

**Meeting Summary**  
**National Wind Coordinating Committee**  
**Wildlife Workgroup**  
**Grassland/Shrub Steppe Species Subgroup**  
**Initial Meeting**  
**March 29-30**  
**Wichita, KS**

**Welcome and Purpose:**

Abby Arnold, RESOLVE, welcomed attendees to the National Wind Coordinating Committee Wildlife Workgroup's first in-person meeting of the Grassland Species Subgroup and described the objectives of the NWCC. The meeting attendees went around the room and introduced themselves and described their interest in grassland species/wind power interactions. Meeting participants and their contact information is provided at the end of this summary.

The group reviewed the agenda, including the meeting purpose. The meeting agenda is provided at the end of this document. Meeting objectives included:

- Initiating the subgroup
- Introducing how wind power sites are identified and developed
- Introducing what is known about grassland species and habitat needs
- Familiarizing participants with what is known about the effects of habitat fragmentation on grassland species
- Identifying questions participants have about real or potential impacts of wind development on grassland species
- Introducing possible research questions or opportunities
- Identifying who else needs to be involved in this issue.

The itinerary was reviewed for field trips to the Elk River I and Leon sites to be taken the following day.

Participants agreed to operate by consensus, i.e. all can live with decisions, during the morning session and review the Subgroup proposed groundrules in the afternoon. A proposal was made and accepted to change the Subgroup name to Grassland/Shrub Steppe Species Subgroup to better characterize the group's focus.

**What is Involved in Site Selection for a Wind Facility:**

Andy Linehan of PPM Energy provided an overview of the wind power development process. This included reviewing the factors needed for a successful wind site, the role of the production tax credit, constraints on development, permitting practices, project time frames, and applicable federal permits and regulations. The stages of project environmental assessment were also detailed, including site risk assessment/Phase 1 study, information review, habitat mapping, and avian/bat use surveys. The websites of AWEA, NWCC, and the Washington Department of Fish and Wildlife provide additional guidance on wind projects. (Visit [www.nationalwind.org](http://www.nationalwind.org) for meeting presentations).

Questions that arose following this presentation included:

- What happens if there is a significant problem at a wind site?
- Are all pre-construction studies done on adult mortality?
- Is study done on productivity effects for juveniles?
- How is “significant biological impact” defined? Who chooses the acceptable mortality levels?
- What are the spatial impacts of turbines?
- Would studies at 3-4 key sites with proper study design be more useful than studies at every wind project site?

A member from the development community said typically when a wildlife mortality issue arises, the sponsoring agency convenes a technical advisory committee (TAC) that works on the issue, and identifies options for additional study and/or mitigation, such as additional off-site conservation, installation of artificial raptor nest platforms, etc.

The group discussed the pros and cons of siting wind farms on agricultural land versus rangeland. Members in favor of siting on cropland felt that typically fewer issues were encountered when building on agricultural land rather than on prairie, particularly in terms of permitting and wildlife impacts. Wind projects can also be viewed as a way of preventing suburbanization of agricultural regions. Other participants suggested that a preference for building wind farms on cropland encourages landowners to turn prairie into crops, in turn contributing to habitat loss, soil erosion, and other related problems. Also, cropland can provide wildlife habitat that is disturbed through wind facility construction and/or operation. Apparently the USFWS is debating policy on this subject at this time.

Wildlife studies done pre- and post-construction have focused on adults; however, some members expressed that adult mortality is not the only concern and that population modeling would be more valuable. Some members voiced concern that populations are not simply displaced but can actually disappear after a human-induced disturbance. As one member commented, there is not a concrete definition of what is a “biologically significant impact.” The NWCC held a workshop related to this subject entitled “How Is Biological Significance Determined When Assessing Possible Impacts?” in Washington, DC on November 17, 2003. Information from that meeting is available at <http://www.nationalwind.org/events/wildlife/2003-2/default.htm>.

The group discussed the standard regarding impacts that the wind industry is being held to and how, if possible, to hold other industries to the same standard. Differences in study approach for large and small wind developers were mentioned.

