
WIND TURBINE GUIDELINES ADVISORY COMMITTEE MEETING

Holiday Inn Ballston
4610 N. Fairfax Drive
Arlington, Virginia 22203

July 20-21, 2011

ATTENDEES

U.S. Department of the Interior

Ken Salazar	Secretary of the Interior
David Hayes	Deputy Secretary
Steve Black	Counselor to the Secretary

U.S. Fish and Wildlife Service

Dan Ashe	Director
David Cottingham	Senior Advisor to the Director
Jerome Ford	Assistant Director for Migratory Birds
Jeff Underwood	Deputy Assistant Director for Fisheries and Habitat Conservation

Committee Members

Taber Allison	Mass Audubon
Dick Anderson	California Energy Commission (by phone)
Ed Arnett	Bat Conservation International
Mike Azeka	AES Wind Generation
Kathy Boydston	Texas Parks & Wildlife Department
René Braud	EDP Renewables
Aimee Delach	Defenders of Wildlife
Sam Enfield	MAP Royalty, Inc
Steve Lindenberg	Department of Energy
Rob Manes	The Nature Conservancy
Winifred Perkins	NextEra Energy Resources
Steve Quarles	Crowell and Moring, LLP
Robert Robel	Kansas State University
Patrick Traylor	Hogan Lovells

PROCESS SUPPORT

Patrick Field, Facilitator, Consensus Building Institute

MEETING PURPOSE

For the U.S. Fish and Wildlife Service (FWS) and the Federal Advisory Committee (FAC) members to provide advice and recommendations regarding revisions to the FWS revised *Draft Land-Based Wind Energy Guidelines* (Draft Guidelines), dated July 12, 2011.

MEETING OBJECTIVES

- To discuss the July 12 version of the FWS Draft Guidelines.
- To hear advice and recommendations from the FAC on effective measures to develop land-based wind energy guidelines.
- To offer the FAC members and the public an opportunity to provide comments on the FWS revised Draft Guidelines.
- To inform the FAC members and the public on next steps, including how they might prepare written comments to the FWS on the revised Draft Guidelines.

WELCOME AND INTRODUCTIONS

U.S. Fish and Wildlife Service Welcome

David Cottingham (*U.S. Fish and Wildlife Service [FWS]*), welcomed members of the Federal Advisory Committee (FAC) and thanked them for attending. D. Cottingham stated that the FWS has heard the FAC's concerns and the issues highlighted during the public comment period, and has developed a second draft in response to those concerns and issues. The Draft Guidelines were published in the *Federal Register* on February 18, 2011, for public comment. The public comment period closed on May 19, 2011. The revised Draft Guidelines were posted online on July 12, 2011. Dan Ashe, FWS Director, thanked the FAC for its hard work and commitment to implementing the Guidelines. D. Ashe then introduced Secretary of the Interior Ken Salazar and Deputy Secretary David Hayes.

Secretary Salazar's Opening Remarks – See Attachment C for full remarks

Secretary Ken Salazar thanked the FAC and the members of the audience for attending the meeting. He highlighted the importance of collaborative efforts, such as that of the FAC, that bring together stakeholders with varying interests to effect a positive conservation outcome. The Secretary described the actions that the Administration, including the Department of the Interior, has undertaken to meet goals for renewable energy development in the U.S. on public lands. Specifically, the Secretary mentioned that he met personally with several individuals from the wind industry and from conservation organizations, and that he understood the concerns he heard. He then asked that the FAC work over the next day and a half to resolve these concerns and stated that he would return on the second day of the meeting for a report on their progress.

Deputy Secretary Hayes' Opening Remarks

Deputy Secretary David Hayes thanked the FAC and reiterated the importance of their work. D. Hayes noted that the FAC's concerns have reached the Department's leadership and hoped that the leadership's presence at the meeting and the hard work of the FWS, demonstrate the Department's commitment to hear the FAC's and the public's concerns. He hopes that the FWS will develop the Guidelines in such a way that will meet the needs of the FAC. D. Hayes expressed his confidence that the outstanding issues that remain in the document are within a workable area that could ultimately be resolved. He committed that the DOI and FWS leadership team will stay on this issue because of its importance to the President's and the Secretary's agenda.

Federal Advisory Committee Opening Remarks

Kathy Boydston (*Texas Parks and Wildlife Department*) presented opening remarks on behalf of the FAC. She stated what an honor it was to be at the meeting with the Secretary and appreciated FWS taking the FAC recommendations under consideration. She noted that the FAC believes that implementation of the Guidelines is the most important issue and that the Guidelines must remain voluntary, parallel to other processes. The FAC believes that its remaining concerns can be resolved effectively with the FWS.

The FAC introduced themselves to the Secretary. Members noted that while the FWS has taken steps to bridge the gap between the FAC's recommendations and the revised draft Guidelines, there are still a few issues to be discussed. The FAC also expressed a desire to be a resource for the FWS in moving ahead with the Guidelines.

Opening Discussion

Topics discussed with Department of the Interior leadership in attendance included: A. Regulatory vs. Voluntary Nature of the Guidelines; and B. Scope of the Guidelines. See Appendix A for the full meeting agenda.

A. Regulatory vs. Voluntary Nature of the Guidelines

D. Hayes asked the FAC how it envisioned striking a balance between developers wanting concrete evidence of assurances and the need for FWS to be able to take a careful look at whether developers had done an adequate job of protecting and mitigating the impacts of wind developments to wildlife. Responses included the following opinions:

- The Guidelines should be non-prescriptive in areas of scientific uncertainty and prescriptive where we have certainty to give developers direction.
- Requiring developers to have multiple check-ins with the FWS would make the Guidelines ineffective, decrease their use, and would hinder development.

D. Ashe indicated that it is the developer's decision to move from tier to tier. However, to gain FWS enforcement discretion, the FWS would have to review the developer's plans and have an affirmative voice at some stage. Because the Guidelines are voluntary, developers may elect to ignore FWS advice, though they do so at their own risk. D. Ashe stated that implementing the Guidelines, while not incorporating the affirmative voice of the FWS, would not be enough for the FWS to grant enforcement discretion. He also noted that FWS intended to limit the number of "check-ins" in the Guidelines.

D. Hayes stressed that the Guidelines are a work in progress. For example, the use of Avian and Bat Protection Plans (ABPPs) is a work in progress and may need clarification. He offered that one purpose of the few remaining check-in points with the FWS is to provide a platform for developers to confirm that there is low impact, or that impacts have been adequately mitigated or compensated.

FAC Member responses to the comments made by D. Ashe and D. Hayes included the following:

- Developers are not seeking FWS approval to proceed. The wind industry should have the freedom to make that choice about proceeding.
- If developers need FWS approval, investors will expect it. The need for FWS approval can prevent banks from offering loans because developers will be asked for written confirmation that they may not be able to get.
- Developers want communication, not coordination, with FWS.
- FWS has moved in the right direction in the current (July 12) Guidelines.

B. Scope of Guidelines

D. Ashe clarified FWS jurisdiction under applicable statutes (e.g., FWS does not have authority over insects not listed under the Endangered Species Act [ESA]) and that the Guidelines do not preclude developers from applying these statutes. FAC Member responses to these clarifications included the following:

- The FAC appreciates FWS statutory responsibilities.
- The FAC's recommended guidelines attempted to narrow the scope while still including federal trust species by using the term "species of concern".

SERVICE PRESENTATION OF COMMENTS ON DRAFT GUIDELINES

D. Cottingham presented a summary of the comments received on the draft Land-Based Wind Energy Guidelines (See Appendix D for power point presentation). A representative selection of the comments received is available at www.fws.gov/windenergy. The comments, with brief responses from D. Cottingham in italics, included:

- The Role of the FWS: how/when will the FWS be involved in implementing the Guidelines
- Mandatory vs. Voluntary
 - *Guidelines will remain voluntary*
- Phase-in period
 - *Needs discussion but FWS does not envision a phase-in period*
- Terminology
 - *“Coordinate” was specifically used at certain points as opposed to “communicate”, returned to use of “species of concern”*
- Community Scale Wind
 - *The voluntary Guidelines will remain available to community scale wind projects, should they choose to use them*
- Feedback timeline:
 - *FWS will respond or request additional time within 60 days*
- Coordination with states and tribes:
 - *Reworked section from FAC recommendations added*
- Conflict Resolution:
 - *FWS chain of command will be maintained*
- Tiered Approach:
 - *Tier 3 communication – FWS needs to coordinate and be provided with information about studies and what developers intend to do. Tier 4 kept the same format but added a questions regarding habitat fragmentation.*

RESPONSES TO CLARIFYING QUESTIONS

The FAC discussed clarifying questions posed by the FWS regarding the Draft Guidelines. These questions are included as comments in the margins of the July 12 version of the Draft Guidelines, available at www.fws.gov/windenergy.

Q1: pg. 38, lines 6-19: “Tier 3 questions do not ask a developer to predict fatality rates. Yet Tier 4 specifically calls for a comparison between predicted fatality rates in Tiers 2 and 3 and actual fatality rates as determined in Tier 4. How does the FAC recommend the Service address this?”

- FAC assumed that risk assessments should be performed at the end of Tier 3.
- The terms “risk” and “impact” are sometimes misused in FAC recommendations and Draft Guidelines.
- FWS will add language to clarify that risk assessments include assessment of predicted fatality rates based on data collected in Tiers 2 and 3, and will correct any misuse of the terms “impact” and “risk”.

Q2: pg. 60, line 14 – pg. 61, line 13: “How does a project developer design studies to answer this question [‘If significant adverse impacts are predicted to species of concern, can these impacts be mitigated?’]? The information in the FAC Recommendations doesn’t answer this question.

- FWS field offices interpret mitigation differently, and industry may need to verbalize what it will do to mitigate. Clarification is needed on what is considered adequate compensatory mitigation (e.g., offsite vs. onsite mitigation).

- This question should focus on siting, rather than post-construction modifications.
- A revision was suggested: “Tier 3 studies can or might show how to avoid adverse impacts“, after which developers return to question 6 if there are potential significant adverse impacts and to identify mitigation measures.
- Guidance is needed on interpreting results of Tier 3 studies to understand how to mitigate impacts.
- Explaining the connection between Tier 3 studies which contribute to Tier 5 evaluations is important.
- Concerns were expressed regarding standardization of mitigation requirements. Mitigation should be left to the developer to work out with FWS field offices.

Q3: pg. 61, line 1: “This [reference] was in FAC Recommendations. Is there published literature we can now reference?”

- A new citation will be available; however, the study is ongoing and won't be complete until 2012.

Q4: pg. 82, lines 9-10: “See added language; is this what the Committee meant to say?” (Added language in italics): In some situations, the timeline for the development of a wind energy facility does not allow for the collection of preconstruction data *that are useful for research purposes...*”

- FWS interpreted the FAC language to mean that typical pre-construction data may not be useful for Before-After Control Impact (BACI) studies or other research, but wanted to verify this.
- The FAC agreed that FWS edits to this language appropriate. Additionally, on pg. 82, line 14, language should be added to clarify that projects should not begin construction without some pre-construction data.
- It is possible to be in Tier 5 without being a high risk or “bad” site.
- It was suggested that FWS replace “preconstruction data are available...” with “prerequisites for a BACI design.”

Q5: pg. 115, line 31: “We request further discussion regarding [the definition of ‘significant’].”

- The FAC had agreed that a flexible, open-ended definition was the best approach.
- A consistent standard for “significant” adverse impacts is important because a variety of individuals will use the Guidelines.
- The FAC as a whole agreed that it was important to use the term “significant” but that it may require additional work to define most appropriately.

The FAC prepared to break for caucus meetings. D. Cottingham reiterated that the Draft Guidelines is an interim document that FWS will continue to develop. He stressed the importance of using the FAC's input while recognizing that ultimately the Guidelines are a FWS document. Before being finalized, the Guidelines will need to undergo interagency review. The FAC expressed a hope that their comments be considered fully, clearly, and with transparency, so there would be no surprises when final guidelines are issued.

TOPICS FOR DISCUSSION

After the break and caucus meetings, the following issues were discussed (items are grouped by topic and may not represent the order they were discussed): A. Voluntary v. Regulatory Nature of the Guidelines; B. Phase-in of Implementation of the Guidelines; C. Avian and Bat Protection Plans; and D. FWS Review Period and Chain of Command.

