From:	Reeves, Julie
To:	Edmunds, Daly; alex_daue@tws.org
Subject:	Re: March 13 - Wyoming wind, transmission and conservation workshop
Date:	Monday, March 17, 2014 1:40:21 PM
Attachments:	Final R6 BBCS Outline with annotation.pdf 2013DraftOutlineMigratoryBirdConservationPlan.docx

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Hi, Daly and Alex,

Thank you so much for the opportunity to participate in last week's workshop. I think it was very beneficial to have that group of people at the same table to at least get ourselves thinking about other perspectives when proposing, reviewing, and permitting these types of projects. I wanted to clarify one point that Mark made during our little spiel regarding APPs, BBCSs, and MBCPs, in case you plan to share that portion of the notes:

An avian protection plan (APP) is a document that energy development companies write as an overarching set of best management practices that govern the company in day-to-day business, and is generally pursuant to APLIC standards and guidelines.

A bird and bat conservation strategy (BBCS) is a document for wind development that includes project information, survey effort, avoidance areas and measures, and on-going monitoring efforts. Region 6 of the USFWS has developed an outline for what we would like to see in a BBCS (Referenced in Kevin Kritz's discussion and attached here).

A migratory bird conservation plan (MBCP) is a similar document to BBCS, but for transmission line projects. These are project-specific documents written by the company, that include project information, survey effort, best management practices, quantification of effects to migratory bird habitat, and compensatory mitigation for those effects. The USFWS does not have specific guidance for the development of a MBCP, though we do have a draft that has been circulated a bit (attached here).

Please let me know if you have any questions or need further clarification. Thanks!

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
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~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
A thing is right when it tends toward the integrity, stability, and beauty of the biotic community; it is wrong when it tends otherwise. ~Aldo Leopold

On Fri, Feb 28, 2014 at 5:23 PM, Edmunds, Daly <dedmunds@audubon.org> wrote:

Hello folks,

On behalf of The Wilderness Society and Audubon Rockies, thank you all for agreeing to participate in this workshop! As you can see, we have a full crowd and we expect this to be a very productive day-long event. Given our numbers and the breadth/depth of the information that we'll be covering, we are carefully constructing the agenda to maximize discussion. The morning consists of presentations and the afternoon primarily focuses on discussion. The revised agenda is attached. → Please look it over as it includes workshop goals and discussion questions.

Thank you to those that are presenting! Many of you have already sent Alex fact sheets/abstracts and we appreciate this. If you haven't, please do so (alex_daue@tws.org) at your earliest convenience. Our goal is to compile material to distribute to all participants on March 10, including a final agenda.

We thank Wyoming Game & Fish Department for hosting this meeting!

Sincerely,

Daly Edmunds and Alex Daue

From: Alex Daue [mailto:alex_daue@tws.org]

Sent: Tuesday, February 18, 2014 5:05 PM
To: Bob Sullivan (sullivan@anl.gov); Rutledge, Brian; Byron Woertz (bwoertz@wecc.biz); Colin McKee (colin.mckee@wyo.gov); Dr. Amy Pocewicz (apocewicz@tnc.org); Garry Miller (Garry.Miller@tac-denver.com); Holly Copeland (hcopeland@TNC.ORG); Jay Diffendorfer (jediffendorfer@usgs.gov); Jayme Lopez (j06lopez@blm.gov); Jeb Steward (jebsteward@union-tel.com); Joe Grennan (Joe.Grennan@res-americas.com); Joy Bannon (joybannon@wyomingwildlife.org); Julie Reeves (julie_reeves@fws.gov); Karen Smith (smithk@anl.gov); Larry Claypool (lclaypool@blm.gov); Lee Walston (lwalston@anl.gov); Mark Sattelberg (mark_sattelberg@fws.gov); Marty Griffith (mgriffith@blm.gov); Mary Flanderka (mary.flanderka@wyo.gov); Mike Valle (mvalle@blm.gov); Nephi Cole (nephi.cole@wyo.gov); Nick Van Lanen (nick.vanlanen@rmbo.org); Reg Rothwell (rrothw@hotmail.com); Roxane Perruso (Roxane.Perruso@tac-denver.com); Todd Lickfett (todd_lickfett@fws.gov); Tom Darin (tdarin@awea.org)
Cc: Edmunds, Daly