Several group members encouraged studies at 3-4 key sites rather than at all proposed wind projects. The suggestion was made that a peer-reviewed matrix be created through the Subgroup/NWCC for site evaluation to be distributed to regional state and federal offices.

## **Summary of What is Known About Grassland Species and Impact of Habitat Fragmentation on Grassland Species:**

Jill Shaffer of the USGS Northern Prairie Wildlife Research Center began this session by presenting on Natural and Anthropogenic Influences on Grassland Birds. She defined a grassland bird as any species that relies on grassland habitats to support some portion of its life cycle. The USGS has a draft document on management practices for grassland birds on its website at [www.npwrc.usgs.gov/resource/literatr/grasbird/grasbird.htm](http://www.npwrc.usgs.gov/resource/literatr/grasbird/grasbird.htm)

Types of prairie and sources of prairie loss were covered. The USFWS Grassland Easement Program (GEP) was described, including the current policy on wind turbines. Currently turbine development is allowed on Grassland Easements at a density of 1 per quarter section, with USFWS reserving the option not to allow turbines if certain conditions cannot be met. The policy does allow clumping, i.e. there may be 4 turbines per quarter section if the rest of the section remains without turbines. The decision that has not yet been made is whether turbines are compatible with meeting the requirement of the GEP to protect nesting and resting habitat for grassland birds.

Population trends for several grassland bird species were depicted. These populations are affected by habitat loss, fragmentation, and degradation, including related increases in brood parasitism, predation, and introduction of non-native species. The results of a study by Pitman, Robel, and others coming out in the Journal of Wildlife Management this year show lesser prairie-chickens did not nest within 400 m of transmission lines or improved roads. Robel et al. also have another publication about human activity impacts on lesser prairie-chickens (see citation below):

*Citation: Robel, R. J., J. A. Harrington, Jr., C. A. Hagen, J. C. Pitman, and R. R. Reker. 2004. Effect of energy development and human activity on the use of sand sagebrush habitat by lesser prairie-chickens in southwestern Kansas. Trans. 69th North American Wildlife and Natural Resources Conference.*

Maps shown of the Dakotas illustrated that areas with good wind resources like the Missouri Cotau tend to overlap areas with high grassland bird potential. Jill Shaffer and Doug Johnson from USGS are currently studying the compatibility of wind development and grassland bird species.

Stephanie Harmon of the US Fish and Wildlife Service continued this presentation, describing what is known about habitat fragmentation and describing the forms of fragmentation: spatial, seral, structural, and behavioral. Fragmentation effects are not instantaneous and they are also cumulative.

Next, the group discussed whether they wanted to continue on this issue and if so what kind of product would be appropriate.

## **What Research Ideas Do We Have to Address? Questions About Wind Development Impact and Mitigation?:**

The group went around the table, giving each participant the opportunity to answer the following questions:

1. Does the group want to organize into a more formal group?
2. What type of product should come out of today's meeting?

In response to question one, all agreed forming a subgroup was a good idea. Question two prompted recommendations for various research plans involving studying a range of grassland and shrub steppe species.

There was not a consensus on whether just a few indicator species could be studied or if all regional species should be included. Given that prairie grouse like the lesser prairie-chicken are a candidate for threatened and endangered species listing and are considered a keystone species, some participants wanted proposed study to focus on prairie grouse. Others felt including all species to be important and considered data obtained on prairie grouse only to be relevant to prairie grouse. Whether future study should focus more on chick survival than adult mortality was also mentioned; there is a need to figure out which life cycle components are influenced by wind sites.

Through its discussion, the group developed the following general research questions:

- What are the effects of wind developments on grassland/shrub steppe birds?
- Are there ways to reduce, minimize, or mitigate the effects (both on- and off-site)?

The group talked about various research methods, including telemetry studies or new technologies like forward looking infrared (FLIR) cameras. One member recommended developing a research hypothesis first and then describing specific research techniques.