A. Voluntary v. Regulatory Nature of the Guidelines

Summary: The FWS maintained that in order for FWS to provide enforcement discretion (“assurances”), the Guidelines must include a point at which the FWS has an opportunity to provide input to and coordinate with the developer. In addition, the developer must provide documentation that the advice was implemented, or if it was not implemented, the developer must provide an explanation of why it was not and describe any alternative action taken. FWS will determine whether enforcement discretion is appropriate based on the description of the alternative action. Some members of the FAC understood that assurances would be granted if a developer had a record to show they followed the Guidelines and documented how FWS suggestions were or weren’t implemented. In addition, some FAC members stated that developers do not want the FWS to make judgments on their mitigation measures that would equate to approval or disapproval of a project.

The FAC discussed specific examples of language in the Draft Guidelines that illustrated their concern and warranted further discussion and clarification.

Pg. 23, Chapter 2, lines 21-26. FAC Comment: The word choice of ‘verification’ and ‘agreement’ makes the Guidelines appear to be regulatory by requiring a kind of approval. FAC discussion of this comment included the following:

- If a developer wants assurances from FWS, they should accept FWS input.
- Developers do not want a pre-construction letter that acts as a de facto permit. No assurances would be requested or expected from FWS until post-construction.
- If FWS provides advice, developers need to document that they followed it or explain why they did not. The documentation should help FWS decide whether to apply or revoke enforcement discretion should impacts arise post-construction.
- The majority of characterization studies (Tier 2) don’t move beyond Tier 3 to development, and therefore it is a waste of resources for the FWS to be involved with every early project plan.
- FWS should describe how risk analyses will be standardized. Developer and FWS estimations of risk may differ. If a developer uses their estimate instead of FWS’s, have they adhered to the Guidelines?
- FWS should consider segregating language for developers that want assurances from those who do not. The Guidelines set a higher standard, even if the developer does not want assurances.

FWS Response (D. Cottingham): There is a difference between FWS’s desire for coordination and developers’ desire to keep FWS at arm’s length. FWS used “coordinate” to be clear that FWS needs an opportunity to provide input. If a developer chooses to proceed, they should implement FWS suggestions if they seek enforcement discretion. FWS indicated that developers who do not want assurances do not have to follow the Guidelines or heed the advice of the FWS. For those that do want assurances, FWS will require the developer to follow the Guidelines and meet the FWS standard of adequacy for mitigation. Page 36 includes more substance than the Introduction on when the FWS will be involved. In response

to concerns about risk analyses, D. Cottingham stated that it is the FWS's intention that developers must come to the FWS to discuss whether mitigation plans are adequate in order to gain enforcement discretion.

Pg. 19-23. FAC Comment: This language is quasi-approval language as opposed to the language on pg. 36. FAC discussion on this comment included the following:

- Some FAC members disagreed with the characterization of “voluntary adherence” on page 12, lines 19, 22, 26, and 27, with developers responsible for maintaining sufficient records, and FWS review of records to determine adherence. Sufficiency is not defined.
- Developers prefer “adherence” as opposed to “compliance” with the Guidelines.
- Developers are mindful of the FWS's role, but they want to be able to move forward at their own risk without seeking FWS's approval.
- FWS has the right to identify “species of concern”; however, it is the responsibility of the developer to devise a solution (e.g., changing where a turbine is sited).
- FWS should decide whether it wants “command and control”, or to just have the option to decide whether developer adherence is adequate.
- There are four absolutes: 1) Developers must talk with FWS; 2) FWS must respond in writing; 3) Developer must document response to FWS comments; and 4) Developer accepts the risk of either following FWS comments, or electing to do something different with documentation as to why.
- If developers must seek FWS approval, it seems to parallel permitting processes, not voluntary guidelines.
- Page 8 states that FWS retains the authority to execute its authority under other statutes. The language here is too similar to language on page 12 such that it feels regulatory in the context of how it is used on pg. 8. Page 12 should illustrate that developers have listened, responded, and chosen to incorporate or reject FWS's suggestions.

FWS Response (Jerome Ford, Jeff Underwood, D. Cottingham): FWS maintains the right to determine whether mitigation measures are sufficient based on anticipated impacts in order to provide enforcement discretion. The developer can reject the FWS's opinion, or even elect to not consult the FWS, because the Guidelines are voluntary. However, if a developer seeks enforcement discretion and rejects the FWS's advice with no explanation or other sufficient action taken, no assurances will be granted. The word “communicate” may have been misused in some places in the document. The Guidelines discuss communication with FWS early in the tiered process to encourage discussions. FWS wants to talk with developers as early in the process as possible, and will expect it in cases where the developer wants assurances.

B. Phase-in of Implementation of the Guidelines

Summary: Developers remain concerned that a phase-in period is needed. Some FAC members agreed that the period could be less than two years. Some of the reasons for concern highlighted include: 1) staff training; 2) financial uncertainty; and 3) project planning/timing.

Staff Training

- It will take time to train FWS staff in implementing the Guidelines.
- The FAC is mindful of other audiences who would use the Guidelines (e.g., industry, consultants, financiers, state agencies). These groups may also require time to train their staff.
- FWS should ensure that the Guidelines are implemented consistently across the Regions.

Financial Uncertainty

- For projects currently in Tier 3, financial institutions will treat the Guidelines as mandatory once they are finalized. Projects are on short time lines and may not have time if in later stages of planning to fully adhere to the guidelines.
- Federal funding for wind developments expires in December 2012. Developers can live with less than two years for a phase-in period, but would like some kind of a phase-in time frame.

Project Planning/Timing

- Greater than 30 days, or 6 months, for a phase-in would be acceptable.
- The lack of a defining line between phases is problematic. Time to address transitional points is important for developers. Developers don't fully understand all risks, e.g., non-ESA small mammal species. Developers want time to consider how best to address these species in our plans.
- It was asked whether currently operating facilities would be eligible for enforcement discretion if they met the guidelines.
- The FAC avoided using the term "projects commencing" because of the ambiguity in defining when a project commences.

Other Concerns

- On pg. 13 line 9, the definition of voluntary adherence should be edited.

FWS Response (D. Cottingham, J. Underwood): The FWS understands the concerns of the FAC with regard to training staff. FWS has talked to the National Conservation Training Center in Shepherdstown, West Virginia, where we will be training our staff, including through video conferences. FWS is reluctant to implement the Guidelines two years after they are finalized. Developers already in construction phases may still gain assurances by following the Guidelines. Projects that are already operational should adhere to Tiers 4 and Tier 5 if they seek assurances. Developers should monitor and sit down to talk with us. If monitoring shows that there's a problem, adaptive management may be an option. FWS will make the edits suggested on pg. 13, line 9.

C. Avian and Bat Protection Plans (APBBs)

Summary: The FAC expressed concerns regarding the ABPP language in the Guidelines. Some members of the FAC were concerned that the language added another layer of quasi-regulation. The members noted the intent of the FAC in its recommendations was adequate documentation of adherence to the Guidelines, not specific kinds of plans. The FAC discussed a few specific examples of a language within the Draft Guidelines that they felt illustrated their concerns and warranted further discussion and clarification:

Pg. 15, Line 25.

- Clarification is needed on pg. 15 line 25, which states that it is important that developers “share” ABPPs and/or other plans with the FWS prior to construction. This implies an expectation that a plan be prepared and delivered to FWS for consideration. Developers were under the impression that they wouldn’t have to seek FWS approval on ABPPs.

Pg. 34, Line 19: ABPPs are listed concurrent to sentences where the FWS discusses its regulatory jurisdiction. The FAC felt that this may lead the reader to believe that ABPPs are regulatory, which is beyond the scope of the FWS’s authority.

- ABPPs are a red flag for developers. If a developer follows the tiered process and develops a plan using the Guidelines, that plan should be adequate and an ABPP would be redundant.
- FWS may craft new guidance on ABPPs, creating another quasi-regulatory standard. Region 8 has already issued guidance on developing ABPPs.
- Page 12 states the Guidelines are voluntary and each operator will maintain internal records. However, pgs. 15 and 34 refer only to ABPPs, which limits the options for developers.
- The ABPP language becomes very prescriptive and FWS field staff are going to feel that they need to approve ABPPs. FWS staff already request developers provide ABPPs.

FWS Response (D. Cottingham, J. Ford): ABPPs are not required; rather, FWS simply wants developers to consider them as an option. With respect to pg. 15, FWS wants to be able to concur that a developer plan, ABPP or otherwise, adequately presents information on potential impacts and steps taken to minimize and mitigate. FWS wants to know what developers are going to do to mitigate impacts on birds. The plan needs to make sense and be comprehensive. It’s critical to note that ABPPs are industry initiated. If FWS staff is asking for ABPPs, then we need to fix this within the FWS. FWS shouldn’t be asking for ABPPs because we do not have the authority to require them. FWS will revise this section and make clear that the important thing is that the FWS has access to developer plans, we discuss the risks with developers, and we have an opportunity to comment.

D. FWS 60-Day Review Period and Chain of Command

Summary: Some FAC members preferred for the FWS response period length to be varied between tiers, others wanted the response period language removed entirely. FAC concerns included: 1) the review period language appears regulatory in nature; 2) the possibility for FWS to extend the review period at 59 days; and 3) chain of command in conflict resolution.

- FWS response time in Tiers 1 and 2 is generally quick and therefore 60 days is very generous. Tiers 3 and 5 may require more time. Developers would benefit from a timeframe goal wherein FWS must respond. A shorter period for Tiers 1, 2, and 4, and a longer period for Tier 3 was recommended.
- FWS should appoint field level staff familiar with renewable energy issues.
- The 60-day response period sounds regulatory in nature. The possibility remains that on day 59 the FWS requests more information before providing a response. What does that mean for developers?
- Developers should just be able to take their chances, while communicating throughout the process. The concept of a defined review period should be removed.

FWS Response (D. Cottingham, J. Ford): FWS included the review period language in response to public comments about timeliness. The 60 day period was intended to provide a timeframe for FWS staff

to plan within to return calls and resolve issues. FWS staff have a lot of material on their desks, and some projects are more complicated than others. The length of the review period is open for discussion. If the FWS assigns different length review periods for different tiers, won't that start to sound regulatory, too? The point of this section is that if developers don't hear back from the FWS in a certain timeframe, they are free to proceed to the next tier without waiting any longer.

With regard to resolution of conflicts, the FWS structure is such that each Region has an energy coordinator. The chain of command within the FWS should address developers concerns. Those up the chain do not blindly support their field office's opinions. These individuals in managerial positions weigh the concerns of developers against those of their field staff and provide reasonable analyses. A regional office will ask for assistance from the Washington office and other partners if they need information on a particular issue. We do our best to get the best answers possible.

PUBLIC COMMENT

Kelly Fuller, American Bird Conservancy

Thank you FAC members and FWS for putting forth a serious effort to develop workable guidelines that fulfill FWS mandate to protect wildlife. I have questions, as a group that is not part of the FAC, but as a group that has been following this since the beginning and is also in touch with the public who is also closely following this but is not in the room. What is the role of public comment at this point in the process? This July draft is a new document compared with what the public has seen. This new public comment period is only 23 days. What do you hope to get out of the public comment? Are there specific questions that commenters should address?

Michael Fry, American Bird Conservancy

We're very gratified with the seriousness of the FWS effort to develop workable guidelines. We are concerned that the staff at FWS are underfunded. It would be very difficult to respond substantively to all projects proposed within 60 days. It would be nice if there were a permit structure with funding provided that allowed staff to move forward. Perhaps fees could be built-in and paid by the permittee. Thank you very much.

D. Cottingham responded to K. Fuller's questions regarding public comment. FWS is trying to finalize guidelines very quickly. It is unusual to put out an interim draft as we did on July 12. FWS felt that it needed to show that we heard the public comments we received on the February draft, and that we were being responsive to them. We'll take further comments for a couple of weeks, but FWS will not extend the public comment period.

He then responded to M. Fry's comments about staff funding. He indicated that the voluntary guidelines are very different from a fee-for-permit type of set up.

The FAC adjourned for the day. Patrick Field asked the FAC members to identify potential subcommittees to further discuss any remaining issues.

DAY TWO: REVIEW OF REMAINING ISSUES & COMMENTS

Patrick Field welcomed the group back and reviewed the agenda with the group before moving into the substance of the day's discussion. The FAC discussed additional issues identified, including: A. Tier 4 and 5 Studies & Habitat Fragmentation; B. Adaptive Management; C. Monitoring Table 1, Tier 4; and D. Role of the Fish and Wildlife Service.

A. Tier 4 and 5 Studies & Habitat Fragmentation

Summary: Several FAC members believed that Tier 5 was mischaracterized as a 'general research tier'. Instead, the FAC envisioned Tier 5 to include site specific studies as opposed to general research. Additionally, the role of who should identify species of habitat fragmentation concern was discussed. Several clarifying edits were also proposed in this section.