Subject: March 13 - Wyoming wind, transmission and conservation workshop
Importance: High

Thank you all for agreeing to participate in the workshop Daly and I are organizing. We have an excellent group and are looking forward to sharing ideas and identifying ways to advance responsible wind energy and transmission development and land and wildlife conservation. Thanks also to Wyoming Game & Fish Department for allowing us to use their conference room, we greatly appreciate it.

We will be in touch with more details next week, including an updated agenda. I will send a calendar invitation for the workshop shortly – please accept the invitation to RSVP.

Please send me any short factsheets that describe your work in this field by the end of next week. We will package those materials and share with the group the week before the workshop.

Workshop details

Date: Thursday, March 13

Time: 9 am to 5 pm

Location: 5400 Bishop Blvd, Cheyenne WY 82009 (Wyoming Game & Fish Department). Elk meeting room.

Food and drink: coffee, tea and lunch (in the meeting room) will be provided

Audio/video: we will have a laptop, powerpoint projector and screen; wi-fi will be available

To-dos

- Accept calendar invite

- Send me factsheets on your work in this field by 2/28

Sincerely,

Alex and Daly

Alex Daue

Assistant Director, Renewable Energy

The Wilderness Society | BLM Action Center

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We protect wilderness and inspire Americans to care for our wild places

U.S. Fish and Wildlife Service, Region 6, Mountain-Prairie Region

Outline for a Bird and Bat Conservation Strategy: Wind Energy Projects

A Bird and Bat Conservation Strategy (BBCS) is a life-of-a-project framework for identifying and implementing actions to conserve birds and bats during wind energy project planning, construction, operation, maintenance, and decommissioning. It is the responsibility of wind energy project developers and operators to effectively assess project-related impacts to birds, bats and their habitats, and to work to avoid and minimize those impacts.

A wind project BBCS should be updated regularly as new information, including monitoring of project impacts and technical advancements, becomes available. A BBCS is a strategy for assessing impacts, avoiding/minimizing impacts, guiding current actions, and planning future impact assessments and actions to conserve birds and bats. It provides reference to project history and previous impact assessments and actions. A BBCS contains the studies, analyses, and reasoning leading to project-specific decisions and implementation of actions. The 2012 U.S. Fish and Wildlife Service (USFWS) Land-Based Wind Energy Guidelines (WEG) provides comprehensive guidance on the process for addressing bird and bat conservation at all stages of wind energy development.

Decisions made through the BBCS framework include determining if there is a need to develop other bird and bat conservation plans such as an Eagle Conservation Plan (2013 USFWS Eagle Conservation Plan Guidance) or Habitat Conservation Plan (Endangered Species Act, section 10(a)(1)(B). Specific surveys needed to support those plans may be most effectively conducted in tandem with surveys to develop the BBCS.

Wind energy projects currently in operation which have not been planned, developed, or operated following a BBCS framework, will, at a minimum, need to supplement assessments of impacts to birds and bats with Post-Construction Assessments and Adaptive Management Studies, working closely with the USFWS.

The following outline is provided by USFWS Region 6 as a guide for developing and organizing a BBCS.

Outline

I. Statement of Purpose
Identify how the BBCS functions as a strategy to address bird and bat conservation during all project phases.

II. Regulatory Framework

A. Fish and Wildlife Laws, Regulations, and Policies
Include the language provided and do not reference USFWS law enforcement or prosecutorial discretion in the BBCS.

