

**U.S. Fish & Wildlife Service**  
**WIND TURBINE GUIDELINES ADVISORY COMMITTEE**

**Federal Advisory Committee Meeting**

**U.S. Fish and Wildlife Service**  
**4401 N. Fairfax Drive, Rooms 200 A&B**  
**Arlington, VA 22203**

**September 1 – 3, 2009**

**-Final Meeting Summary-**

On September 1 - 3, 2009, the Wind Turbine Guidelines Advisory Committee (FAC) convened its ninth in-person meeting at the U.S. Fish and Wildlife Service headquarters in Arlington, VA.

*For copies of the slides presented at the meeting and Attachments referred to herein, please visit the U.S. Fish & Wildlife Service Web site at:*

*[www.fws.gov/habitatconservation/windpower/wind\\_turbine\\_advisory\\_committee.html](http://www.fws.gov/habitatconservation/windpower/wind_turbine_advisory_committee.html)*

Meeting Objectives:

- Review Draft Version 4 (“Draft v.4”) of the One-Text of Recommended Guidelines (distributed August 19, 2009)
  - Review comments submitted on Draft v.4.
  - Review draft language proposals to add to or replace sections of Draft v.4.
  - Review Draft Appendices, including the Draft Glossary, and decide on next steps for completing them.
  - Develop direction for moving forward with each section of the FAC recommendations.
- Review Proposed Approach for Chapter Five on Implementation (distributed August 25<sup>th</sup>, 2009)
- Agree on steps to reach consensus on and complete the Synthesis Workgroup Draft One-Text of Recommendations for the FAC to review and finalize in October
- Discuss milestones, timelines, and process steps

**I. WELCOME AND OVERVIEW OF THE AGENDA**

Dave Stout, *USFWS/Committee DFO and Chairman*, welcomed all meeting attendees and asked them to introduce themselves (See Attachment A). Abby Arnold, *facilitator*, asked members of the public to sign up if they would like to make a public comment to the FAC.

A. Arnold reviewed the agenda and the FAC approved it (See Attachment B).

**II. PRESENTATION AND DISCUSSION OF DRAFT V.4 OF THE “ONE-TEXT”**

**A. Overview of Draft v.4 of the One-Text:**

The Synthesis Workgroup distributed Draft v.4 of the One-Text on August 19, 2009 (See Attachment C). The contents of Draft v.4 are laid out as follows.

- I. Draft Preamble to the Committee Recommendations
  - A. Establishment of Wind Turbine Guidelines Advisory Committee
  - B. Background on Context and Need for the Recommended Guidelines
  - C. Committee Premises and Guiding Principles
- II. Committee Policy Recommendations
- III. Committee Draft Recommended Guidelines (“Guidelines”)
  - Chapter One: Introduction
  - Chapter Two: Summary of the Guidelines and General Considerations
  - Chapter Three: The Tiered Approach for Wildlife Assessment and Siting Decisions
  - Chapter Four: Mitigation
  - Chapters Five - Seven: *placeholder*
  - Appendices

The following changes were made to the One-Text based on FAC direction at the June 30 – July 2, 2009 FAC meeting, to produce the current Draft v.4:

- **A professional editor** revised the organization of the document and edited the text for correct grammar. She paid special attention to retaining the meaning of the text.
- **Chapter Three** was edited by the technical subgroup based on comments received from the FAC after the June 30 - July 2 meeting.
- **Decisions to move from tier to tier:** new language was drafted to describe how to make decisions to move from tier to tier, and how these decisions are evaluated to confirm adherence with the Guidelines (pages 18-19). Some of this language is **highlighted in gray** in Draft v.4 to indicate that it will be edited after the draft Implementation Chapter is completed.
- **Tier 3, Question 2:** new language was included to address habitat fragmentation analysis (page 26-27). However, additional edits on this topic were underway at the time Draft v.4 was distributed, so these edits were presented to the FAC at the September 1 – 3 Meeting as a separate handout (Attachment D).
- **Level of detail in methods and metrics:** The Synthesis Workgroup considered the option, raised at the June 30 – July 2 FAC Meeting, of moving the methods and metrics into an appendix. To address the concerns raised by the FAC, the level of detail in Tier 3 (pages 22 – 36) was revised to match the detail in the rest of the tiers.
- **Chapter Four, Mitigation:** a subgroup edited the chapter on mitigation and the Synthesis Workgroup reviewed and approved it (pages 52-54).
- **Chapters Five – Seven:** The text from Chapters Five – Seven in the previous iteration of the One-Text, Draft v.3, was moved into the draft Implementation Chapter (See Attachment E). This chapter was still under revision at the date of Draft v.4’s release, and so was distributed to the FAC as a separate handout from the Implementation Subcommittee – the Synthesis Workgroup did not have the chance

to review this before it was distributed. Some of the sections in former Chapters Five - Seven had already been reviewed in previous drafts of the One-Text, but this text was removed from Draft v.4 anyway, to allow the FAC to view it as it appears in the context of the new Implementation Chapter.

