

NWCC WIND WILDLIFE RESEARCH MEETING

Virtual Meeting • December 1–4, 2020

PRESENTED BY AWWI

On-Demand Presentation List

Please find below a list of all meeting on-demand presentations, organized by presentation number. This number will help you navigate the presentations once they are available on the virtual meeting platform.

- 5 **Landscape and roost use by spring migrating female Indiana bats (*Myotis sodalis*)**
Presenting Author: Piper L. Roby, Copperhead Consulting

- 11 **Use of Camera Technology for Detecting Wildlife Mortality at Wind Turbines**
Presenting Author: Brogan Morton, Wildlife Imaging Systems LLC

- 12 **An evaluation of the cost-effectiveness of detection dogs and humans for incidental take permit monitoring**
Presenting Author: Meredith Rodriguez, Western EcoSystems Technology, Inc. (WEST)

- 13 **Sensitive bat species in Colorado and their relative susceptibilities to wind farm impacts**
Presenting Author: Pamela Wegener, Pinyon Environmental, Inc.

- 14 **Understanding the Effects of Offshore Wind Energy Development in the U.S. on Birds and Bats: Identifying Key Research Needs, Mitigation Measures, and Conservation Guidance**
Presenting Author: Kate Williams, Biodiversity Research Institute

- 15 **Potential ecosystem effects of large-scale implementation of offshore wind in the North Sea**
Presenting Author: Luca van Duren, Deltares

- 16 **Evaluating model-based approaches to assess collision risk at wind facilities**
Presenting Author: Greg Forcey, Normandeau Associates, Inc.
- 17 **Autonomous Eagle Smart Detection, Ground Deterrent and Blade-Event Monitoring**
Presenting Author: Roberto Albertani, Oregon State University
- 18 **Automated Enhanced Low-Energy Blade Impact Detection with Night Vision and Acoustics Capabilities**
Presenting Author: Roberto Albertani, Oregon State University
- 19 **Examining the effectiveness of blanket curtailment strategies in reducing bat fatalities at terrestrial wind farms in North America**
Presenting Author: Evan Adams, Biodiversity Research Institute
- 20 **Effects of wind energy development on pronghorn habitat selection**
Presenting Author: Megan Milligan, U. S. Geological Survey, Northern Rocky Mountain Science Center
- 21 **Ecosystem service models for onshore and offshore wind development**
Presenting Author: Liz Kalies, The Nature Conservancy
- 24 **Multirejestrator - polish tool to birds of prey monitoring and protection on windfarms.**
Presenting Author: Aleksandra Szurlej Kielańska, Bioseco; Department of Vertebrate Ecology and Zoology, University of Gdansk, Poland
- 25 **A decade of post-construction bird and bat monitoring at south-eastern Australian wind farms**
Presenting Author: Elizabeth Stark, Symbolix

- 26 **Reducing collision mortality through wind turbine shutdown: creating a predictive bird migration model with 3D radar data**
Presenting Author: Jonne Kleyheeg-Hartman, Bureau Waardenburg
- 28 **Optimal bat curtailment: A data-driven strategy to sustain bat populations while minimizing curtailment losses**
Presenting Author: Jonathan Rogers, Persimia, LLC
- 30 **Estimating cumulative numbers of collision victims, and impact assessment on population level**
Presenting Author: Astrid Potiek, Bureau Waardenburg
- 31 **Preliminary results on effectiveness of an ultrasonic acoustic deterrent from bat flight cage trials**
Presenting Author: Brittany Stamps, Texas State University
- 32 **Assessing Population-Level Consequences of Wind Energy on Birds**
Presenting Author: Todd Katzner, U.S. Geological Survey
- 33 **Effects of turbine design on bird and bat fatalities at wind energy facilities in Ontario, Canada**
Presenting Author: Alexandra Anderson, Trent University
- 35 **Temporal, topographic, and meteorological correlates of Golden Eagle flight behavior in California's Tehachapi Wind Resource Area**
Presenting Author: Michael Kuehn, AECOM
- 36 **Offshore bat activity patterns detected by vessel-based acoustic monitoring**
Presenting Author: Katelin Craven, Tetra Tech, Inc.
- 37 **Effect of repowering on mortality depends on energy production not turbine size**
Presenting Author: Manuela Huso, U.S. Geological Survey