1. Migratory Bird Treaty Act (MBTA)
The MBTA is the cornerstone of migratory bird conservation and protection in the United States. The MBTA implements four treaties that provide for international protection of migratory birds. It is a strict liability statute, meaning that proof of intent, knowledge, or negligence is not an element of an MBTA violation. The statute's language is clear that actions resulting in a "taking" or possession (permanent or temporary) of a protected species, in the absence of a USFWS permit or regulatory authorization, are a violation. The MBTA states, "Unless and except as permitted by regulations … it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill … possess, offer for sale, sell … purchase … ship, export, import …transport or cause to be transported… any migratory bird, any part, nest, or eggs of any such bird …" 16 U.S.C. 703. The word "take" is defined by regulation as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect" 50 CFR 10.12. The USFWS maintains a list of all species protected by the MBTA at 50 CFR 10.13. This list includes over one thousand species of migratory birds, including eagles and other raptors, waterfowl, shorebirds, seabirds, wading birds, and passerines.

2. Bald and Golden Eagle Protection Act (Eagle Act)
Under authority of the Eagle Act, 16 U.S.C. 668–668d, bald eagles and golden eagles are afforded additional legal protection. The Eagle Act prohibits the take, sale, purchase, barter, offer of sale, purchase, or barter, transport, export or import, at any time or in any manner of any bald or golden eagle, alive or dead, or any part, nest, or egg thereof, 16 U.S.C. 668. The Eagle Act also defines take to include "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb," 16 U.S.C. 668c, and includes criminal and civil penalties for violating the statute. See 16 U.S.C. 668. The term "disturb" is defined as agitating or bothering an eagle to a degree that causes, or is likely to cause, injury to an eagle, or either a decrease in productivity or nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior, 50 CFR 22.3.

3. Endangered Species Act (ESA)
The ESA directs the USFWS to identify and protect endangered and threatened species and their critical habitat, and to provide a means to conserve their ecosystems. Among its other provisions, the ESA requires the USFWS to assess civil and criminal penalties for violations of the Act or its regulations. Section 9 of the ESA prohibits take of federally-listed species. Take is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct" 16 U.S.C. 1532. The term "harm" includes significant habitat alteration which kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering, 50 CFR 17.3. Projects involving Federal lands, funding or authorizations will require consultation between the Federal agency and the USFWS, pursuant to section 7 of the ESA. Projects without a

Federal nexus should work directly with USFWS to avoid adversely impacting listed species and their critical habitats.

B. Other Federal, State, County, Local and Tribal Laws, Regulations, and Policies

III. Project Description

Provide descriptions and maps of all project elements (e.g., roads, power lines, met towers) during all phases of pre-construction, construction, operation, maintenance, and decommissioning. Describe and provide maps of the project impact area (inside and outside project area boundary) where the project may potentially impact birds, bats and their habitats..

IV. Project History of Bird and Bat Presence, and Risk Assessments

A. Preliminary Site Evaluation (WEG Tier 1)

1. Site Description

Describe proposed wind energy site(s) within the broader geographic landscape of bird and bat distribution, use, and habitats.

2. Decision to Abandon Site(s) or Select Site(s) for Additional Assessments in WEG Tier 2

Describe evaluations of sites by answering questions in WEG Tier 1, Chapter 2: (1) Are species or habitats of concern present? (2) Does the landscape contain areas precluded by law or areas that are designated as sensitive? (3) Are there critical areas of wildlife congregation? (4) Is there potential to fragment large intact habitats for species that are sensitive to habitat fragmentation? Based on the answers to these questions, describe the decision to abandon sites or identify project modifications to effectively avoid and minimize potential adverse impacts.

B. Site-specific Characterization and Decisions (WEG Tier 2)

Continue landscape-scale assessments and include site reconnaissance evaluations.

1. Site Description

Provide additional site information obtained through more detailed Tier 2 assessment.