- FWS believes that habitat fragmentation studies should be included in Tier 4 and tried to incorporate habitat fragmentation impacts in addition to impacts to species of concern.
- Tier 4 was intended by the FAC to be purely fatality monitoring that is conducted at every site. The FAC didn't want to get this section confused with 'optional' studies for particular projects. It was suggested that FWS take research out of Tier 5, and separate it into a new tier.
- There are two different kinds of habitat questions in this section: what actual changes in habitat are occurring, and more detailed research questions. Splitting these two between Tiers 4 and 5 may be helpful. Tier 5 was intended to apply to specific sites. General research of broad value to the industry (e.g., noise studies) was not intended for Tier 5.
- On pg. 67 items 7 and 8, there are bullets, but no discussion.
- Page 76 lines 22 and 23 call for a characterization of habitat. This seems quite open ended.
- The question is about a specific set of species that should have been identified in previous tiers as being of habitat fragmentation concern. This should be clarified.
- Page 29, line 5 in Tier 2 suggests that the developer may identify species of habitat fragmentation concern. The FAC recommended that the states and FWS would identify a list of species of habitat fragmentation concern. Developers would be responsible for monitoring these species but not have to identify species of habitat fragmentation concern because that would be a broader, complex, and extensive effort.
- States have Natural Heritage databases and State Wildlife Action Plans that are required to include a species of concern list. Lists should also include species of habitat fragmentation concern. The burden has always been on the state, not the developer, to provide those lists and is being done already.
- FWS should add language on pg. 67 that clarifies this section isn't for every project.
- Habitat impacts is a more important issue than direct mortalities and should remain as a factor to be monitored in Tier 4, not relegated to an issue to be researched in Tier 5. It is essential that habitat fragmentation be characterized as both research and monitoring.
- The FWS edit is a clarifying change that doesn't put more of an onus on the developer.

FWS Response (D. Cottingham): FWS will make clarifications to this section. It was intentional to have developers provide information regarding species of habitat fragmentation. FWS does not always have high-quality distribution maps and the private sector may have information that could be helpful to all parties. FWS wanted to create options for collaborative efforts. However, if the states are amenable to bearing the entirety of the burden, FWS will agree to their responsibility for providing the information.

B. Adaptive Management

Summary: The FAC supports the concept of adaptive management. However, several FAC members expressed concern about the overuse of adaptive management in the Guidelines. Specifically, some FAC members are concerned about meeting power purchase agreement terms if adaptive management

were considered commonplace for wind projects because of the possible open-ended and uncertain financial commitments that come with the inherent uncertainties of adaptive management. Other FAC members felt that adaptive management needed to remain a tool for the FWS to use when appropriate.

- The language is open ended and does not provide a framework for how adaptive management measures should be used.
- The FAC factored in costs when considering adaptive management. It was recommended that cost be included on pg. 79 in the list of considerations when deciding if adaptive management is appropriate.
- The Draft Guidelines make adaptive management a recommendation for virtually every project. Under current laws and policy, adaptive management is generally not applied to species of fragmentation concern and other species. While adaptive management is an important tool, FWS should find a way to ensure that it's not an expectation for every project.
- Adaptive management is mentioned in six or seven instances (pg. 21, 60, 70, 97, 100). Developers fear that organizations applying the Guidelines will conclude that all wind projects have to implement adaptive management. In reality, adaptive management is applied to the minority of projects.
- FWS uses adaptive management to manage habitats or special areas in order to accomplish wildlife goals. This is different than how wind farms apply adaptive management.
- It is hard to finance around adaptive management, especially in regard to meeting the requirements of power purchase agreements. Adaptive management can exceed \$10 million over the life of a project. The Guidelines shouldn't say that expensive measures should be avoided, but developers do want to help the FWS understand when adaptive management is appropriate.
- To many developers, adaptive management means curtailment and cuts in turbine speed.
- Generators under power purchase agreements have an obligation to provide kilowatt hours at a certain price and regularity. If developers can't meet those agreements, they are legally at risk.
- FWS must have the freedom to use adaptive management when it's appropriate.
- FWS should consider the original FAC recommendations, pg. 11.

FWS Response (D. Cottingham): When the FWS approves 30- to 40-year permits in other settings, there are almost always adjustments made along the road after review. For these voluntary guidelines, if developers are relatively close to their fatality estimates after communicating with the FWS in pre-construction and gathering adequate data, FWS probably won't request adaptive management. FWS can't predict when or what appropriate adaptive management measures would be. The Department of the Interior has a policy on how to adaptive management should be applied. FWS understands that adaptive management may not be appropriate for every project.

C. Monitoring Table 1, Tier 4

Summary: The FAC generally agreed that Table 1 requires significant editing and clarification. Questions raised included: 1) questions regarding differentiation between nocturnal and diurnal monitoring; 2) clarification on duration of studies and levels of risk; 3) habitat studies vs. fatality monitoring.

Nocturnal vs. Diurnal Monitoring

- Some FAC members interpreted the table as all carcass searches are to occur at night.
- Uncertainty why carcass searches are recommended both during the day and at night.

Duration of Studies

- Table is vague and open-ended. For example, there is no explanation of the durations given.

Level of Risk

- FWS should define the trigger that determines the different categories of risk. Why would certainty of risk vary between categories? The FAC Tier 4 table included conditions to evaluate the data to drive a decision. Data needs to drive the decision making process.
- FWS uses terms such as “mortality greater than predicted”, where the FAC used terms like “significant” or “acceptable”. Significant is subjective, however the intent of using the term was to identify the kind of impacts developers should consider. In the absence of “significant”, a developer who exceeds estimated fatalities by a trivial amount could be required to do adaptive management. Clarity about what kinds of impacts trigger further evaluation is necessary.
- The removal of the term “comparable studies” from this table is an issue with the states. State agencies feel that studies that are used to make determinations about risk should include studies from comparable sites. This term should be reincorporated.

Habitat Studies vs. Fatality Monitoring

- The table reads as though it applies exclusively to fatality monitoring.
- There are many places where the reader is lead to believe the FWS is referring to fatality studies only. FWS should return to the FAC’s Tier 4 table, with edits to incorporate habitat monitoring. Tier 5 should include other studies for developers specific to the project. General research contributing to the industry, while important, should be moved to another section.

FWS Response (D. Cottingham): In response to concerns about conducting carcass searches both during the day and at night, this table also applies to habitat surveys and behavioral studies in response to questions 7 and 8. In this context nocturnal monitoring is appropriate. FWS did not want to dictate the duration of studies so we used “less than a year” or “multiple years”. FWS will continue work on this table with the Committee’s advice.

D. Role of the Fish and Wildlife Service

- State agencies are typically the lead and the FWS takes a back seat unless there are endangered species issues. Sometimes FWS chooses to not participate, and that should be made clear in the Guidelines.
- Does FWS see its involvement in implementation of the Guidelines as routine? The Guidelines address more than FWS trust species and federal lands. FWS sometimes comments on every project regardless of a federal nexus.
- Cooperation is important; it is necessary to make sure developers are aware of any state processes and species that aren’t federal trust species.

FWS Response (D. Cottingham): Sometimes states are more stringent and sometimes the FWS is more stringent in wildlife requirements. FWS intended that states and counties could also use the Guidelines. FWS field office staff would defer to state colleagues with particular expertise when they don't have the time to review a project. That working relationship at the field level will vary from office to office. Agencies with relative expertise help one another out when appropriate.

SECRETARY SALAZAR & DEPUTY SECRETARY DAVID HAYES DISCUSSION WITH FAC

The Secretary returned to the meeting mid-morning on the second day. D. Cottingham reported to the Secretary and Deputy Secretary that the FAC identified ten issues that they agreed bear further work. Topics identified for further clarification include: 1) adaptive management; 2) mitigation measures; 3) definition of "significant"; 4) phase-in of guidelines; 5) habitat fragmentation; 6) Table 1 post-construction; 7) ABPPs; 8) role of the FWS; 9) voluntary nature of the guidelines; and 10) small-scale and distributed wind concerns. FWS will work with subcommittees of the FAC on these issues. FWS will develop the next draft by late September or early October.

FAC Closing Remarks

K. Boydston spoke on behalf of the FAC. She agreed that the FAC and the FWS made tremendous progress to get the job done. The FAC identified subcommittees to work with the FWS with the goal of increasing joint understanding of these issues and narrowing differences wherever possible. The FAC volunteered to help coordinate these activities.

René Braud (*EDP Renewables*) highlighted that one of the great successes of the FAC is that the 2010 recommendations were agreed to by consensus with all FAC members aligned, and they remain aligned on the remaining issues.

Secretary Salazar's Remarks – See Attachment B for full remarks

The Secretary restated the Department of Interior's, the President's, and his personal commitment that the issue of renewable energy would remain a priority within the Department of the Interior and that the Department and its associated agencies would continue to work to bolster renewable energy in all of its forms, including wind energy, in the United States. The Secretary also reiterated that he appreciated the FAC for the tremendous amount of work done over the years. He noted the tremendous potential that the United States has in producing renewable energy, citing his experience in Colorado in passing the first Renewable Portfolio Standard for the State. The Secretary closed with three points: 1) the FAC should aim to meet again mid-September as opposed to October; 2) the FAC must be cognizant that the FWS must be able to perform its statutory responsibilities to protect eagles, bats, and other avian species in addition to its other statutory responsibilities and the role of FWS should not be undermined in the Guidelines; and 3) ABPPs, in his view, ought to be a part of what becomes one of the best practices that we have with respect to wind energy development.

Deputy Secretary's Closing Remarks:

D. Hayes shared the Secretary's delight that this group has worked so well together and has come as far as it had. The interpretation of the Draft Guidelines published in February shows that we unintentionally had ships passing in the night. Indeed, the FWS took the FAC recommendations very seriously and yet the first iteration of the Guidelines shocked the FAC. Since then, good progress has been made. We're now in the fine-tuning stage of the Guidelines. He closed with two thoughts:

First, the final product will have to be a FWS document and FWS Guidelines. The FWS will own this document while getting as close as we can to the FAC document. In this process we've done a very good job of narrowing the field of disagreement.

Secondly, this is going to be an interim process. Nothing should be written in stone and there should be a feedback loop in continuing to promote open dialogue. Let's continue to progress in siting wind developments on public and private lands in a way that respects wildlife.

PUBLIC COMMENT

The Secretary then opened the floor for public comments. These comments are summarized below by speaker:

Michael Powelson, The Nature Conservancy

Thank you Mr. Secretary. I'd like to state that this is a good move towards implementing renewables. We hope that the final Guidelines reflect the consensus of the FAC and that they be no less rigorous than the FAC in protecting species. We want compliance to the law in protecting wildlife species.

Shruti Suresh, Meyer Glitzenstein & Crystal

Thank you Mr. Secretary. We have several concerns about the Guidelines. We believe that voluntary compliance is not going to be effective. We tried that in 2003 and it hasn't worked. The FWS has rarely exercised its prosecutorial authority. This could lead to future litigation. The Guidelines should be made mandatory. Additionally, there's too much back and forth between the FAC and the FWS. The FWS has a mandate to protect wildlife that it must adhere to.

Bill Miller, Power Company of Wyoming

Thank you to the FAC and thank you Mr. Secretary for your follow-through. I couldn't agree with you more regarding your three points. Additionally, I appreciate you pushing the September 15 date; the faster this is resolved the better.

Peggy Jelen, Avian Power Line Interaction Committee (APLIC)

Thank you Mr. Secretary. I appreciate this meeting as the chair of APLIC. I see this is going to be effective. Even though APLIC is not involved on the turbine side, we want you to know that our staff has a connection to the Electric Power Research Institute (EPRI), and we work in partnership with resource agencies, and we partner to mitigate bird fatalities. We provide suggested practices and will soon release several manuals. I want to add that the FWS is a member of APLIC and that we have a great relationship. We worked in collaboration to establish APP guidelines. Every utility is different in how it prepares APPs. APPs are prepared regarding the environmental issues specific to the technology; they aren't project based. Lastly, we look forward to working on BGEPA and offering our expertise.

Michael Fry, American Bird Conservancy

Thank you Mr. Secretary. I've participated in every FAC meeting and would like to make two points. 1) Adaptive management in areas of high risk is critical. Short-term cutting of turbine speed will have to be done. This is analogous to water release at hydroelectric plants, and short-term shut down at some plants. The wind industry needs to understand they aren't being picked on. 2) Funding for the FWS. It's critical that this agency get funding for review of mitigation plans with short-term turn-arounds. What happened with Minerals Management Service and the Bureau of Ocean Energy, Management and Regulation was a consequence of funding shortages resulting in incomplete oversight. Wind projects will disrupt 20,000 square miles of habitat and the risks need to be addressed.