Several members commented that a literature review relevant to wind power but including other research done on prairie grouse is a key product that the group could develop. How this endeavor, and specific research on wind/species interaction, might be funded was another oft-mentioned topic. Some members suggested using a funding collaborative similar to that of BWEC (Bat Wind Energy Collaborative). Specific funding possibilities brought up included the USFWS, USGS, the National Academy of Sciences, wind developers, NREL, and state Department of Wildlife offices.

The timing of research is another important question related to when projects are going in and when funding becomes available. There are wind facilities going in this year, but there is no guarantee that the same will be true next year. Also, members of the wind industry voiced their desire for guidance on how to accommodate for grassland/shrub steppe species as soon as possible. The sooner research is completed and recommended development guidelines set forth, the sooner the wind industry can apply those guidelines. However, researchers present noted that time is required to review other literature, obtain buy-in from researchers, and conduct research that will stand up to peer review.

After discussing whether a research project for this spring was feasible, the group agreed to developing both a short-term research plan aimed at Spring 2005 and a long-term research plan. There will be separate plans for prairie grouse and other species.

### **What Is Our Workplan? Who Will Do What By When?**

The Subgroup developed a draft two-step workplan, containing short- and long-term phases.

#### **Short-term Workplan for All Grassland/Shrub Steppe Birds, Spring 2005**

##### **A. Literature Review**

- Sponsor a critical literature review detailing how study on grassland/shrub steppe species is done, limitations, and applicability to wind projects. Include the following topics:
  - Wind Power
  - Transmission Lines
  - Substations
  - Roads
  - Oil and gas research?
  
- A cost estimate will be established and funds will be solicited.
- Volunteers from the Subgroup will be solicited to help select a contractor.
- An RFP for the critical lit review will be drafted by Abby Arnold and Katie Kalinowski, and then sent to the group for review before soliciting bids. Potential bidders to approach include:
  - Mary Rowland (Leland, OR)
  - Grouse Inc
  - WEST
  - USGS
  - Oklahoma State University
  - Leslie Robb (Bridgeport, WA)
  - Lewis Best, Iowa State
  - Lynn Sharp, TetraTech

Criteria suggested for the researcher chosen:

- Experience with grassland birds or prairie birds beneficial
- Have conducted lit reviews
- Demonstrated ability to write, produce on time, cost
- Access to library facilities/database

Group members felt the lit review should focus on indirect bird mortality (at least initially). Questions for the researcher to consider include:

1. What are effects of wind development on grassland and shrub steppe avian species (including influence on predators of avian species)?
2. What are the secondary and tertiary effects?

## **B. Spring/Summer 2005 Research Topics**

The following topics identify areas for beginning the research process prior to the commencement of long-term research.

- Grassland Birds (small)
  - Gather data at Rugby site, building on what USGS and WEST have been doing
  - Determine whether songbird surveys are needed at the Elk River location
  - Observe breeding birds in May-June
- Prairie Grouse Lek Locations
  - Focus on Elk River I site and determine what counts are in this 3rd year of development preparation compared to years 1 & 2—not agreement among researchers on whether there is a need to count leks in year 3
  - Start building a database for Elk River II
  - Season for observation: April-May

## **Long-term Workplan [To be conducted in 2006]**

### **C. Conduct Management Experiments**

- Cultural
- Mitigation—what does it take to mitigate on site (monetary compensation, vegetation management, etc)
- Minimization of effects-different than mitigation, further study needed
- Best management practices (BMPs) for regions with grassland/short steppe species, compare with BLM BMPs

A few group members expressed that there are additional parties that need to be engaged in the Subgroup's conversation. Engaging developer participation for site access and possibly funding support is needed. A participant recommended preparing a small write-up to present to developers' management boards outlining how grassland/shrub steppe species affect their ability to finance and build a project, including tie-ins to federal regulations and programs. Some members also voiced a need for additional participation by the academic/government scientific community as the group proceeds. The group discussed conducting a workshop in the Fall of 2005 to review a draft long term research workplan.

The next draft of the *Proposed Interim Operating Protocols for Grassland Species Subgroup* will include new *Developing Priorities* and have the sections on technical and scientific advisory committees removed. Group members agreed to operate under consensus for now and to respect confidentiality as outlined in the protocols.

