

Bats and Wind Energy Workshop

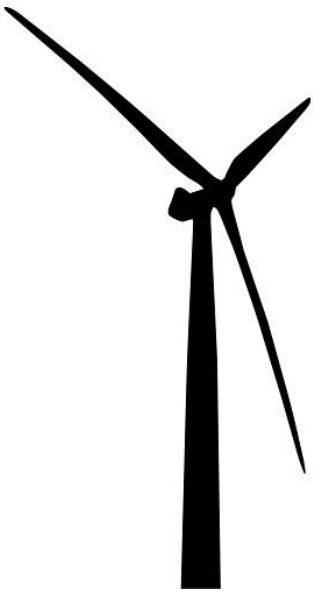
WESTERN BAT WORKING GROUP

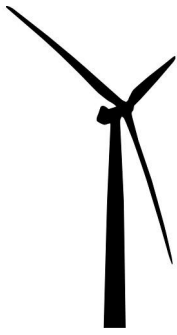
Austin, Texas
Radisson Austin Town Lake

April 13 – 15, 2009

- Latest **information** and **training** for predicting risk and conducting surveys for bats at wind energy developments
 - acoustics
 - field/study designs
 - pre- and post-construction protocols
 - mitigating fatalities
 - equipment instruction and demos
- Targeted at land managers, government regulators, industry professionals and consultants
- Instructors/presenters: professionals, academics, and equipment designers
- Come witness the emergence! *Congress Avenue Bridge Brazilian Free-tail bats* – acoustic, night vision, and thermal imaging demo
- WBWG Biennial Conference and Meeting to follow

www.wbwg.org for more information





***Bats and Wind Energy Workshop
Radisson – Town Lake
Austin, Texas***



Monday, 13 April 2009:

1830-1930 BATS 101
Joe Szewczak, Humboldt State University

1900-2100 EVENING SOCIAL and CONGRESS AVE. BRIDGE BAT EMERGENCE

Tentative Schedule, Tuesday, 14 April 2009:

SESSION 1: INTRODUCTION to WIND ENERGY AND BAT ISSUES
Moderator: Ed Arnett, Bat Conservation International

0800 Welcome and Opening Remarks
Carter Smith, Executive Director, Texas Parks and Wildlife Department

**0815 Future Wind Energy Technology Development in the United States and
Implications for Wildlife**
Robert Thresher, National Renewable Energy Laboratory

0855 Political and Legal Aspects of Wind Energy Development: the Texas Experience
Glen Webb, McMahon, Surovik, and Suttle Attorneys

0935 Wind Energy Development and Wildlife: Industry Challenges and Perspectives
Jim Lindsay, FPL Energy

1015 Question/Answers

1030 BREAK

1050 Patterns of Bat Fatality at Wind Energy Facilities in North America
Ed Arnett, Bat Conservation International

**1125 An Overview of Guidelines and Protocols for Wind Energy Development:
Implications for Bats and Other Wildlife**
Bronwyn Hogan, California Department of Fish and Game

1200 Question/Answers

1215 LUNCH (on your own)

SESSION 2: STUDY DESIGN, DATA NEEDS, AND ESTIMATORS OF FATALITY
Moderator: Bronwyn Hogan, California Department of Fish and Game

**1330 An Evaluation of Study Design, Biases, and Limitations of Post-Construction
Studies**
Wallace P. Erickson, Western Ecosystems Technology

1415 **Estimators of Wildlife Fatality: A Critical Examination of Methods**
Manuela Huso, Oregon State University

1500 **Question/Answers**

1520 **BREAK**

SESSION 3: POST-CONSTRUCTION STUDIES and CONSIDERATIONS
Moderator: Mike Herder, Bureau of Land Management

1540 **Post Construction Fatality Studies and Lessons Learned**

Eastern U.S.: Ed Arnett, Bat Conservation International
Western/Midwest U.S.: Jeff Gruver and Wally Erickson, WEST
Canada: Erin Baerwald, University of Calgary
Europe: Ivo Neirmann, University of Hanover

Each presentation will be 20 min. Topics will include: plot layout, plot and habitat delineation, handling carcasses and injured bats, conducting searcher efficiency and carcass removal trials, other data collection procedures, key findings from studies.

1700 **Question/Answers/Discussion**

1730 **ADJOURN (dinner on your own)**

1930 **Equipment Demonstration at Congress Avenue Bridge**
(Acoustic detectors, night vision, thermal imaging)

Instructors:

Chris Corben, Titley Electronics (ANABAT detectors)
Mark Jensen, Binary Acoustic Technologies (BAT detectors)
Joe Szewczak, Humboldt State University (Pettersson detectors and SONOBAT)
Liz Braun, Boston University (Infrared Thermal Imaging)
Todd Mabee, ABR (Night Vision Binoculars)
Adam Kelly, DeTect (Radar)

Tentative Schedule, Wednesday, 15 April 2009:

SESSION 4: PRE-CONSTRUCTION TOOLS FOR ASSESSING BAT ACTIVITY
Moderator: Cori Lausen, Birchdale Ecological, Ltd.

0800 **An Overview of Tools for Assessing Preconstruction Bat Activity at Proposed Wind Facilities**
Joe Szewczak, Humboldt State University

0830 **Design Considerations and Data Needs for Pre-Construction Assessments**
Ed Arnett, Bat Conservation International

0900 **Pre-Construction Studies: Techniques and Lessons Learned**

Key Findings and Deployment of Acoustic Equipment:
Jeff Gruver, Western Ecosystems Technology, Ted Weller, USFS

Acoustic Identification of Bats
Eric Britzke, US Army Corps of Engineers

Use of Marine Radar to Study Bat Emergence and Movement Patterns

Donald Solick, Western Ecosystems Technology

New Advances in Radar Technology

Adam Kelly, DeTect

1020 Questions/Answers

1040 BREAK

SESSION 5: AVOIDING AND MINIMIZING BAT FATALITIES

Moderator: Ted Weller, USFS Redwood Sciences Lab

1100 Options for Mitigating Bat Fatalities at Wind Facilities

Ed Arnett, Bat Conservation International

1110 Changing Turbine Cut-In Speed to Reduce Bat Fatalities at Wind Turbines

Erin Baerwald, University of Calgary

Ed Arnett, Bat Conservation International

1130 Development of Acoustic Deterrents to Reduce Bat Fatalities

Joe Szewczak, Humboldt State University

1200 Question/Answers

1215 LUNCH (on your own)

SESSION 6: BREAK OUT GROUPS (*session will last 1 hour and 15 min and will repeat 3 times with a 15 min break; ** session will last 4 hours)

1330-1730 *Anabat Detectors, Software, and Analysis Chris Corben, Titley Electronics; Eric Britzke, US Army Corps of Engineers

***Pettersson Detectors and Sonobat Software** Joe Szewczak, Humboldt State University

***Binary Acoustic Technology Detectors** Mark Jensen, Binary Acoustic Technologies

***Field Methods for Deploying Detectors** Michael Schirmacher, Bat Conservation International; Cris Hein, ABR; Donald Solick, Western Ecosystems Technology

***Radar Systems** Adam Kelly, Detect

***Carcass Searches** Ed Arnett, Bat Conservation International; Erin Baerwald, University of Calgary; Jeff Gruver, Western Ecosystems Technology

****Fatality Estimation** Manuela Huso, Oregon State University

1730 ADJOURN