John Graham, BP Wind Energy

Thank you Mr. Secretary. I'd ask you to look at the financial market and the retrospect it provides. Our investors want to mitigate risks and get evidence that we've adhered to the Guidelines. We understand that the FWS gives us letters for assurance but these Guidelines as written don't actually meet our financial needs. We have proposed language that would accommodate our financial markets.

Abby Arnold, American Wind Wildlife Institute (AWWI)

Thank you Mr. Secretary. I was a mediator for the FAC and now I'm with AWWI. I appreciate your commitment to this process. AWWI and its many partners stand ready to work with Interior to implement the Guidelines. AWWI can help get wind on the ground. We thank the FWS in being willing to accommodate the FAC recommendations. FWS field staff will need resources and training about why we have made revisions to the FAC document and moved away from the original Guidelines.

Julie Falkner, Defenders of Wildlife

Thank you Mr. Secretary. We want to help with this approach by gathering the best scientific information available and promote transparency for all projects moving forward.

Genevieve Thompson, Audubon and AWWI

Thank you Mr. Secretary. I represent Audubon and AWWI and have a unique vantage point because I head the program in the Dakotas and at the national level. I've seen the opportunities on how we can develop wind and protect wildlife. I commend the FWS for its open communication and I believe our goals are achievable. We are prepared to provide the FWS with sound science and partnership continuance. We are at the starting point, not the finish line, of this process.

Jan Blittersdorf, AWWI/American Wind Energy Association (AWEA)

Thank you Mr. Secretary. I speak as a CEO of a wind company and I work with AWWI and AWEA. It sounds like a lot of the issues have been resolved within the Guidelines and the few remaining issues will be worked on. I want to remind you that you're working with an industry that cares about wildlife. This is important to note in looking forward. We would not be happy with 30 years of looking the other way and seeing wildlife go by the wayside.

Mike Farr, American Bird Conservancy

Thank you Mr. Secretary. There are many people that want to participate in this process that deeply care about birds and wildlife. They place their trust in the Department of the Interior. This trust is well placed. ABC has stood for mandatory guidelines; however, we are encouraged by the progress that was made here today and yesterday. Our main focus now is siting. If we get that right we can go a long way to dealing with many of the issues. We see a lot of project proposals that we think are in the wrong places. In addition, while we are encouraged by multistate HPCs, we don't think there are enough whooping cranes left for incidental take permits. We do not want to see the golden eagle or the sage grouse listed under the ESA. As a result, we believe ABPPs are important and should be included in the Guidelines.

Chris Chapel, Florida Power & Light

It's important to simply say thank you to the Secretary from Florida Power and Light. We want to do more with wind. At the micro level we've learned a lot; many projects are being dismantled and repowered. And much of what we've learned is done in cooperation with NGOs and at the macro level. We are pleased that the political continuum is dedicated to get this issue right. I take umbrage where individuals complain that none of us are going to be entirely happy; that's to be expected. We're looking to get to a good conclusion.

Tom Vinson, AWEA

Thank you Mr. Secretary. We're close to having a workable document with conservation benefits, and there are only a few outstanding issues left which we believe we're going to get to a resolution on. Industry looks forward to implementing these guidelines voluntarily and would like to note that we're going out of our way to do more than the law requires. Additionally, we're looking to find a workable resolution on eagles.

Stu Webster, Iberdrola

Thank you Mr. Secretary. Firming up certainty in our investments has been important so thank you for your understanding. We feel that this current draft is a great meeting of common ground, but our colleagues feel that the FWS still needs to define what responsible wind energy is going to be. We still have some concerns we will address and work through with the FWS. Ultimately, while we have an energy shortage, we're going to have conflict with wildlife and there will be a feeding frenzy of applications before short term policy incentives expire.

Eric Meyers, Duke Energy

Thank you Mr. Secretary. The FAC has not only created a great document, but it built a tremendous amount of trust. This trust needs to be captured in moving forward. The terms of art that they reached within this document have been changed and the ambiguities of choice were left in the FAC document for a particular reason. The only way that we can get something practical out of this document is that we need more trust from the FWS in implementing these Guidelines. The burden is on industry, we will need to walk the talk. Your reaction will be based on how we successfully build our trust with you. While this language doesn't sound like regulatory certainty, we can build certainty further down the road.

Secretary Salazar's Response – See Appendix B for full response

NEXT STEPS

The FAC listed other key topics that hadn't been covered:

- The flow chart - terms that apply a universal approach to should reexamined.
- Pg. 20 should discuss who is responsible for cumulative impacts analysis.

Members of the FAC are willing to engage the FWS in further dialog to focus on specific language and to address options for the remaining issues.

The FWS has put this iteration of the draft Guidelines out for comment. Comments are due no later than August 4. D. Cottingham asked that reviewers please keep in mind that this must be a FWS document. The FWS will work with the FAC on the outstanding issues described and have a revised draft to discuss at an upcoming meeting. The revised draft will be provided at least 10 days in advance to allow for advance review. Additionally, FWS will accept comments for 30 days following the meeting.

D. Cottingham adjourned the meeting by stating he believes strongly that the work the FAC has done will work for all parties involved and will get us over the finish line.

APPENDIX A—MEETING AGENDA

AGENDA FOR WIND TURBINE FEDERAL ADVISORY COMMITTEE JULY 20 -21, 2011 Holiday Inn, Arlington

Wednesday July 20

- 8:30 to 8:45 Welcome and Introductions – Dan Ashe, Fish and Wildlife Service
Review of Agenda – Patrick Field, Facilitator
- 8:45 to 10:00 FAC opportunity to interact with Secretary Kenneth Salazar
- Opening comments by the Secretary
 - Comments from selected Committee members
 - Dialogue
- 10:00 to 10:15 Break
- 10:15 to 10:45 Overview of comments received – David Cottingham, FWS
- 10:45 to 11:15 Comparison of new draft and FAC key recommendations – David Cottingham, FWS
- 11:15 to 12:00 Clarifying Questions from Committee
- 12:00 to 2:00 Lunch and Caucus Meetings to Detail agenda for remainder of Meeting
- 2:00 to 3:30 Discussion of specific issues as determined by lunch time caucus(es)
- 3:30 to 3:45 Break
- 3:45 Continued Discussion
- 4:45 to 5:00 Public Comment
- 5:00 Adjourn
- 6:30 to 9:00 Room available for Caucus(es) if needed

Thursday July 21

- 8:30 to 9:30 Discussion of specific issues continued

9:30 – 10:00	Identify key issues requiring further work and Inter-meeting communication with FAC (who, what format, how often) – David Cottingham
10:00 to 10:30	Status Report to the Secretary -- Secretary Kenneth Salazar and the Committee (Tentative)
11:30 – 11:45	Public Comment – Secretary Salazar (Tentative)
11:45	Wrap-up and next steps – David Cottingham
12:00	Adjourn

DRAFT

APPENDIX B—PARTICIPANT LIST

WIND TURBINE GUIDELINES ADVISORY COMMITTEE MEETING JULY 20-21, 2011

PARTICIPANT LIST

IN PERSON:

Fatima Ahmad
U.S. Department of the Interior
1849 C Street NW
Washington, DC
(202) 208-1381
Fatima_Ahmad@ios.doi.gov

Taber Allison
American Wind Wildlife Institute
208 South Great Road
Lincoln, Massachusetts 01773
781-259-2145
tallison@awwi.org

John M. Anderson
American Wind Energy Association
1501 M St. NW, Suite 1000
Washington, DC 20005
202-383-2516
janderson@awea.org

Ed Arnett
Bat Conservation International
P.O. Box 162603
Austin, Texas 78716
512-327-9721
earnett@batcon.org

Abby S. Arnold
American Wind Wildlife Institute
1110 Vermont Avenue, NW, Suite 950
Washington, DC 20005
202-535-7800
aarnold@awwi.org

Dan Ashe
U.S. Fish and Wildlife Service
Washington, DC

Michael Azeka
AES Wind Generation
4542 Ruffner Street, Suite 200
San Diego, California 92111-2239
858-573-2018
mike.azeka@aes.com

Sarah K. Ball
Edison Electric Institute
701 Pennsylvania Avenue NW
Washington, DC 20004
202-508-5208
sball@eei.org

Jan Blittersdorf
NRG

Kathy Boydston
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744-3291
512-389-4638
kathy.boydston@tpwd.state.tx.us

René Braud
EDP Renewables, North America
808 Travis, Suite 700
Houston, Texas 77002
713-265-0350
Rene.Braud@edpr.com

Larry Bright
U.S. Fish & Wildlife Service
4401 N. Fairfax Drive
Arlington, Virginia
703-358-2161
Larry_Bright@fws.gov

David Cottingham
U.S. Fish and Wildlife Service
Washington, DC
David_Cottingham@fws.gov
Sue Cowell
Chadbourne & Parke, LLP
200 New Hampshire Ave, NW
Washington, DC 20036
202-974-5644
scowell@chadbourne.com

Richard Curry
CURRY & KERLINGER, LLC
1734 Susquehannock Drive
McLean, VA 22101
703-8231-1404
RCA1817@aol.com

Aimee Delach
Defenders of Wildlife
1130 17th Street, NW
Washington, DC 20036
202-772-0271
adelach@defenders.org

Samuel Enfield
MAP Royalty, Inc.
3000 El Camino Real
5 Palo Alto Square, Suite 700
Palo Alto, California 94306-2122
650-543-5887
senfield@maproyalty.com

Megan Feeney
USFWS
4501 N. Fairfax Drive
Arlington, Virginia 22203
Megan_Feeney@fws.gov

Pat Field
Consensus Building Institute
238 Main Street, 4th Floor
Cambridge, Massachusetts 02142
617-844-1118
pfield@cbuilding.org

Sean Flannery
Renewable Energy Systems Americas
Inc.
12 South 6th Street, Suite 930
Minneapolis, Minnesota 55402
612-746-4028
sean.flannery@res-americas.com

Richard Fristik
U.S. Department of Agriculture
1400 Independence Ave., SW, Stop
1571, Room 2240
Washington, DC 20250
202-720-5093
richard.fristik@wdc.usda.gov

Michael Fry
American Bird Conservancy
1731 Connecticut Avenue, NW
Washington, DC 20009
202-234-7181
mfry@abcbirds.org

Kelly Fuller
American Bird Conservancy
1731 Connecticut Ave. NW, 3rd Floor
Washington, DC 20009
(202) 234-7181
kfuller@abcbirds.org

Nick Garver
Enel Green Power North America
816 Connecticut Ave NW Suite 600
Washington, DC 20005
(202) 559-4554
Nick.garver@enel.com

Brandy Gibson
BP Wind Energy
700 Louisiana St., 33rd Floor
Houston, Texas 77002
713-354-2160
brandy.gibson@bp.com

Patrick Gilman
Department of Energy
1000 Independence Ave SW, EE-2B
Washington, DC 20585
202-586-3449
patrick.gilman@ee.doe.gov

Gene Grace
AWEA
John Graham
BP Wind Energy

Sarah Greenberger
DOI
Joseph F. Grennan
Renewable Energy Systems Americas
Inc.
11101 West 120th Avenue, Suite 400
Broomfield, Colorado 80021
303-439-4281
joe.grennan@res-americas.com

Timothy A. Hayes
Duke Energy Corp
1000 East Main Street
Plainfield, Indiana 46168
317-838-1725
tim.hayes@duke-energy.com
John Hensley
AWEA

John Holt
NRECA
4301 Wilson Blvd
Arlington, Virginia 22203
703-907-5805
john.holt@nreca.coop

Todd Hopper
Gamesa Energy USA
1801 Market Street, Suite 2700
Philadelphia, Pennsylvania 19103
267-563-0628
thopper@gamesacorp.com

Michael Horn
GE Energy

Grant Jackson
USFWS
4401 N Fairfax Dr
Arlington, VA
703-358-1755
grant_jackson@fws.gov
Peggy Jelen
Avian Power Line Interaction
Committee
2133 W Peoria Ave
Phoenix, AZ 85029
602-371-5250
Peggy.Jelen@aps.com

Paul Johnson
USDA Forest Service
1601 N. Kent St., RPC Bldg, 5th floor
Arlington, Virginia 22209
703-605-4793
PJohnson02@fs.fed.us

Jennifer Lee
National Park Service
1201 Eye Street, NW Room 1141
Washington, DC 20005
202-513-7188
jennifer_lee@nps.gov

