

## **Appendix B Public Scoping Comments**

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Scott Pruitt/R3/FWS/DOI  
05/26/2011 08:53 AM

To Forest Clark/R3/FWS/DOI@FWS, Marissa  
Reed/R3/FWS/DOI@FWS, Lori Pruitt/R3/FWS/DOI@FWS  
cc  
bcc  
Subject Fw: public comment on federal register Fw: THE BAT IS  
MORE IMPORTANT THAN THE WINDMILL IN THAT  
LOCATION

Our first comment.

Scott

----- Forwarded by Scott Pruitt/R3/FWS/DOI on 05/26/2011 08:52 AM -----



"bk1492@aol.com"  
<bk1492@aol.com>  
05/25/2011 05:09 PM

To lynn\_lewis@fws.gov, fowlerridge@fws.gov,  
scott\_pruitt@fws.gov, rush.holt@mail.house.gov,  
speakerboehner@mail.house.gov,  
SF.NANCY@MAIL.HOUSE.GOV  
cc broads@greatoldbroads.org, information@sierraclub.org,  
foe@foe.org, info@emagazine.com  
Subject public comment on federal register Fw: THE BAT IS MORE  
IMPORTANT THAN THE WINDMILL IN THAT LOCATION

deny this permit to fowler ridge. the windmill can be put anywhere. we need to sve those bats, which help  
everybody in america by eating insects.  
jean public address if required

[Federal Register Volume 76, Number 101 (Wednesday, May 25, 2011)]  
[Notices]  
[Pages 30384-30386]  
From the Federal Register Online via the Government Printing Office [[www.gpo.gov](http://www.gpo.gov)]  
[FR Doc No: 2011-12860]

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS-R3-ES-2011-N096; 30120-1112-000-F2]

Notice of Intent To Prepare a Draft Environmental Impact  
Statement for a Proposed Habitat Conservation Plan and Incidental Take  
Permit

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of intent; request for comments.

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SUMMARY: We, the U.S. Fish and Wildlife Service (Service), advise the public that we intend to prepare a draft environmental impact statement (EIS) to evaluate the impacts of several alternatives relating to the proposed issuance of an Endangered Species Act Permit to Fowler Ridge Wind Farm LLC, Fowler Ridge Wind Farm II LLC, Fowler Ridge Wind Farm III LLC, and Fowler Ridge Wind Farm IV LLC (Applicant) for incidental take of the Indiana bat (*Myotis sodalis*), a Federal endangered species, from activities associated with the operation of Fowler Ridge Wind Farm in Benton County, Indiana. We also announce a public comment period.

DATES: The public scoping period begins with publication of this notice in the Federal Register and will continue through June 23, 2011. The Service will consider all comments defining the scope of the EIS that are received or postmarked by this date. Comments received or postmarked after this date will be considered to the extent practicable. The Service will conduct a public scoping meeting in Fowler, IN, on June 7, 2011. The scoping meeting will provide the public with an opportunity to present comments, ask questions, and discuss issues with Service staff regarding the EIS.

ADDRESSES: You may submit comments by U.S. mail or hand-delivery to Mr. Scott Pruitt, U.S. Fish and Wildlife Service, 621 South Walker St., Bloomington, Indiana, 47403; electronic mail: [FowlerRidgeHCP@fws.gov](mailto:FowlerRidgeHCP@fws.gov); or fax: (812) 334-4273 (Attention: Scott Pruitt).

FOR FURTHER INFORMATION CONTACT: Mr. Scott Pruitt at (812) 334-4261. Individuals who are hearing-impaired or speech-impaired may call the Federal Relay Service at (800) 877-8337 for TTY assistance.

SUPPLEMENTARY INFORMATION: We publish this notice in compliance with the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 et seq.), and its implementing regulations (40 CFR 1501.7, 1506.6, and 1508.22), and Section 10(c) of the Endangered Species Act of 1973 (the Act), as amended (16 U.S.C. 1539(c)). We intend to gather the information necessary to determine impacts and alternatives to support a decision regarding the potential issuance of an incidental take permit to the Applicant, and the implementation of the supporting draft habitat conservation plan (HCP). We intend to prepare an EIS to evaluate the impacts of several alternatives relating to the proposed issuance of an incidental take permit (ITP) under the Act. The applicant proposes to apply for an incidental take permit through development and implementation of an HCP. The proposed HCP will cover take of the Indiana bat that is incidental to activities associated with the operation of Fowler Ridge Wind Farm, and will include measures necessary to minimize and mitigate impacts to the Indiana bat and its

habitat to the maximum extent practicable.

#### Request for Information

The Service requests data, comments, new information, or suggestions from the public, other concerned governmental agencies, the scientific community, Tribes, industry, or any other interested party on this notice. These comments will be considered in the development of a draft EIS, in the development of a draft HCP by the applicant, and in the determination of whether to issue an ITP. We particularly seek comments concerning:

- (1) Biological information concerning the Indiana bat;
- (2) Relevant data concerning wind power and bat interactions;
- (3) Additional information concerning the range, distribution, population size, and population trends of the Indiana bat;
- (4) Current or planned activities in the subject area and their possible impacts on the Indiana bat;
- (5) Any information identified in the aforementioned as it relates to other bat

[[Page 30385]]

species, in particular, tree bat species such as red bat (*Lasiurus borealis*), hoary bat (*Lasiurus cinereus*), and silver-haired bat (*Lasionycteris noctivagans*) that occur in the project area;

(6) The presence of archeological sites, buildings and structures, historic events, sacred and traditional areas, and other historic preservation concerns, which are required to be considered in project planning by the National Historic Preservation Act (16 U.S.C. 470 et seq.); and

(7) Identification of any other environmental issues that should be considered with regard to the proposed development and permit action.

#### Public Comments

You may submit your comments and materials considering this notice by one of the methods listed in the ADDRESSES section.

Comments and materials we receive, as well as supporting documentation we use in preparing the NEPA document will be available for public inspection by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Bloomington Indiana Field Office (see FOR FURTHER INFORMATION CONTACT section). You may obtain copies of this notice on the Internet at: <http://www.fws.gov/midwest/Endangered/permits> the Bloomington Indiana Field Office (see FOR FURTHER INFORMATION CONTACT section).

#### Background

Section 9 of the Act prohibits ``take'' of fish and wildlife species listed as endangered under section 4 (16 U.S.C. 1538, 1533,

respectively). The Act's implementing regulations extend, under certain circumstances, the prohibition of take to threatened species (50 CFR 17.31). Under section 3 of the Act, the term ``take'' means ``to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct'' (16 CFR part 1521). The term ``harm'' is defined by regulation as ``an act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering'' (50 CFR 17.3). The term ``harass'' is defined in the regulations as ``an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering'' (50 CFR 17.3).

Section 10(a)(2)(A) of the Act requires an applicant



Paul Friesema  
<pfree@northwestern.edu>

05/25/2011 04:33 PM

To: FowlerRidgeHCP@fws.gov  
cc:  
Subject: ATTN: Scott Pruitt

Hello Scott. Please put me on the mailing list for the DEIS on the Proposed Habitat Conservation Plan and Incidental Take Permit for the Fowler Ridge Wind Farm. If there is a current status report on the Indiana Bat, would you send that along too. I prefer paper copies of materials, beginning with the scoping announcement and summary. Please send material to:

Professor Paul Friesema  
Environmental Policy and Culture Program  
227 Scott Hall, Northwestern University  
Evanston, IL.60208-1006

Thank you! Paul Friesema

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[Federal Register Volume 76, Number 101 (Wednesday, May 25, 2011)]

[Notices]

[Pages 30384-30386]

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[FR Doc No: 2011-12860]

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

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Wind Farm LLC, Fowler Ridge Wind Farm II LLC, Fowler Ridge Wind Farm III LLC, and Fowler Ridge Wind Farm IV LLC (Applicant) for incidental take of the Indiana bat (*Myotis sodalis*), a Federal endangered species, from activities associated with the operation of Fowler Ridge Wind Farm in Benton County, Indiana. We also announce a public comment period.

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Bloomington, Indiana, 47403; electronic mail:  
FowlerRidgeHCP@fws.gov;  
or fax: (812) 334-4273 (Attention: Scott Pruitt).

FOR FURTHER INFORMATION CONTACT: Mr. Scott Pruitt  
at (812) 334-4261.

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call the  
Federal Relay Service at (800) 877-8337 for TTY assistance.



"Hyman, Jeffrey Bruce"  
<jbhyman@indiana.edu  
>

To: "FowlerRidgeHCP@fws.gov" <FowlerRidgeHCP@fws.gov>  
cc:  
Subject: Comments on Fowler Ridge NOI Attn Scott Pruitt

06/22/2011 05:26 PM

Thanks, Scott, for this opportunity to comment on the Fowler Ridge NOI, 76 Fed. Reg. 30384. Comments are attached in pdf format. Mail delivery to follow.

Please verify receipt of this e-mail.  
Thanks.

Jeff Hyman

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Jeffrey B. Hyman, Ph.D., J.D.  
Staff Attorney, Conservation Law Center  
Adjunct Professor of Law, Indiana University Maurer School of Law

Bloomington, IN 47408  
(812) 856-5737 (Direct Line)  
(765) 994-5872 (Cell Phone)  
jbhyman@indiana.edu

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116 South Indiana • Bloomington, Indiana 47408  
phone: 812-856-0229 • fax: 812-855-1828

admin@conservationlawcenter.org • www.conservationlawcenter.org

Comments on NOI to prepare draft EIS for Indiana Bat ITP and HCP at Fowler Ridge,  
76 Fed. Reg. 30384

June 22, 2011

Mr. Scott Pruitt  
U.S. Fish and Wildlife Service  
621 South Walker St.,  
Bloomington, Indiana, 47403;  
Electronic mail: [FowlerRidgeHCP@fws.gov](mailto:FowlerRidgeHCP@fws.gov) (receipt verification requested);  
fax: (812) 334-4273 (Attention: Scott Pruitt).

Dear Mr. Pruitt,

We offer these comments pursuant to the Service's Notice of Intent ("NOI") to prepare a draft National Environmental Policy Act Environmental Impact Statement ("EIS") for a proposed habitat conservation plan ("HCP") and incidental take permit ("ITP") for the Fowler Ridge Wind Farm project (the "Project") in Benton County, Indiana.<sup>1</sup> The Conservation Law Center is a nonprofit public interest law firm located in Bloomington, Indiana. Our mission is to help clients solve natural resources conservation problems, to work to improve the body of conservation law and policy, and to educate law students.

The comments below identify environmental issues that should be considered with regard to the proposed development, permit action, and EIS content.

**I. DELINEATION OF THE ACTION AREA OF THE PROJECT MUST ACCOUNT FOR FORAGING AND OTHER MOVEMENTS**

The NOI describes the percentage of habitat types in the area of the Project as follows:

The project is located in a rural setting, with the landscape primarily composed of agricultural properties. Of the roughly 72,953 ac (29,523 ha) *within 0.5 mi (0.8 km) of turbine locations*, row crops comprise about 93 percent of the land use for the study area. After tilled agriculture, the next most common land uses within the FRWF are developed areas (e.g., houses and buildings), which comprise 5.0

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<sup>1</sup> 76 Fed. Reg. 30384 (May 25, 2011).

percent of the total, and pastures/hayfields, which comprise 1.4 percent of the total. There are 22.8 ac (9.2 ha) of grasslands, which compose less than 0.1 percent of the study area. Grasslands in the study area are limited primarily to strips along drainages, railroad rights-of-way (ROW), and ROWs along county and State roads. Trees in the study area occur at homesteads, along some of the drainages and fencerows, and within some small, isolated woodlots. Forested areas are rare within the study area, based on 2001 data, and the 249.3 ac (100.8 ha) of forest comprise 0.5 percent of the total area. Small amounts of barren ground, open water, and woody wetlands are also present.

