

# Avian Workgroup #8

## Meeting Summary

November 5, 1997 - Boston, Massachusetts

**Welcome and Introductions** *Bill Grant, Izaak Walton League  
and Dick Anderson, California Energy Commission*

As outgoing Workgroup co-chair, Bill Grant noted that the NWCC's emphasis is moving beyond research, consensus-building, and preparing reports to conducting outreach and information dissemination and becoming actively involved in areas where wind development is occurring; until now the Avian Workgroup has been in NWCC's "old mold" and focused on creating dialogue on the issues. Bill noted that while it would be a mistake to cut off this process prematurely, the Workgroup may be behind the curve of the rest of the NWCC and may soon feel pressure to complete works in progress and translate research results into tools for various stakeholders. Dick Anderson thanked Bill for all his hard work as Avian co-chair. Bill noted that having a co-chair to divide up the workload may be desirable; others agreed that recruiting Workgroup replacements, particularly to balance stakeholder groups, is needed.

## **Research Status Summaries**

NREL now has an Avian Literature Database on its avian site on the [National Wind Technology Center's](#) web page.

- *Modeling - Karin Sinclair, National Renewable Energy Lab*

NREL funded a project to develop a modeling framework for evaluating potential wind power facility impacts that can be generalized to most bird species. Mike Morrison and Ken Pollock have written a paper which:

- Reviews the major factors that can influence the persistence of a wild population;
- Briefly reviews various models that can aid in estimating population status and trends, including methods of evaluating model structure and performance;
- Reviews survivorship and population projections; and
- Develops a framework for using models to evaluate the potential impacts of wind development on birds.

Sensitivity analyses were conducted on five avian species to determine the effects of survival of age classes on population growth rates. Modeling can help narrow the scope of research requirements for a potential site.

- *Colorado - Karin Sinclair*

Public Service Company of Colorado and Distributed Generation have been co-funding avian research at the Ponnequin wind energy project in Weld County, Colorado; NREL has funded parallel research on reference sites. Based on the information in an environmental assessment of the site, the DOE has issued a finding of no significant impact.

- *CARES - Karin Sinclair*

WEST, Inc. will begin research on the use of bird flight diverters on guy wires as a mitigation technique for Flowind AWT turbines. Pre-construction research at Columbia Hills will include behavioral and mortality studies for the proposed 25 MW site.

- *Altamont Perching Study - Karin Sinclair*

NREL is seeking access to turbines in Altamont to conduct avian perching research to:

- Determine the behavior of birds flying near, and perching on turbines;
- Determine the relationship between flight behavior, perching, and bird mortality;
- Explore the factors responsible for bird turbine interactions and bird death; and
- Develop recommendations for reducing bird-wind turbine interactions.

Dick Curry of Energy Choice is currently involved in installing 1-3 different types of perch guards on some turbines in Altamont for Kenetech and its partners. NREL is not involved in this research.

- *Vermont - Karin Sinclair*

Paul Kerlinger examined day/night migrations, breeding, and avian fatalities at the Searsburg site as an NREL-STEP state co-funded project. Four interim reports have been completed; a final report is expected by January.

- *Avian Physiology - Karin Sinclair*

Research conducted at Boise State University on the visual capacities of raptors to see blades, including lab work on painted blade patterns, is being compiled; the first report is out for peer review.

- *Altamont Golden Eagle Study - Dick Anderson, California Energy Commission*

Grainger Hunt has released his second year report (available through NREL) tracking 179 golden eagles to determine causes of mortality and population stability. Through August of 1996, fatalities of 26 radio-tagged golden eagles were examined. Of those 26, 9 were from turbine strikes – about one-third. In Grainger's draft final report, which studied the eagles through June 1997, 52 fatalities were recorded, with 17 from turbine strikes – still about one-third. Other causes of death include: fledging mishap (6), lead poisoning (2), electrocution (9), car strikes (3), botulism (1), killed by another eagle (2), fence collisions (2), shooting (1); unknown (9). Meeting attendees questioned whether lead poisoning had been tested as leading to disorientation for the collisions.

