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2012 Wind Wildlife Research Meeting Presents Latest Findings, Takes Stock of Progress in Understanding and Addressing Potential Wind Energy Impacts

The nation's leading scientists on wind energy and wildlife are convening November 27-30 in Denver, Colorado for the ninth biennial Wind Wildlife Research Meeting to share their latest findings and evaluate progress in understanding and addressing wind energy's potential impacts on wildlife and wildlife habitat. The meeting is co-hosted by the American Wind Wildlife Institute (AWWI) and the National Wind Coordinating Collaborative (NWCC). With over 40 speakers, 70 poster presentations, and 350 attendees, it is the largest ever of its kind.

"We've come a long way since the first Wind Wildlife Research Meeting was held 18 years ago," said Abby Arnold, Executive Director of the American Wind Wildlife Institute and Senior Facilitator for the National Wind Coordinating Collaborative, which are co-hosting the meeting. "Working with conservation groups, wildlife agencies, and wind energy companies, scientists have identified the questions to ask, are developing a body of peer-reviewed research across species and across disciplines, and are planning for future research priorities. We're building a strong scientific foundation for responsible wind energy development."

"The science is maturing to a point where we are able to draw preliminary conclusions about certain impacts and how much information is needed to in order to site and operate projects," said Dr. Taber Allison, AWWI's Director of Research and Evaluation and Wind Wildlife Research Meeting Chair. "The Land-Based Wind Energy Guidelines issued earlier this year by the U.S. Fish and Wildlife Service are a case in point: each decision about siting and operating a wind energy project is grounded in the evolving science." The Wind Wildlife Meeting agenda features a full-day Training Session on the U.S. Fish & Wildlife Service Land-Based Wind Energy Guidelines.

In the course of the Meeting, scientists will present their latest research for on- and offshore risk assessment, unprecedented planning at the landscape level, conservation and mitigation opportunities, and more.

Examples include:

Assessing habitat-based impacts: Are sensitive grassland birds such as Greater Prairie-Chickens negatively affected by wind energy development?

A research team led by Kansas State University has completed a comprehensive seven-year study focusing on Greater Prairie-Chickens, the first of its kind in scope of factors examined and in duration. Once abundant across the central plains, the Greater Prairie-Chicken is now threatened and isolated in much of its range mainly as a result of widespread conversion of its native prairie habitat to rowcrop agriculture. Concerns have been raised about possible impacts of wind energy development in Kansas and other windy Prairie states on remaining populations.

Using pre- and post-construction data, investigators tested for a broad range of possible impacts of wind power development on population performance, including male attendance at leks (communal display sites), breeding behavior, movements and use of breeding habitat, fecundity, natal dispersal (process by which young permanently depart from their natal area in search of new sites), female survival, and population numbers.

Little to no negative impacts were observed on most of the demographic parameters studied, including nest site selection, female reproductive effort, and nesting success. Overall, wind power development had a weak effect on the probability of lek persistence. Unexpectedly, female survival increased after wind turbines were installed.

“Our comprehensive, pre-and post-construction study suggests that Greater Prairie-Chickens were not strongly affected by wind power development in a fragmented landscape in northcentral Kansas,” said Brett Sandercock of Kansas State University, the lead researcher for the study. “The strongest correlates of population performance were the availability of native prairie and vegetative cover at the nest site. In current work, we are exploring the potential benefits of patch-burn grazing for enhancing habitat conditions for sensitive grassland species on private lands.”

Results for the preconstruction period appear in the *Journal of Wildlife Management* and *Studies in Avian Biology*. Following completion of peer review, results comparing the pre- and postconstruction periods of the study will be published in 2013.

Bats: What does the latest research tell us about the effectiveness of operational mitigation techniques to reduce bat fatalities?

Bat fatalities at wind turbines are of concern and have long perplexed researchers since these were first recorded ten years ago. Bats use echolocation to locate prey and it is unclear why they are unable, through echolocation, to avoid wind turbines, but instead sometimes appear to be attracted to the turbines.