Emphasis added.

The referenced “72,953 ac (29,523 ha) within 0.5 mi (0.8 km) of turbine locations” may be a sufficient area for monitoring bat fatalities below turbines, but this area is too small to constitute an “action area” for the Project’s effects on Indiana bats. An “action area” is defined by regulation as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action.<sup>2</sup> The action area is not limited to the footprint of the action nor is it limited by the Federal agency’s authority. Rather, it is a biological determination of the reach of the proposed action on listed species.

When delineating the action area of the Project, the movement patterns of Indiana bats must be considered. Indiana bats residing in maternity colonies may forage over several miles and often travel miles between roosts and foraging areas. For example, the EIS and associated documents for the I-69 Evansville to Indianapolis project consider the summer action area to be the area within 2.5 miles to either side of the centerline of the highway corridor, and these documents state that this distance corresponds to the average range around maternity colonies in which female adult bats will forage during the summer breeding season. Bats roosting in colonies (and, indeed, any gathering of bats) two to three miles from the Project’s turbines potentially will be impacted by those turbines during foraging and gathering movements.

Indiana bats migrating during spring from hibernacula to summer foraging areas and back again in autumn also may come into contact with the Project turbines. Reproductive females may migrate up to 575 km (357 mi) to form maternity colonies to bear and raise their young.”<sup>3</sup>

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<sup>2</sup> 50 C.F.R. § 402.02.

<sup>3</sup> USFWS, *Indiana Bat (Myotis sodalis) Draft Recovery Plan: First Revision*, April 2007, p. 37.

In addition, both male and female Indiana bats change roost trees and locations throughout the summer,<sup>4</sup> and such movements also may bring bats into the Project.

The Fowler Ridge EIS should evaluate the extent and timing of bat foraging, gathering, migration, and dispersal movements and should analyze how such movements influence the delineation of an “action area” for the Project. The habitat composition and landscape features for the justifiable “action area” of the Project, which is certainly larger than the area “within 0.5 mi (0.8 km) of turbine locations,” can then be determined.

## **II. INDIANA BAT MATERNITY COLONIES, AS WELL AS NON-REPRODUCTIVE FEMALES AND ADULT MALES, SHOULD BE SURVEYED**

The Project EIS should describe the results of landscape surveys for Indiana bat maternity colonies and estimate the likelihood that reproductive females and juveniles will interact with Project wind turbines. Even small clumps of trees may house maternity colonies. As the surveys for the I-69 project EISs and Biological Opinions have shown, Indiana bat maternity colonies are widespread throughout Indiana and may not be detected during initial surveys. Several maternity colonies are likely to exist in the “action area” of the Fowler Ridge Project.

The Project EIS should also describe the results of landscape surveys for non-reproductive female bats and male bats, and should estimate the likelihood that these bats will interact with Project wind turbines. Although some Indiana bat bachelor colonies have been observed, males and non-reproductive females typically do not roost in colonies and may migrate long distances to their summer habitat.

## **III. THE PERCENTAGE OF FORESTED ACRES WITHIN THE ACTION AREA WILL NOT ACCURATELY REFLECT THE LIKELIHOOD OF TAKE**

As discussed above, the NOI makes a point of describing the habitat composition of the Project “study area,” noting that forested habitat is rare. Although female Indiana bats congregating in maternity colonies may use roost trees or forested areas as a base for foraging

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<sup>4</sup> See, for males, *Animal Welfare Institute v. Beech Ridge Energy LLC.*, 2009 U.S. Dist. LEXIS 114267, \* 13, \_\_\_\_\_ F. Supp. 2d \_\_\_\_\_ (D. Md., December 8, 2009); for females, USFWS, *Indiana Bat (Myotis sodalis) Draft Recovery Plan: First Revision*, April 2007, pp. 46-47, 50-51.

bouts, Indiana bats are likely to be associated also with nonforested areas, especially during migration. Thus, the number of bats contacting wind turbines cannot be predicted from the location or amount of forested areas or roost trees alone, and the EIS should not focus on trees to the exclusion of other habitats. The Project EIS should describe the results of surveys for all Indiana bats and should estimate the likelihood that any Indiana bat – whether foraging, gathering, dispersing, or migrating – will interact with Project wind turbines under various alternatives and scenarios.

#### **IV. THE EIS SHOULD EVALUATE AT LEAST ONE ALTERNATIVE THAT REQUIRES SHUTTING DOWN TURBINES FROM SUNSET TO SUNRISE DURING THE NON-HIBERNATING SEASON**

The Service, to issue an ITP, must find that the Project's applicant will, to the maximum extent practicable, minimize and mitigate the impacts of the taking.<sup>5</sup> This finding typically requires consideration of two factors: adequacy of the minimization and mitigation program, and whether it is the maximum that can be practically implemented by the applicant. Particularly where the adequacy of the mitigation is a close call, the record must contain some basis to conclude that the proposed program is the maximum that can be reasonably required by that applicant. This may require weighing the costs of implementing additional mitigation, benefits and costs of implementing additional mitigation, the amount of mitigation provided by other applicants in similar situations, and the abilities of that particular applicant.<sup>6</sup>

This Project and ITP are but the beginning of a wave of similar projects and ITP applications as wind power development surges forward. The cumulative impact of wind power development is potentially severe for the Indiana bat and other hibernating bats as well as for tree bat species such as the red bat (*Lasiurus borealis*), hoary bat (*Lasiurus cinereus*), and silver-haired bat (*Lasionycteris noctivagans*).<sup>7</sup> The Service now has an opportunity to ensure that wind power is developed in an environmentally responsible and sustainable manner that is protective of bats and other wildlife.

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<sup>5</sup> 16 U.S.C. §1539(a)(2)(B); USFWS, *Habitat Conservation Planning (HCP) and Incidental Take Permit Processing Handbook*, Dec. 4, 1996, pp. 7-3 to 7-4, available at <http://www.nmfs.noaa.gov/pr/laws/esa/policies.htm>.

<sup>6</sup> HCP Handbook (1996), pp. 7-3 to 7-4.

<sup>7</sup> See, e.g., Paul M. Cryan, *Wind Turbines as Landscape Impediments to the Migratory Connectivity of Bats*, *Environmental Law* 41, 355–370 (2011).

As the Service suggests, the Project EIS must consider the “Maximally Restricted Operations Alternative,” which includes shutting down turbines at night during the period from April 1 through October 31. If other curtailment options – based, for example, on time of day, season, bat activity level, or wind speed – are considered, the EIS should compare information on their effectiveness for minimizing take of bats with the projected benefits of the Maximally Restricted Operations Alternative.

We recognize that the effectiveness of curtailment regimes during prime activity or migration periods is highly uncertain; operational mitigation measures were cited in Appendix 4 of the USFWS Interim Wind Power Guidelines as a subject in need of research.<sup>8</sup> The Project EIS, ITP, and HCP must work with that uncertainty, however, and devise measures likely to be effective. The effectiveness of alternative design and operational measures must be evaluated using the best available data, reasonably obtainable new data developed for this Project, and risk assessments. An EIS should resolve key information gaps where practical and analyze the remaining uncertainties.<sup>9</sup> “The purpose of an EIS is to obviate the need for speculation by insuring that available data are gathered and analyzed prior to the implementation of the proposed action.”<sup>10</sup> “Lack of knowledge does not excuse the preparation of an EIS; rather it requires the agency to do the necessary work to obtain it.”<sup>11</sup> The Project EIS should analyze existing information, gather new information that is reasonably obtainable, and provide for further gathering of needed information on the effectiveness of curtailment regimes.

## **V. SETBACKS, ROOST TREE PROTECTION, AND HABITAT PROTECTION AND ENHANCEMENT, BY THEMSELVES, ARE NOT ADEQUATE TO MINIMIZE TAKE**

In the NOI, the Service listed some possible mitigation measures to avoid and minimize impacts to Indiana bats, including the impact of lethal take, for this Project:

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<sup>8</sup> USFWS, *Service Interim Guidance on Avoiding and Minimizing Wildlife Impacts from Wind Turbines*, May 13, 2003, App. 4 (discussing effectiveness of seasonal wind turbine shutdowns at preventing mortalities, including the feasibility of using self-erecting turbines that are easily erected and dismantled without cranes, and taking them down during critical periods such as migrations), available at <http://www.fws.gov/habitatconservation/wind.pdf>.

<sup>9</sup> See *Nat'l Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 733-35 (9th Cir. 2001) (EIS required where effectiveness of proposed mitigation measures was too uncertain).

<sup>10</sup> *Nat'l Parks*, 241 F.3d at 732 (quoting *Sierra Club v. United States Forest Serv.*, 843 F.2d 1190, 1195 (9th Cir. 1988)).

<sup>11</sup> *Nat'l Parks*, 241 F.3d at 733.

Any turbine operational management adjustment program is likely to contain various measures to avoid and minimize impacts to Indiana bats, including the impact of lethal take. Various methods that may be considered include, but are not limited to: Protection of roost trees and surrounding habitat, set-back distances from known roost trees, mapping and avoidance of foraging areas, protection and enhancement of Indiana bat habitat outside the project area, various operational adjustments for turbines during prime activity or migration periods, and post-construction monitoring for fatalities.

As discussed above, a criterion for the issuance of an ITP is that the applicant, to the maximum extent practicable, must minimize and mitigate the impacts of taking. The immediate impact of the Project on bats is death or sub-lethal injury. Thus, minimizing such harm to bats requires turbine design and operational standards to avoid exposing bats to harm, restricting siting of turbines away from places that bats visit, or deterring bats from coming within harms way of turbines.

In contrast, protecting tree roosts and surrounding habitat and protecting or enhancing Indiana bat habitat outside the project area do nothing to minimize bat fatalities resulting from contact with turbines. Protecting habitat as “mitigation” for turbine-related fatalities is not like protecting habitat as mitigation for a project’s destruction of habitat. The impact of a project that destroys habitat used by a maternity colony may be mitigated to some extent by replacing the destroyed habitat with restored habitat in the colony area. For the Fowler Ridge Project, in contrast, habitat protection does not avoid or minimize the impact of turbine-related fatalities, does not reduce or alleviate that impact over time, and does not replace or provide substitute resources. The only actions that reduce or alleviate the immediate impacts of wind turbines on Indiana bats are those that reduce the risk of harm at the turbines. In fact, protecting tree roosts and habitat within the action area may have the perverse effect of increasing interactions of bats with turbines.<sup>12</sup>

Moreover, protecting tree roosts and surrounding habitat, and establishing setbacks from tree roosts or maternity colonies, do not minimize harm to Indiana bats that are passing through the Project area while migrating to and from hibernacula or while moving among different foraging and roosting locations. Habitat protections and setbacks to roost trees also will be

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<sup>12</sup> As we noted in prior comments on an Ohio wind facility, removing tree roosts and bat habitat from the action area is not a solution to turbine-related mortality either. The point is that manipulating habitat in either direction is not likely to be useful for minimizing and mitigating take due to contact with turbines.

largely ineffective if the bats are attracted to wind turbines, a hypothesis discussed by Cryan and Barclay.<sup>13</sup>

Protection and enhancement of Indiana bat habitat outside the project area may, however, compensate for the population-level effect (loss of abundance and reproductive potential) of individual bat fatalities, but only if such habitat measures increase reproductive output or reproductive success.<sup>14</sup> The Project EIS should present any available data on such compensatory effects in the Indiana bat, if expected, and should carefully analyze the possibility of such effects. It cannot be assumed that protection and enhancement of Indiana bat habitat outside the Project area will compensate for population-level impacts of wind turbine mortality.<sup>15</sup>

Moreover, how bat presence and mortality are related to landscape and habitat features is highly uncertain. The Service has recently stated that there is “currently no reliable method for determining or evaluating the relative value of [different] areas as summer habitat for the Indiana bat.”<sup>16</sup> Thus, attempting to mitigate for mortality (or even habitat loss) in one area with increased protection of another area will require detailed analysis in the Project EIS.