Sherry Liguori
PacifiCorp
1407 West North Temple, #120A
Salt Lake City, Utah 84116
801-220-4736
sherry.liguori@pacificcorp.com

Steve Lindenberg
Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585
202-586-2783
steve.lindenberg@ee.doe.gov

James Lindsay
Florida Power & Light Co.
15146 95th Avenue N.
Jupiter, Florida 33030
407-640-2424
jim_lindsay@fpl.com

Rachel London
U.S. Fish and Wildlife Service
4401 North Fairfax Drive
Room 840
Arlington, Virginia 22203
703-358-2491
Rachel_London@fws.gov

Cade London
U.S. Fish and Wildlife Service
Washington, DC
Cade_London@fws.gov
Christopher Long
American Wind Energy Association
1501 M Street NW, Suite 1000
Washington, DC 20005
202-552-8107
clong@awea.org

Rick Loughery
Edison Electric Institute
701 Pennsylvania Avenue, NW
Washington, DC 20004-2696
202-508-5647
rloughery@eei.org

Robert Manes
The Nature Conservancy, Kansas
P.O. Box 285
Ellsworth, Kansas 67439
620-388-1940
rmanes@TNC.org

Albert Manville
U.S. Fish and Wildlife Service
4501 North Fairfax Drive
Room 4000
Arlington, Virginia 22203
703-358-1963
Albert_Manville@fws.gov

Megan Marzec
Department of Interior
1849 C St. NW
Washington, DC 20240
202-219-0671
Megan_Marzec@ios.doi.gov

Kely Mertz
BHE Environmental, Inc.
11733 Chesterdale Road
Cincinnati, Ohio 45246
513-326-1500
kmertz@bheenvironmental.com

Catherine Miceli
The export import bank of the united
states
831 vermont ave, nw
Washington, D.C. 20571
202-565-3582
catherine.miceli@exim.gov

Bill Miller
Power Company of Wyoming

John Moore
Bureau of Land Management
1849 C St. NW
Washington, DC 20240
(202) 912-7169
j6moore@blm.gov

Eric D. Myers
Duke Energy
550 South Tryon Street
Charlotte, North Carolina 28201
704-382-7891
eric.myers@duke-energy.com

Mike Parr

Roxane Parruso
Power Company of Wyoming LLC
555 17th Street, Suite 2400
Denver, CO 80202
roxane.perruso@tac-denver.com

Winifred Perkins
Next Era Energy Resources
700 Universe Boulevard
Juno Beach, Florida 33408
561-691-7046
Winifred_Perkins@nexteraenergy.com

Doug Pfeister
Offshore Wind Development Coalition
doug@OffshoreWindDC.org

Michael Powelson
The Nature Conservancy
821 SE 14th Avenue
Portland, Oregon 97214
503-233-4243
mpowelson@tnc.org

Steven Quarles
Crowell & Moring LLP
1001 Pennsylvania Avenue, NW
Washington, DC 20004-2595
202-624-2665
squarles@crowell.com

Bonnie Ram
Ram Power LLC
1925 16th ST, NW Suite 302
Washington, DC 20009
202.441.6458
bonnieram@gmail.com
Rich Rayhill
Ridgeline Energy, LLC
720 W. Idaho Street, Suite 39
Boise, Idaho 83702
208-841-5037
rrayhill@rl-en.com

Casey Reeves
Bureau of Land Management
20 M st SE
Washington, DC 20003
2029127503
creeves@blm.gov

Lloyd Ritten
AWEA

Melissa Roark
AWWI
1110 Vermont st NW
Washington, DC 20005
202-575-7800
mroark@awwi.org

Robert Robel
Kansas State University
116 Ackert Hall
Manhattan, Kansas 66506-4901
785-532-6644
rjrobel@ksu.edu

Jerry Roppe
Iberdrola Renewables
1125 NW Couch, Suite 700
Portland, Oregon 97209
503-796-6939
jerry.roppe@iberdrolaren.com

Ruchi Sadhir
U.S. Department of the Interior

Meghan Sadlowski
USFWS
meghan_sadlowski@fws.gov

Stacie Sears
American Wind Wildlife Institute
1110 Vermont Avenue NW
Washington, DC 20005
802-598-3920
ssears@awwi.org

Stacy Small-Lorenz
Environmental Defense Fund
1875 Connecticut Ave. NW
Washington, DC 20001
202-572-3263
ssmall@edf.org

Dale Strickland
Western EcoSystems Technology, Inc.
2003 Central Avenue
Cheyenne, Wyoming 82001
307-634-1756
dstrickland@west-inc.com

Shruti Suresh
Meyer Glitzenstein
1601 Connecticut Avenue NW, Suite
700
Washington, DC 20037
202-588-5206
Ssuresh@meyerglitz.com

Phil Taylor
E&E Publishing
122 C Street NW, suite 722
Washington, DC 20009
202-446-0439
ptaylor@eenews.net

Genevieve Thompson
Audubon Dakota
118 Broadway Suite 512
Fargo, North Dakota 58102
701-298-3373
gthompson@audubon.org

Patrick D. Traylor
Hogan Lovells
Columbia Square
555 13th Street, NW
Washington, DC 20004
202-637-6866
patrick.traylor@hoganlovells.com

Katie Umekubo
NRDC
1200 New York Ave., NW, Suite 400
Washington, DC 20005
202-717-8194
kumekubo@nrdc.org

Sally Valdes
Bureau of Ocean Energy, Management,
Regulation, and Enforcement
381 Elden Street, MS-0402
Herndon, Virginia
703-787-1707
Sally.Valdes@boemre.gov

David J. van Hoogstraten
BP Wind Energy NA Inc.
1101 New York Avenue, Suite 700
Washington, DC 20005
202-277-5840
david.vanhoog@bp.com

Rafael Villegas-Patracá
Instituto de Ecología A.C.
Km 2.5 Carretera Antigua a Coatepec
Xalapa, Veracruz, Mexico 91000
228-842-1847
rafael.villegas@inecol.edu.mx

Tom Vinson
American Wind Energy Association
1501 M Street, NW
Washington, DC 20005
202-383-2535
tvinson@awea.org

Stu Webster
Iberdrola Renewables, Inc.
1125 NW Couch St.
Portland, Oregon 97217
503.320.1099
stu.webster@iberdrolaren.com

Geoffrey West
First Wind, LLC
129 Middle Street
Portland, me 04101
207.228.6876
gwest@firstwind.com

Erin Wiedower
Akuo Energy
150 N Michigan Avenue
Chicago, Illinois 60601
312-291-4647
wiedower@akuoenergy.com

James R. Woehr
Bureau of Ocean Energy, Management,
Regulation, and Enforcement
381 Elden St., MS 4080
Herndon, Virginia 20170
703-787-1732
James.Woehr@boemre.gov

William Woody
USFWS

Mike Young
US Department of Interior

VIA
WEBCAST/TELECONFERENCE

Summer Adleberg
HDR EOC
9449 Balboa Ave.
San Diego, ca 92123
619-550-8422
summer.adleberg@hdrinc.com

Daryoush Allaei
SheerWind
143 Jonathan Blvd. N Suite 200
Chaska, MN 55318
952-556-0173
dallaei@sheerwind.com

Kari Andresen-Martinson
Ecology & Environment, Inc
9300 West 11th Street, Ste 645
Overland Park, Kansas 66210
913-339-9519 ext 4152
kandresen@ene.com

Michele Barlow
Pacific Gas & Electric Company
245 Market Street. Mail Code: N10A
San Francisco, CA 94105
415-973-5272
M6B0@pge.com

Nicole Bauman
ERO Resources Corporation
1842 Clarkson St
Denver, Colorado 80218
303-830-1188
nbauman@eroresources.com

Jeff Becker
Renewable Energy Systems Americas
Inc.
11101 W. 120th Ave
Broomfield, Colorado 80021
303-439-4657
jeff.becker@res-americas.com

William R. Behling
Norvento USA LLC
470 Atlantic Avenue, 4th Floor,
Independence Wharf
Boston, Massachusetts 02210
617-273-8191
wbehling@norvento.com
Caitlin Bell
US Wind Force, LLC
130 Battery St. Ste. 400
San Francisco, California 94111
415-981-2811
cbell@ene.com

Rick Bergman
Aquila Wind Development
P O Box 170170
Glendale, Wisconsin 53217
414-962-9000
rcbww@wi.rr.com

Ashleigh Blackford
U.S. Fish & Wildlife Service
2493 Portola Road Suite B
Ventura, California 93003
805-644-1766
ashleigh_blackford@fws.gov

Karen Blakemore
Phelps Dunbar LLP
400 Convention Street
Baton Rouge, Louisiana 70802
225-376-0256
karen.blakemore@phelps.com

Beverly Blessent
San Diego Gas and Electric
8315 Century Park Court
San Diego, California 92111
858-637-3702
BBlessent@semprautilities.com

Omar Bocanegra
U.S. Fish and Wildlife Service
711 Stadium Drive
Arlington, Texas 76011
817-277-1100
Omar_Bocanegra@fws.gov

Jeff Bollman
Montana DNRC Southern Land Office
1371 Rimtop Drive
Billings, Montana 59105
4062474404
jbollman@mt.gov

Matt Boss

Rob Bouta
Westwood Professional Services
7699 Anagram Drive
Eden Prairie, Minnesota 55344
952-906-7436
rob.bouta@westwoodps.com

Erica Brand
Pacific Gas & Electric Company
1850 Gateway Blvd. 3022B.
Concord, ca 94520
415-516-0799
eesb@pge.com

Barb Bresson
Forest Service / Bureau of Land
Management
16400 Champion Way
Sandy, Oregon 97055
503-668-1414
bbresson@fs.fed.us

John M. Bridges
Western Area Power Administration
P.O. Box 281213
Lakewood, Colorado 80228
720-962-7255
bridges@wapa.gov

Kim Brown
Ventus Environmental Solutions
3522 SW Kanan Dr.
Portland, OR 97221
503 950 3232
brownki@vcn.com

Buffalo Bruce
Western Nebraska Resources Council
P.O. Box 612
Chadron, Nebraska 69337
(308) 432-3458
buffalobruce1@gmail.com

Angela Burgess
U.S. Fish and Wildlife Service
9014 E 21st St.
Tulsa, Oklahoma 74129
918-382-4527
angela_burgess@fws.gov

Rory Cantwell

Nicole Carlisle Squires
Chapman and Cutler llp
201 South Main Street, Suite 2000
Salt Lake City, Utah 84111
801.320.6720
squires@chapman.com

Laura Caspari
Nordex USA, Inc
300 S Wacker Dr, Suite 1500
Chicago, IL 60606
312-386-4278
lcaspari@nordex-online.com

Gregory Copeland
NaturEner USA, LLC
394 Pacific Avenue, Suite 300
San Francisco, CA 94111
(415) 217-5500
gcopeland@naturener.net

Thomas Corr
Sempra Global
101 Ash Street. MS HQ 08
San Diego, California 92101
619-696-4246
TCorr@SempraGlobal.com

Sue Cowell
Chadbourne & Parke, LLP
200 New Hampshire Ave, NW
Washington, DC 20036
202-974-5644
scowell@chadbourne.com

Robyn Cullas

Donnie R. Dann
Bird Conservation Network
donniebird@yahoo.com

Stephen Davies
Endangered Species & Wetlands Report
202-744-1535
steve@eswr.com

Jennifer Diaz
Puget Sound Energy
25901 Vantage Highway
Ellensburg, WA 98926
509-964-7813
jennifer.diaz@pse.com

Kara Donohue
Southern California Edison
1218 S Fifth St
Monrovia, California 60610
626-462-8613
kara.donohue@sce.com

Haley Edwards
Puget Sound Energy
10885 NE 4th Street
Bellevue, WA 98004
425.462.3305
haley.edwards@pse.com

Michael Erickson
U.S. Fish and Wildlife Service
1 First Street
Kulm, North Dakota 58456
701-647-2866
Michael_Erickson@fws.gov

Denise Fale

Laura Fox
lfox1@vermontlaw.edu

Gregory S. Friend
McElroy, Sullivan & Miller, L.L.P.
1201 Spyglass Drive, Suite 200
Austin, Texas 78746
(512) 237-8111
gfriend@msmtx.com

Garry George
Audubon California
926 S. Citrus Ave
Los Angeles, California 90036
323-933-6660
ggeorge@audubon.org

Mark Griswold
TetraTech
143 Union Boulevard, Suite 1010
Lakewood, Colorado 80228
303-980-3665
Mark.Griswold@tteci.com

