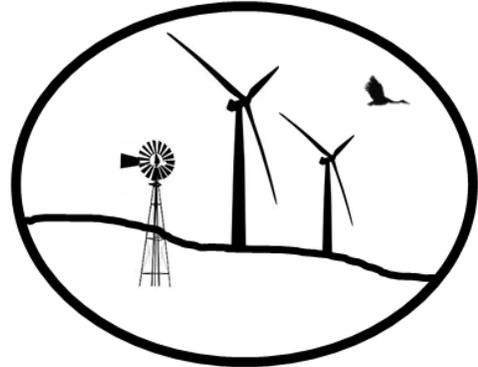


## Wind Energy and Wildlife News

August 19, 2015



### Around Nebraska...

**[Local View: Noise standards could be deal-breaker for local wind energy.](#)** Lancaster and Gage counties are looking at an exceptional opportunity to welcome an industry that will move them toward more stable and sustainable futures. A developer has proposed to use wind power, one of our most valuable natural resources, to generate clean and renewable energy. But before the developer can begin work on the project, it must obtain county zoning approval. Decisions will be made by the City-County Planning Commission at its Aug. 19 meeting, then by the County Board at its September meeting.

**[Public hearing set.](#)** Plenty of people on both sides of the wind turbine issue are expected to turn out for a Lincoln/Lancaster County Planning Commission public hearing at 5:30 p.m. Wednesday in the City-County building, 555 S. 10th St. on proposed regulations that will shape the development of wind energy in the county.

**[Wind turbines either a saving grace or a nuisance, depending on your view.](#)** Depending on which side of a wind turbine one stands, the rhythmic swoosh of its blades sounds like emissions-free clean energy, a pay day or a paradise-despoiling annoyance. Proposed regulations being considered in Lancaster County deal with noise and health issues from wind turbines, as well as setback requirements from homes and property, lighting and decommissioning of towers. The Planning Commission is considering the regulations, and the Lancaster County Board will have the final say and could host a public hearing next month.

**[Invenergy Wind secures project financing for 73-MW Neb. wind facility.](#)** Invenergy LLC subsidiary Invenergy Wind LLC on Aug. 11 said it has arranged debt and tax equity project financing for its 73-MW Prairie Breeze II wind energy center in Antelope and Boone counties, Neb. The project, now under construction, will include 41 GE 1.79-MW wind turbines and is expected to come online in the fourth quarter. Electricity generated by the facility will be sold to Lincoln Electric System under a long-term power purchase agreement.

**[Some fear stricter plant emission standards will raise utility bills in Nebraska.](#)** President Barack Obama's landmark plan to reduce carbon dioxide and other harmful emissions will affect Nebraska and other states that rely heavily on coal plants to generate electricity, but to what extent remains to be seen. Public power representatives say they'll have to review the 1,560-page Clean Power Plan unveiled Monday before commenting on its potential implications.

**[8th Annual Nebraska Wind and Solar Conference and Exhibition.](#)** November 4-5, 2015. Omaha, NE. Since 2008, volunteers from farmer and rancher organizations, state agencies, public power utilities and higher education professionals have shaped this educational networking conference and exhibition to advance the wind and solar industry of Nebraska. The conference has included top quality speakers and timely presentations.

**[30 must-see Nebraska state and national park gems.](#)** From cascading waterfalls to vast grasslands, Nebraska's state and national parks are home to amazing natural beauty. Many of them are off the beaten path and showcase the amazing diversity of the state's landscape.

[Jocelyn Oleny Harrison to defend master's thesis](#), "Assessment of disturbance effects of an existing wind energy facility on greater prairie-chicken (*Tympanuchus cupido pinnatus*) breeding season ecology in the Sandhills of Nebraska." Although her defense has already occurred, you can check out her complete abstract is available at: <http://newsroom.unl.edu/announce/snr/4419/25149>.