## **VI. CUMULATIVE IMPACTS OF RAPID WIND POWER GROWTH AND OTHER DEVELOPMENT IN THE RANGE MUST BE CAREFULLY ANALYZED AND MINIMIZED**

The Service recognizes that further information and analysis is needed regarding the cumulative impact of past, present, and future wind developments.<sup>17</sup> Individual impacts may appear small but, combined with other small projects, may collectively have significant impacts. In general, there is growing concern in the scientific community regarding the potential for bat kills and population declines given the rapid proliferation of wind power facilities and the large-scale mortality that has occurred at some facilities.

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<sup>13</sup> Cryan, P. M. and R. M. R. Barclay, *Causes of Bat Fatalities at Wind Turbines: Hypotheses and Predictions*, *J. Mammalogy* 90(6), 1330–1340 (2009); see also Paul M. Cryan, *Wind Turbines as Landscape Impediments to the Migratory Connectivity of Bats*, *Environmental Law* 41, 355–370 (2011). Bats may be attracted to wind turbines, to insects swarming around lighting, or to other features on the Project.

<sup>14</sup> See, e.g., McGowan C.P., Ryan M.R., Runge M.C., et al., *The Role of Demographic Compensation Theory in Incidental Take Assessments for Endangered Species*, *Biological Conservation* 144(2), 730–737 (2011); McGowan C.P. and Ryan M.R., *A Quantitative Framework to Evaluate Incidental Take and Endangered Species Population Viability*, *Biological Conservation* 142(12), 3128–3136 (2009).

<sup>15</sup> See references in note 14.

<sup>16</sup> 72 Fed. Reg. 9916, *Endangered and Threatened Wildlife and Plants; 90-Day and 12-Month Findings on a Petition To Revise Critical Habitat for the Indiana Bat* (March 6, 2007).

<sup>17</sup> See, e.g., USFWS, *Indiana Bat Draft Recovery Plan* (2007), p. 101.

“Cumulative impact” is defined in NEPA as “the impact on the environment [that] results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”<sup>18</sup> Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Cumulative impacts are thus the total effect, including both direct and indirect effects, on a given resource (in this case the endangered Indiana bat), of all actions taken, no matter who has taken the actions (federal, nonfederal, and private).<sup>19</sup>

The CEQ advises that when analyzing the contribution of the proposed action to cumulative effects, the geographic boundaries of the analysis should be conducted at the scale of human communities, landscapes, airsheds, watersheds, or eco-regions.<sup>20</sup> Generally, the NEPA analyst must determine the geographic areas occupied by the affected resources outside of a project impact zone, and in most cases “the largest of these areas will be the appropriate area for the analysis of cumulative effects.”<sup>21</sup> For example, for migratory wildlife the appropriate geographic scale of analysis would be the breeding grounds, migration route, wintering areas, and total range of affected population units.<sup>22</sup>

Other sources of direct and indirect mortality for Indiana bats, besides wind power projects, include those listed in the 2007 Indiana bat draft recovery plan: quarrying and mining operations (summer and winter habitat), loss/degradation of summer/migration/swarming habitat, loss of forest habitat connectivity, some silvicultural practices and firewood collection, disease and parasites (e.g., White-Nose Syndrome), predation, competition with other bat species, environmental contaminants (not just “pesticides”), climate change, and collisions with man-made objects (communication towers, airstrikes with airplanes, and roadkill).<sup>23</sup> Human

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<sup>18</sup> 40 C.F.R. § 1508.7.

<sup>19</sup> Council on Environmental Quality (CEQ), *Considering Cumulative Effects Under the National Environmental Policy Act*, January 1997, p. 8, available at <http://ceq.hss.doe.gov/nepa/ccenepa/ccenepa.htm>.

<sup>20</sup> CEQ (1997), p. 12-14.

<sup>21</sup> CEQ (1997), p. 15.

<sup>22</sup> See, e.g., *NRDC v. Hodel*, 865 F.2d 288, 297-300 (D.C. Cir. 1988) (requiring the Secretary of Interior to analyze the cumulative effects of offshore drilling near California and Alaska together because whales and salmon would pass through both project drilling areas in the normal course of migration).

<sup>23</sup> USFWS, *Indiana Bat Draft Recovery Plan* (2007); USFWS, *Indiana Bat (Myotis sodalis) 5-Year Review: Summary and Evaluation*, September 2009, pp. 13-14.

disturbance at hibernacula also is still an important threat to Indiana bats.<sup>24</sup> Furthermore, the impacts of WNS may mask population declines resulting from projects and these other sources.

This Project EIS is a golden opportunity to evaluate such cumulative impacts. The cumulative impacts of the numerous threats to Indiana bats throughout their range are highly uncertain and must be evaluated using the best available data, reasonably obtainable new data developed for this Project, and risk assessments. As the Service states, “significant information gaps remain regarding the species’ ecology that hinder sound decision-making on how best to manage and protect the species.”<sup>25</sup> The Project EIS should adequately study and discuss the relevant information gaps, should resolve key information gaps where practical, and should analyze the remaining uncertainties.<sup>26</sup>

## **VII. THE PROJECT EIS SHOULD ANALYZE THE POSSIBILITY THAT WNS-INDUCED BEHAVIORAL CHANGES MAY INCREASE BAT FATALITIES AT TURBINES**

The effects of White-nose Syndrome (WNS) on Indiana bats may be synergistic with impacts of wind turbines. For example, behavioral changes attributed to WNS include arousal from hibernation more frequently and/or for longer periods than normal; shifts of large numbers of bats in hibernacula to locations near the entrances or unusually cold areas; large numbers of bats dispersing during the day from hibernacula, even during mid-winter; a general unresponsiveness to human disturbance; and, disruption of important wing-dependent physiological functions, including inhibition of flight.<sup>27</sup> Such behavioral changes may increase the vulnerability of bats to wind turbine fatality. Such synergistic effects may be exacerbated if Indiana bats are attracted to turbines.<sup>28</sup> The EIS should consider such potential effects of WNS on turbine-related risk.

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<sup>24</sup> USFWS, *Indiana Bat 5-Year Review* (2009), p. 15.

<sup>25</sup> USFWS, *Indiana Bat Draft Recovery Plan* (2007), p. 8; see also USFWS, *Indiana Bat 5-Year Review* (2009).

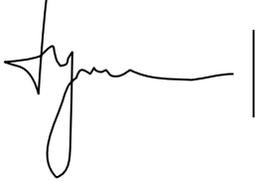
<sup>26</sup> See *Nat'l Parks*, 241 F.3d at 733-35.

<sup>27</sup> USFWS, *A National Plan for Assisting States, Federal Agencies, and Tribes in Managing White-Nose Syndrome in Bats*, May 2011, available at <http://www.fws.gov/WhiteNoseSyndrome/pdf/WNSnationalplanMay2011.pdf>.

<sup>28</sup> See references in note 13.

Thank you for considering our comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Hyman", followed by a vertical line.

/s/ Jeffrey B. Hyman, Ph.D., J.D.  
Staff Attorney  
Conservation Law Center  
116 S. Indiana Ave.  
Bloomington, Indiana 47408  
jbhyman@indiana.edu



"Jim"  
<jim\_pairitz@yahoo.com>

06/23/2011 11:53 PM

To: <FowlerRidgeHCP@fws.gov>  
cc:  
Subject: Fowler Ridge Habitat Conservation Plan Comment

I support the Maximally Restricted Operations alternative because it will provide the most protection for a valuable endangered species against the destructive (economically as well as environmentally) impact of the massive number of wind turbines in the Fowler Ridge development.

### ***Maximally Restricted Operations Alternative***

*Under the Maximally Restricted Operations Alternative, an ITP would be issued; Phases I, II and III would continue to operate; and Phase IV would be constructed as described under Proposed Action—i.e., full build-out of up to 448 turbines. Minimization for potential impacts to Indiana bats would include shutting down turbines at night during the period from April 1 through October 31, the active period for Indiana bats. This minimization would occur during all four phases of the project, every year the FRWF is in operation.*

A clear understanding of the cost / benefit of any change to the environment needs to be carefully considered. I believe the overall economic benefit of the Indiana bat is far greater than the contribution of Wind Technology. In fact, I believe Wind technology will ultimately prove to be a detriment to the economy of the United States as it has for countries around the world. The cost of electric energy will inevitably increase as the amount of wind energy is forced onto the electrical grid and into our homes. I believe the quality of life for both animals and humans living within the development will be reduced.

Keeping the Indiana Bat a viable species will be of a greater benefit than wind, and unlike wind, bats have no significant detriment to man or the environment. As a professional engineer who has been investigating the pros and cons of wind technology I have come to the conclusion that wind is bad for America for many reasons. Here are just a few negatives of Wind Energy. It is neither clean nor green.

1. Other forms of energy production will create less destruction of habitat and animals than wind. Thousands of birds / bats have been killed by Wind Turbines whereas other forms of energy production have not.
2. Wind systems do not reduce CO2 as fossil fuel systems are needed to provide consistent and reliable power when the wind is not blowing. Ramping fossil fuel system up and down to track the erratic supply of power delivered by wind causes increased CO2 emissions that are greater than the CO2 savings generated when the wind is blowing.
3. Wind systems require subsidies far greater than any other energy source even though it is a "mature" technology used for over 20 years around the globe. Without these subsidies and Renewable energy standards that force people to pay a premium for electricity generated by wind, the entire industry would fold. This statement has been made by several wind proponents at several wind conferences to encourage attendees to lobby for both items.
4. Wind systems are just distributed power plants that suck up hundreds of thousands of acres of land and are not Ag compatible. The development is detrimental to the soil via compaction and disturbance of large volumes of prime farm ground.

The Indiana bat is 100 % compatible with Agriculture and is of great benefit to it. Wind Turbines are not and should take a back seat to the benefits provided by nature at no cost to us. I believe wind turbines will be extinct in the future as the reality of their many negative impacts are fully understood. I only hope the Indiana Bat can survive until that happens.

Finally, the pressure being applied to this species by many existing factors is leading to a rapid decline in population. Adding the killing that is guaranteed to occur due to the rapid installation of hundreds of these machines all over the country side could be the straw that puts the Indiana bat out of existence. This guaranteed “take” will be operating for at least 30 years – what a destructive thing to do to man and the environment.

Sincerely

Jim Pairitz PE

765 491 0619 Cell

765 275 2553 Home

8323 W 1200 S

Westpoint, IN 47992



Kay Pairitz  
<kaypairitz@gmail.com>  
>

To: "FowlerRidgeHCP@fws.gov" <FowlerRidgeHCP@fws.gov>  
cc: kaypairitz@gmail.com  
Subject: EIS comments

06/23/2011 11:49 PM

Mr. Scott Pruitt,  
U.S. Fish and Wildlife Service,

I am writing concerning the Fowler Ridge Wind Farm – Indiana Bat HCP. My general comments regarding wind energy and the killing of bats and particularly the endangered species:

Wind turbines have been used for many years now and it is a known fact that they kill bats. I know that the killing of bats is “incidental” to the process of generating electricity with the wind turbines. But with the knowledge now that bats will be killed, why is the developer even allowed to erect a turbine in the area? When a developer puts up that turbine he is setting a trap because he knows full well that he will kill bats. To me, this is wrong and a developer should not even be allowed to erect turbines in an area where it is a known fact that bats will be killed or harmed.