Lou Hanburry

Andrew Hartzell
O'Neil LLP
19900 MacArthur Blvd. Ste 1050
Irvine, California 92612
949 798-0714
AHARTZELL@ONEIL-LLP.COM
Judy Harvey

Keith Hastie
U.S. Fish and Wildlife Service
300 Westgate Center Drive
Hadley, Massachusetts 01035
413-253-8612
Keith_Hastie@fws.gov

Irene Heng
PacifiCorp
825 NE Multnomah Street, Ste. 2000
Portland, Oregon 97232
(503) 813-5589
irene.heng@pacificorp.com

Joan Heredia

Aaron Heun
Berrendo Energy
(303) 415-0140
aaron.heun@berrendoenergy.com

Alice Hoffman
Hoffman Management Partners
1717 S Prairie Ave #602
Chicago, IL 60616
312-341-1858
HoffmanManagement@earthlink.net

Rene Hypes
DCR-DNH
217 Governor Street
Richmond, Virginia 23219
804-371-2708
Rene.Hypes@dcr.virginia.gov

Dustin Janeke
HDR
9449 Balboa Avenue
Suite #210
San Diego, California 92123
(858) 467 - 4900 ext #4119
Dustin.Janeke@hdrinc.com

Renee Johnson
BLM Montana/Dakotas
5001 Southgate Drive
Billings, Montana 59101
406.896.5028
renee_johnson@blm.gov

Jeff Johnson
USDA/FSA
1005 High Avenue
Willmar, Minnesota 56201
320-235-3540x113
jeff.johnson@mn.usda.gov

Tamara Johnson
USFWS-Georgia Field Office
105 Westpark Drive, Suite D
Athens, GA 30606
706-613-9493 ext. 226
Tamara_Johnson@fws.gov

Scott Kamber
TRC Environmental Corporation
605 Skyline Dr
Laramie, Wyoming 82070
307-742-3843
skamber@trcsolutions.com

Chris Kearney
Xcel Energy
325 7th Street NW
Washington, DC 20005
202-549-1583
christopher.b. Kearney@xcelenergy.com

Frederick Kelley
Versar, Inc.
9200 Rumsey Road
Columbia, Maryland 20145
410-740-6110
FSKelley@versar.com

Matthew Kireker
American Wind Wildlife Institute
1110 Vermont Ave, Suite 950
Washington, DC 20005
2022169700
mkireker@awwi.org

Robert Kraska
U.S. Fish and Wildlife Service
1 Federal Drive
Fort Snelling, Minnesota 55111-4056
612-713-5103
Robert_Kraska@fws.gov
Robyn Kullas
NexGen Energy Partners
1881 9th Street, Suite 120
Boulder, Colorado 80302
303.440.6262
r.kullas@nexgen-energypartners.com

Megan Lawler
Ecology and Environmental
130 Battery st
San Francisco, CA 94111
415-981-2811
mlawler@ene.com

Kenneth Leister
Golder Associates
15851 S US 27, Suite 50
Lansing, MI 48906
517-482-2262
Kenneth_Leister@golder.com

Laila Lienesch
U.S. Fish & Wildlife Service
500 Gold Avenue SW
Albuquerque, New Mexico 87101
505-248-6494
Laila_Lienesch@fws.gov

Michael J. Malmquist
Parsons Behle & Latimer
201 South Main Street
Salt Lake City, Utah 84111
801-532-1234
abaxter@parsonsbehle.com

Jim Maloney
Lane County Audubon Society
4391 Shadow Wood Drive
Eugene, Oregon 97405
541-345-6867
jimgm@comcast.net

Brooke Marcus

Lelaina Marin
National Park Service
1201 Oakridge Drive, Suite 100
Fort Collins, Colorado 80525
970-225-3552
Lelaina_Marin@nps.gov

Spencer Martin
Wasatch Wind Intermountain
2700 Homestead Road, Suite 210
Park City, Utah 84098
435-503-8821
smartin@wasatchwind.com

Cohn McKee
Wyoming Governors office
200 w 24th st
Cheyenne, WY 82002
307-777-7434
colin.mckee@wyo.gov

Cara Meinke
Stantec
9400 SW Barnes Rd. Suite 200
Portland, or 97225
909-255-8227
cmeinke@stantec.com

Alice Miller
Pacific Gas & Electric Company
3401 Crow Canyon Rd
San Ramon, CA 94583
925-415-6352
ACBP@pge.com

Amber Miller
U.S. Fish and Wildlife Service
6300 Ocean Drive Unit 5837
Corpus Christi, Texas 78412-5837
361-994-9005
Amber_Miller@fws.gov

Kathleen Miller
TetraTech
18 Mallard Drive
Gorham, Maine 04038
207.893.1262
kathleen.miller@tetrattech.com

Theresa Miller
CH2M Hill
155 West Grand Avenue, Suite 800
Oakland, California 94612
510-587-7754
theresa.miller@ch2m.com

David Moldal
Disgen Development Services, LLC
12345 W. Alameda Parkway, Suite 117
Lakewood, Colorado 80228
503-896-9868
dmoldal@disgenonline.com

Erick Molvar

Tim Morgan
ESA
1425 North McDowell Blvd, Suit 200
Petaluma, California 94954
707-795-0903
tmorgan@esassoc.com

Jordan Muir
USFWS Region 7
1011 East Tudor Road
Anchorage, Alaska 99503
907-786-3503
jordan_muir@fws.gov

Jessica Nadolski
Cardno ENTRIX
701 University Avenue
Sacramento, California 95825
916-386-3833
jessica.nadolski@cardno.com

Travis Nelson
Washington Department of Fish and
Wildlife
600 Capitol Way North
Olympia, Washington 98501
360-902-2390
nelsotwn@dfw.wa.gov

Margaret F. O'Connor
Consumers Energy Company
1945 West Parnall Road, Room P22-510
Jackson, Michigan 49201
517-788-1957
mfoconnor@cmsenergy.com

Christopher M. O'Meilia
U.S. Fish and Wildlife Service
chris_omeilia@fws.gov

Sophie Osborn
Wyoming Outdoor Council
121 Grand Ave, Suite 200
Laramie, Wyoming 82072
307-742-6138
sophie@wyomingoutdoorcouncil.org

Charles Paradzick
Salt River Project
PAB352, PO Box 52025
Phoenix, AZ 85072
(602) 236-2724
Charles.paradzick@srpnet.com

Rebecca Pearson
Great Lakes Commission
2805 S. Industrial Hwy., Ste. 100
Ann Arbor, Michigan 48104
734-971-9135
bpearson@glc.org

David M. Phillips
CH2MHill
1063 Bonita Drive
Laramie, Wyoming 82072
720-375-2942
david.phillips@ch2m.com

Martin D. Piorowski
Cornell Lab of Ornithology
11 Cardinal Drive
Ithaca, New York 14850
607-254-2119
mp362@cornell.edu

David Reinke
Shell Canada Limited
400 - 4th Avenue SW
Calgary, Alberta Canada
403 691 3440
david.reinke@shell.com

Susan Rice
US Fish and Wildlife Service
5003 Hallett Circle
Cape Charles, Virginia 23310
757-331-2760
susan_rice@fws.gov

Derek Riemann
EDP Renewables North America
332 S. Michigan Ave., Suite 200
Chicago, IL 60604
281-740-1800
derek.rieman@edpr.com
Andi Rogers
AZ Game and Fish Department
3500 S. Lake Mary Road
Flagstaff, Arizona 86001
928 707 0417
arogers@azgfd.gov

Denise Sale
PPL Renewable Energy, LLC
Two North Ninth Street
Allentown, PA 18101
610-774-4689
dysale@pplweb.com

Kate Schindler

Susan Schumacher
Wisconsin Energy Corporation
333 W. Everett Street , Room A231
Milwaukee, WI 53203
414-221-2189
susan.schumacher@we-energies.com

Lynn Sharp
Tetra Tech EC, Inc.
1750 SW Harbor Way, Suite 400
Portland, Oregon 97201
503-222-4546
lynn.sharp@tetrattech.com

Tanya Shenk
National Park Service, BRMD
1201 Oakridge Drive Suite 200
Fort Collins, Colorado 80525
970 267-2193
tanya_shenk@nps.gov

Daniel Shepard
Little River Band of Ottawa Indians
375 River St
Manistee, MI 49660
231-398-6810
dshepard@lrboi.com

Mark Skolnicki
Black Swamp Bird Observatory
Oak Harbor, Ohio
mskolnicki@bex.net

Joseph Smith
Nature Conservancy
2350 route 47
Delmont, New Jersey 08314
609-861-4135
joseph_smith@tnc.org

Stefanie Stavrakas
U.S. Fish and Wildlife Service
Portland, OR
Stefanie_Stavrakas@fws.gov

Jennifer Spagon
U.S. Fish and Wildlife Service
1011 E tudor rd
Anchorage, Alaska 99503
907-786-3509
jennifer_spagon@fws.gov

Judd Stark
Catena Consulting, LLC
1101 Strawberry Ave
Billings, Montana 59105
406-671-3961
jstark@catenaconsulting.com

Bobbie Stephenson
County of San Diego, California
5201 Ruffin Road, Suite B
San Diego, CA 92123
858-694-3680
bobbie.stephenson@sdcounty.ca.gov

Marie Strassburger
USFWS - R8
2800 Cottage Way
Sacramento, CA 95825
916/414-6727
Marie_Strassburger@fws.gov

Tim Sullivan
U.S. Fish and Wildlife Service
3817 Luker Road
Cortland, New York 13045
607-753-9334 x 124
Tim_R_Sullivan@fws.gov

Leslie TeWinkel
Fish & Wildlife Solutions
6345 Irving Ave S
Richfield, Minnesota 55423
612-965-6960
leslie.tewinkel@gmail.com

Tyson Utt
Apex Wind Energy, Inc.
244 East High Street
Charlottesville, VA 22902
434-220-7595
tyson@apexwind.com

Matthew J. Wagner
DTE Energy
One Energy Plaza
Detroit, Michigan 48226
313-235-5575
wagnerm2@dteenergy.com

James A. Walker
enXco Inc
4 Paradise Valley Ct
Henderson, Nevada 89052
drjameswalker@gmail.com

Zachary Walton
SSL Law Firm LLP
575 Market Street, Suite 2700
San Francisco, California 94105
415.814.6400
zack@sslfirm.com

James R. Wells
Duke Energy
139 E. 4th Street, 1212 Main
Cincinnati, Ohio 45202
513-287-4363
james.wells@duke-energy.com

Jim Whalen
East County Renewables Coalition
1660 Hotel Circle N., Suite 725
San Diego, California 92108
619-683-5544
jim@jwhalen.net, cmcgee@jwhalen.net

Laurie Woodall
KR Saline and Associates PLC
160 N. Pasadena Ave. Suite 101
Mesa, Arizona 85201-6764
480 610 8741
law@krsaline.com

Dominick Yacono
NAVY REGION MID-ATLANTIC
1510 GILBERT STREET, RM 204
NORFOLK, Virginia 23511
757-444-1395
dominick.yacono@navy.mil

APPENDIX C—FULL REMARKS OF SECRETARY KEN SALAZAR

DAY ONE

Thank you all for being here today, particularly members of the FAC. The work you've done has been extremely helpful to the Nation as we move forward with the development of renewable energy, especially wind energy. It's important to stress how important it is that we have a coalesced effort to uphold conservation values, while at the same time, making sure we move forward with the new energy frontier.

We see it in places like Kansas. Over the last week, Dan Ashe and I have been all over, including in Wisconsin and Montana. In Montana we went to the Blackfoot, Swan Valley, and Rocky Mountain Front conservation areas. One of the responsibilities which the Department's leadership, Deputy Secretary David Hayes, Director Dan Ashe, and I have on behalf of the American people, the President and the Congress is upholding the conservation values and conservation legacy of this country. When I look at the Flint Hills and the Tall Grass Prairies of Kansas, I'm mightily proud of the Kansas Livestock Association, the ranchers who have been there for four or five generations, two Republican Senators, and the Republican Governor who are working with Democrats and conservation organizations to preserve the last of the remaining tall grass prairies, over 1.1 million acres.

That kind of a coalition of effort makes good things happen. In Montana, the crown of the continent, we're dealing with 250 miles north-south and 150 miles east-west that includes some of the most iconic places on the entire planet, including Glacier National Park, and other places up there. [Right now] we have ranchers that are helping us to reforge a new way of conservation in America where the government does not just buy the land and own it in fee title, it instead works with the ranchers who place their land in conservation areas, and by so doing, several things happen. Ranchers keep their way of life and pass those traditions on to their children and their grandchildren, six generations in many cases. We're able to keep local governments happy because we're not taking property off of the tax roll, it remains on the tax roll as agricultural land.