2. Evaluation and Decisions

(a) Abandon Site or Advance to Field Surveys to Support a BBCS

Describe evaluations of sites by answering the four questions from WEG Tier 1, plus questions from WEG Tier 2, Chapter 3: (5) Are plant communities or vegetation habitats of conservation concern present? (6) What species of birds and bats are likely to use the proposed site? (7) Is there potential for significant adverse impacts to those species? If there is a high probability of significant adverse impacts that cannot be avoided or minimized, the site should be abandoned.

(b) Determine Need for Other Bird or Bat Conservation Plans

Describe determination of need, and reference field surveys, for an Eagle Conservation Plan) or Habitat Conservation Plan.

C. Field Studies to Document Wildlife and Habitat, and Predict Project Impacts (WEG Tier 3)

Describe the goals, methods, results, analyses and conclusions of field studies, and include maps to assess the presence of, and project risks to, birds and bats and their habitats. Describe potential project impacts by answering the seven questions from WEG Tier 1 and Tier 2, plus questions

from WEG Tier 3, Chapter 4: (8) What are the distributions, abundance, behaviors and site-use of birds and bats, and what project elements expose these species to risk? (9) What are the potential risks to individuals and local populations of birds and bats and their habitats? (10) How can impacts to birds and bats be avoided and minimized? (11) What studies should be initiated and continued post-construction to evaluate predictions of impacts to birds and bats? Describe the level of scientific rigor of studies, and coordination and sharing of data with USFWS field offices.

1. Bird and Bat Status Assessments
   Describe how assessment studies were of sufficient duration and intensity to ensure adequate data were collected to accurately characterize bird and bat use of the area.

   (a) Bird and Bat Species Presence
      (i) Species Presence by Season
      (ii) Species of Concern (WEG, p. 63)
      (iii) Species of Habitat Fragmentation Concern (WEG, p. 63)

   (b) Bird and Bat Habitats
      Describe, quantify, and map.

   (c) Bird and Bat Use Patterns
      Describe, quantify and map survey data (e.g., from point counts, acoustic surveys, and migration surveys).

   (d) Baseline (Pre-construction) Habitat Management
      Describe the management of habitat at the proposed site prior to construction.

2. Bird and Bat Risk Assessment and Decisions Based on Assessments
   Describe assessment methods and assumptions.

   (a) Project Risk Assessment

      (i) Direct Impacts:
         Describe direct project impacts on birds and bats (e.g., wind turbine collisions, powerline electrocutions and collisions, vehicle collisions, barotrauma, disturbance, displacement, behavioral changes, and habitat loss, degradation and fragmentation).

      (ii) Indirect Impacts
         Describe indirect project impacts on birds and bats (e.g., loss of population vigor, attraction to modified habitats, and increased exposure to predation).

      (iii) Cumulative Impacts

   (b) Risk Assessment Decisions

      (i) Decision Criteria to either Abandon Site or Advance Project

      (ii) Decision of Need for Other Bird and Bat Conservation Plans
         Describe decision to develop other plans such an Eagle Conservation Plan, Habitat Conservation Plan, Candidate Conservation Plan with Assurances, or a plan to address state-managed species.

V. Conservation Measures to Avoid and Minimize Adverse Impacts (during project construction, operation, maintenance, and decommissioning)
Describe conservation measures and when and how each measure will be applied. Some measures will apply to all project phases, but other measures will only apply to specific phases of the project (e.g., construction versus operation). See WEG Chapter 7 for examples. While the following topics in the outline should all be included, the organization of this section may be modified (e.g., conservation measures may be organized by project phase, project elements, or category of conservation action).

A. Measures to Avoid/Minimize Direct Impacts

1. Fatalities

2. Disturbance/Displacement/Behavioral Changes

(a) Nest/Roost/Hibernacula Management
Describe how impacts to nests and nesting attempts will be avoided or minimized during all phases of the project. For example, constructing outside the breeding season or using nest buffers may be appropriate during construction, but measures to discourage or prevent birds from nesting in a sub-station may be needed during operation.