The amount of electricity that is produced from a turbine is so small and insignificant. It has never been proven that wind energy reduces CO2 emissions. Wind energy is not worth ruining a valuable part of our ecosystem! Bats are an important part of our ecosystem, more important than the perceived benefit of wind energy. Why be allowed to kill off one important part of the ecosystem that we know is very beneficial just for the so called “perceived benefit” of wind energy? We know that wind energy is a very inefficient form of energy. Keeping the bats alive is more important than having wind turbines! Keeping the Indiana bat alive is more important than wind turbines! Also, I think that wind developers are taking advantage of the incidental take permit process. Wind turbine developments keep killing bats over and over again. It is not like building a bridge once and being done with the killing.

My comments specific to the Fowler Ridge development: I understand that three phases are already built. I understand that the Indiana bat has been found dead in the project site. Why is phase four even being allowed to be built? How many bats will they be allowed to kill with the ITP? What percent is OK to take as the population continues to decrease? As the number of the IN bat drops, the value of each individual bat increases. Every kill becomes more significant and has a bigger impact. When do we say enough killing is enough? The proposed action is the Modified Operations Alternative. In this section the second sentence states “The proposed HCP, which must meet the requirements.....etc....to the maximum extent practicable. My question and concern is “what is the maximum extent practicable and who determines this?” I do not think the Modified Operations Alternative is a strong enough action.

I think the Maximally Restricted Operations Alternative is the action that needs to be implemented. This is the stronger action that will do the most to avoid taking of the IN bat not just minimize impacts.

We are talking about a wind project in the state of Indiana. Indiana is located within the core of the species’ range; approximately half of the known population of Indiana bats hibernate in Indiana. Maternity colonies of Indiana bats occur throughout Indiana. We are the home state for the Indiana bat. If we don’t do everything to the maximum extent possible to protect the Indiana bat here in this state why should other localities and states be expected to protect the Indiana bat??? Let’s set the example and do things right and that means being strict with the rules and regulations.

Thank you for the opportunity to comment on the Fowler Ridge project.

Kay Pairitz  
8323W 1200S  
West Point, IN 47992



**Julie Peretin**  
<julie.peretin@gmail.com>

06/21/2011 11:46 AM

To: FowlerRidgeHCP@fws.gov  
cc:  
Subject: Comments on Fowler Ridge Habitat Conservation Plan

## Comments on Fowler Ridge Habitat Conservation Plan:

Bats, including the endangered Indiana Bat, are responsible for billions of dollars in agriculture benefits according to the April 2011 edition of Science. Fewer bats in agricultural areas will lead to more pesticide use. Conservation of wildlife, particularly the endangered Indiana Bat, is vital to protect and preserve our fragile existence with the land that supports our life.

The cumulative impact of White Nose Syndrome and Industrial Wind Turbines is unacceptable. We must take all reasonable action as stewards of the land to protect and conserve the existing species. Industrial wind energy provides modest economic impacts to Benton County, but the promises of money will not protect the delicate balance between wildlife and human activity. Industrial Wind Turbines do not create CO2 emissions when they are operated, but the construction of each tower includes the use of over 300 tons of concrete; Portland cement is responsible for at least 10% of the US CO2 emissions. Industrial Wind Turbines do not require large amounts of water to operate, but the manufacture of the specialized magnets in each turbine includes over 2 tons of rare earth minerals which are destructively mined and processed in China.

Industrial Wind Energy does not replace other energy producers, either. Wind Energy usually offsets natural gas--which does not produce CO2--and has little to no impact on coal usage. Industrial Wind Energy is not a reliable energy source. Energy from Industrial Wind Turbines is "noise" on the electrical grid. Such an immature technology propagated in areas that have marginal wind resource--like Indiana--is an affront to environmental and conservation groups.

Industrial Wind Energy is clearly not the answer to our nation's energy needs and should not be given preference in its willing and unrepentant take of bats and birds. Industrial Wind Energy is being exposed as a environmentally irresponsible activity. Please protect our wildlife from this menace. The Fowler Ridge Habitat Conservation Plan will set a pattern for wind developers across the nation as they prey on unsuspecting communities.

The miniscule electrical output of the wind development will not come close to offsetting the benefits that bats provide to Midwestern ecosystems. I fully support the maximally restricted operations alternative in order to protect the Indiana Bat. In addition to curtailment of operations during migration periods, I hope you will provide guidelines for creating or enhancing Indiana Bat habitat. Please consider requiring long-term (15-20 year) mortality studies to provide research opportunities on the long-term impact to bat populations. I am afraid the decline of bat populations in areas industrialized by wind energy will happen on a greater scale (with a steeper trajectory) than is recognized at this time.

Thank you for the opportunity to comment.  
Julie Peretin

505-13 Portledge Commons Drive  
Lafayette, IN 47904  
765.491.9721

--

Facts do not cease to exist because they are ignored. -- Aldous Huxley



mdr6001@aol.com  
06/22/2011 09:00 PM

To: fowlerridgehcp@fws.gov  
cc:  
Subject: Fowler Ridge HCP comment

TO: Scott Pruitt

Mr. Pruitt,

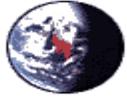
I feel very strongly that the conservation of the endangered Indiana Bat must be of utmost importance. This means the ultimate goal should be that not even one Indiana Bat is taken (even incidentally). There really should be protection for all bats.

The alternative in which the operation of all towers is maximally restricted would hopefully achieve this goal. I strongly support this alternative in which all towers are shut down at night April 1 thru October 31, when the Indiana Bat is active.

Thank you.

Sincerely,

Lori Russell



**"Mark Russell (Frank)"**  
<Markr@cbpmail.net>

06/23/2011 01:05 PM

To: "FowlerRidgeHCP@fws.gov" <FowlerRidgeHCP@fws.gov>  
cc:  
Subject: Public comments

Mr. Pruitt- thanks for the opportunity to comment. I want to say that being "green and renewable" needs to pertain to being "green" to wildlife as well as to the atmosphere. The indiscriminate killing of wild life must be curtailed. Unlike hunting licenses the take permit does not have a daily bag limit. The impact of long term kill rates is only a guesstimate. Wind energy is not the cure all and mandatory regulations need to be put into place to protect all avian species. Thanks for your efforts in this matter.

Mark Russell  
6001 Maple Forest Road  
West Point IN 47992

Mark D. Russell  
Custom Building Products-Frankfort Plant  
Quality Control Manager  
Frankfort, Indiana 46041  
765-656-0234 ext.236



"John Shure"  
<eldadhannah@cawi.org>

06/23/2011 06:04 PM

To: <FowlerRidgeHCP@fws.gov>  
cc:  
Subject: Fowler Ridge Wind Farm and Indiana Brown Bat

I wish to submit the following comments regarding allowing the Fowler Ridge Farm to operate in area inhabited by the Indiana Brown Bat, a legally protected and endangered species. These bats are in danger of extinction due to white nose syndrome and wind farm kills. The bats have proven to be extremely valuable to agriculture production through feeding on insects that otherwise would reduce crop harvest, etc. It seems that allowing the Fowler Ridge Wind Farm to operate and kill these bats is against the principles of the endangered species act and defeats its purposes. I urge that the application for the Fowler Ridge Wind Farm be denied. Respectfully submitted. John Shure, 044 E 900 North Road, Buckley, IL 60918. Telephone: 630-774-7511



**liz switzer**  
<switzer.liz@gmail.com  
>

To: FowlerRidgeHCP@fws.gov  
cc:  
Subject: Fowler Ridge questions

05/31/2011 08:51 AM

Mr. Pruitt,

I am a journalist for a renewable energy newsletter and I am doing an article on Fowler Ridge. Can you give me a statement as to how many bats have been killed? What is the scope of the problem, and how big will the expansion of the wind farm be? Also, how long does this incidental take permit process take and could the farm possibly be closed down due to the bat issue?

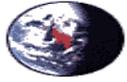
Thanks very much,

--

Liz Switzer

Chief Correspondent  
Renews Americas  
M: + 1 (270) 996.7900  
renewsamericas.com

Renews Europe / Renews Ltd.  
St. George's House  
Winchester, SO23 8BG  
P: + 44 (0)1962 890 449  
Liz@reNewsAmericas.com



jvancamp@tc3net.com

06/22/2011 09:59 PM

To: FowlerRidgeHCP@fws.gov

cc:

Subject: Comments on Fowler Ridge Habitat Conservation Plan

USFWS,

Wind energy should NOT come at the expense of bats and the benefits they provide. Wind turbine are generally less productive in the midwest during the summer months, therefore I support the adaptation of the maximally restricted operations alternative so that the bats and the turbines can co-exist.

*Maximally Restricted Operations Alternative*

*Under the Maximally Restricted Operations Alternative, an ITP would be issued; Phases I, II and III would continue to operate; and Phase IV would be constructed as described under Proposed Action.i.e., full build-out of up to 448 turbines. Minimization for potential impacts to Indiana bats would include shutting down turbines at night during the period from April 1 through October 31, the active period for Indiana bats. This minimization would occur during all four phases of the project, every year the FRWF is in operation.*

Thank you receiving my comment.

Josh Van Camp

3883 Fike Rd

Jasper, MI 49248

517-443-5935

jvancamp@tc3net.com

## **Appendix C Agency Coordination**

---



Indiana Department of Natural Resources

Mitchell E. Daniels, Jr., Governor  
Kyle J. Hupfer, Director

Division of Nature Preserves  
402 W. Washington St., Rm W267  
Indianapolis IN 46204-2739

September 22, 2006

Ms. Victoria Poulton  
West, Inc.  
2003 Central Avenue  
Cheyenne, WY 82001

SEP 26 2006

Dear Ms. Poulton:

I am responding to your request for information on the endangered, threatened, or rare (ETR) species, high quality natural communities, and natural areas documented from wind energy project area, Benton County, Indiana. The Indiana Natural Heritage Data Center has been checked and enclosed you will find information on the ETR species documented from the project area.

For more information on the animal species mentioned, please contact Katie Smith, Nongame Supervisor, Division of Fish and Wildlife, 402 W. Washington Room W273, Indianapolis, Indiana 46204, (317)232-4080.

The information I am providing does not preclude the requirement for further consultation with the U.S. Fish and Wildlife Service as required under Section 7 of the Endangered Species Act of 1973. You should contact the Service at their Bloomington, Indiana office.

U.S. Fish and Wildlife Service  
620 South Walker St.  
Bloomington, Indiana 47403-2121  
(812)334-4261

At some point, you may need to contact the Department of Natural Resources' Environmental Review Coordinator so that other divisions within the department have the opportunity to review your proposal. For more information, please contact:

Kyle Hupfer, Director  
Department of Natural Resources  
attn: Christie Stanifer  
Environmental Coordinator  
Division of Water  
402 W. Washington Street, Room W264  
Indianapolis, IN 46204  
(317)232-4160

Please note that the Indiana Natural Heritage Data Center relies on the observations of many individuals for our data. In most cases, the information is not the result of comprehensive field surveys conducted at particular sites. Therefore, our statement that there are no documented significant natural features at a site should not be interpreted to mean that the site does not support special plants or animals.

Due to the dynamic nature and sensitivity of the data, this information should not be used for any project other than that for which it was originally intended. It may be necessary for you to request updated material from us in order to base your planning decisions on the most current information.

Thank you for contacting the Indiana Natural Heritage Data Center. You may reach me at (317)232-8059 if you have any questions or need additional information.