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[Graduate Research Assistantship – Bat habitat: Nebraska Cooperative Fish & Wildlife Research Unit](#). During the past few years, we have received grant funding to bring graduate students on to help us learn more about bat distribution, habitat use, and migration in Nebraska. The research the students are conducting will be useful in siting and mitigation for wind energy as well as other resource management decisions. I am happy to announce that we have a Master's level Graduate Assistantship for motivated student with interest in bat ecology, habitat modeling, landscape ecology. Student will conduct state-wide sampling of bats utilizing acoustic detectors, and use resulting data to construct habitat specific range maps for Nebraska to aid in Nebraska bat management. Student will additional help create a monitoring network using citizen-scientists that will be a legacy for the future and provide data to the NABat National Bat Monitoring effort. Successful applicant will join a team of ecologists working to understand bat habitat use and movements in Nebraska.



[The 2015 National Bat Blitz will be August 27 – September 3, 2015](#). A simple 'net your backyard' style, everyone who can to participate is encouraged to net for 1-2 nights at your favorite spot (or two or three!). This year, and future years, we are also encouraging everyone to place a bat detector in an appropriate place near their net site. In addition to gathering an interesting nationwide dataset for the early fall, the event is designed to promote bat conservation and raise educational opportunities for both the public and biology students. While not required, we are encouraging everyone to invite students, friends, or even the public out to net for the night. Register your event at: <http://go.unl.edu/batblitz>. For more information, contact **Michael Whitby** ([michael.whitby@gmail.com](mailto:michael.whitby@gmail.com))

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## **Around the Nation & World...**

### **Wind and Wildlife**

[Court invalidates 30-year permit provisions of U.S. Fish and Wildlife Service's eagle permit rule on NEPA grounds](#). The court set aside and remanded the Final 30-Year Rule to the USFWS for further consideration. Until the USFWS completes the appropriate NEPA analysis, the maximum term for programmatic Eagle Take Permits is five years.

[Debra Shearwater et al. v FWS and AWEA: Eagle 30-year take permit decision](#). In this very critical decision by the US District Court of Northern District of California (Judge Lucy H. Koh), the 30-year take permits for bald and golden eagles established by the US Fish and Wildlife Service have been set aside and remanded back to the Service.

[Regional Analysis of Wind Turbine-Caused Bat Mortality](#), Drake et al. 2015. Acta Chiropterologica. Our analysis suggested that select habitat and landscape features were among the predictor variables that explained bat mortality at the broad scale. Given heterogeneity in mortality estimates within the upper Midwest region, we recommend that individual wind facilities conduct project-specific pre- and post-construction monitoring rather than infer mortality effects based on published results from other wind facilities.

[Seasonally-Dynamic Presence-Only Species Distribution Models for a Cryptic Migratory Bat Impacted by Wind Energy Development](#). Hayes et al. 2015. PLOS ONE. Comparing wind-turbine fatality data to model outputs could

test many predictions, such as 'risk from turbines is highest in habitats between hoary bat summering and wintering grounds'. Although future field studies are needed to validate the SDMs, this study generated well-justified and testable hypotheses of hoary bat migration patterns and seasonal distribution.

[\*Wind farm noise suppresses territorial defense behavior in a songbird\*](#), Zwart et al. 2015. Behavioral Ecology. Anthropogenic noise may affect their ability to deter an intruder, leading to expenditure of extra time and energy, to increased risks of injury and, as a consequence, reduced breeding success. Our study contributes to understanding the impact of anthropogenic noise on birds by linking disruptive noise and territorial behavior, which may be a mechanism underlying the reduction in bird breeding densities and success that has been reported in noisy areas.

[\*Landscapes for Energy and Wildlife: Conservation Prioritization for Golden Eagles across Large Spatial Scales\*](#), Tack and Fedy 2015. PLOS ONE. By overlaying predictive models of golden eagle nesting habitat with wind energy resource maps, we highlight areas of potential conflict among eagle nesting habitat and wind development. Map predictions cannot replace on-the-ground monitoring for potential risk of wind turbines on wildlife populations, though they provide industry and managers a useful framework to first assess potential development.

[\*Effects of wind farms on Montagu's harrier \(Circus pygargus\) in southern Spain\*](#), Hernández-Pliego et al. 2015. Biological Conservation. Displacement and mortality on Montagu's harrier in wind farms had been analysed. Nest and colony abundances did not change after wind farm construction. Decreased distance to the closest conspecific nest after wind farms was installed. A GLM suggested habitat and distance to closest track explained nest occurrence. Mortality rate was low for Montagu's harrier in the study area.

[\*Biodiversity & Wind Energy: A Bird's and Bat's Perspective\*](#). An illustrated book.