#### **B. COMMENTS ON DRAFT V.4 (SEE ATTACHMENT F)**

The FAC reviewed the compiled comments from the caucuses starting at page 18, line 702, through page 30, line 1201. Edits were made to Draft v.4, and next steps developed for comments and edits requiring further discussion.

- Next Step: The remainder of the compiled comments will be reviewed by the Synthesis Workgroup, and their proposed edits noted in Draft v.5.

#### **C. PROPOSED REVISIONS AND TOPICS FOR FURTHER DISCUSSION IN DRAFT V.4**

- **Habitat Fragmentation: see Attachment D, “Habitat Fragmentation language for Draft v.4,” with edits to pages 19, 22, 25-27 of Draft v.4**

This language was revised by a subgroup during the FAC meeting, then presented and briefly discussed; no agreement was reached. It includes a placeholder statement for Tier 1 on preventing development in rare and intact ecological communities regardless of the presence of species of concern. The remainder of the edits relate to habitat fragmentation for species of concern, and are intended for Tiers 2 and 3. The intention of this section is to protect the local population of a species of concern from habitat fragmentation – not to protect individual members of the species, nor the entire species. The target population should be clarified in the draft.

Habitat fragmentation is not typically addressed by individual project proponents. It was suggested that the Guidelines take into account the adjustments that wind developers will have to make initially to follow this section of the Guidelines. To acknowledge this, habitat fragmentation could be a shared responsibility in some cases, similar to what the FAC is recommending for addressing cumulative impacts. The FAC requested further information on how much these studies would cost, and what low risk and high risk areas for habitat fragmentation would look like. It was clarified that developers are not responsible for the *presumed* presence of species of concern, or for *potential* habitat for species of concern. However, if conditions are unusual during the year a study is conducted, this may warrant additional investigation into whether habitat impacts for species of concern are likely under normal conditions.

- Next Steps: Clarify that the target is to protect the “area” or “local” population. Review other comments from the FAC and revise this section to address them and to assure a level of detail consistent with the rest of the tiers; review with the Synthesis Workgroup (R.Manes, D. Strickland, and T. Allison).
  - Develop language as necessary for the placeholder statement in Tier 1 (*page 19*) on the protection of intact, rare ecological communities.
- **Sage Grouse, Sharp-tailed grouse, Greater Prairie Chicken, and Lesser Prairie Chicken:** *pages 29, 34, 47, 50 of Draft v.4*  
R. Robel presented information to the FAC on the effects of anthropogenic activities on greater and lesser prairie chickens. Conclusive studies have only been completed on the

effects of *wind energy* development for greater prairie chickens, not for lesser prairie chickens. Collision fatalities from wind turbines and other types of development are low, but anthropogenic activities have significant effects on nesting success - a vital factor for these species. A FAC member pointed out that the target level of acceptable impact must be decided before setting a recommended buffer distance for leks (there is a high degree of certainty of no impact if the buffer is 10 miles, but the targeted level of impact may not be zero). There are concerns among FAC members that these Guidelines might set up “no-go” zones. The Guidelines should also state that recommendations for these species will be updated as new information on wind energy’s impacts on them is published.

- Next Step: Experts on greater and lesser prairie chickens, sage grouse, and sharp-tailed grouse will be convened to provide technical information to the FAC. The FAC will develop a proposal on whether to recommend specific guidelines for these four species (R.Manes, R.Robel, D. Strickland, P.Traylor, D.Stout).
- **Significantly Adverse Impacts to Species of Concern:** *throughout Draft v.4*
  - Next Steps: The Guidelines are primarily intended to help developers avoid, minimize, and conduct compensatory mitigation for *significant* adverse impacts to *species of concern* at their sites.
  - The glossary will list the types of species/species designations that the term “species of concern” encompasses. The Guidelines are not meant to address all species (Editor; technical subgroup).
- **References to D. Strickland et al, *Studying Wind Energy/Wildlife Interactions: a Guidance Document, In Review (“revised M&M”)*:** *throughout Draft v.4*
  - Next Step: The FAC agreed that the Guidelines should reference the published literature this document is based on, rather than the document itself. There are concerns that the recommendations in the “revised M&M” have not been reviewed by the FAC, and therefore should not be referenced (Editor and technical group).
- **Tier 1 and 2 Questions and Decision Points** (*(pages 20 and 21, and pages 20 and 22 of Draft v.4, respectively)*) (See Attachments G and H)

Edits were submitted by various FAC members. The decision process should be tailored for each tier: Tiers 1 and 2 are more qualitative than Tier 3.