In new research, Cris Hein (Bat Conservation International), Ed Arnett (Theodore Roosevelt Conservation Partnership), and Wallace Erickson, Jeff Gruver, David Young (WEST, Inc.) examine current efforts to minimize or reduce bat fatalities using operational mitigation techniques such as raising the turbine's "cut-in speed" (the wind speed at which the spinning blades of a turbine start to produce electricity into the power grid) during periods of high bat activity. The researchers reviewed data from a number of wind energy facilities in North America and Europe, and examined study methodologies and site-specific conditions such as differences in turbine height and design.

Their findings suggest that such measures yield significant reductions in bat fatalities, but that success does vary. As a result, the researchers present optimal models evaluated across these studies for this type of operational mitigation.

Following completion of the study, the results will be published in a peer-reviewed scientific journal.

Landscape-level Planning: The Great Plains Wind Energy Habitat Conservation Plan for the Whooping Crane and other endangered species.

Whooping cranes migrate along a 1500-mile long corridor extending from Canada to the Gulf of Mexico, which corresponds to some of the best wind resources in North America. To comply with the Endangered Species Act and seek to avoid potential impacts to four covered species, with a primary focus on Whooping Cranes, 17 wind industry companies, through their affiliation with the American Wind Energy Association and in collaboration with the US Fish and Wildlife Service and state agencies, are developing the Great Plains Wind Energy Habitat Conservation Plan (GPWE HCP).

In an innovative, forward-looking effort to design a landscape-level HCP that, according to the joint mission statement, "provides a means for reasonable wind power development in the planning area, that will support the survival and recovery of the species covered in the HCP," the plan considers the future development of wind energy facilities in a nine-state, 200-mile wide area of the central US. The companies are collaborating with the US Fish and Wildlife Service as well as the state wildlife agencies included in this 268 million acre area to analyze potential impacts from the proposed development and operation of wind energy facilities on two endangered species: the Whooping Crane and Interior Least Tern; one threatened species, the Piping Plover; and on the Lesser Prairie-Chicken, a species that is a candidate for listing. In a presentation on this collective work, Karen Tyrell, BHE Environmental, representing a team, will highlight the benefits of this regional conservation planning approach.

The Wind Wildlife Research Meeting agenda with a full list of presentation topics is included in http://www.nationalwind.org/assets/research_meetings/NWCC_Research_Meeting_IX_Program_Final.pdf

About the American Wind Wildlife Institute:

The American Wind Wildlife Institute (AWWI) leverages the power of collaboration and the voice of science to facilitate timely and responsible development of wind energy while protecting wildlife and wildlife habitat. For more information about AWWI initiatives and AWWI conservation and wind energy Partners, see www.awwi.org.

About the National Wind Coordinating Collaborative:

The National Wind Coordinating Collaborative (NWCC) provides a neutral forum so a wide range of stakeholders can pursue the shared objective of developing environmentally, economically, and politically sustainable commercial markets for wind power in the United States. The NWCC is now focused on the activities of its Wildlife Workgroup. The NWCC is funded by the U.S. Department of Energy's Wind and Water Technologies Program through the National Renewable Energy Laboratory and is facilitated by the American Wind Wildlife Institute. For more information on the NWCC see www.nationalwind.org.

About the Wind Wildlife Research Meeting:

The biennial Wind Wildlife Research Meeting provides an internationally recognized forum for researchers and wind-wildlife stakeholders to hear contributed papers, view research posters, and listen to panels that synthesize the most recent wind power-related wildlife research. This meeting is organized by the Wildlife Workgroup of the National Wind Coordinating Collaborative (NWCC) and presented by the American Wind Wildlife Institute (AWWI). Dr. Taber Allison, AWWI's Director of Research and Evaluation, is the meeting chair. The agenda was planned by AWWI with support from the meeting Planning Committee. For more information about the 2012 Wind Wildlife Research Meeting see <http://www.nationalwind.org/issues/wildlife/researchmeetingix.aspx>.

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