Sincerely,

*Ronald P. Hellmich*  
Ronald P. Hellmich  
Indiana Natural Heritage Data Center

enclosure:        data sheet  
                      invoice

\*\*\*\* Effective January 1, 2006, the Indiana Natural Heritage Data Center, Indiana Department of Natural Resources will be raising the fee for information requests to \$42 per one half hour, one half hour minimum. Most requests take one half hour to complete. An invoice for the amount due will be included with the completed request response.

Endangered, Threatened and Rare Species, and High Quality Natural Communities  
documented from a proposed wind energy facility, Benton County, Indiana

<u>SPECIES NAME</u>	<u>COMMON NAME</u>	<u>FED</u>	<u>STATETOWN RANGE</u>	<u>DATE</u>	<u>MISCCOMMEN</u>
<i>Ixobrychus exilis</i>	Least Bittern		SE 026N008W 34	1988-06	
<i>Rallus elegans</i>	King Rail		SE 026N008W 34	1988-06	
<i>Bartramia longicauda</i>	Upland Sandpiper		SE 025N008W 07	1988-06-15	
<i>Bartramia longicauda</i>	Upland Sandpiper		SE 025N007W 07	1997-06-10	
<i>Tyto alba</i>	Barn Owl		SE 024N006W NEAR OTTERBEIN	1958-06-30	
<i>Asio flammeus</i>	Short-eared Owl		SE 025N008W 30	1988-05-03	
<i>Sturnella neglecta</i>	Western Meadowlark		SSC 024N008W 30	1997-06-10	
<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE 024N007W 9	2001	
<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE 024N006W 29 SEQ	1994-06-02	
<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE 025N009W 12 EH NEQ	1987-08-18	
<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE 025N008W 23	1987-08-24	
<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE 025N009W 34	1981	
<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE 024N006W 36 SWQ SEQ	1986-07-22	
<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE 025N008W 08 NEQ	1986-06-03	
<i>Spermophilus franklinii</i>	Franklin's Ground Squirrel		SE 025N009W 32 NWQ NEQ	1987-08-07	
<i>Geomys bursarius</i>	Plains Pocket Gopher		SSC 024N007W 05	1988-10-10	
<i>Geomys bursarius</i>	Plains Pocket Gopher		SSC 025N008W 25 NWQ SEQ SEQ	1988-07-29	
<i>Geomys bursarius</i>	Plains Pocket Gopher		SSC 026N008W 34 NWQ SWQ NWQ	1988-07-05	
<i>Mustela nivalis</i>	Least Weasel		SSC 025N007W 31 NWQ NWQ	1988-05-07	
<i>Taxidea taxus</i>	American Badger		025N008W 23 SEQ SEQ SEQ	1988-11-05	
<i>Taxidea taxus</i>	American Badger		025N009W 12	2004-11-19	
<i>Taxidea taxus</i>	American Badger		024N006W 28	2004-11-12	
<i>Emydoidea blandingii</i>	Blanding's Turtle		SE 025N009W 4 MI W OF FOWLER	NO DATE	
<i>Liochlorophis vernalis</i>	Smooth Green Snake		SE 025N007W 07	1973	
<i>Liochlorophis vernalis</i>	Smooth Green Snake		SE 025N008W 23 NWQ SEQ	1988-07-07	
<i>Liochlorophis vernalis</i>	Smooth Green Snake		SE 024N006W 1/2 MI W-NW OF OTTERBEIN	1975	
Prairie - mesic	Mesic Prairie		SG 025N008W	NO DATE	
<i>Venustaconcha ellipsiformis</i>	Ellipse		SSC 025N009W 10	2001-09-25	Fresh dead
<i>Liatris pycnostachya</i>	Cattail Gay-feather		ST 025N008W 05 SWQ	1938-08-13	
<i>Liatris pycnostachya</i>	Cattail Gay-feather		ST 025N008W 26 NEQ	1981-09	
<i>Prenanthes aspera</i>	Rough Rattlesnake-root		SR 025N008W 16 SEQ SEQ	1928-09-20	
<i>Aster sericeus</i>	Western Silvery Aster		SR 025N008W 05 SWQ	1938-09	
<i>Gentiana puberulenta</i>	Downy Gentian		ST 025N008W FOWLER	NO DATE	

Fed: LE = listed federal endangered; C = federal candidate species

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SG = state significant; WL = watch list; no rank = not ranked but tracked to monitor status

Grank: Heritage Global Rank: G1 = critically imperiled; G2 = imperiled; G3 = rare or uncommon; G4 = widespread but with long term concerns; G5 = widespread and secure; GU = unranked

Srank: State Heritage Rank: S1 = critically imperiled; S2 = imperiled; S3 = rare or uncommon; S4 = widespread but with long term concerns SNR = not ranked; B = breeding rank; SNA = not resident in state in non-breeding season

Endangered, Threatened and Rare Species, and High Quality Natural Communities  
documented from a proposed wind energy facility, Benton County, Indiana

<u>SPECIES NAME</u>	<u>COMMON NAME</u>	<u>FED</u>	<u>STATETOWN RANGE</u>	<u>DATE</u>	<u>MISCCOMMEN</u>
Agalinis auriculata	Earleaf Foxglove		ST	1930-09-12	

**OTTERBEIN HIGHWAY PRAIRIE MANAGEMENT AREA**

Camassia angusta	Wild Hyacinth		SE 024N006W 29 SEQ NEQ SWQ & NWQ SWQ SEQ	1992-06-09	
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<b>Hawkins Gamebird Habitat Area (IDNR Fish &amp; Wildlife)</b>	Sec 29 T26N R8W
<b>Knob View Gamebird Habitat Area (IDNR Fish &amp; Wildlife)</b>	Sec 12 T24N R10W
<b>Watland Gamebird Habitat Area (IDNR Fish &amp; Wildlife)</b>	Sec 7 T25N R8W
<b>Falwell Gamebird Habitat Area (IDNR Fish &amp; Wildlife)</b>	Sec 30 T26N R7W
<b>Kirsch Gamebird Habitat Area (IDNR Fish &amp; Wildlife)</b>	Sec 4 T24N R9W
<b>Fowler Highway Management Area (INDOT &amp; IDNR Nature Preserves)</b>	Sec 22, 23, 25, 26 T25N R8W

Fed: LE = listed federal endangered; C = federal candidate species  
 State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SG = state significant; WL = watch list; no rank = not ranked but tracked to monitor status  
 Grank: Heritage Global Rank: G1 = critically imperiled; G2 = imperiled; G3 = rare or uncommon; G4 = widespread but with long term concerns; G5 = widespread and secure; GU = unranked  
 Srank: State Heritage Rank: S1 = critically imperiled; S2 = imperiled; S3 = rare or uncommon; S4 = widespread but with long term concerns SNR = not ranked; B = breeding rank; SNA = not resident in state in non-breeding season



# United States Department of the Interior Fish and Wildlife Service



Bloomington Field Office (ES)  
620 South Walker Street  
Bloomington, IN 47403-2121  
Phone: (812) 334-4261 Fax: (812) 334-4273

October 13, 2006

OCT 24 2006

Ms. Victoria Poulton  
WEST, Inc.  
2003 Central Avenue  
Cheyenne, Wyoming 82001

Dear Ms. Poulton:

Thank you for your letter dated September 18, 2006 concerning a proposed wind energy project near Fowler, Benton County, Indiana. The transmission route study area also includes a small portion of Tippecanoe County along the U.S. 52 Highway corridor.

These comments are being provided pursuant to the Endangered Species Act (ESA), the Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, and Fish and Wildlife Act of 1956. This information is being provided to assist you in making an informed decision regarding site selection, project design, compliance with applicable laws, and to determine whether a permit to cover anticipated take of species is appropriate under the ESA.

The Fish and Wildlife Service (Service) supports the development of wind power as an alternative energy source, however, wind farms can have negative impacts on wildlife and their habitats if not sited and designed with potential wildlife and habitat impacts in mind. Selection of the best sites for turbine placement is enhanced by ruling out sites with known high concentrations of birds and/or bats passing within the rotoswept area of the turbines or where the effects of habitat fragmentation will be detrimental. In support of wind power generation as a wildlife-friendly, renewable source of power, development sites with comparatively low bird, bat and other wildlife values, would be preferable and would have relatively lower impacts on wildlife.

## **THREATENED AND ENDANGERED SPECIES**

The area described in your letter is within the range of the Federally endangered Indiana bat (*Myotis sodalis*), the Federally threatened bald eagle (*Haliaeetus leucocephalus*), and a Non-Essential, Experimental population of whooping cranes (*Grus americana*).

The Indiana bat uses woodlands during the summer when maternity colonies occupy trees with loose bark for roosting. These bats forage primarily over wooded stream corridors, although they have been collected in grazed woodlots, mature deciduous forests, and pastures with trees. There are no records of the Indiana bat in Benton County however we are not aware of any surveys conducted in that county. The Indiana bat has been found in adjacent Warren County (along Big Pine Creek and Little Pine Creek), Tippecanoe County (Wabash River and Indian Creek) and Newton County (Kankakee River). Bats in general have been the focus of several recent studies with regard to impacts from wind turbines and mortality appears to be highest during the fall migration period (Johnson et al. 2003). Based on a desktop review of aerial photographs, topographic maps, and other information, there does not appear to be much suitable summer bat habitat within the project area; however, spring and fall migration routes could include areas of Benton County.

Eagles nest in close proximity to lakes, rivers, or reservoirs. They construct their nests near habitat ecotones, such as lakeshores, rivers, and timber management areas (clearcuts or selective cuts). Tolerance of human activity during the nesting season has been variable, but, ideally, human disturbance of eagles should be avoided. The bald eagle's food base from the watershed includes carrion, waterfowl, and especially fish. There are no records for the bald eagle in Benton County but there are currently 2 nests in Tippecanoe County and a new nest in Newton County.

The eastern population of the whooping crane was reintroduced into the Midwest in 2001 and made its first migration to wintering sites in Florida following an ultralight aircraft. The birds make several stops along their fall migration route through Indiana, often including Benton County. The cranes utilize a variety of habitats during migration including croplands, marshes, and riverine areas. The birds stand up to five feet tall and have snowy white body feathers with black wingtips. The head is red and black with a long, pointed beak. The eastern population was listed as a non-essential, experimental population under the Endangered Species Act of 1973 (as amended). This designation relaxes the restrictions of the Endangered Species Act and lessens possible conflicts between people and whooping crane conservation. Whooping cranes are still fully covered under the Migratory Bird Treaty Act, as are most migratory birds.

Tippecanoe County has populations of two federally endangered Unionid mussels, the clubshell (*Pluerobema clava*) and fanshell (*Cyprogenian stegaria*). Both species are in the Wabash and Tippecanoe Rivers upstream from Lafayette and are not likely to occur in the transmission route study area.

Because of the potential for wind power projects to impact endangered bird, bat, or other listed species, they are subject to the Endangered Species Act (16 U.S.C. 1531-1544) section 9 provisions governing "take", similar to any other development project. Take incidental to a lawful activity may be authorized through the initiation of formal consultation, if a Federal agency is involved. If a Federal agency, Federal funding, or a Federal permit are not involved in the project, an incidental take permit pursuant to section 10 (a)(1)(B) of the ESA may be obtained upon completion of a satisfactory habitat conservation plan for the listed species. However, there is no mechanism for authorizing incidental take "after-the-fact".

