

U.S. Fish & Wildlife Service

Wind Turbine Guidelines Advisory Committee

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Resource Conservation

U.S. Fish and Wildlife Service



USFWS Mission

Working with others

To conserve, protect, and enhance

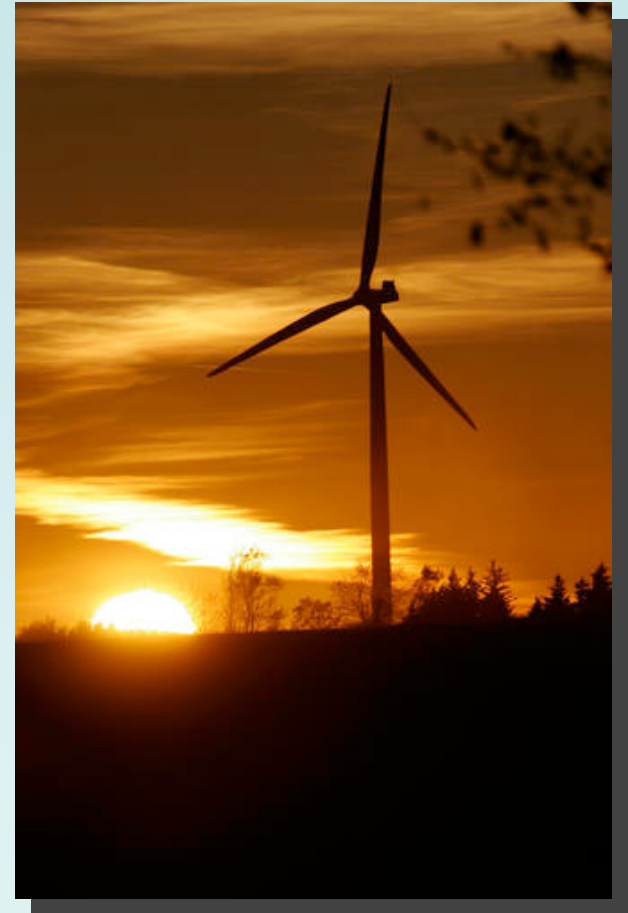
Fish, wildlife, and plants
and their habitats

For the continuing benefit
of the American people.



Background

- 2003 Interim Guidelines
- Wind Turbine Guidelines Advisory Committee
 - Established in 2007
 - Members represent diversity of stakeholders
 - Consensus process



Committee Structure

- David J. Stout, Chairman
- Abby Arnold, Facilitator
- Subcommittees
- Caucuses:
 - Wind Industry
 - Wildlife Conservation
 - Federal Interagency
 - State and Tribal



Committee Members

Federal Caucus

Mr. David J. Stout *Chairman, U.S. Fish & Wildlife Service*

Mr. Steve Lindenberg *U.S. Department of Energy*

Dr. Robert Robel *Kansas State University*

State/Tribal Caucus

Ms. Kathy Boydston *TX Parks & Wildlife Department*

Mr. Scott Darling *VT Fish & Wildlife Department*

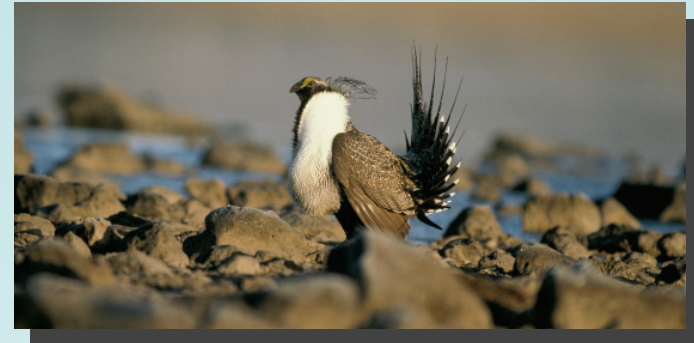
Chairman Karen Douglas *CA Energy Commission*