### **Next Steps**

- Robert Robel and Clait Braun will begin to draft a research plan for a telemetry study on prairie grouse. Wally Erickson, Jill Shaffer, and Doug Johnson will draft a research plan for studying grassland birds other than prairie grouse.

- A workshop to review research plans was proposed for Fall (2005) September/October; Katie Kalinowski will send out a scheduling form.
- Katie will schedule a Subgroup conference call for the last week in April to discuss draft research plans.
- Abby Arnold will edit the *Proposed Interim Operating Protocols for Grassland Species Subgroup* to incorporate meeting developments
- John Bridges will report to the Wildlife Workgroup at the May 4-5 meeting in Denver on the Subgroup's activities.
- A letter of interest must be submitted if the Subgroup is interested in obtaining money (\$50,000 per region) designated for urgent research available from USFWS Regions 2 and 6 with USGS approval.
- Jim Mosher will circulate the completed draft research proposal to the Prairie Grouse Technical Council.

**NWCC Grassland Species Subgroup Meeting  
Wichita, KS March 29-30, 2005  
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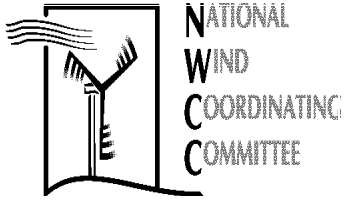
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**NATIONAL WIND COORDINATING COMMITTEE  
WILDLIFE WORKGROUP**

**GRASSLAND SPECIES SUBGROUP  
FIRST MEETING**

**March 29-30, 2005  
Wichita, Kansas**

**Meeting Purpose:**

- Initiate subgroup
- Introduce how wind power sites are identified and developed
- Introduce what is known about grassland species and habitat needs
- Introduce what is known about affect of habitat fragmentation on grassland species
- Identify questions participants have about real or potential impact of wind development on grassland species
- Introduce possible research questions, or opportunities
- Identify who else needs to be involved in this issue

**March 29, 2005**

9:00-9:40 am	<b>Introductions and Welcome</b> <ul style="list-style-type: none"><li>• Introductions</li><li>• Review purpose of meeting</li><li>• Review groundrules</li><li>• Review and adopt agenda</li></ul>	<i>Abby Arnold, RESOLVE</i>
9:20-10:20	<b>What is Involved in Site Selection for a Wind Facility</b>	<i>Andy Linehan, PPM</i>
10:20-12:00	<b>Summary of What is Known About Grassland Species and Impact of Habitat Fragmentation on Grassland Species</b>	<i>Jill Shaffer, USGS Stephanie Harmon, US FWS</i>
12:00-12:15	<b>Informal Lunch served on site</b>	
12:15-1:20	<b>Informal Discussion- Over Lunch</b> <i>What's on Our Mind About Impacts or Potential Impacts of Wind Energy Systems on Grassland Species</i> <i>Facilitated, no notes- lunch conversation to start afternoon conversation</i>	<i>Facilitated discussion</i>
1:20-1:45	<b>Break</b>	
1:45-3:45	<b>What Research Ideas Do We Have To Address? Questions About Wind Development Impact and Mitigation?</b>	<i>Facilitated discussion</i>
3:45-5:00	<b>What Is Our Workplan? Who Will Do What By When?</b> <ul style="list-style-type: none"><li>- What are tasks to be conducted and what's a schedule?</li><li>- Who else should be invited to participate in this discussion</li><li>- Do we need to convene a meeting of experts on questions</li></ul>	

identified above, to gather their advice, suggestions

- Are we ready to create a research plan? If so who ought to write it?
- Are we prepared to raise funds to support this research?  
How will we do this? What is timing?
- Other questions?
- Review of who will do what by when

5:00-5:15      **Review of Logistics for Our Field Trip on March 30**

5:15            **Adjourn to Group Dinner**

**March 30, 2005**

5:30 am      **Site field trip**

Sites include Elk River I, Elk River II