(b) Management of Other Habitat-use Areas (e.g., Foraging Areas)

3. Habitat Loss/Degradation/Fragmentation

B. Measures to Avoid/Minimize Indirect Impacts
For example, address measures to avoid loss of population vigor and increased exposure to predation.

C. Measures to Offset and/or Compensate for Habitat-Related Impacts

D. Measures to Avoid and Minimize Other Identified Project-Specific Risks

VI. Post-construction Studies to Estimate Impacts (WEG Tier 4)
Provide assessments of ongoing project risks to birds and bats and the effectiveness of conservation measures. Describe study methods and the level of survey effort (i.e., how many of each survey type was conducted, over what time period and seasons, and location and geographic coverage).

A. Carcass Surveys

B. Nest/Roost/Hibernacula Surveys

C. Habitat Surveys

D. Other Surveys
A need for surveys, such as point counts, acoustic surveys, mist net surveys, may be identified through measuring project impacts.

VII. Other Post-construction Studies and Adaptive Management (WEG Tier 5)
Describe adaptive management studies which may (1) be planned during development of the BBCS via measuring impacts during post-construction and the discovery that conservation measures are not adequate to avoid and minimize impacts, or may (2) address unplanned or unforeseen impacts. Describe the actions taken during the following steps.

A. Evaluate need for action (1) based on assessing effectiveness of conservation measures through post-construction monitoring of impacts, or (2) as determined by unforeseen impacts or circumstances.

B. Identify potential technical/operational option(s) to avoid and minimize impacts (e.g., via scientific literature or industry innovation).

C. Present technical/operational option(s) to agency/authority for review to determine if it merits field testing or application. If, after review, field testing or application is not merited, go to step B. If field testing or application is merited, go to step D.

D. Field test or apply technical/operational option(s), with agency/authority concurrence of methods, in settings which will not increase adverse impacts to birds and bats nor will result in impacts exceeding those allowable in permits or other project-related plans.

E. Evaluate and report effectiveness of technical/operational option(s) with review by agency/authority. If ineffective, go to step B. If effective go to step F.

F. Apply effective avoidance and minimization measures.

G. Monitor effectiveness (update post-construction monitoring in BBCS, if necessary, with agency/authority review).

H. Update BBCS Section on Conservation Measures, return to step A to evaluate need for further action.

VIII. Project Permits Addressing Birds and Bats

Identify need for permits. For example, migratory bird permits would be required for active nest relocation, temporary possession, depredation, salvage/disposal, and scientific collection.

A. Bird and Bat Permits

Identify permits needed for project construction, operation, and/or maintenance.

B. Agency and Process for Permit Issuance

Identify the responsive agency and processes to apply for and comply with permits.

IX. Reporting Formats and Schedule

Describe formats and schedule for reporting data and study results to responsive agencies.

A. Preconstruction Survey Data

B. Operation/Post-construction Monitoring

C. Adaptive Management

D. Permits

X. Personnel Training

Describe process and curriculum for providing personnel and contractors with education about wildlife laws; processes to follow upon finding injured birds, bats or carcasses; and actions they can take to avoid impacts to birds and bats.

XI. Contacts/Key Resources

A. List of Contacts and Key Resources

B. Coordination Processes
Who/when/where a company should initiate contact and under what circumstances.

XII. References and Literature Cited

XIII. Appendices

A. Baseline Survey Reports

B. Post Construction Reports

1. Carcass Monitoring
2. Nest/Roost/Hibernacula Surveys
3. Habitat Surveys
4. Other Surveys: For example, point counts, acoustic surveys, mist net surveys

C. Adaptive Management Studies

D. Other Plans Guiding Bird and Bat Conservation (e.g., ECP)

E. Permits Related to Birds and Bats

U.S. Fish and Wildlife Service and BLM Recommendations on a Project-specific
Migratory Bird Conservation Plan
For Proposed Transmission Line Projects

1) Needs to address a) An assessment of direct and indirect impacts to migratory birds and their habitats, and b) Development of compensatory mitigation for impacts to migratory bird habitat services lost including direct habitat loss or alteration resulting from the project.
2) Needs to pull together all avoidance, minimization, and mitigation measures currently being applied for the benefit of migratory birds and their habitats in the applicant's company policy, project environmental impact statement, and biological assessment. Would also be useful to identify what effects those measures are intended to address.
3) Should be written in coordination with FWS and BLM.

