



### **Energy and Wildlife Policy Committee Report**

Chair: Paul Johansen, West Virginia DNR

Meeting on March 7, 2019

North American Wildlife and Natural Resources Conference  
Denver, CO

**Committee Charge:** *The Energy and Wildlife Policy Committee is focused on energy development and generation in North America and its impacts on fish and wildlife resources and their landscape habitats at the state, province, territory, region and international levels.*

**Participants:** Mylea Bayless (BCI), Paul Johansen (WVDNR), Jessica Wilkinson (TNC), Mark Truax (PAC/West), Steve Belinda (NAGP), Ed Arnett (TRCP), Angie Bruce (WGFD), Scott Smith (WGFD), Tom Kirschenmann (SDGFP), Jesse Beckers (NDNRT), Chris Berens (KDWPT), Sarah Reif (ODFW), Laura Zebehazy (TPWD), Bob Sargent (GDNR), Mona Khalil (USGS), Brandon Marette (CPW), Karen Voltura (CPW), Holly Goyert (ABC), Jennifer Goff (FWC), Marshall Johnson (NAS), Kurt Dyroff (NWTF), Gary Frazer (USFWS), Nick Payne (TRCP), Niels Hansen (PLC), Clay Crowder (AZGF), Eri Schneider (Audubon), Nicole Turner (NPS), Ian Cole (Eversource Energy), Laura Kearns (ODNR), Madeline West (TRCP), Michelle Ford (Eversource Energy), Jen Sheehan (AZGFD), Dan Kennedy (MIDNR), Frank Quamen (BLM), Brian Boroski (TWS), Dave Trevino (NPS), Greg Link (NDGFD)

The meeting convened at approximately 1:00pm

#### **Scheduled Discussion Items**

##### Avian Power Line Interaction Committee

Brad Loveless-The Avian Power Line Interaction Committee was formed in the 1970s by industry and conservation groups to prevent power line electrocutions and collisions to birds. AFWA has been invited to join the committee at no cost.

Paul Johansen- I don't see any downsides of joining this group. Does anyone on the committee have concerns? Hearing none, I will recommend that AFWA join and will invite APLIC to attend the next meeting.

##### Update on Committee's National Conservation Need

Mark Humpert-The National Conservation Need (NCN) that was submitted last year was circulated to the committee for comment. Most of the suggested changes were incorporated into the revised NCN that was submitted to the Grants Committee.

##### State Roundtable

Angie Bruce-Wyoming is working with a half a dozen businesses on wind power. In Wyoming, wind power is limited by the lack of transmission lines. We would like pre and post construction monitoring to

minimize wildlife impacts and are looking at post construction impact for mitigation. There has been a new surge of wind power. We are studying the impacts of wind on species such as pronghorn and mule deer. We are adding to a dataset from a previous study to inform future development and impacts.

Steve Belinda-How much in mitigation dollars are going towards impacts?

Ed Arnett-There might be disturbance from infrastructure of just four turbines. We need to build a model to predict impacts of wind.

Angie Bruce-Mitigation at the Shirley Basin project is for the entire basin, not just a single site.

Tom Kirschenmann-South Dakota is working on alternative approaches to reduce wind impacts. Our new governor has slowed things down. Concerns about impacts to prairies and wetlands in eastern South Dakota, has the attention of the utility commission.

Greg Link-The industry, landowners and the North Dakota Public Service Commission want to see more involvement from the North Dakota Fish and Game Department, instead of just checking the box. A couple of years ago we ratcheted up engagement and saw a big surge. Industry wants clear transparent guidance and has asked about the means to evaluate projects. We have a couple of studies that looked into avoidance on prairies and wetlands. As wind power moves into wetlands, we are trying to use better science. North Dakota utilities are not sure the agency should be going along on assessments. We are looking at this as a public resource. There are a couple of bills in the legislature to take the agency out of the game. There is a hearing tomorrow on wind development. Companies say they use the wind energy guidelines. The USFWS requires a closer look. We are at a cross roads. Industry wants mitigation to be a tool. We would like to see consistency on how states approach wind power.