- 39 **Predicting annual variation at large spatial scales in at-sea foraging distribution of a mobile seabird of high conservation value**
Presenting Author: Rob van Bemmelen, Bureau Waardenburg
- 41 **Avian and Bat Mortality Patterns at Wind and Solar Energy Facilities**
Presenting Author: Wallace Erickson, Western EcoSystems Technology, Inc. (WEST)
- 42 **Bat Fatality Timing at Wind Farms across the Continental U.S. and Canada**
Presenting Author: Wallace Erickson, Western EcoSystems Technology, Inc. (WEST)
- 43 **A Review of the Issues of Uncertainty in Cause of Death and Background Mortality in Avian Fatality Monitoring Studies.**
Presenting Author: Daniel Riser-Espinoza, Western EcoSystems Technology, Inc. (WEST)
- 47 **Improved behavioral classification of flight behavior informs risk modeling of bald eagles at wind facilities in Iowa**
Presenting Author: Silas Bergen, Winona State University
- 48 **Migratory bird twilight ascent and descent rates along the southwestern shoreline of Lake Erie**
Presenting Author: Michael Wellik, U.S. Geological Survey
- 49 **A new physics-based model for guiding bat carcass surveys at wind turbines**
Presenting Author: Shivendra Prakash, University of Iowa
- 51 **Flight behavior of Golden Eagles in Wyoming: Implications for wind power**
Presenting Author: Tricia Miller, Conservation Science Global

- 52 **Elasmobranchs and EMFs: An evaluation of the potential cumulative effects of electric and magnetic fields (EMFs) from offshore wind development on elasmobranchs in the Massachusetts Wind Energy Area**
Presenting Author: Cristen Mathews, DNV GL
- 53 **Keeping the lights on: first attempt at year-round nighttime ultraviolet illumination of wind turbines for deterring bats.**
Presenting Author: Paul Cryan, U.S. Geological Survey
- 54 **Movement patterns of migratory tree-roosting bats during autumn migration**
Presenting Author: Erin Swerdfeger, University of Regina
- 55 **Hawaiian hoary bat (*Lasiurus cinereus semotus*) behavior at wind turbines on Maui**
Presenting Author: P. Marcos Gorresen, Hawai'i Cooperative Studies Unit, University of Hawai'i at Hilo
- 56 **Behavioral patterns of bats at a wind turbine confirm seasonality of fatality risk**
Presenting Author: Shifra Goldenberg, Smithsonian Conservation Biology Institute
- 57 **How low can you go? Optimizing curtailment on a regional scale to reduce bat fatalities and energy loss.**
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- 59 **Modification of Eagle Search Methods with Consideration of Project Topography**
Presenting Author: Marci Trana, Western EcoSystems Technology, Inc. (WEST)
- 60 **The use of radar and observers: from strategic planning to mitigation**
Presenting Author: Ricardo Tomé, STRIX – Environment and Innovation

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Presenting Author: David Wilson, The Biodiversity Consultancy
- 62 **Ecology of scour protection in offshore wind farms – biodiversity enhancement, ecosystem-services and options for eco-design from Europe**
Presenting Author: Wouter Lengkeek, Bureau Waardenburg
- 63 **A Multi-Sensor Approach for Measuring Bird and Bat Collisions with Offshore Wind Turbines**
Presenting Author: Rebecca Schmitt, Western EcoSystems Technology, Inc. (WEST)
- 64 **Relationship between Bat Fatality Rates and Turbine Size at Wind Farms across the Continental U.S. and Southern Canada**
Presenting Author: Kevin Murray, Western EcoSystems Technology, Inc. (WEST)
- 65 **Emerging applications and trends related to remotely sensed imagery analysis for habitat and wildlife mapping in support of wind energy project development**
Presenting Author: Ian Evans, DNV GL
- 66 **A test of weather and time-based smart curtailment for bat fatality reduction**
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- 67 **Automated measurements of bird movements in an offshore wind farm**
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- 68 **Landscape factors associated with fatalities of migratory tree-roosting bats at wind energy facilities in the midwestern and northeastern U.S.**
Presenting Author: Kimberly Peters, DNV GL
- 73 **Performance of the GenEst mortality estimator compared to the Huso and Shoenfeld estimators**
Presenting Author: Paul Rabie, Western EcoSystems Technology, Inc. (WEST)