  - Next Step: Tier 1 and 2 questions were revised to ensure that all of the information requested in Tier 1 is also requested in the Tier 2 questions. These revisions were incorporated into the draft.
  - Tier 1 and 2 decision process language was revised by a subgroup, and will be reviewed by the Synthesis Workgroup and incorporated into Draft v.5.
- **Level of effort and duration of pre-construction studies:** *page 23 of Draft v.4* (see Attachment I)

The technical subgroup presented edits to Draft v.4 on the recommended level of effort and duration of pre-construction studies to the FAC. The revision states that the level of effort is dependent on the species of concern and variability in the environment. Some

species have required protocols, and for those that don't, the level of effort should be adequate to answer the questions in the tiers, and should be discussed with government agencies in each situation.

- Next Step: The FAC made a few edits to the proposed revisions, and they will be incorporated into Draft v.5 (Editor).

- **Level of effort and duration of post-construction studies:** *page 38 of Draft v.4* (See Attachment J)

These edits attempted to describe when it is necessary to conduct more than one year of post-construction monitoring, and when one year is sufficient. Post-construction studies should be tailored to the site, and the Guidelines should note that there are instances where these studies cease being necessary.

- Further revisions will be drafted in a subgroup, and will be reviewed by the Synthesis Workgroup and incorporated into Draft v.5.

- **Displacement:** *page 47 of Draft v.4* (See Attachment K)

Edits to this section in Tier 5 were presented to the FAC to describe when developers have the primary responsibility for addressing displacement effects and when this is a shared responsibility between developers, government agencies, and NGOs.

- Next Step: These edits will be incorporated into Draft v.5 (Editor).

- **Use of the term “mitigation”:** *throughout* (See Attachment L)

The FAC reviewed certain usages of the terms “mitigation” and “compensatory mitigation.” The FAC was reminded of agreements at previous meetings that the term “mitigation” be used when referring to all three components of mitigation: “avoidance, minimization, and compensatory mitigation.”

- Next Step: The FAC affirmed that the term “mitigation” is sufficient to use throughout the document when referring to all three steps in mitigation (avoid, minimize, mitigate). However, when referring just to the third step, this should be specified as “compensatory mitigation.”

- **“Compensatory mitigation”:** *throughout*

There was discussion over whether it is appropriate for the Guidelines to recommend that the developer be responsible for monitoring the effectiveness of their compensatory mitigation, or whether this should be determined in site-specific agreements.

- Next Step: Synthesis Workgroup review phrase in Tier 3, Question 6 methods (page 35, lines 1408-1410 of Draft v.4):

*“Where habitat impacts are of major concern, Tier 5 studies will provide data that evaluate the predicted impacts and the effectiveness of avoidance, minimization, and mitigation measures.”*

#### **D. APPENDICES: SEE HANDOUT “APPENDICES FOR DRAFT V.4” (ATTACHMENT M)**

- Next Steps: The FAC agreed to include the following as appendices:
  - Glossary
  - Legal White Paper
  - Landscape-Level Mapping Tools for Assessing Wildlife and Habitat Impacts from the Landscape-Habitat Subcommittee
  - Literature Cited

- The rest of the Appendices listed in Draft v.4 will be removed, and accessible on the FWS website: the Other Models Matrix, Existing Guidelines Recommendations, and the Summary of Metadata for Data Layers Mapped.
- The Horizon Site Characterization Scope of Work will be sent to the FAC again to review and consider whether it should be included as an Appendix. In conjunction with this, edits to Tier 2 will be drafted to reflect elements of a site characterization study. These edits will be reviewed by the Synthesis Workgroup, and may be incorporated in Draft v.5. (A.Delach, R. Braud)

### **III. CHAPTER FIVE: IMPLEMENTATION**

This section of the Guidelines was drafted by the Implementation Subcommittee and sent directly to the FAC, as there was not sufficient time for the Synthesis Workgroup to review. Therefore, it was not incorporated into Draft v.4 and is contained in a separate handout (See Attachment E).

A new proposal for incentives was made at the meeting and the Proposed Approach for Chapter Five was revised accordingly (See Attachment N). The FAC discussed and agreed to include the following language in Draft v.5:

“The Service urges voluntary adherence to the Guidelines and communication with the Service when planning and operating a facility. The Service will regard such voluntary adherence and communication as evidence of due care with respect to avoiding, minimizing, and mitigating impacts to species protected under the MBTA and BGEPA, and will take such adherence and communication fully into account when exercising its discretion with respect to any potential referral for prosecution related to the death of or injury to any such species. Each developer will be responsible for maintaining internal records sufficient to demonstrate adherence to the Guidelines. Examples of these records could include: studies performed in the implementation of the tiered approach; an internal or external review or audit process; an avian and bat protection plan; or a wildlife management plan. The Service retains its existing authority to inspect and assess the sufficiency of those records.”