Jesse Beckers-The fish and wildlife agency in North Dakota has had a tough time. I commend them for trying to move forward. A seventeen member panel was created to discuss wind power and no wildlife person was put on the panel. Audubon has been involved. Greg has done a great job trying to bring people to the table.

Greg Link-A bill in the legislature would set up a voluntary fund for mitigation. We shouldn't just be looking after the fact. Avoidance is important too.

Eric Schneider-It's unprecedented that indirect impacts would be removed. This is coming after peer reviewed research has shown the effect of indirect impacts.

Ed Arnett-There is a technical report available through The Wildlife Society. The Wildlife Society has thinking spatially about mitigation for a while. Are there any advancements?

Greg Link-I appreciate comments about the cumulative effects. Once turbines are anchored in, there are more impacts.

Jesse Beckers-I don't see the North Dakota legislature taking a lead on mitigation.

Steve Belinda-Have you discussed with industry to see if they would go above and beyond?

Greg Link-Industry wants to reduce impacts but without a tool. If there was no mitigation, we would have to say no.

Sarah Reif-In Oregon, natural gas pipelines have implications for WOTUS (waters of the US) and clean water act. State authorities are in question. We have wind projects so we launched statewide bat monitoring as part of NA BAT. We are paying attention to incidental take. There is a push for more solar, 25,000 acres have been proposed or implemented. In the legislature, bills are coming from industry to limit state authority. Habitat loss is an important issue. Migration corridors, winter range and cumulative effects are all issues. We are running into challenge where there are not enough private lands to offer up as mitigation. We are trying to build partnerships.

Chris Berens-In Kansas there are over 30 active wind projects. Transmission is lacking and we are starting to see counties push back against wind through zoning. Three counties have moratoriums on wind. A citizens group got a bill introduced to require 3 mile setbacks from wildlife areas. That bill did not make it out of committee. Our new governor will request to continue the moratorium on wind development in the Flint Hills. The Department has a position statement on 3 mile setbacks from wildlife areas. Projects inside the 3 mile setback are still being proposed. The agency does not have regulatory authority. There are 12 new industrial scale solar projects encompassing several hundred acres.

Steve Belinda-Is wind development affecting enrollment in the Conservation Reserve Program?

Chris Berens-We are not seeing this.

Sarah Reif-We are seeing it on expired contracts in Oregon.

Chris Berens-Our Walk-in Access program is taking a hit.

Laura Zebehazy. Texas has a biennial legislative session. A House bill proposed requiring an environmental assessment for pipelines. Three deep water ports are proposed for pipelines. Unique and fragile habitat types could be impacted, including those for ocelots. There are lots of concerns. Wind power is facing increased opposition by landowners, especially impacts to the viewscape. Solar energy is increasing, some companies are using the wind energy guidelines.

Jennifer Goff-Florida may sign on to a multistate lawsuit on offshore exploration because of potential impacts to right whales.

Bob Sargent-In Georgia, we are concerned about solar impacts to gopher tortoise. Most solar development is in the range of gopher tortoises. Solar power is exploding. Georgia Power has agreed to review projects but smaller companies do not do a review. Sometimes gopher tortoises are discovered after a solar project is completed.

Brandon Marette-In Colorado, legislation allows counties to conduct a siting review.

Karen Volutra-In Colorado, the renewable energy deadline is coming up. There is a huge push to reach the goal. There are 14-20 projects in the pipeline. The new governor is pushing for more renewable energy. Counties are not pushing back on private lands. We would like to build relationships. We are concerned about oil and gas and wind power impacts to Lesser Prairie Chickens.

Clay Crowder-In Arizona, a 2018 ballot initiative would have set up a renewable energy goal of 50%. My agency is not regulatory but the department did get involved in a biomass plant. Arizona has lots of space. Some companies have been proactive and use mitigation. Industry recognizes the value of wildlife. Arizona has just four wind farms. Some new ones are in the planning stages.