It is important for us to create the kind of connectivity for wildlife that is so important for the conservation interests which are represented here today as well. When you think about the migration corridors, whether it's the grizzly bear or other kinds of wildlife that we care so much about, we're doing that both at the Flint Hills and the crown of the continent, and other places around the United States of America. That kind of an effort is what this FAC has been working on with the wind industry and the conservation community, as we move forward with the development of wind energy here in our Nation.

I am hopeful and optimistic that this Committee's recommendations, along with the public input that we received, from thousands and thousands of people on the proposed Guidelines of the FWS will lead us to that kind of coalesced effort. It will take that kind of coalesced effort to make sure that wind energy is a part of our

new energy frontier and not just a flash in the pan for three, four, five, or ten years, but rather, is a part of the fabric of America's energy equation.

Let me back up and say that from day one, when we were working on our priorities for the Department, I defined the way forward relative to the highest priorities of my Administration relative to the Administration on behalf of President Obama. One of those areas that I focused on and continue to focus on a great deal is renewable energy. It is a part of the President's energy blue print for the future, and it's a part of what I'm significantly proud of [and pleased] that we've done a lot of in the last two and a half years with the leadership of this team and the leadership of Bob Abbey, Janea Scott, Steve Black and others who have been involved in this effort.

Now, when I started at Interior, we had lots of conversations about how we were going to do this, but the one thing we were committed in doing was that we would succeed in making believers out of the skeptics who didn't think we could get it done. I'm proud that two and a half years into this tour of duty, we have licensed and permitted over 4,000 MW of renewable energy power in the United States. Much of that, admittedly, has been in the solar arena where we are constructing a number of solar energy projects on public lands, which includes the largest solar energy facility in the world. We have also done as much as we can with geothermal power, hydro power, and to wind power. What we recognize as we've moved forward is in order for us to succeed, transmission need to be addressed.

We've probably had ten meetings in the last two and a half years with me, Secretary of the Department of Energy Steven Chu, Federal Energy Regulatory Commission Chairman Jon Wellinghoff, and others to work out how we can go about setting up transmission. It doesn't do you any good to have great wind energy in Wyoming or the Dakotas and have it stranded because we can't get that electricity to the markets where it's going to be consumed. We have permitted, and the construction has begun, on some 5,000 miles of transmission around the country. This is all work that I'm very proud of. However, I also believe we have a lot of work left to do. On the solar end, we're trying to develop the long term blue print for programmatic environmental impact statements that will allow us to create solar energy zones on public lands, where we know in the Southwestern part of America, we have the best solar opportunities. With wind energy, we're working with [the National Renewable Energy Laboratory] and the Department of Energy [to determine] where the best opportunities for wind energy are located and what the possibilities are in connecting [these resources] up to the grid. It's important that as we move forward with wind energy, and we see the huge potential of wind energy, that we implement it in the right way. Last week I announced the permit approval for two wind energy projects, and there will be others announced in the near future. It's important that as we move forward in this effort that we have the kind of road-map that will withstand scrutiny and the criticism and challenges that are to come over the next several decades. That's why we have put the amount of energy and effort into this initiative that we have.

Now, I met with members from both the conservation community and the wind industry about a month ago. At that point, I knew that there were flash points and concerns about the proposed voluntary Guidelines published by the Fish and Wildlife Service. After hearing the comments that day over an hour to an hour and a half, I said that I would ask the Service to reconvene the FAC so that we could take a look at those issues and figure out whether we could come to agreement on how to move forward. These are tough issues, you can't solve them simply by saying this is a good thing and we're going to solve them; these are issues that we actually have to work through. In some cases, I think that the FWS and the criticism of its Guidelines essentially had a lot to do with misunderstandings. There wasn't really a clear sense of what the Service was doing and this may have been caused by the terminology that was being used. However, Dan Ashe and his team have worked very hard to come up with a set of revisions that were published ten days or so ago. This meeting today is an opportunity for the FAC to provide some feedback to the FWS relative to the [newly] proposed Guidelines.

Let me in conclusion say three things:

1) In my view, and the President's view, wind energy is a big part of the energy future for the United States of America, we need to make sure that we make it happen. The permitting is only one aspect of it. There's also a whole host of other issues including the financial issues that you are all so well aware of. But we ought to at least have a permitting process that works both for industry and also protects the conservation values which this country is so proud of.

2) I want to say thank you again to the FAC. I know the members of this committee have worked very hard for a long period of time, to come up with the best recommendations. What's good about these recommendations is that they aren't just wind industry recommendations. You had the input of great conservation leaders in the community as you've developed your recommendations. The FWS is sure, and I will make sure this happens, to take into account the views, concerns, and suggestions that the FAC members have.

3) Let me also say that I know this is about the voluntary Wind Energy Guidelines on land. But since I have so many of you here in this room whom are leaders in the industry, leaders in conservation, and leaders from government agencies and NGOs, that we ought not to forget the offshore wind energy opportunities that we have in the United States. We have worked very hard with the Bureau of Ocean Energy Management Regulation and Enforcement and the states along the Atlantic to look at the possibility of offshore wind development. We've spent a lot of time in permitting of what will hopefully be the first operating offshore wind energy facility in the Atlantic - Cape Wind off Nantucket Sound. We have moved forward with the development of Wind Energy Areas in many of the states off the Atlantic and we [additionally] have great interest from states not off the Atlantic; states like Oregon whom want to move forward with offshore wind

energy development. The challenges there are different; the fiscal challenges are different. None the less, I do think that we have a great opportunity here. If the UK, Denmark, and other countries have been able to do it, there's no reason why we shouldn't be able to do it here in the United States. There are many advantages, though I won't go into them today, for developing wind energy off those coasts.

With that I'm going to turn it over to David Hayes because he has been a key player in these efforts with all of us. Dan Ashe may also have some comments. I also want to hear some comments from the FAC and then I have to go and deal with some other issues at the Department of the Interior.

Before I go I want to conclude with four quick points:

1) I want to thank the FAC again for all of the hard work you've done, because I know how much you all get paid, and it's nothing from us. Thank you again for lending us your expertise as we try to move forward with renewable energy, and particularly wind energy, in the country.

2) I want to say thank you to Dan Ashe and David Hayes along with the entire FWS team. I know you've been working literally night and day to get these Guidelines into a form that would be presentable. When they published these guidelines about a week ago or so, it really was a herculean effort on their part taking into account many of the comments which you had sent in to them.

3) I want to congratulate Dan Ashe, after having been unanimously confirmed by the Senate is now officially the Director of the FWS. He now has the full responsibility of making sure we get across the finish line here.

4) Last, while David will be here for a while longer, I intend to come back tomorrow at 10:00 a.m. and hopefully you'll all tell me you've reviewed the changes and that we're ready to move forward. I look forward to seeing you all tomorrow morning at 10:00. Thank you.

DAY TWO

Let me make a few comments and then see whether there are some points that you all want to make to me and to Deputy Secretary, David Hayes. I know there are some of you in the audience today who weren't here yesterday, for those of you who were here from the FAC, this may be a repetition. First, let me recommit to all of you the President's commitment and my personal commitment, that the Department of Interior with all of our agencies, the BLM, the Fish and Wildlife Service, USGS, and all of the other agencies that have a role in renewable energy, that this issue will remain a cornerstone of our priorities within the Department of the Interior and that we will continue to work to bolster renewable energy, in all of its forms including wind energy, here in the United States. I want to state that up front.

Secondly, let me again say that this Committee has done a tremendous amount of work over the years and I appreciate the work that you did before the first Service Guidelines came out.

I appreciate the issues you have raised and the fact that you spent all of the day yesterday and today grappling with some of these issues, trying to isolate them down to these last remaining issues.

I'll have a comment on a few of these issues in just a minute. Before that though, I'm pleased to note that besides the membership of the Committee that we have here, there are also a number of CEOs from the conservation community and the wind industry who are here as well.

I understand Justin Allegro is here from the National Wildlife Federation, Dr. Ed Arnett of course from Bat Conservation, Eric Meyers from Duke Energy, Chris Chapel from Florida Power and Light, Abby Arnold with AWWI, Stu Webster with Iberdrola, John Graham with BP Wind Energy, Jan Blittersdorf with NRG, Tom Vinson with AWEA, John Anderson with AWEA, Chris Long with AWEA, Gene Grace with AWEA, Kelly Fuller with the American Bird Conservancy, Genevieve Thompson with National Audubon, Julie Falkner with Defenders of Wildlife, see Aimee, they came to watch you, making sure you were doing a good job on the Committee here, and Bill Miller who is here from the Power Company of Wyoming, and looking at the names on this list I was given, and the names on this Committee, I recall having seen many of you throughout the time we've been working on these issues over the last several years.

I remember, I think it was in Wyoming, having a conversation at the Western Governors Association with Bill Miller and some of the other wind advocates who are here. I appreciate the fact that all of you have seen this as a great opportunity for the United States.

I believe we have huge potential to develop wind power while protecting our Nations wildlife. We need to make sure that we stay on track and that we ensure both the Congress, as well as the executive branch, continue to support renewable energy for the imperatives which Rene, Kathy and others spoke about yesterday. At the end of the day, this is about national security via our own energy supply here in the United States. It's also about addressing the need to tackle the challenges of climate change and making sure that we're producing the kind of energy that will get us to the new energy frontier first. We don't want the United States to play second fiddle here. We want to make sure that we continue to move forward. It's in this context that the Fish and Wildlife Service Guidelines are so important to the work of the wind industry and of the conservation advocates; if we don't get it right, we'll end up getting ourselves wrapped around the axle of litigation and controversy, that frankly, could stop the wind industry from becoming what it can be here in the country.

I'm proud of the progress that has been made. Indeed, I need only look at the number of megawatts that are now being produced. I remember in Colorado, when we first passed the Renewable Portfolio Standard for the State, I think it was 10% by [2015], the campaign that we put to the ballot actually had on the other side my wonderful and good friend, Dick Kelly, whom some of you know from Xcel.

He was opposed to our initiative, and he campaigned against it around the state of Colorado. We obviously won the campaign at the end of the day and therefore we had an RPS for renewable energy in the State. So wind farms were developed (many of your companies are part of those wind farms on the Eastern Plains up in the Northern part of Colorado) and within two years, we had made believers out of the skeptics. I remember so well that my wonderful good friend and colleague Dick Kelly, testifying in front of the Colorado General Assembly saying that it was time to double the RPS from 10 to I think 20, I don't remember the exact numbers but it was to double the RPS for the state of Colorado. All this happened because we made believers out of the skeptics.

That's what you're doing here. Kathy, the dialogue that you've had here and the progress which you reported on from members of the FAC Committee over the last several days is something that I think is important. It's important for you to have identified these remaining issues. That said, I'm going to have David make a few comments here in conclusion but I, before I do that I want to just address three quick points.

1) Time is our most difficult challenge and enemy and in our defense, we set deadlines. What this does is it drives people to work together produce results. With this in mind, the reconvening of the FAC Committee is something that we ought to aim for doing by mid-September as opposed to October. Everybody here should have reviewed the latest version of the Fish and Wildlife Service proposed voluntary guidelines and you've had a robust discussion about them for now a day and a half. The subcommittee groups that you have set up should work together through the sultry days of August, and get back together in September to see if we have come to conclusion on these issues. So push - put the pedal to the metal to try to get it done as quickly as possible.

2) Second, let me comment on the role of the Service. You have all been students of government and students of regulation. The complaint I hear from industry more often than anything else is that what you need is regulatory certainty, or certainty about what the guidelines are going to be. I agree that's very important; you don't want to have changing milestones and you want to be able to know that the project you're investing in is ultimately going to be built. However, it also is important that the Service not be sidelined in these efforts. You've seen other examples in the Department of Interior, for 30 years the oil and gas world of the Minerals Management Service essentially sidelined that agency. The consequence of that was a 30 year legacy of, frankly, looking the other way at what was happening with respect to oil and gas production in the Nation's oceans. When bad practices like

this happen here in the United States, it creates bad practices throughout the world because people look to us as a standard for development. As we move forward with a new generation of dealing with oil and gas production in our Nation's oceans, we also move forward with international protocols. We're working with Mexico, the Arctic countries, and a whole host of other countries to develop one set of standards on development of oil and gas in the oceans, making sure we have the best practices in place. My point is that we need to make sure that the Fish and Wildlife Service is performing its statutory responsibilities to protect eagles, bats, and other avian species in addition to its other statutory responsibilities. And so as you debate the question of the role of the Service, make sure that you have the robustness that is necessary to be able to tell the story 5 or 10 years from now that the United States still has the best land and wildlife conservation agency on this Earth. Don't undermine the Service as you have your discussions about the role of the Service.