## OTHER SPECIES OF CONCERN

In addition to the above mentioned species, upland sandpipers (*Bartramia longicauda*), Franklin's ground squirrels (*Spermophilus franklinii*) and other species listed as endangered or special concern by the State Of Indiana may potentially be found near the area. Upland sandpipers are migratory birds that favor grasslands, pastures, and fields in early successional stages. They nest in loose colonies in taller vegetation and feed on insects, seeds of grasses and forbs, as well as waste grains (Castrale et al. 1998). Franklin's ground squirrels are burrowing animals that prefer dense grass/weed habitat which provides good cover. Some of the best remaining habitat may be along railroad embankments. This species feeds primarily on vegetable matter (although insects are sometimes eaten) and hibernates for several months (Mumford and Whitaker 1982). Both species have been recorded near the proposed project area. These animals are not afforded legal protection under the authorities of the federal Endangered Species Act (as amended); however, because they are State Endangered species the FWS encourages consideration of these species in project planning. We recommend that you consult with the Indiana Department of Natural Resources (IDNR) for more information regarding wildlife species and natural resources of interest to the State that may occur within the study area.

## MIGRATORY BIRDS

The two primary types of wind turbine impacts to migratory birds (and bats) are direct mortality from collisions and indirect impacts from habitat avoidance, disruption and displacement. For these reasons, site selection and evaluation are extremely important. The study area near Fowler appears to be primarily comprised of agricultural row crops, although several small wetlands and areas of grassland/pasture (including several managed areas and Heritage Data Base records) may be present based on a "desktop" review of digital/GIS data. Since some data layers are over 10 years old, field verification may be necessary. These small, isolated areas of grassland and pasture may provide the only remaining habitat for sensitive grassland species, such as Henslow's sparrows, grasshopper sparrows, and upland sandpipers (Jeff Kiefer pers. comm.), as well as habitat for more common migratory grassland species such as dickcissels and eastern meadow larks (Castrale et al. 1998 and Dunning, Jr. and Braile 1998). Additionally, the transmission route study corridor crosses Big Pine Creek and 2 headwater tributaries of Indian Creek containing several wetlands.

The Migratory Bird Treaty Act (16 U.S.C. 703-712; MBTA) implements four treaties that provide for international protection of migratory birds. The MBTA prohibits taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. Bald and golden eagles are afforded additional legal protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d). Unlike the Endangered Species Act, neither the MBTA nor its implementing regulations at 50 CFR Part 21, provide for permitting of "incidental take" of migratory birds.

While the MBTA has no provision for allowing unauthorized take, the Service recognizes that some birds may be killed at structures such as wind turbines even if all reasonable measures to avoid it are implemented. While it is not possible under the MBTA to absolve individuals, companies, or agencies from liability if they follow these recommended guidelines, the Service's

Office of Law Enforcement and Department of Justice have used enforcement and prosecutorial discretion in the past regarding individuals, companies, or agencies who have made good faith efforts to avoid the take of migratory birds.

The Service's "voluntary" Interim Guidelines on Avoiding and Minimizing Impacts from Wind Turbines may be helpful as you evaluate your proposed wind power generation site (<http://www.fws.gov/habitatconservation/wind.htm>) (attached). The guidance contains a pre-development site evaluation and ranking process to assess potential project impacts, as well as recommendations for conducting post-construction monitoring. The guidance also contains more information on the applicable laws and permitting aspects in Appendices 3 and 5. Service staff welcome the opportunity to work with representatives of your industry.

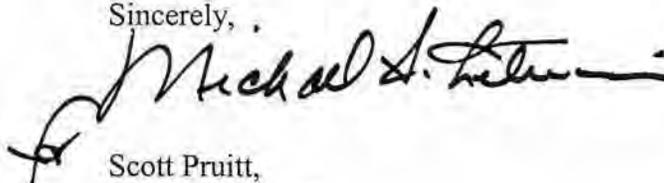
Finally, we recommend that you contact the Indiana Department of Natural Resources, Division of Nature Preserves, and Division of Fish and Wildlife concerning possible State-listed species and other state resource concerns. Their addresses are:

Indiana Department of Natural Resources  
Division of Nature Preserves  
402 West Washington, Rm W267  
Indianapolis, Indiana 46204

Indiana Department of Natural Resources  
Division of Fish & Wildlife  
402 West Washington, Rm W273  
Indianapolis, Indiana 46204

Thank you for the opportunity to provide comments on your wind-power project. If we can be of further assistance during the design and implementation of your project, please contact Mike Litwin of my staff at (812) 334-4261 ext. 205.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael A. Litwin", with a large, stylized initial "M" on the left.

Scott Pruitt,  
Field Supervisor

cc: Katie Smith, Division of Fish and Wildlife, IDNR, Indianapolis, IN  
John Castrale, Division of Fish and Wildlife, IDNR, Mitchell, IN

## References

Castrale, J.S., E.M. Hopkins, and C.E. Keller. 1998. Atlas of Breeding Birds of Indiana. Indiana Department of Natural Resources, Division of Fish and Wildlife, Indianapolis. 388pp.

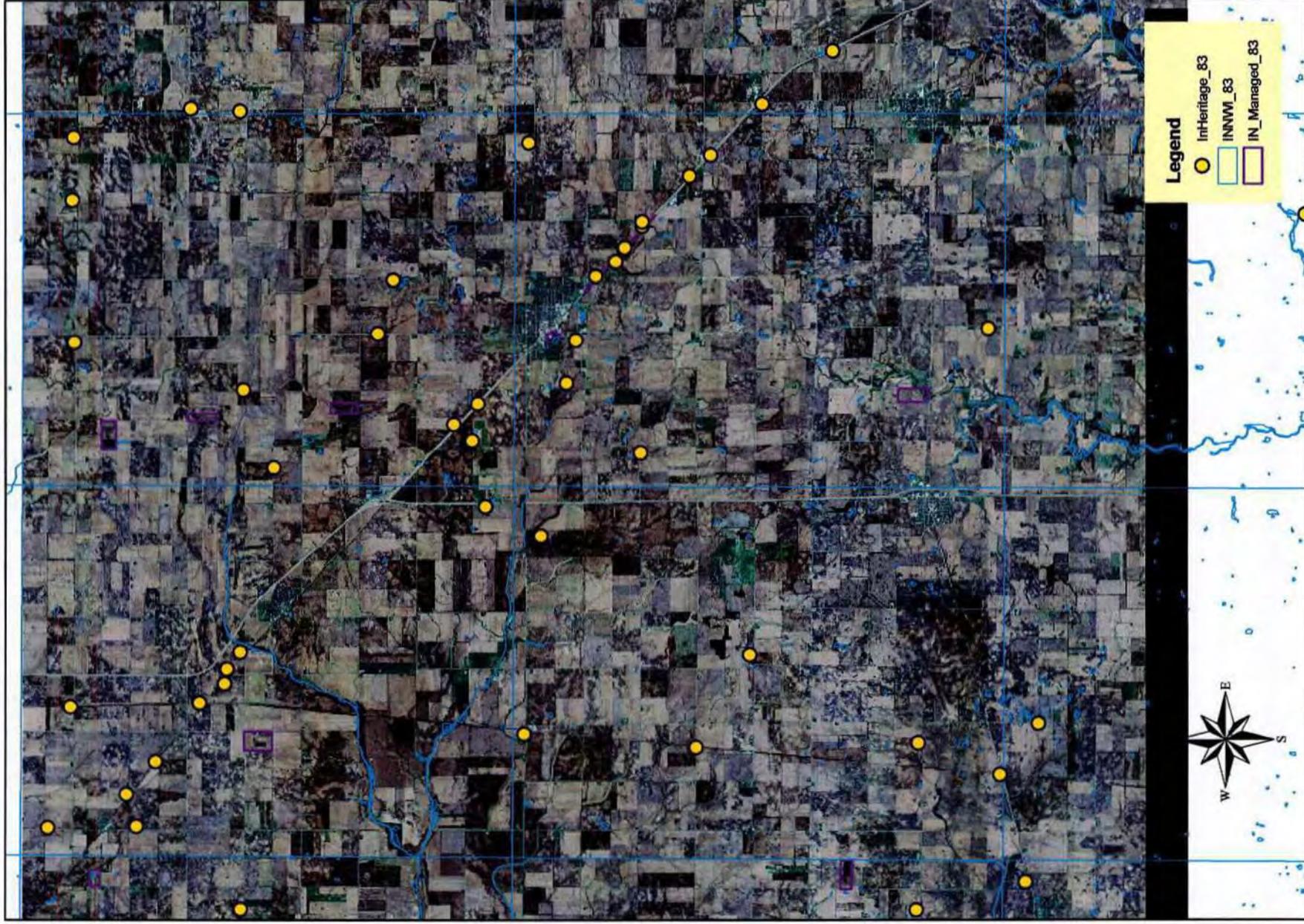
Dunning Jr., J.B. and T.M. Braile. 1998. Checklist of the Birds of Benton County, Indiana. Department of Forestry and Natural Resources, Purdue University, Lafayette, IN. Internet format at <http://www.ces.purdue.edu/extmedia/FNR/FNR-165/FNR-165.html>

Johnson, G.D., W.P. Erickson, M.D. Strickland, M.F. Shepherd, D.A. Shepherd, and S.S. Sarappo. 2003. Mortality of Bats at a Large-scale Wind Power Development at Buffalo Ridge, Minnesota. *American Midland Naturalist* 150:332-342.

Kiefer, Jeff. Private Lands Program Supervisor, U.S. Fish and Wildlife Service, Bloomington, Indiana Ecological Services Field Office.

Mumford, R.E., and J.O. Whitaker. 1982. Mammals of Indiana. Indiana University Press, Bloomington, Indiana. 537pp.

# Fowler Wind Project Study Area



**State of Indiana  
DEPARTMENT OF NATURAL RESOURCES  
Division of Water**

DEC 18 2006

**Early Coordination/Environmental Assessment**

**DNR #:** ER-12409 **Request Received:** September 20, 2006

**Requestor:** Western EcoSystems Technology, Inc  
Victoria Poulton  
Biologist  
2003 Central Avenue  
Cheyenne, WY 82001

**Project:** Proposed wind energy facility, Town of Fowler

**County/Site info:** Benton - Tippecanoe Counties

**Regulatory Assessment:** The Indiana Department of Natural Resources has reviewed the above referenced project per your request. Our agency offers the following comments for your information and in accordance with the National Environmental Policy Act of 1969. This proposal may require the formal approval of our agency pursuant to the Flood Control Act (IC 14-28-1) for any proposal to construct, excavate, or fill in or on the floodway of a stream or other flowing waterbody which has a drainage area greater than one square mile. Please submit more detailed plans to the Division of Water's Technical Services Section if you are unsure whether or not a permit will be required.

**Natural Heritage Database:** The Natural Heritage Program's data have been checked. We recommend avoiding the area known as "Parish Grove" (located in Sections 35 and 36, Township 25 North, Range 9 West). This lightly wooded area is a significant natural and historical landscape feature. It is the last intact pre-settlement forest grove remaining in Benton County (a prairie county).

Significant prairie vegetation occurs alongside State Highway 55 and the adjacent railroad throughout the project area including the proposed transmission route from the point approximately one mile west of Otterbein (where the railroad begins paralleling the highway). Several state-listed species occur along this corridor and caution should be exercised to avoid adversely impacting them.

Minimize disturbances to natural vegetation along the highway/railroad corridor.

**Fish & Wildlife Comments:** Fish, wildlife, and botanical resource losses as a result of this project can be minimized through implementation of the following measures.  
Pre-construction surveys within the effected zone (horizontal and vertical) should be conducted for impacts to both birds and bats.  
Adjust the site to minimize direct impacts to birds and bats.  
Avoid migratory pathways and DNR Gamebird Habitat Areas. Gamebird Habitat Areas should be avoided by a minimum of one mile to minimize habitat displacement due to avoidance of the turbines by birds.  
Conduct annual and ongoing mortality surveys post construction. Allow site access for DNR to conduct mortality sampling and research.  
Mitigation for mortality may include adjusting locations of specific turbines, altering hours of operation to avoid diurnal bird and/or bat activity, and possibly shutting down during migratory peaks for specific species such as Whooping Crane or American Golden-Plovers.