- *Montana - Dick Anderson*

Research in Montana has been conducted to determine if radar is useful in avian studies. Much larger numbers of sightings are recorded, but many are high above the field of risk for turbines (however bad weather can bring birds closer to the ground). Flight patterns, speed and elevation can indicate species. Activity after sunset and nocturnal migration was noted, which wasn't detected visually. The technology was found to be an important tool for high risks areas to identify the level of bird activity.

- *Minnesota - Dick Anderson*

WEST is conducting research in the Buffalo Ridge area to compile before and after information. Average annual fatalities of 1.4 birds per turbine were estimated; bird populations have not been impacted to date.

- *Tehachapi & San Geronio - Dick Anderson*

Little bird activity has been found in the desert, although recharge basins attract water fowl. Scavenging was found to remove 95% of carcasses within 5 days; feather spots were visible for one month.

### **National Avian-Wind Power Planning Meeting III**

*Purpose, program, date, and location - Dick Anderson*

Proposed draft agenda is attached -- meeting has been tentatively scheduled for May 27-29 in San Diego, 1 1/2 hours from San Geronio. Focus of day 3 should be on outreach and additional current needs such as providing a "decision tree" tool for developers to determine which sites are appropriate for development.

### **Standard Metrics and Methods for Monitoring Avian/Wind Energy Interactions**

*Dick Anderson*

*Update:* The first draft NWCC avian metrics document has been sent out for broad stakeholder peer review, with comments requested by January 15. Once feedback is incorporated; a revised and edited report will be circulated for Workgroup review. The Workgroup will meet and discuss the document at the Planning Meeting III in May to determine if NWCC approval will be sought at the June Plenary meeting.

### **Standard Metrics and Methods Workshops, Ft. Collins Workshop**

*Dick Anderson*

Opportunities to disseminate the metrics recommendations to the public include a symposium planned by the Colorado Governor's Office for the fall of 1998 in Ft. Collins; the Workgroup may consider supporting other public workshops in the future.

### **Briefing Paper/Summary of Current Research and Findings**

*Steve Ugoretz, Wisconsin DNR Energy Team*

Steve Ugoretz has volunteered to develop a summary report of the various avian-wind studies and results to date as an initial product for state regulators, similar to other issue papers in NWCC's series.

### **Discussion: Future Avian Workgroup Efforts**

*All*

Ideas for reaching a larger audience included developing a National Geographic-type documentary, slideshows, a speakers' bureau to interact with grassroots citizens groups, local Audubon clubs, and Fish & Wildlife conferences. Paul Kerlinger offered assistance on developing this.

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## **Avian Workgroup Meeting #8 Participants**

*November 5, 1997*

*Boston, Massachusetts*

- Jim Anderson, *New Hampshire Office of the Consumer Advocate*
- Dick Anderson, *California Energy Commission*
- R.T. "Hap" Boyd, *Enron Wind Corp.*
- Peter Goldman, *U.S. Department of Energy*
- Bill Grant, *Izaak Walton League of America*
- Chester Hamilton, *U.S. Fish and Wildlife Service Division of Law Enforcement*
- Larry Hartman, *Minnesota Environmental Quality Board*
- Paul Kerlinger, Ph.D., *R. Curry & Associates*
- Peter Paton, *University of Rhode Island Dept. of Natural Resources Science*
- Heather Rhoads, *RESOLVE, Inc.*
- Patricia L. Rogers, *U.S. Fish and Wildlife Service Division of Law Enforcement*
- Karin Sinclair, *National Renewable Energy Laboratory*
- Robert W. Thresher, *National Wind Technology Center*
- Steve Ugoretz, *Wisconsin Dept. of Natural Resources Energy Team*