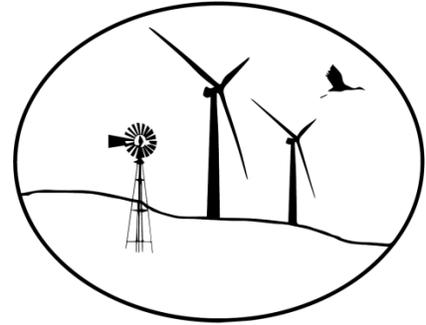


Wind Energy and Wildlife News

December 1, 2015



Around Nebraska...

[Whooping crane stopover site use intensity within the Great Plains](#), Pearse et al. 2015, USGS Open-File Report 2015-1166. This assessment resulted in four categories of stopover site use: unoccupied, low intensity, core intensity, and extended-use core intensity. Although provisional, this evaluation of stopover site use intensity offers the U.S. Fish and Wildlife Service and partners a tool to identify landscapes that may be of greater conservation significance to migrating whooping cranes. Initially, the tool will be used by the U.S. Fish and Wildlife Service and other interested parties in evaluating the Great Plains Wind Energy Habitat Conservation Plan.



[Can prairie chickens share the prairie with wind turbines?](#) This article was written by Dr. Larkin Powell and Dr. Mary Bomberger Brown, two of the lead researchers on the wind-prairie chicken project in Nebraska. Our research team collected data near a 36-turbine facility south of Ainsworth during 2013 and 2014. We captured prairie chickens and attached radio collars and satellite tracking devices to them so we could follow them during the nesting season. Our research technicians marked nest locations, as well as the areas used by female prairie chickens to raise their broods. We recorded males vocalizing at leks both near and far away from wind turbines. And we performed surveys for mammal and avian predators near and far from the turbines. Our initial results suggest that the birds are able to cope with the Ainsworth wind turbines. Females did not avoid turbines when selecting nest sites or locations to raise their broods, but they were wary of roads, including those used to service wind turbines. This tells us that prairie chickens apparently do need larger tracts of grassland without roads. New energy sources are important, but prairie chickens are important, too. We must continue to investigate the potential effects of human disturbances on prairie chickens and the other wildlife who share Nebraska with us. By working together, we can find ways to make sure there is enough room on the prairie for all of us.

Effects of Wind Turbine Noise on Male Greater Prairie-Chicken Vocalizations and Chorus, M.S. Thesis Defense by Cara Whalen (November 30, 2015). Cara asked two questions: 1) Do prairie chickens adjust their vocalizations around wind turbines?; 2) Does wind turbine noise mask prairie-chicken vocalizations? The answer she found to both of these questions is YES. Prairie-chickens in close proximity to wind turbines altered a number of aspects of their calls. Models suggest that wind turbines are masking the prairie-chickens vocalizations, but an accurate distance cannot be determined at this point. I will provide a link to Cara's lengthy and very interesting thesis when it is available.

[Column: Support affordable energy by ending corporate welfare.](#) Here's a question Nebraska's U.S. Senators and all three Representatives should answer: Do you support raising Cornhusker State gas and electricity bills by \$750 in the next five years? That may seem like a silly question. After all, no politicians go to Washington promising to

make life harder for their constituents, especially low- and middle-income families. Yet that's exactly what's at stake with Congress's upcoming vote to renew the wind Production Tax Credit (PTC).

[Local View: Fossil fuel subsidies dwarf wind energy incentives.](#) (In response to the opinion column "Support affordable energy by ending corporate welfare" LJS, Nov. 14). Why did you fail to call for an end to government/taxpayer-funded fossil fuel subsidies? Are you going to call on Nebraska's U. S. senators and representatives to repeal oil, coal and gas subsidies? Aren't oil companies able to stand on their own without subsidies? The fossil fuel industry has been getting federal subsidies for 100 years. The cumulative cost of oil, coal and gas subsidies dwarf wind energy incentives.

[Company slows plan for \\$2B line to ship Iowa wind energy.](#) Clean Line Energy Partners said it is assessing plans for the Rock Island Clean Line, amid opposition from some landowners and uncertain odds of gaining regulatory approval. The Iowa Utilities Board has granted the company's request to pause a technical review of its petitions to build the high-voltage, overhead line through 16 counties.