This proposal leaves decisions regarding how strictly to adhere to the Guidelines to the developer. The more the developer adheres to the Guidelines, the lower their risk. In this scenario, USFWS is available as a technical advisor and resource. If there is take under the MBTA or BGEPA, the FWS will look to the developer for records demonstrating adherence to the guidelines, and USFWS will exercise its discretion with respect to any potential referral for prosecution.

The sections on coordination in the draft Implementation chapter were not edited, but the interaction between USFWS and developers was revised to reflect the proposal. The FAC discussed whether the Charter would still be fulfilled with this change. It was noted that this would not affect the tiered process in Chapter Three, which essentially fulfills the FAC’s charge. Based on the proposed revisions to the Implementation Chapter, it was suggested that the more detail included in Chapter Three, the easier it will be for

developers to conduct accurate risk assessments and confirm their own adherence. However, demonstrating adherence to others remains an important question.

- Next Step: Proposed language for the Draft Implementation Chapter will be incorporated (inserted at line 151 of handout, “*Proposed Approach for Chapter Five, for FAC Review September 3, 2009*”).
  - FAC Members will send their comments on the revised Chapter Five to their representatives on the Synthesis Workgroup by Friday, September 11th. The Synthesis Workgroup will compile and review these comments, and a revised Chapter Five will be presented to the FAC for review.
- **Avian and Bat Protection Plans (ABPPs):** *this discussion was temporarily removed from the Proposed Approach for Chapter Five; it may be reinserted or moved elsewhere.*  
Avian and Bat Protection Plans were raised as one of many tools for developers to use. It may be helpful to some developers, but there is concern that this example could be interpreted by some as the model all developers should use. Most FAC members expressed preference for a general description of ABPPs rather than a detailed description.
    - Next Step: A small group will discuss how to treat ABPPs in the Guidelines – both location in the document, and level of detail - and bring their proposal to the Synthesis Workgroup (M. Sinclair; W. Perkins; A. Linehan)

#### IV. PUBLIC COMMENT

**Michael Fry, American Bird Conservancy (ABC)**, presented his comments to the Committee. He was pleased with the proposal submitted on habitat fragmentation, but finds the revised proposal for Implementation weak. He would prefer there be accountability, incentives, and clear “benchmarks” for following the Guidelines. M.Fry also announced that ABC and Cornell Laboratories held a meeting in June 2009 on improving weather radar and predictions; the proceedings from this meeting will be made available to the public, and wind energy facilities will be able to make use of them.

#### V. ANTICIPATED OUTLINE OF FAC AND SUBCOMMITTEE NEXT STEPS AND SCHEDULE

- September 11: FAC members send comments on the Implementation Chapter to their representatives on the Synthesis Workgroup.
- September 15: FAC members send in comments on Appendices.
- September 21: Draft v.5 is distributed to the FAC.
- **Dates for future FAC meetings:**
  - September 29 – October 1
  - *TENTATIVE:* October 13 – 15
- **Subcommittee Work**
  - **Synthesis Workgroup:**
    - Review remainder of caucus comments of Draft v.4 and edit the draft.

- Compile comments on the revised Implementation Chapter; review revised chapter.
  - Review other proposed revisions (Habitat Fragmentation; Glossary).
  - Review Draft v.5 and send to the FAC.
- **Prairie species subgroup:**
    - Convene experts to discuss recommendations for the FAC on greater and lesser prairie chickens, sage grouse, and sharp-tailed grouse.
- **Habitat Fragmentation subgroup:**
    - Revise the proposed language in response to FAC comments; discuss with subgroup; provide revisions to the Synthesis Workgroup.
- **Glossary subgroup:**
    - Draft, discuss, and decide on definitions to propose for undefined terms in the glossary and in the One-Text.

## V. LIST OF ATTACHMENTS

- A. Final Participants List
- B. Meeting Agenda
- C. Synthesis Workgroup Draft v.4 of the One-Text of Recommended Guidelines, for Release to FAC August 19, 2009
- D. Habitat Fragmentation Revisions for Draft v.4
- E. Proposed Approach for Implementation Chapter, for FAC Review September 1-3
- F. Compiled Comments on Draft v.4
- G. Revised Tier 1 and 2 Questions
- H. Revised Tier 1 and 2 Decision Process
- I. Revisions to Level of Effort and Duration of Pre-Construction Studies
- J. Revisions to Level of Effort and Duration of Post-Construction Studies
- K. Edits to Tier 5 Displacement Studies
- L. State Caucus Mitigation Issues
- M. Draft Appendices for Draft v.4
- N. Revised Proposal for Implementation Chapter