## Policy

[\*Senate Energy Package Focuses On Fossil Fuels And Electric Infrastructure\*](#). The bill focuses on areas of agreement and avoids controversial issues such as lifting the ban on crude oil exports and hydrocarbon development in the Arctic Wildlife National refuge; it also omits tax extensions related to renewable energy generated from solar and wind power. The bill tackles five core areas: efficiency, infrastructure, supply, accountability, and the conservation of public lands.

[\*President Obama Is Going to Alaska. Here's Why\*](#): (video with beautiful footage of Alaska). Later this month, President Obama will travel to Alaska and shine a spotlight on what Alaskans in particular have come to know: Climate change is one of the biggest threats we face, it is being driven by human activity, and it is disrupting Americans' lives right now.

[\*U.S. Is Set to Propose Regulation to Cut Methane Emissions\*](#). The Obama administration is expected to propose as soon as Tuesday the first-ever federal regulation to cut emissions of methane, a powerful greenhouse gas that contributes to global warming, by the nation's oil and natural-gas industry, officials familiar with the plan said on Monday.

## Wildlife & Habitats

[\*Stable hydrogen isotopes identify leapfrog migration, degree of connectivity, and summer distribution of Golden Eagles in eastern North America\*](#), Nelson et al. 2015. The Auk. We observed a positive relationship between  $\delta^2\text{Hf}$  values and the latitude of the wintering location, which, along with the likelihood-of-origin maps, revealed moderate patterns of leapfrog migration and migratory connectivity.

[\*\*Data acquisition varies by bat phonic group for 2 types of bat detectors when weatherproofed and paired in field settings\*\*](#), Kaiser and O'Keefe 2015. Wildlife Society Bulletin. We demonstrated that the ability to record bat calls in different frequency ranges varies with microphone type and weatherproofing strategy, which implies that best practices for presence–absence surveys may also vary for bats in different phonic groups.

[\*\*Bats Need Natural Habitat for Food Reservoirs\*\*](#). Bats eat so many insects that surround crops during the summer that they can act as natural pesticides for farmers, but researchers recently examined what bats consume later in those summer months when the crops are no longer flourishing.

[\*\*The importance of natural habitats to Brazilian free-tailed bats in intensive agricultural landscapes in the Winter Garden region of Texas, United States\*\*](#), Davidai et al. 2015. Biological Conservation. Our results strongly suggest that intensive agricultural practices create systems providing bats with inconsistent resource supply, but the persistence of natural habitats provides consistency in food supply through time. Taken together, these findings illustrate the importance of protecting and restoring natural habitats for the conservation for bats and the pest-suppression services they provide in agricultural ecosystems.

[\*\*The Importance of Landscape Elements for Bat Activity and Species Richness in Agricultural Areas\*\*](#), Heim et al. 2015. PLOS ONE. Our results highlight the importance of forested areas, and suggest that agricultural grasslands that are closer to forest remnants might be better buffered against outbreaks of agricultural pest insects due to higher species richness and higher bat activity. Furthermore, our data reveals that even for highly mobile species such as bats, a very dense network of connecting elements within the landscape is beneficial to promote activity in open areas and thus assure vital ecosystem function in agricultural landscapes.

[\*\*Not to Put Too Fine a Point on It — Does Increasing Precision of Geographic Referencing Improve Species Distribution Models for a Wide-Ranging Migratory Bat?\*\*](#) Hayes et al. 2015. Acta Chiropterologia. We conclude that the considerable time and effort invested in carefully increasing the precision of the occurrence locations in this data set was not worth the marginal gains in improved SDM performance, and it seems likely that gains would be similar for other bat species that range across large areas of the continent, migrate, and are habitat generalists.

[\*\*New report shows encouraging trends in Western greater sage-grouse populations\*\*](#). The Western Association of Fish and Wildlife Agencies released a [final report](#) on greater sage-grouse population trends across the Western United States. The report was prepared to provide scientific information to the U.S. Fish and Wildlife Service in advance of the upcoming Endangered Species Act listing decision on greater sage-grouse, which is expected to be made by the end of Sept. 2015. It summarizes and analyzes the information gathered over the past 50 years from the 11 western states where sage-grouse populations can be found. Find the full report [here](#).