Paul Johansen-Major gas pipelines in West Virginia need to move Marcellus shale gas to the coast. We have been working with the Federal Energy Regulatory Commission on voluntary mitigation and have been successful. The Conservation Fund is holding mitigation dollars for the agency. The money is rolling in, so we have begun acquiring land. Citizens will see some benefits. Gas transmission companies have been willing to partner.

Steve Belinda-The North American Grouse Partnership has been working with the Midwest Association of Fish and Wildlife Agencies and the Western Association of Fish and Wildlife Agencies as part of a working group to bring scientist together to identify core habitat. We are working towards a range wide strategy in the Great Plains.

Jessica Wilkinson-The Nature Conservancy has a North American Energy Deployment program. We sit on the board of the American Wind Wildlife Institute. Most of our work is on wind siting in the Great Plains. We will be expanding to seventeen states in the wind belt. We are working on policy to incentivize the right siting of wind. We have developed a map of key habitats to inform wind suppliers who use the Wind Energy Guidelines. We want to see early screening. We will roll out the tool in early spring.

Steve Belinda-Are you doing energy by design?

Jessica Wilkinson-We want to see well-sited energy.

Ed Arnett-The Teddy Roosevelt Conservation Partnership is engaging mostly on oil and gas development, but also wind power. Sage Grouse plans are out. We have concerns that we have competing policies with energy dominance. Our biggest concern is mitigation. Some states have paid attention. The Department of Interior has moved away from mitigation on federal lands.

Jessica Wilkinson-The Western Governors Association passed a resolution that is a positive step.

Ed Arnett-We have not figured this out yet.

Steve Belinda-No net gain is where we are. Nevada got to keep their net positive for sage grouse. Voluntary and compensatory on behalf of energy producers. If it is after the fact, then they won't do it.

Holly Goyert-The American Bird Conservatory has a climate and energy report. An offshore energy working group was established for birds and bats on the Great Lakes. Let us know how we can help. Contact us here if you want to join the working group. It is focused on Lake Michigan now.

Jesse Beckers-We are providing incentives to landowners to manage and protect grasslands

Erik Schneider-The M-opinion on incidental take is a concern. We would like to support states who want to look at their statutes to improve them for bird conservation. Let us know how we can help.

Kurt Dyroff-The National Wild Turkey Federation has a program we are retooling on energy to provide incentives.

Paul Johansen-Would you like to present on that at the next meeting?

Brian Boroski-We have a book on renewable energy and wildlife that will be published in September.

### Report on survey of best management practices effectiveness to minimize incidental take

Laura Zebehazy-I sit on the AFWA Incidental Take Working Group. The purpose of this group is to develop best management practices to avoid and minimize impacts on birds. We identified existing best practices and looked at ways to make them more accessible. We surveyed the states and asked them about perceived barriers. Thirty-five states and two provinces responded. Transmission lines, wind power, building collisions and lead ingestion were some of the top causes of incidental take. A full report will be available. States said they have some best practices but that they want to have more that are effective. A small team is working new best practices. We need to determine how effective best practices are.

Karen Voltura-We have statewide set back guidelines, but we don't have science behind them. We get good reaction because there are set numbers. It helps to have something to hand to developers.

Ed Arnett-No one has looked at the wind energy guidelines to evaluate their effectiveness or compliance.

Steve Belinda-It is hard to determine effectiveness of best practices. We don't have much scientific evidence that they work.

Laura Zebehazy-Does it matter who creates the best practices? Is it better coming from an NGO or federal or state agency?

Ed Arnett-There needs to be a proper vetting process.

Chris Berens-Ideally, they need to be created together by state and federal agencies and NGOs.

Greg Link-I don't know if industry uses best practices or uses them in the right way. If a public resource is being diminished, we need to get something back. Until we have consistent mitigation policy, the best practices will be a dance. We should ask how the original plan modified with best practices.