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Presenting Author: Mona Khalil, U.S. Geological Survey
- 75 **Estimating bat fatality at a Texas wind energy facility: Implications transcending the United States-Mexico border**
Presenting Author: Sara P. Weaver, Bowman Consulting Group
- 76 **Beyond 8760s: How a Novel Approach to Time-Based Analyses Will Better Inform Bat-Take Minimization Choices**
Presenting Author: Taylor Parsons, DNV GL
- 77 **Situational Performance of Mortality Estimators**
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- 79 **A machine learning based intelligent thermal camera vision system for detecting, identifying, and tracking biological targets in and around wind turbines**
Presenting Author: John Yarbrough, National Renewable Energy Laboratory
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Presenting Author: Scott Larsen, U.S. Fish and Wildlife Service
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- 82 **Demographic impact of avian fatalities at wind energy facilities**
Presenting Author: Tara Conkling, U.S. Geological Survey

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- 84 **Monitoring Bat Activities at a Large Wind Farm Using an X-Band Radar and Infrared Cameras**
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- 86 **A framework for predicting migratory behavior and wind-development impacts: Uniting morphological and life-history characteristics with distribution-based migration models**
Presenting Author: Caitlin Campbell, University of Florida
- 87 **Nightly, Seasonal, And Annual Patterns Of Hawaiian Hoary Bat Activity From Bat Acoustic Monitoring At Wind Farms In Hawai'i**
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- 90 **Fatality minimization targets for hoary bats assuming capacity for compensatory growth**
Presenting Author: Nicholas Friedenber, Western EcoSystems Technology, Inc. (WEST)
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Presenting Author: Kristen Nasman, Western EcoSystems Technology, Inc. (WEST)
- 92 **Factors that influence the efficacy of operational minimization revealed by quantitative meta-analysis**
Presenting Author: Michael Whitby, Bat Conservation International
- 93 **Eastern red bat (*Lasiurus borealis*) and hoary bat (*Lasiurus cinereus*) foraging habits in an agricultural landscape**
Presenting Author: Timothy Sichmeller, Western EcoSystems Technology, Inc. (WEST)

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Presenting Author: Regis Thedin, National Renewable Energy Laboratory
- 97 **Assessment of Marbled Murrelet (*Brachyramphus marmoratus*) Movements and Potential Collision Risk in Northern California.**
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Presenting Author: Cheryl Horton, U.S. Geological Survey, Western Ecological Research Center
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Presenting Author: Erin Baerwald, University of Northern British Columbia
- 101 **Unmanned aerial systems equipped with thermal cameras as a potential method for detection of hibernacula used by bats.**
Presenting Author: Michael Gerringer, Western EcoSystems Technology, Inc. (WEST)
- 102 **Development of a meteorological data set to support research of volant species**
Presenting Author: Caroline Draxl, National Renewable Energy Laboratory
- 104 **National-Scale Impacts on Wind Energy Production under Curtailment Scenarios to Mitigate Bat Fatalities**
Presenting Author: Galen Maclaurin, National Renewable Energy Laboratory
- 106 **Genetics 101: Applications for the Wind Industry**
Presenting Author: Elizabeth Baumgartner, Western EcoSystems Technology, Inc. (WEST)

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Presenting Author: Danielle O'Neil, Harvard Extension School
- 109 **Estimating the Likelihood that Wind Turbines cause Barotrauma in Bats**
Presenting Author: Michael Lawson, National Renewable Energy Laboratory
- 110 **Eagle Nest Issues and Solutions: Case Studies from Across the US**
Presenting Author: Bernadette Bezy, Stantec Consulting Services Inc.
- 111 **Quantifying Turbine-Level Risk to Golden Eagles Using a High-Fidelity Updraft Model and a Stochastic Behavioral Model**
Presenting Author: Rimple Sandhu, National Renewable Energy Laboratory
- 112 **Habitat use acoustics for preconstruction turbine micro siting**
Presenting Author: Adam Rusk, Stantec Consulting Services Inc.
- 116 **Simple curtailment in Australia, a compromise between bat mortality and energy production.**
Presenting Author: Emma Bennett, PhD student at Monash University and the Principle Ecologist of the Elmoby Ecology Lab
- 118 **Autumnal Movement by "Tree" Bats of the Mid-Atlantic Coast: Evidence from the Motus Wildlife Tracking Systems and Stationary Acoustics**
Presenting Author: Michael True, Virginia Polytechnic Institute and State University
- 119 **Collision risk modeling and decision support for endangered birds in the western Atlantic**
Presenting Author: Christopher Field, University of Rhode Island