Mr. Greg Hueckel *WA Department of Fish & Wildlife*

Ms. Jeri Lawrence *Blackfeet Nation*

Mr. Mark Sinclair *Clean Energy States Alliance*

Mr. Keith Sexson *Assn. of Fish & Wildlife Agencies*



NGO Caucus

Dr. Taber Allison *MassAudubon*

Dr. Ed Arnett *Bat Conservation International*

Mr. Mike Daulton *National Audubon Society*

Ms. Aimee Delach *Defenders of Wildlife*

Mr. Robert Manes *The Nature Conservancy, KS*

Industry Caucus

Mr. Michael Azeka *AES Wind Generation*

Ms. René Braud *Horizon Wind Energy*

Mr. Andrew O. Linehan *Iberdrola Renewables*

Ms. Winifred Perkins *NextEra Energy Resources*

Mr. Steven Quarles *Crowell & Moring LLP*

Mr. Rich Rayhill *Ridgeline Energy, LLC*

Mr. Patrick D. Traylor *Hogan & Hartson, LLP*

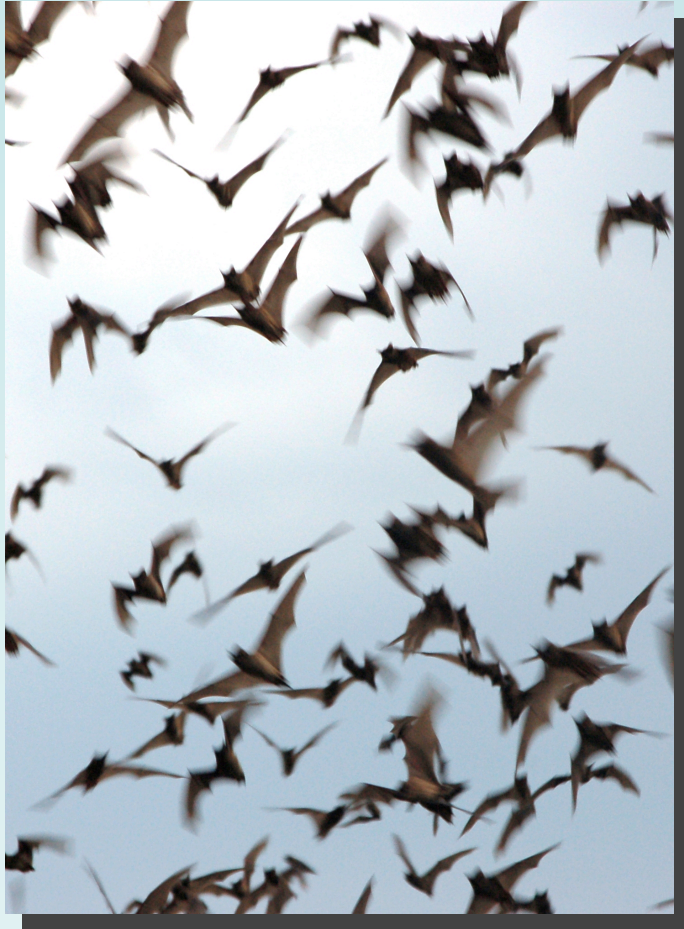


Committee Scope and Objective



The Committee will provide advice and recommendations to the Secretary of the Interior on developing effective measures to avoid or minimize impacts to wildlife and their habitats related to land-based wind energy facilities

Report to Secretary



- Cover Letter
- Policy Recommendations
- Recommended Guidelines
- Appendices (incl. glossary)

Highlights: Draft Recommendations

- Tiered approach to project planning
 - Level of detail and effort increase through tiers
- Use of best available science and management practices
- Early and effective coordination + good science = greatest conservation benefit and cost effectiveness



Tiered Approach: Tier 1

Landscape Perspective



Preliminary evaluation or screening of potential sites

- Internal company process to:
 - Conduct landscape-level review
 - Identify high risk/value habitats
 - Avoid high value habitat
 - Evaluate potential wildlife concerns
- Developer encouraged to coordinate with FWS and other agencies

Tiered Approach: Tier 2

Site characterization

- Preliminary characterization of risk to wildlife and habitat at potential sites
- Site visits, recommended contact with FWS and other agencies



Tiered Approach: Tier 3

Field studies to document site wildlife conditions and predict project impacts

- Quantitative, scientifically rigorous studies to:



- Evaluate site: develop or abandon?
- Design site to avoid or minimize impacts
- Develop compensatory mitigation
- Evaluate need for post-construction studies
- Develop baseline for post-construction studies

- Developer should coordinate with FWS and other agencies

Tiered Approach: Tier 4

Post-construction fatality studies

- Includes estimation and study of:
 - Species composition of fatalities
 - Relationships of fatalities w/ site characteristics
 - Comparison of actual & predicted fatalities
- Are operational changes or additional mitigation measures warranted?



Tiered Approach: Tier 5

Other post-construction studies

- Direct and indirect effects
 - Displacement due to habitat alteration, loss, and/or fragmentation
 - Reproductive effects, behavioral modifications, other?
 - Factors associated with effects
- Effectiveness of measures to avoid, minimize, and mitigate
- Local population demographic effects



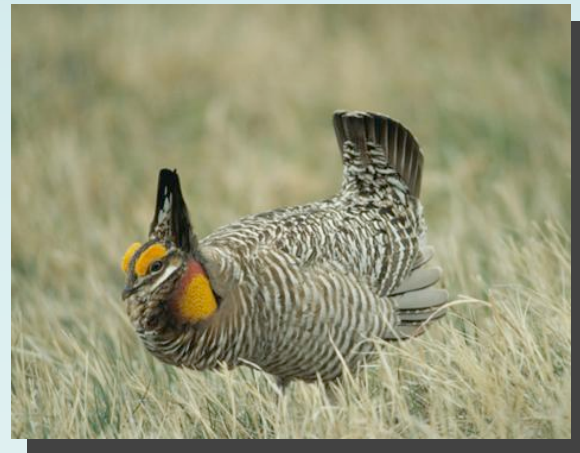
Implementation

- Federal process for developing final guidelines
- Project development and coordination with FWS
 - Timely project review
 - Conflict resolution
- FWS coordination w/ stakeholders
- NGO participation
- Incentives for adherence to guidelines