Paul Johansen-Laura, could you provide us the survey and assemble a simple list of questions and send them to the committee?

Laura Zebehazy-I will send the results of the survey.

### Habitat impacts and wind development: opportunities to address the needs of state wildlife agencies

Jessica Wilkinson-Wind power is critical to address climate change and decarbonize our energy system. Renewable energy, including solar and wind, is an essential part of our energy future in North America. The amount of wind will need to quadruple current installed capacity by 2050 to reach a 35% goal. Total installed wind capacity would be 404 GW by 2050, whereas current onshore wind power capacity is 0.89 GW. Wind-habitat issues are anticipated to increase as low-risk sites with easy access to transmission become harder to find. A 2016 study by NREL found that siting conflicts, including but not limited to wildlife issues is anticipated to affect 80% of future, developable wind projects and could reduce deployment of wind capacity by 14% by 2030 and 28% by 2050. These delays and increased costs could be minimized by evaluating these siting considerations at early stages in the project development process. The footprint of wind and solar is several times that of conventional energy. Direct impacts

include post-construction, collisions, direct strike and habitat impacts include fragmentation, degradation/loss, species displacement and behavioral impacts. AFWA conducted a preliminary survey of the states to assess wind power siting concerns. They asked states to identify their greatest challenges and opportunities related to wind power siting and what role they see for NGOs like TNC. The challenges that were identified included 1) Siting decisions that are made before or without consultation of state wildlife agencies; 2) Landscape impacts (fragmentation) and cumulative impacts are not considered; 3) No requirements to consult with wildlife agency; 4) Insufficient data/science on wildlife impacts; 5) Limited data sharing. The following opportunities were identified: 1) More research is needed; 2) Need to incentivize well-sited wind; 3) Need to improve communication between agencies and industry; 4) More regional coordination including data sharing; 5) The need to communicate benefits of “green” wind development. We would like to form a working group to do a larger survey of all states and identify potential actions that the committee can take and report out at the September AFWA meeting.

Karen Voltura-The easy sites have been taken.

Laura Zebehazy-We need to look at the wind energy guidelines again since we have more data now. Bats feed in agricultural lands but the wind energy guidelines send development to agricultural lands.

Jessica Wilkinson-There are other questions we could ask. The pilot survey of states was limited.

Mylea Bayless-You might consider collaborating with the incidental take working group on their survey. The Bat Working Group is also thinking about a survey of the states. We might want to consider collaborating with the three surveys.

Laura Zebehazy-The survey the bird committee conducted is specific to incidental take.

Paul Johansen-There seem to be opportunities to collaborate with the Bat Working Group.

Sarah Reif-I would like to understand how/if states are using take authority.

Steve Holmer-The Bird Conservation Committee is sending out a mitigation framework.

Bob Sargent-A small percentage of states have “take” authority but is not robust for many.

Paul Johansen-Is there interest in a small group flushing out a survey that we can send out to the states to solicit input on wind siting? Are there states, federal agencies, and NGO’s who would be interested in working on this?

#### Bat and wind energy cooperative (BWEC) research priorities

Michael Schirmacher-Bat Conservation International is a founding member and coordinates the Bats and Wind Energy Cooperative which is an alliance of experts from government agencies, private industry, academic institutions, and non-governmental organizations that cooperate to develop and disseminate solutions to reduce to the greatest extent practicable or, where possible, prevent mortality of bats at wind energy facilities. New research priorities have been developed. More information about BWEC is available at <http://batsandwind.org/>.

Mylea Bayless-How would you like to get information about BWEC?

Laura Zebehazy-The Bat Working Group would be a good source.

Michael Schirmacher-There is a BWEC newsletter you can get at [www.batsandwind.org](http://www.batsandwind.org).

Paul Johansen-Send Mark the information. He can send it out to the committee.