[Predictions of future ephemeral springtime waterbird stopover habitat availability under global change,](#) Uden et al. 2015, Ecosphere. Model predictions indicate that if the temperature and precipitation changes assumed under our climate change scenarios occur, wetland stopover habitat availability in the Rainwater Basin could decrease in the future. The results of this and similar studies could be aggregated to increase knowledge about the potential spatial and temporal distributions of future stopover habitat along migration corridors, and to develop and prioritize multi-scale management actions aimed at mitigating the detrimental effects of global change on migratory waterbird populations.

[Buff-breasted Sandpiper stopover duration in the Rainwater Basin, Nebraska, in relation to the temporal and spatial migration patterns in the Great Plains of North America,](#) McCarty et al. 2015, International Wader Study Group. Buff-breasted Sandpipers *Calidris subruficollis* are a species of significant conservation concern. Previous work shows densities are high during stopover in the Rainwater Basin of Nebraska, USA during the northward migration. The short duration of stopover, relative to the amount of time the species is present in the Rainwater Basin, suggests the total number of individuals using the region is greater than previous estimates based on density at a given point of time.

Around the Nation & World...

Wind and Wildlife

[Modeling with uncertain science: estimating mitigation credits from abating lead poisoning in Golden Eagles,](#) Cochrane et al. 2015, Ecological Applications. We developed an approach to quantify and analyze compensatory mitigation that (1) relies on expert opinion elicited in a thoughtful and structured process to design the analysis (models) and supplement available data, (2) builds computational models as hypotheses about cause-effect relationships, (3) represents scientific uncertainty in stochastic model simulations, (4) provides probabilistic predictions of "relative" mortality with and without mitigation, (5) presents results in clear formats useful to applying risk management preferences (regulatory standards) and selecting strategies and levels of mitigation for immediate action, and (6) defines predictive parameters in units that could be monitored effectively, to support experimental adaptive management and reduction in uncertainty.

[Enhanced audio-visual warnings for reducing bird fatalities at wind turbines,](#) Khan & Haque 2015, IEEE Xplore. This paper proposes further details of audio visual warnings, including directional lights, which will enhance the learning process and act as warnings.

[Proposed N.D. wind farm's impact on bald eagles needs more study, FWS official says.](#) "I would not put this in a low-risk category," Kevin Shelley, ecological services supervisor for North Dakota, told reporters after meeting with the state Public Service Commission.

[Wildlife officials concerned about wind farm site.](#) Federal wildlife officials are raising concerns about a proposed northwest Missouri wind farm they say could have an impact on the migration of birds into the Squaw Creek National Wildlife Refuge.

Wildlife & Habitats

[Large-scale control site selection for population monitoring: An example assessing sage-grouse trends.](#) Fedy et al. 2015, Wildlife Society Bulletin. This research demonstrated an approach for control site selection across large landscapes and can be used as a template for similar impact-monitoring studies. It is important to note that identification of changes in population parameters between control and treatment sites is only the first step in understanding the mechanisms that underlie those changes.

[Habitat Selection and Factors Influencing Nest Survival of Golden Eagles in South-Central Montana.](#) Crandall et al. 2015, Journal of Raptor Research. Based on our results, we suggest that to maintain breeding pairs of Golden Eagles in areas similar to our study area, management should focus on preserving adequate prey habitat in areas with rugged topography. However, territories with higher ruggedness may not be as productive; therefore, management goals should be clear and environmental factors influencing both habitat selection and reproductive success should be considered when possible.

[Space Use and Habitat Selection by Adult Migrant Golden Eagles Wintering in the Western United States.](#) Domenech et al. 2015, Journal of Raptor Research. Golden Eagles appeared to avoid urban areas, grassland, agriculture, and non-sagebrush-steppe habitat types. Our results suggest that an effective conservation strategy for migrant Golden Eagles wintering in the western United States should include a large geographic area with heterogeneous habitat allowing for adequate hunting perches and prey habitat, with little urban development or anthropogenic habitat conversion.



[Wisdom: Oldest Living Banded Bird Returns to Wildlife Refuge.](#)

Meet Wisdom, the oldest living, banded, wild bird. This 64-year-old bird returned to [Midway Atoll National Wildlife Refuge](#) on November 19, 2015, after a year at sea. Wisdom was first banded in 1956. And because Laysan albatross do not return to breed until they are at least five years old, it is estimated Wisdom is at least 64 years old, but she could be older.