**THIS IS NOT A PERMIT**

**State of Indiana  
DEPARTMENT OF NATURAL RESOURCES  
Division of Water**

**Early Coordination/Environmental Assessment**

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**Contact Staff:**

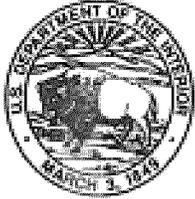
Christie L. Stanifer, Environ. Coordinator, Environmental Unit  
Our agency appreciates this opportunity to be of service. Please do not hesitate to contact the above staff member at (317) 232-4160 or 1-877-928-3755 (toll free) if we can be of further assistance.



---

Jon W. Eggen  
Environmental Supervisor  
Division of Fish and Wildlife

**Date:** December 11, 2006



United States Department of the Interior  
Fish and Wildlife Service



Bloomington Field Office (ES)  
620 South Walker Street  
Bloomington, IN 47403-2121  
Phone: (812) 334-4261 Fax: (812) 334-4273

September 10, 2007

*Rec'd 9/17*

Ms. Rene Braud  
BP Alternative Energy  
700 Louisiana, Suite 3300  
Houston, Texas 77002

Dear Ms. Braud:

The US Fish and Wildlife (FWS) appreciates British Petroleum Alternative Energy's (BP) attendance and cooperation at the meeting of June 13, 2007 regarding BP's proposed wind power project proposal near the town of Fowler in Benton County, Indiana. The meeting was also attended by representatives of the Indiana Department of Natural Resources (DNR), the Indiana Audubon Society, and West, Inc. acting as the environmental consultant for BP.

These comments are being provided pursuant to the Endangered Species Act (ESA), the Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, and Fish and Wildlife Act of 1956.

The FWS submitted general comments regarding endangered species, migratory birds and other wildlife for the Fowler wind project in our letter of October 13, 2006. The main topic at the June 13, 2007 meeting was protection of the American golden plover, a migratory bird species which is heavily dependent upon an area within northwest Indiana and northeast Illinois for staging during its spring migration from South America to the Arctic. The US Shorebird Conservation Plan lists the American golden plover as a Species of High Concern due to its downward population trends and threats during the non-breeding season (Brown et. al. 2001). The Indiana Audubon Society considers this species to be the #1 stewardship species in Indiana (James Cole, Indiana Audubon Important Bird Areas Coordinator, personal communication).

The Fowler wind project site lies within the portion of the staging area most intensively used by migrating golden plovers, including an Audubon Society designated Important Bird Area (IBA). Based on information provided at the June 13 meeting, and on information we have acquired since then, the FWS is submitting a list of recommendations for protection of the migrating golden plover population within the wind project development area. This letter also provides updated information on concerns related to potential impacts from the project on federally endangered species.

At the June 13 meeting it was stated that West, Inc. conducted bird surveys at the project study area in Spring, 2007. During the surveys they observed approximately 61,000 American golden plover (20-30% of the global population) during peak migration from mid-April to early-May. These numbers are consistent with previous observations of golden plovers from surveys in the vicinity of the IBA, and it appears that the migrating population is stable at this time. We are not aware of any previous studies concerning the impact of wind power development on American golden plover staging areas in the Midwestern US, although there have been several wind farm studies where the affected species were other plover species, other shorebird species or grassland birds. The major concerns for these types of birds are avoidance of tall structures, habitat loss and fragmentation, and strike mortality. Avoidance behavior has been studied, and in some cases clearly demonstrated, for other species in other areas of the world, however it is somewhat speculative to extrapolate those results to this situation.

The fish and wildlife agencies, Illinois Natural History Survey and Audubon Society addressed appropriate conservation measures in a conference call on August 3, 2007. In view of the lack of previous data, the extreme importance of the study area to the American golden plover and the scope of potential impacts, the FWS is compelled to make conservative recommendations for protection of this species. The following recommendations, some of which were discussed at the June 13 meeting, are intended to provide a range of options. As many of these recommendations as possible should be implemented.

#### Timing of Development

1. Develop the project in phases, beginning in the southwest portion of the site. This will provide an opportunity to observe the effect on American golden plover use of the developed areas prior to potential development closer to the IBA.

#### Geographic Considerations

2. Shift the footprint of the development further west toward US 41 Highway.
3. Limit wind turbine development to the southwestern portion of the site as far as possible from the IBA.
4. If development occurs in the eastern portion of the site, maintain an undisturbed buffer at least 500 meters wide around the IBA. This measure is focused on avoidance behavior but is also intended to reduce strike mortality.

#### Design Considerations

5. Minimum blade distance from the ground should be higher than the typical American golden plover flying height during foraging. These birds normally fly at 30-40 feet above ground during foraging activity, but may rise considerably higher if alarmed by a predator or other disturbance.
6. Minimize the footprint of roads and other infrastructure.

## Operation and Management

7. Cease or reduce operation of blades during peak incoming and outgoing migration flights. This measure would be most important for turbines nearest the IBA and other areas of heavy bird concentration.
8. Address the issue of vegetation management near turbines during migration season. Lower vegetation would facilitate mortality monitoring, however high vegetation adjacent to the turbine blades might discourage bird use and reduce the potential for blade strike mortality.

## Measures to Offset Impacts on the American Golden Plover

9. For landowners within and near the IBA who anticipated leases for wind turbine construction, substitute conservation easements for leases.
10. Assist with funding of habitat enhancement measures on conservation easements, possibly through partnering with the Department of Agriculture's Wetland Reserve Program or other DOA conservation programs. Appropriate measures could include increased seasonal water regime management, vegetation plantings, and customized vegetation management practices.

## Monitoring

11. Design and implement a plan for monitoring of American golden plover use of the project site and avoidance behavior. This would require at least 3 years of monitoring using a transect methodology as described by Leddy et al. (1999) and Erickson et al. (2007) to evaluate bird use with respect to distance from turbines. Study design should be developed through consultation and concurrence with the Indiana DNR and USFWS.
12. Conduct monitoring of mortality for at least 3 years, utilizing trained dogs to search for carcasses. Study design should be developed through consultation and concurrence with the Indiana DNR and USFWS.

## Smiths Longspur

Another migratory bird species of concern in the project area is Smith's longspur (*Calcarius pictus*). This rare Arctic breeding species stages in eastern Illinois and northwestern Indiana in similar habitat to the American golden plover, although in much smaller numbers at any single location (see attached fact sheet). We are not aware of any data on the effects of wind turbines on Smith's longspur, however due to its small global population and narrow migration pathways, cumulative effects of multiple wind power developments could be of concern.

## **Endangered Species**

The proposed project is within the range of the Federally endangered Indiana bat (*Myotis sodalis*) and a Non-Essential, Experimental population of whooping cranes (*Grus americana*). Our letter of December 13, 2006 included general information on these species with regard to the project area. We are providing the following additional endangered species information.

While there is very little habitat for the Indiana bat within the wind farm study area, there may be more extensive habitat along the power line transmission route(s). Transmission routes should be sited to avoid or minimize forest loss and fragmentation. There are several summer records of this species in adjacent Tippecanoe and Warren Counties, along Mud Pine Creek, Big Pine Creek and Little Pine Creek. Of greatest concern is Big Pine Creek, where there are Indiana bat records within 3 miles downstream of the transmission route depicted in your coordination letter of September 20, 2006. Please notify this office if other transmission routes come under consideration.

The bald eagle (*Haliaeetus leucocephalus*) was recently removed from the federal endangered species list, however this species is still protected from disturbance under the Bald and Golden Eagle Protection Act. The distribution of eagle nests with respect to the project study area has not changed since our previous review of this project, and there are currently no anticipated impacts on bald eagles.

This endangered species information is provided for technical assistance only, and does not fulfill the requirements of Section 7 of the Endangered Species Act.

For further discussion please call Mike Litwin at (812) 334-4261 ext. 205.

Sincerely yours,

  
 Scott E. Pruitt  
Field Supervisor

cc: Matt Buffington, Indiana Division of Fish and Wildlife, Indianapolis, IN  
Jeff Gosse, USFWS, Twin Cities, MN  
Elizabeth McCloskey, USFWS, Chesterton, IN  
Keith Shank, Illinois DNR, Springfield, IL

### **Literature Cited**

Brown, S., C. Hickey, B. Harrington and R. Gill eds. 2001. The U.S. Shorebird Conservation Plan, 2<sup>nd</sup> ed. Manomet Center for Conservation Sciences. Manomet, MA.

Leddy, K.L., K.F. Higgins, and D.E. Naugle. 1999. Effects of wind turbines on upland nesting birds in Conservation Reserve Program grasslands. *Wilson Bulletin* 111:100-104.

Erickson, W, D. Strickland, J.A. Shaffer, and D.H. Johnson. 2007. Protocol for investigating displacement effects of wind facilities on grassland songbirds. National Wind Coordinating Committee (NWCC). 15 pp.

# Smith's longspur

## *Migratory habitat in the eastern Midwest*

The Smith's longspur regularly migrates through a number of counties in east-central Illinois and northwest Indiana. An unknown number of this rare Arctic species—whose global population is estimated at 75,000—stages in the springtime in the eastern Midwest, preparing for the journey to the northern breeding grounds. Smith's longspurs usually appear in single species flocks or occasionally in mixed flocks with horned lark or Lapland longspur.

Numbers of migrating Smith's longspur are likely to be at most in the tens and low hundreds, not thousands, at any single location in the eastern Midwest.

Sightings are most frequently reported in Benton and Newton counties in Indiana, and in Illinois in McLean, Knox, Mason, Sangamon, Cook, Jasper and Champaign counties. Smith's longspur may also spend time in counties adjacent to those listed above, but both a lack of observers and a focus on targeted surveys in the species' habitat during the narrow spring migration window make this difficult to determine.

Preferred habitat of the Smith's longspur includes agricultural stubble fields and heavily grazed pastures with a large growth of *Aristida* sp., or threeawn, particularly along the edges of wet depressions and recently wet or drying mudflats and along the muddy borders of water bodies in very open country. Historically, these were birds of mid-to

tallgrass prairies in burned or heavily grazed areas and the edges of seasonal wetlands.

The Smith's longspur may be present in the eastern Midwest area from mid March (Illinois) or late March (Indiana) until early May. The species actually occurs in a broader region, extending from western

Ohio as far west as central South Dakota, so only a small portion of the bird's population would be vulnerable at a single location.

Within that broad area though, the only known pathways with a major concentration of Smith's longspurs are quite narrow — an

eastern Dakotas - western Missouri - western Minnesota route, and a route that uses the staging area in east central Illinois and western Indiana, and likely then heads northwest towards breeding grounds that begin on the western shores of Hudson Bay.

The effects of wind turbines on the Smith's longspur are unknown. Cumulative impacts from a large number of projected wind turbines could potentially negatively affect this species.

Smith's longspurs chasing each other on the breeding grounds may ascend out of sight and thus be susceptible to turbine blades. Similar behavior on migration is to be expected on occasion, particularly in late spring.

Generally, the Smith's longspur forages on the ground, and it seldom flies unless it is disturbed by a human or a predator or moves to another field to forage.