#### Western big game winter range and migration corridors and Secretarial Order 3362

Casey Stemler-Secretarial Order 3362 speaks to working with the states. It is respectful of state authorities. We asked western states for their priorities. Most states don't have maps of corridors. We asked states for their priorities and risks. Some states sent us game management units. These are large blocks, not priority areas. The number one risk cited by states was highways which kill wildlife and stop migration. Oil and gas development in Idaho, Wyoming and Colorado and solar in Washington were also mentioned. Mineral extraction was cited in Washington and Nevada. How are states dealing with these risks? Wyoming worked through a process with lease sales where they can ask for a deferment or language when the lease is exercised. Wyoming is the only state to move on this. Colorado would like a buffer. States have not asked for anything on wind and solar.

Karen Voltura-We would like to see a requirement for one facility per square mile on leases in Colorado. We would like some acres deferred.

#### Research and best management practices to avoid/minimize wildlife impacts from solar development

Jennifer Goff-In Florida, solar development ranges from 1-40,000 acres. When 75 megawatts is reached, it triggers a review so some projects come in at 74.9 megawatts. Fencing around solar sites is stopping wildlife movement. There is little research on avian mortality, so we are starting an avian mortality study. Data collection is just beginning, and results will be shared with other states. Some sites are being constructed in Florida Panther habitat, so we are looking at modifying fencing. We use cameras to do preconstruction surveys and we've seen positive results with wildlife moving across sites. Native seed mixes/seedlings are affordable and low growing forms can be used on solar sites. Solar areas may be able to hold gopher tortoises long-term, but studies are needed. We would like to know if southeastern states are interested in best management practices.

Karen Voltura-Have you thought about changing the threshold for solar permitting?

Michael Schirmacher-You might want to use the GenEx model to estimate mortality.

Steve Holmer-Habitat loss from power lines to serve solar production might be a larger impact. We need more information on that.

Davia Palmeri-Oregon is dealing with the same issue. Small projects are being done to avoid the permitting process.

#### Partner Updates

Mona Khalil-USGS is focused on understanding and mapping risk to fish and wildlife, measuring impacts and informing solutions. Solar powered GPS-GSM telemetry systems are helping scientists study movement of eagles. Topographic roughness, ground elevation, and aspect were the primary drivers of flight altitude above ground level, and those primary drivers acted on thermal updrafts. Warm seasons

and south facing nests had higher mortality. We put up shading which reduced eagle mortality. Use of artificial shade structures in exposed nests may reduce or prevent mortality caused by heat stress, and thus might be a potential tool for mitigation of “take” from anthropogenic structures and activities. USGS is working with other agencies to find out what types of airspace condors prefer. USGS is developing science and decision support tools to inform policy and management decisions about various aspects of the energy development life cycle. Scheduling for GenEst workshops were delayed because of the federal shutdown. The first workshop will be held April 24-25 at NREL. Three papers have been published on pollution from oil extraction brine and its effects on wetlands and amphibians. Scientists are testing whether illuminating a wind turbine with dim ultraviolet (UV) light may prevent bats from approaching and being struck by moving blades. A guidebook for reclamation of oil and gas well pads has been developed with BLM. There are more than 26,000 abandoned and 63,000 active gas and oil wells on the Colorado Plateau. The USGS and University of Massachusetts is developing and testing new fishway attraction and entrance technology designed to enhance fish passage which is likely to have broad applicability to many target species including Atlantic salmon, American shad, alewife, and blueback herring. This work can benefit the hydropower industry by reducing fishway operation and maintenance costs and can benefit restoration efforts for these species by providing more efficient and safe passage around riverine and other barriers.

**Meeting Adjourned** at approximate 5:00pm

**Action Items**

The Wind Siting Survey Working Group was established.

**Progress and Opportunities**

A new working group was formed that will conduct a survey of the states to better understand concerns related to wind power siting. AFWA will join the Avian Power Line Interaction Committee

**Threats and Emerging Issues Identified**

**None identified.**

**New Opportunities Identified**

None

**Submitted by:**

Paul Johansen, Chair