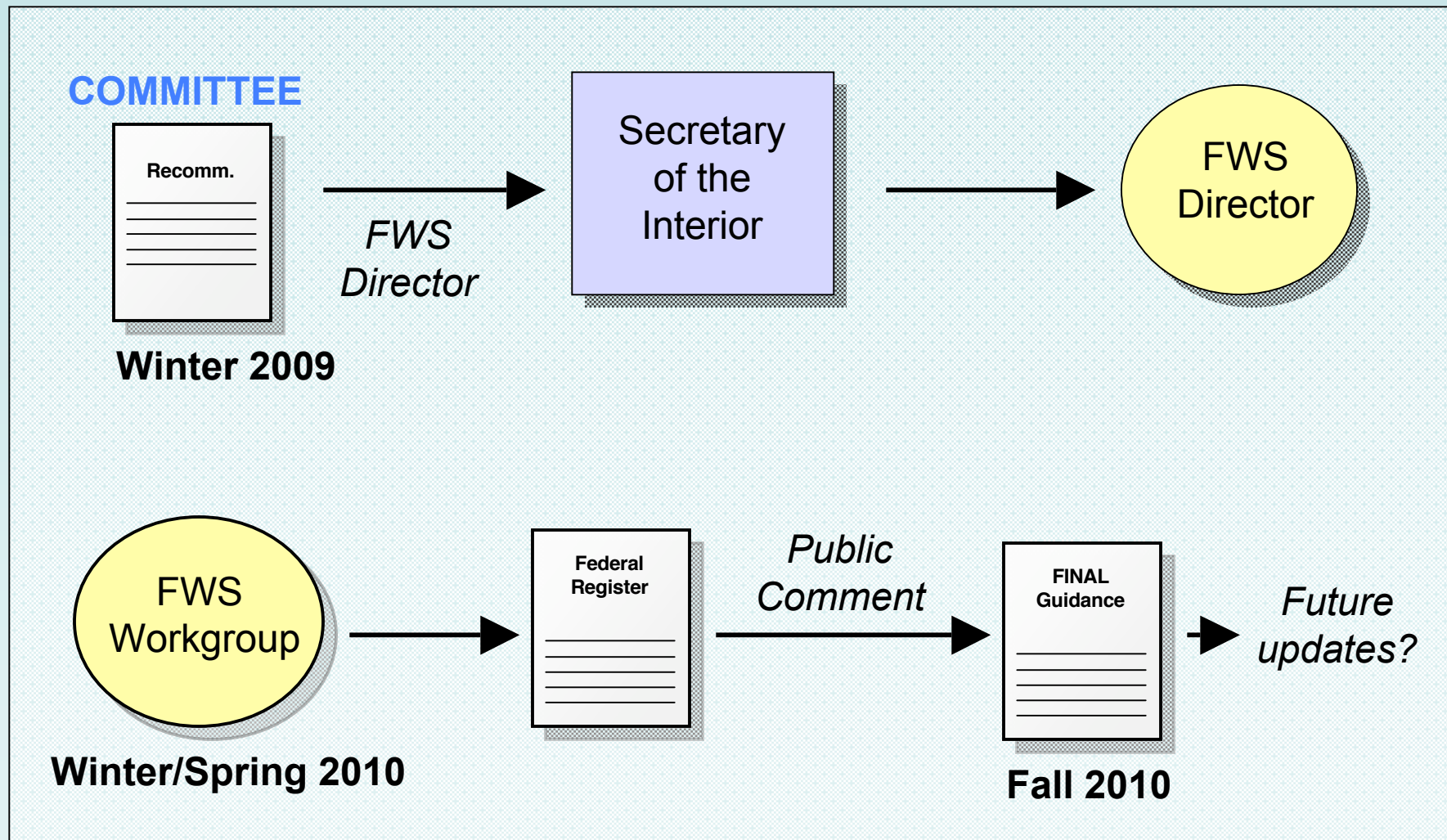


Federal Coordination

- Who
 - WO Programs, Regional and Field Staff
 - Interagency Caucus
 - Interested parties
- How
 - Meetings
 - Webcasts
 - Website
 - Teleconferences



Anticipated Timeline



Challenges / Obstacles

- Large diverse stakeholder group
- Ensuring all interests heard and addressed
- Setting a process for open communication
- Managing public involvement
- Managing 'up'
- Setting realistic timelines

Lessons Learned

- Communication is key
- Listen first, then be heard
- There is always a second 'right' answer
- Honesty and transparency

Successful Outcomes

- Trust among diverse stakeholders built and strengthened through collaborative process
- Promotion of *environmentally responsible* wind energy development
- Model for other renewable and traditional energy industries to coordinate and collaborate with the FWS to voluntarily protect trust resources

Contacts:



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