## **Wind**

[\*\*New technology could reduce wind energy costs\*\*](#). Engineers from the University of Sheffield have developed a novel technique to predict when bearings inside wind turbines will fail which could make wind energy cheaper.

[\*\*Qualified, absolute, idealistic, impatient: Dimensions of host community responses to wind energy projects\*\*](#), Fast 2015. Environment and Planning A. This study contributes to fuller understandings of the tensions in wind energy planning and politics. Through a q-method analysis of wind energy supporter and opponent discourses in communities hosting both proposed and constructed projects it extends the literature in three main ways.

[\*\*Aviation Bird Hazard in NEXRAD Dual Polarization Weather Radar Confirmed by Visual Observations\*\*](#), Muller et al. 2015. International Journal of Aviation, Aeronautics, and Aerospace.

## Other

**Bat Week 2015 Bat House Building Challenge** (see attached). On October 31, 2015 join us in our goal to build a record of 5,000 bat houses in the USA and Canada all in one day! Sign up as a host site. Contact Danielle Todd, Organization for Bat Conservation, at [dtodd@batconservation.org](mailto:dtodd@batconservation.org).

**[A different way to think about climate change.](#)** Targeted collaboration and friendliness between neighbors will lead to a future of healthy, functioning populations of fish, wildlife, plants, and humans. After all, we are all in this together. The author talks about not only mitigating the impacts of climate change, but also adapting to climate change.

**[How to de-oil a polar bear: Grim outlook for wildlife impacts from an Arctic spill.](#)** In the event of a large oil spill in Alaska's Arctic, officials say they would have limited ability to clean oiled marine mammals, and in some cases might not be able to clean them at all.

## Tools

**[Free Learning Sources for GIS and Geospatial Analysis.](#)** Here is a list of FREE learning sources, including GIS software training courses and tutorials, applied learning materials, workshops and webinars related to GIS and/or Geospatial analysis, etc. All of them are Free of Cost.

## Upcoming Conferences & Trainings & Webinars

**[Call for Abstracts: AWEA WINDPOWER 2016 Conference & Exhibition.](#)** The American Wind Energy Association (AWEA) is soliciting abstracts until September 8th. Abstracts should demonstrate the dynamic and technologically advanced nature of the wind energy industry.

### **[Maine Ocean & Wind Industry Initiative Webinar Recordings.](#)**

**[WREN Quarterly Webinar #4: Avian Sensitivity Mapping and Wind Energy.](#)** August 27, 2015 @ 11am – 12:30pm (ET). The topic of this webinar is Avian Sensitivity Mapping and Wind Energy Projects as presented by Julia Willmott and Greg Forcey of Normandeau Associates, and Roel May of the Norwegian Institute for Nature Research (NINA). The speakers will present on tools they have developed to assess the potential vulnerability of birds to wind energy development.

**[Electric Transmission 101 Workshop.](#)** October 6-8, 2015. Grand Rapids, MI. This workshop is designed to train state fish and wildlife agency and federal agency personnel who review and comment on electric transmission line projects. This will be a good opportunity for state and federal agency staff to meet members of the electric utility industry and better understand the planning and design process for electric transmission. Register at the following link: <http://www.cvent.com/d/xrqc4y/4W>.

**[8th Annual Nebraska Wind and Solar Conference and Exhibition.](#)** November 4-5, 2015. Omaha, NE. Since 2008, volunteers from farmer and rancher organizations, state agencies, public power utilities and higher education professionals have shaped this educational networking conference and exhibition to advance the wind and solar industry of Nebraska. The conference has included top quality speakers and timely presentations.

**The Wildlife Society Renewable Energy Working Group – LinkedIn.** Connect with other resource professionals involved in renewable energy – wildlife work. To join, go to:

[http://www.linkedin.com/groups?gid=4433729&trk=my\\_groups-b-grp-v](http://www.linkedin.com/groups?gid=4433729&trk=my_groups-b-grp-v), click Join.

Check out the Nebraska Wind Energy and Wildlife Project website at: <http://snr.unl.edu/renewableenergy/wind/>  
and Wind Energy and Wildlife news at: <http://www.scoop.it/t/wind-energy-and-wildlife>.

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In the Message Field (NOT Subject): UNSUBSCRIBE wind\_wildlife