NOTE: I included this article because it illustrates that diversity in life histories of bird species. Consider the loss of a long-lived, slow breeding albatross compared

to a bird that is a short-lived, prolific-breeder.

Wind

[Multi-criteria site selection for offshore renewable energy platforms.](#) Cradden et al. 2015, Renewable Energy. A bespoke European wind, wave and tidal energy resource dataset was built into a GIS. Unique flexible tools were created to identify sites for offshore energy platforms. Time series were used to examine detailed met-ocean factors including correlation. The north and west of Europe most suitable in terms of energy and depth requirements. Accessibility and logistics are likely to be problematic at promising sites.

[**Humpback Whales Solve a Big Problem for Wind Turbines.**](#) Professor Fish and his team engineered flippers with tubercles and without, and tested them in a wind tunnel at the Naval Academy. They found that the tubercles did delay stall, increasing the angle of attack up to 42 percent. Affixing tubercles to blades has shown similar effects with windmills, fans, surfboard fins, and even a hydroplane.

Other

[**Senators Revive Financing Tactic From '70s for Carbon Emissions.**](#) Under a bill set to be introduced on Thursday, carbon capture projects — considered important tools for fossil fuel power plants and industrial facilities to meet anticipated greenhouse gas restrictions — would qualify for tax-exempt private activity bonds, which helped clean up air pollution in the 1970s and 1980s.

[**Online engagement for sustainable energy projects: A systematic review and framework for integration.**](#) Barrios-O'Neill and Schuitema 2016, Renewable and Sustainable Energy Review. This paper addresses the question, how can sustainable energy projects increase engagement from consumers using interactive media communications? To this end, a systematic literature review was conducted in order to synthesise findings across four major disciplines, with the goal of identifying current and imminent challenges, as well as potential solutions, to engaging consumers with sustainable energy projects in the era of interactive media.

[**Gov. Mead launches Species Conservation and ESA Initiative workshops by urging collaboration, good intentions.**](#) Wyoming Gov. Matt Mead kicked off the first workshop of the [**Species Conservation and Endangered Species Act Initiative**](#) with a nod to the significance of wildlife in the West and a request to find the best way to employ state expertise to conserve it responsibly.

Tools

[**RE-Powering's Electronic Decision Tree.**](#) Developed by US EPA's RE-Powering America's Land Initiative, the RE-Powering Electronic Decision Tree tool guides interested parties through a process to screen sites for their suitability for solar photovoltaics or wind installations. EPA encourages renewable energy on already developed or degraded land instead of green space.

[**US EPA Decision Tree Tool Webinar.**](#) The recording of the webinar is available.

Upcoming Conferences & Trainings & Webinars

[**Wildlife Monitoring and Wind Energy**](#) webinar. Scheduled for Wednesday, December 2, 2015 from 4 to 5:30 pm UTC (8:00 am PT/11:00 am ET) developed as part of International Energy Agency's Wind Task 34 (also known as WREN – Working Together to Resolve Environmental Effects of Wind Energy).

[**Renewable Energy on Public Lands Webinar.**](#) Thursday, December 3, 2015, 1-2:30 p.m. (ET). Paul Hastings LLP, Department of the Interior, Defenders of Wildlife, Bureau of Land Management of California and B2BWebinars.com are pleased to announce the upcoming webinar, [**Renewable Energy on Public Land**](#)

[**Adaptive Management in the Marine Renewable Energy Industry Webinar.**](#) The webinar begins at 8:30 AM Pacific Time on December 10, 2015. It will delve into the concept of Adaptive Management (AM), and how it can be used as an effective decision making process in the face of uncertainty for the marine renewable energy industry. Basic principles of Adaptive Management will be discussed, as well as its benefits, drawbacks, how this concept has been utilized thus far, and its potential role in the future.

[**AWEA Wind Project Siting and Environmental Compliance Conference.**](#) March 22-23, 2016, Charleston, SC. where leaders from the wind industry, environmental permitting and compliance sector, the scientific community and

regulatory officials come together for a robust discussion about the current state of siting and environmental compliance, and network.

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, 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