Outline:

i) Project description/Introduction
   a. This section should define the background and the need for such a document.
   b. Should include detailed description of the project and components that will potentially affect migratory birds
ii) Regulatory Framework
   a. Migratory Bird Treaty Act
   b. Executive Order 13186
   c. Memoranda of Understanding between FWS and other Federal agencies under EO 13186
   d. Bald and Golden Eagle Protection Act
   e. Instruction Memorandum No. WY-2013-005
iii) Applicability
   a. List of focal migratory bird species or all species potentially using project area. Birds should be listed by habitat associations or vegetation community associations.
   b. Sage-grouse mitigation framework and conservation plan and how they can be used to address migratory birds, in part
iv) Habitat assessment/Analysis of Impacts
   a. Assessment of impacts at various scales (landscape-scale, project-scale, etc.)
   b. Habitat types and acreages being impacted
   c. Species of concern/importance being affected for each habitat type
   d. Impact assessment developed for the greater sage-grouse mitigation framework; what can be useful for migratory birds
   e. Impact analysis
      i. Permanent and temporary impacts defined and evaluated
      ii. Direct and indirect defined and evaluated
v) Conservation measures
   a. Avoidance and minimization measures (BMPs, Applicant-committed measures, seasonal and spatial buffers, surveys, reclamation, monitoring, reporting, etc.)
      i. Siting and design
      ii. Construction
      iii. Operations and maintenance

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b. Compensatory mitigation
    i. How the value is defined for habitat
    ii. Types of compensatory mitigation proposed (habitat acquisition, offsite habitat remediation, etc.)
    iii. Monitoring of success
c. Sage-grouse mitigation framework avoidance, minimization, and mitigation measures that can be applied for migratory birds

vi) Coordination and communication plan
a. Agency roles

vii) References used in development of the document (i.e. State of Utah Wildlife Action Plan (and other state-specific plans), Important Bird Area documentation, etc.)

Example Forms of Mitigation

I. Avoidance and Minimization	**II. Compensatory Mitigation**
Siting and design to avoid impacts to habitat	3rd party contributions -acquisition of land -offsite habitat restoration and/or enhancements -long-term management of purchased/restored land -monitoring and reporting of project impacts and mitigation success to include pre and post population monitoring of project area and mitigation areas. -adaptive management plan
Identification of nesting season	
Preconstruction nest surveys	
Pre-and post-construction project monitoring and reporting to assess effects of the project on migratory bird use of project site	
Construction outside the nesting season	
Vegetation removal outside the nesting season	
Spatial buffers for birds: a)raptors, b) passerines	
Biological monitor onsite: a) surveying/ monitoring, b) reporting, c) flagging	
Environmental training for personnel	Determine ratios of habitat value to habitat impacts
Micro-realignment of the project	Research? (Not currently viewed as compensatory mitigation in this FWS Region without further review; monitoring is important part of column I.) -species richness and abundance changes with the installation of a transmission line. Would also likely require Mig bird use monitoring (Pre & Post development) -demonstrated avoidance of transmission line ROW -increased predation or increased nesting within ROW
Noise reductive barriers	
Anti-perching devices, flight diverters	
Habitat restoration	
Consultation with FWS and BLM offices for emergencies, variances	
Colocation with existing or proposed transmission lines (discount effects of both if they share ROW)	
Fire, weed, trash, speed limit plans	Identify specific measures to be used in various habitat types.
Others?	Others?

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