3) The last point that I wanted to comment on is Avian and Bat Protection Plans where I think there has been some conversation about what those should be. In my view, it doesn't seem to me to be all that difficult to file an application and have an Avian and Bat Protection Plan as part of it. ABPPs in my view ought to be a part of what becomes one of the best practices that we have with respect to wind energy development. As a part of my role as Secretary of the Interior, yesterday I spoke about our conservation agenda at some length which I take very seriously. We have Habitat Conservation Plans that work in the Dakota Grasslands and in other places where they deliver good things for conservation. I similarly believe that Avian and Bat Protection Plans can be drawn up in a way to be helpful for developers and also advance our conservation agenda to protect the bats and the avian creatures that we care so much about.

So, with that, what I want to do is to hopefully suggest to you that you convene this meeting again in mid-September and hopefully we get some conclusion of these Guidelines for the wind industry and for conservation. Now I'll hand it over to David Hayes.

REPONSE TO PUBLIC COMMENTS

Let me make six quick points:

First, to Stu and others, you all know that one of the big things missing is the fact that we don't have the long term policy in the United States of America. We don't have a national Renewable Portfolio Standard which is something which we would all very much support. At present, we kind of move forward with these state by state RPSs. However, it would be good if we could move forward into that kind of a national legal framework. But in all candor, it doesn't seem to be something that's going to happen in this Congress, at least this year. But it's something maybe Congress will somehow find to be important once they get beyond the debt

ceiling/budget debate where we may be able to move forward with an energy bill that creates a long-term framework which I had been fighting for as U.S. Senator and as the attorney general from my own state. I've worked with renewable energy companies for years on this public policy issue, and yet it remains one of my greatest frustrations. Developers don't have a certainty with production tax credit, nor do they have certainty with respect incentives; everybody has to think short term. It'd be a hell of a lot better for the country, for industry, and for all of us involved, if we had a long-term framework in place. So let us hope that the United States and its leadership in the Congress recognize the importance of this issue and that in the not too distant future we can put something together.

Secondly, Michael, you raised a question with respect to funding. I have the entire budget of the Department of the Interior in front of the U.S. House of Representatives probably on Saturday or Sunday for their vote. I have said this before publically and I'll say here today again, this is a very sad day for conservation. The Land and Water Conservation Fund, wetlands funds for NACWA, and everything else that I believe in in conservation has essentially been decimated. In this budget, you have a 22% cut just to the operations of the U.S. Fish and Wildlife Service. So query to all of you, how can we expect this agency, which is a small agency, to continue to do its job? We're working with good people to see whether or not they can come to some sense of reality with respect to how we invest in conservation and how to support the Fish and Wildlife Service in the future. It's an important issue and it's an issue that is here and now.

Third, I want to say is we have spent a lot of time working with all of you and many of the CEOs here and those who represent their respective organization from the AWEA conference in Chicago, to the meetings in California, Cheyenne, Wyoming, and Washington D.C. in my office, you know the commitment that our entire team at Interior has on this issue and trying to resolve challenges and problems as they arise. In the meeting that I had at Interior about a month ago, the request made by those who attended to the Fish and Wildlife Service was to reconvene the FAC Committee. We've received tremendous support in the last couple of days after my coming here yesterday morning and my coming back here to receive this report at the end of this meeting. I appreciate the commendations we've received. As I've said before, this is something we strongly believe in and we want to get done.

I want to thank the CEOs from both the non-profit world and those from the wind industry who have really leaned into this process to find the sweet spots. In sharing this table with members of the Audubon Society, Defenders of Wildlife as well as NextEra and Duke and all of the other companies that are here, it seems to me that there is a huge common ground that we can work on.

I take a lesson here from my own history book of Ted Kennedy and Mike Henzy from Wyoming; Mike Henzy, the conservative republican and Ted Kennedy who was probably known as the most progressive liberal U.S. Senator at least in the last 50 years. I remember often sitting down with Ted Kennedy and Mike Henzy and

having conversations with them about how dysfunctional the Senate is in Washington, DC. However, what Ted Kennedy and Mike Henzy believed in was the 80% rule. They recognized that between the two of them, on 20% of the issues they had some fundamental disagreement, but on 80% they could agree. And so they defied the approach in Washington, DC which is to concentrate on the 20% of what you disagree on, and spend all your time on that. Instead they decided that they were going to focus in on the 80% that they agreed on. Because of that, they were able to pass some of the most important legislation in the last decade and a half. In our case here, between the Fish and Wildlife Service, conservation interests and the wind industry, I think we've already gone to a place where we're about 90% agreement. With this in mind, I encourage you to move forward and grapple with these 9 issues which David Cottingham outlined at the beginning and try to get them to the point where we have these guidelines into the end-zone.

Finally, I want to reiterate what I said. I think we ought to try to have another meeting of the FAC, probably September 15, and try to see how many of these issues can be worked out so then we can move forward. The quicker we do it, the better off we're going to be, and I think that, you know, this is not one of those things we're going to get through today. This is an issue that this Committee with the great minds who sit on this Committee have been grappling with for 3 years. This is an issue which David and the Fish and Wildlife Service have been involved for a very long time. So I think given this history, it's something that is imminently doable.

I also want to let you know that our entire staff is very committed to the work that you've done and that's why we spend the kind of time on this effort that we have. In light of this, I want to say a special thank-you to David Hayes, the Deputy Secretary of the Interior who has not only worked on renewable energy, but on matters relating to Native Americans where we probably have done more in that arena in 2 years than has been done in 200 year. He works tirelessly, probably 100 hours a week on behalf of the American public and takes these initiatives very seriously.

To Steve Black, my counselor and his very able assistant Janea Scott who last year were in California helping get permitted thousands of megawatts of solar power which is now under construction there. They were given an award recently as the champions of solar last year. This year, I want them to be the champions of wind. Steve and Janea just do a great job on your behalf.

To Michael Bean who is in the back. When I was looking around to try and find somebody that could help us work through the thorniest issues that we have in the Fish and Wildlife Service, Secretary Babbitt and I had a conversation, and I said "what kind of advice would you give to me as the Secretary of Interior?" – this was almost two and a half years ago – and he said "well," you know, in his own humble way, and Bruce can be humble...occasionally, he said "well, Ken, I don't know that I can give you much advice, but I do have one piece of advice," he says, "You know, these wildlife and endangered species issues are so, so tough. So the

one recommendation I would give to you is that you hire the smartest man on the planet". And he said "and his name is Michael Bean." I was happy to report to Secretary Babbit that I had already hired Michael Bean. So he will be very helpful to us as we move forward with these issues and to all the Fish and Wildlife Service.

Last night we had a reception for Dan Ashe in the Secretary's Office, to welcome him as the 16th Director of the U.S. Fish and Wildlife Service. He comes from a proud tradition of a family who has been involved in fish and wildlife issues for more than a generation. His father was a Fish and Wildlife Director in the Northeast Region of the United States for a long time in the 80's and he was there last night and spoke about the proud tradition of the Fish and Wildlife Service.

In sum, how we deal with this confluence of circumstances – wind energy and protection of the bald and golden eagle and protection of birds and the protection of bats – is a very important for all of us. It's critical that we make sure that the storied legacy of the Fish and Wildlife Service is one that we're going to be proud of 10 and 15 years from now. Thank you very much for this great meeting and I look forward to the meeting in mid-September. Thank you.



Summary of Comments *on the* **Draft Land-Based Wind Energy** **Guidelines**

July 2011

David Cottingham
U.S. Fish and Wildlife Service



General Overview

- Service received ~ 30,000 comments
- This summary is not all-inclusive
- Phrases used are those of commenters, not the Service
- For any given topic, comments included full spectrum of stakeholder concerns

FAC Recommendations

- Adopt FAC recommendations in full
- Adopt FAC recommendations as much as possible
- Explain reasons behind differences in FAC recommendations and draft Guidelines
- Keep the draft guidelines

“Assurances”

- Deviation from FAC language negates assurances
- Assurances needed to ensure voluntary use
- Requirements to gain assurances too onerous
- Impossible to avoid take and to obtain an incidental take permit under MBTA
- Assurances should not be provided for voluntary adherence to Guidelines

Mandatory vs. Voluntary

- Guidelines should remain voluntary
- Guidelines should be made mandatory
- As presently written, Guidelines are mandatory de facto
- Service lacks regulatory authority to require compliance
- Wherever a federal nexus exists, lead federal agency needs to work with project proponents to integrate Guidelines

FWS Role

- In Project Planning
 - Intense coordination with the Service should be limited to projects with high risk
 - Guidelines should be developer driven
 - Service, or oversight organization, should be involved in decision making at certain steps
 - Service should be involved at every step/tier
 - Service should develop timelines as to when it will respond to developers
- With Respect to Staffing and Resource Needs
 - Service lacks resources to respond to developers' concerns in a timely manner
 - Service staff will need time to be trained

FWS Role

- In Data Collection
 - Developers should maintain own records and collect own data
 - Service should be responsible for data collection and processing
- Regarding a Cohesive Agency Approach to Wind Development
 - DOI should revoke all prior related documents
 - Superseded by new stand alone document
 - Service must ensure consistency and clarity in applying Guidelines

Methods and Metrics

- Guidelines must incorporate standardized surveys and protocols
- Methods and metrics should be maintained in document and not on website
- Greater detail/information should be included in methods and metrics section
- Adopt FAC's version of Methods and Metrics

Phase-in (on-ramps)

- Projects should not be expected to go back to any tier already passed by
- Phase-in language needs clarification
 - **how and when will projects already planned and operating apply Guidelines**
 - **at what tier will they start**
- Guidelines should be finalized and implemented as soon as possible
- Immediate effective date creates uncertainty in costs and risks to projects since, in all likelihood, advanced staged projects will be out of compliance with Guidelines
- Adopt FAC proposal for phase-ins

Scope of Species Covered

- Guidelines unreasonably propose broader scope for research and mitigation efforts than is envisioned in FAC recommendations (i.e. species of concern)
- Scope and magnitude of draft Guidelines is out of proportion to impacts of wind energy on wildlife
- Guideline's scope should include effects to local populations and species as a whole
- Guidelines switch between addressing all species to focusing on birds and bats; clarify what species, and effects to such species, are to be considered

Monitoring

- Low level monitoring should be continued indefinitely, even after post-construction monitoring has been completed
- Monitoring should be required and not a rare occurrence
- Monitoring must be based on best available science
- Monitoring requirements should be risk-based and site-specific as recommended by FAC

Cumulative Impacts

- Adopt FAC wording regarding cumulative impacts
- Cumulative impact assessments should be required
- Cumulative impacts are important and should be afforded more attention
- Cumulative impact assessments are costly, resource intensive, and often do not yield information that would change project determinations

Community Scale Wind

- Guidelines should apply to all turbines
- Small-scale projects (<1MW) should be excluded
- Application of Guidelines to small projects will prevent development

Eagles

- Service should explain how WEG and ECPG relate to one another
- ECPG is too stringent or scientifically unsupported
- ECPG not stringent enough
- Guidelines do not take into account the benefits of wind energy for eagles

Conflict Resolution

- Service's chain of command should be used to resolve disputes
- Use Service's chain of command with specified point persons identified in Guidelines for consistency
- All stakeholders should be involved in conflict resolution
- 'Wind guru' should be appointed for conflict resolution matters

Coordination

- Maintain state coordination section from FAC recommendations
- Conflicts with existing state guidelines must be addressed
- Guidelines should emphasize need to coordinate with stakeholders
- Differentiate between coordination requirements on public and private land

Sound Impacts

- Noise impact evaluations should be required
 - If noise impact evaluations are required, criteria must be established and clarified
- Noise impact evaluations should not be required and/or moved to the research tier
- Singling out the relative impact of noise, as opposed to other factors, including avoidance of tall structures, is impossible

Native American Involvement

- Guidelines fail to provide information or guidance as to how Service will accept tribal input regarding BGEPA programmatic eagle take permits

Audience

- Audience for Guidelines should be developers
- Guidelines should clearly state intended audience

Legal Authority

- Service has overreached its legal authority to require compensation for non-statutorily protected species or to veto projects
- Service must adhere to its existing legal authorities
- Guidelines are inconsistent with existing authorities (i.e. states)
- Guidelines should distinguish between requirements of laws that provide for ITPs and apply to harm through habitat alteration (e.g., ESA), and those with criminal penalties for intentional take (e.g., MBTA)