Smith's longspur. Credit: Ron Martin



# United States Department of the Interior Fish and Wildlife Service



Bloomington Field Office (ES)  
620 South Walker Street  
Bloomington, IN 47403-2121  
Phone: (812) 334-4261 Fax: (812) 334-4273

August 5, 2011

Robert Myer  
BP Wind Energy NA, Inc.  
700 Louisiana St., 33rd Floor  
Houston, TX 77002

Dear Mr. Myer:

The U.S. Fish & Wildlife Service has completed our review of the spring bat mortality surveys you have completed at the Fowler Ridge Wind Farm, Benton County, Indiana. Surveys were completed during spring migration each year from 2009 – 2011. The results of those surveys reveal that few bat mortalities occur each spring. In addition, no bats of the genus *Myotis* were found. Based on those survey results the Service concludes that the operation of the Fowler Wind Farm during spring migration is not likely to result in the mortality of federally listed Indiana bat (*Myotis sodalis*) and consequently no take permit is needed. Surveys you have completed during fall migration have verified that Indiana bats are taken at your facility during that time and we look forward to working with you to complete your draft Habitat Conservation Plan with a goal of issuing you an Incidental Take Permit to allow for operation during fall migration in compliance with the Endangered Species Act.

Please contact me if you have questions or concerns.

Sincerely,

Scott E. Pruitt  
Field Office Supervisor



Division of Historic Preservation & Archaeology • 402 W. Washington Street, W274 • Indianapolis, IN 46204-2739  
Phone 317-232-1646 • Fax 317-232-0693 • [dhp@dnr.in.gov](mailto:dhp@dnr.in.gov)



October 18, 2012

James E. Myster  
Regional Historic Preservation Officer  
U.S. Department of the Interior  
Fish and Wildlife Service  
5600 American Boulevard West, Suite 990  
Bloomington, Minnesota 55437-1458

Federal Agency: U.S. Fish and Wildlife Service

Re: Information and notification of the U.S. Fish and Wildlife Service's finding of "no adverse effect" regarding the Fowler Ridge Wind Farm, Phase IV (DHPA #13953)

Dear Mr. Myster:

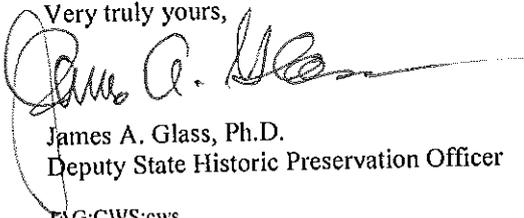
Pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. § 470f) and 36 C.F.R. Part 800, the staff of the Indiana State Historic Preservation Officer ("Indiana SHPO") has conducted an analysis of the materials dated September 17, 2012 and received on September 20, 2012 for the above indicated project near Fowler, Benton County, Indiana.

We see no reason to object to the U.S. Fish and Wildlife Service's September 17, 2012 finding that there are no historic buildings, structures, districts, or objects within the area of potential effects that will be adversely affected by the above indicated project.

It is our understanding that the identification and analysis of archaeological resources will be conducted programmatically. We look forward to participating in future consultation to reach an agreement.

If you have questions about buildings or structures please contact Chad Slider at (317) 234-5366 or [cslider@dnr.IN.gov](mailto:cslider@dnr.IN.gov). If you have questions about archaeological issues please contact Amy Johnson at (317) 232-6982 or [ajohnson@dnr.IN.gov](mailto:ajohnson@dnr.IN.gov). Additionally, in all future correspondence regarding the above indicated project, please refer to DHPA #13953.

Very truly yours,



James A. Glass, Ph.D.  
Deputy State Historic Preservation Officer

JAG:CWS:cws

emc: Jon Currie, Stantec Consulting Services, Inc.  
Blayne Gunderman, BP Wind Energy  
James Myster, USFWS



February 28, 2013

Mrs. Blayne Gunderman  
Environmental Manager  
BP Wind Energy NA, Inc.  
700 Louisiana St, 33<sup>rd</sup> Floor  
Houston, Texas 77002  
(713)299-3100

Mr. Scott Pruitt  
Field Supervisor  
U.S. Fish and Wildlife Service  
Ecological Services Field Office  
620 S. Walker Street  
Bloomington, Indiana 47403  
(812)334-4261 Ext. 1214

Dear Mrs. Gunderman and Mr. Pruitt:

The purpose of this letter is to address the proposed gating project and subsequent monitoring activities at Wyandotte Cave. Wyandotte Cave is a state owned property and occurs within the O'Bannon Woods State Park located in Crawford County. The Indiana Department of Natural Resources (IDNR) has conducted various monitoring activities at the cave over the past several decades.

As a requirement of their Habitat Conservation Plan (HCP), the Fowler Ridge Wind Farm (FRWF) proposes to remove and replace the current gate at Wyandotte Cave in order to protect Indiana bats (*Myotis sodalis*) that are currently hibernating in an area of the cave that is outside of the current gate. The IDNR will have final approval authority concerning the location and design of the new gate and will provide Section 106 coordination for the gate construction. This gating project is being implemented to mitigate for the incidental take of Indiana bats as a result of the operation of the FRWF. In addition to the mitigation actions, the HCP requires monitoring be completed to ensure success of those mitigation actions.

This letter serves as confirmation that the IDNR will continue to conduct monitoring activities at Wyandotte Cave and will provide all necessary information to FRWF to ensure compliance with their HCP. Monitoring activities to be done include: 1) weekly checking of the gate by O'Bannon Woods State Park personnel to ensure the gate is intact and has not been damaged or breached; 2) installation and maintenance of dataloggers, and downloading of data collected by the dataloggers (i.e. temperature, humidity, air flow inside the cave); and 3) installation and

maintenance of speloggers, and downloading of data collected by the speloggers (i.e. human visitation occurrences). A summary report of monitoring activities will be provided annually for 12 years following installation on the new gate and will include: data from speloggers and dataloggers, digital photographs of the gate and cave entrance, and any management recommendations. To ensure that any required management actions can be taken prior to the upcoming hibernation period, the winter habitat mitigation report will be submitted to FRWF annually by June 30. In the event the IDNR cannot continue these monitoring activities, the IDNR will work with FRWF to ensure subsequent monitoring under the HCP is performed by qualified personnel using approved protocols.

Please contact Scott Johnson via phone (812-334-1137) or email ([sjohnson@dnr.IN.gov](mailto:sjohnson@dnr.IN.gov)) with any questions or concerns.

Sincerely,

A handwritten signature in black ink that reads "John M. Davis" with a stylized flourish at the end.

John M. Davis  
Deputy Director  
Dept. of Natural Resources  
402 W. Washington St. Rm W256  
Indianapolis, Indiana 46204



Indiana Department of Natural Resources

Michael R. Pence Governor  
Cameron F. Clark, Director

Division of Nature Preserves  
402 W. Washington St., Rm W267  
Indianapolis, IN 46204-2739

July 5, 2013

Molly Gillespie  
Stantec  
2300 Swan Lake Boulevard, Suite 102  
Independence IA 50644

Dear Molly Gillespie:

I am responding to your request for information on the endangered, threatened, or rare (ETR) species, high quality natural communities, and natural areas documented from the Fowler Ridge Wind Farm Phase Four project area, Benton County, Indiana. The Indiana Natural Heritage Data Center has been checked and following you will find information on the ETR species documented within 0.5 mile of the project area.

For more information on the animal species mentioned, please contact Christie Stanifer, Environmental Coordinator, Division of Fish and Wildlife, 402 W. Washington Room W273, Indianapolis, Indiana 46204, (317)232-8163.

The information I am providing does not preclude the requirement for further consultation with the U.S. Fish and Wildlife Service as required under Section 7 of the Endangered Species Act of 1973. If you have concerns about potential Endangered Species Act issues you should contact the Service at their Bloomington, Indiana office.

U.S. Fish and Wildlife Service  
620 South Walker St.  
Bloomington, Indiana 47403-2121  
812-334-4261

At some point, you may need to contact the Department of Natural Resources' Environmental Review Coordinator so that other divisions within the department have the opportunity to review your proposal.

For more information, please contact:

Department of Natural Resources  
attn: Christie Stanifer  
Environmental Coordinator  
Division of Fish and Wildlife  
402 W. Washington Street, Room W273  
Indianapolis, IN 46204  
(317)232-8163

Please note that the Indiana Natural Heritage Data Center relies on the observations of many individuals for our data. In most cases, the information is not the result of comprehensive field surveys conducted at particular sites. Therefore, our statement that there are no documented significant natural features at a site should not be interpreted to mean that the site does not support special plants or animals.

Due to the dynamic nature and sensitivity of the data, this information should not be used for any project other than that for which it was originally intended. It may be necessary for you to request updated material from us in order to base your planning decisions on the most current information.

Thank you for contacting the Indiana Natural Heritage Data Center. You may reach me at (317)232-8059 if you have any questions or need additional information.

Sincerely,



Ronald P. Hellmich  
Indiana Natural Heritage Data Center

Enclosure:       invoice  
                  Data sheet

07/05/13

**Endangered, Threatened and Rare Species Documented From The  
Fowler Ridge Wind Farm Phase Four Project Area, Benton County,  
Indiana**

Type	Species Name	Common Name	Fed	State	Town Range	Date	Comments
Bird	<i>Asio flammeus</i>	Short-eared Owl		SE	025N008W 30	1988-05-03	
Bird	<i>Bartramia longicauda</i>	Upland Sandpiper		SE	025N008W 07	1988-06-15	
Bird	<i>Ixobrychus exilis</i>	Least Bittern		SE	026N008W 34	1988-06	
Bird	<i>Rallus elegans</i>	King Rail		SE	026N008W 34	1988-06	
Bird	<i>Sturnella neglecta</i>	Western Meadowlark		SSC	024N008W 30	1997-06-10	
Mammal	<i>Geomys bursarius</i>	Plains Pocket Gopher		SSC	026N008W 34 NWQ SWQ NWQ	1988-07-05	
Mammal	<i>Taxidea taxus</i>	American Badger		SSC	025N009W 12	2004-11-19	
Reptile	<i>Emydoidea blandingii</i>	Blanding's Turtle		SE	025N008W 7	NO DATE	
Vascular Plant	<i>Agalinis auriculata</i>	Earleaf Foxglove		ST	025N008W 21	1930-09-12	
Vascular Plant	<i>Aster sericeus</i>	Western Silvery Aster		SR	025N008W 05 SWQ	1938-09	
Vascular Plant	<i>Liatrix pycnostachya</i>	Cattail Gay-feather		ST	025N008W 05 SWQ	1938-08-13	

**FOWLER RIDGE WIND FARM**

Fed: LE = listed federal endangered; C = federal candidate species

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SG = state significant; WL = Watch List; no rank - not ranked but tracked to monitor status

Type	Species Name	Common Name	Fed	State	Town Range	Date	Comments
Mammal	Nycticeius humeralis	Evening Bat		SE	025N008W 20	2012	

**GICK GAMEBIRD AREA (NEWP FGS #259)**

Mammal	Spermophilus franklinii	Franklin's Ground Squirrel		SE	025N009W 12 EH NEQ	1987-08-18	
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**Mud Creek**

Mollusk	Venustaconcha ellipsiformis	Ellipse		SSC	025N009W 9	2001-09-25	FRESH DEAD
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**PC-GRAVEL HILL.S (NEWP FGS #022)**

Mammal	Spermophilus franklinii	Franklin's Ground Squirrel		SE	025N008W 08 NEQ	1986-06-03	
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**Watland Gamebird Habitat Area, (DNR Fish & Wildlife) Section 7, Township 25 North, Range 8 West**

Fed: LE = listed federal endangered; C = federal candidate species

State: SE = state endangered; ST = state threatened; SR = state rare; SSC = state species of special concern; SG = state significant; WL = Watch List; no rank - not ranked but tracked to monitor status