



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

Ecological Services  
3425 Miriam Avenue  
Bismarck, North Dakota 58501



APR 10 2008

Mr. Jeffery R. Rice  
Tetra Tech, Inc.  
P.O. Box 30615  
618 South 25<sup>th</sup> Street  
Billings, Montana 59101

RECEIVED

APR 14 2008

PUBLIC SERVICE COMMISSION

Dear Mr. Rice:

This is in response to your January 21, 2008, request for environmental information in relation to a proposed wind energy development project in Barnes County, North Dakota. The proposed project consists of an approximately 200 megawatt (MW) wind energy center and an associated 230 kilovolt (kV) transmission line approximately five miles in length. The location for the proposed project is in: T. 141 N., R. 57 W., Sections 2, 4, 8, 9, 11, 22 and 23; T. 142 N., R. 57 W., Sections 4-10, 17, 20, 21, 27-29, and 31-33; T. 143 N., R. 57 W., Sections 20, 22, 27 and 32-34. No information is provided as to the number of wind turbines or other infrastructure. Therefore, our comments are general in nature. We offer the following comments under the authority of and in accordance with the Migratory Bird Treaty Act (16 U.S.C. 703 et seq.), Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. 668-668d, 54 Stat. 250), Executive Order 13186 "Responsibilities of Federal Agencies to Protect Migratory Birds", the Endangered Species Act (ESA) (16 U.S.C. 1531 et seq.), the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57), and the National Environmental Policy Act (NEPA) ( Pub. L. 91-190, 42 U.S.C. 4321-4347, January 1, 1970, as amended by Pub. L. 94-52, July 3, 1975, Pub. L. 94-83, August 9, 1975, and Pub. L. 97-258, § 4(b), Sept. 13, 1982).

The U.S. Fish and Wildlife Service (Service) holds certain resources in trust and manages them for the benefit of the American people. These resources include migratory birds, inter-jurisdictional fish, federally-listed threatened and endangered species of plants and animals and their habitats, and units of the National Wildlife Refuge system. When planning an activity, project proponents should give careful consideration to potential impacts to these trust resources and compliance with the laws mentioned above. Additional information is provided below.

### Migratory Birds

Adequate consideration for avian resources early in the site evaluation process can help to minimize impacts and facilitate project review. Although current wind turbine technology and proper siting can help to minimize the incidence of avian deaths due to blade, aerial line, and tower strikes, the potential for direct mortality of some migratory birds will remain. Wind power

developers, in concert with the Service, can help to ensure that projects proceed with as little impact to migratory birds as possible. This can be accomplished by gathering information on avian resources as they relate to project siting, and by implementing measures to minimize impacts to migratory birds from the construction and operation of the wind facility. The Service's Interim Wind Turbine Siting Guidelines are enclosed to assist in project planning (enclosure 1). We encourage the project proponents to conduct a Potential Impact Index (PII) analysis to assist in the selection of a wind power site that minimizes the potential to impact migratory birds. Please inform this office whether or not you plan to use the Service's interim guidelines in selecting your site and if not, why not, and whether you intend to use a different method to assess avian resources and impacts to migratory birds.

To minimize the electrocution hazard to birds, the Service, with support from the Rural Utilities Service, recommends that new or updated overhead power lines be constructed in accordance with the current guidelines for preventing raptor electrocutions. The recommended guidelines can be found in "Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 1996". To increase power line visibility and reduce bird fatalities resulting from collisions with power lines, the Service recommends new power lines that cross or run adjacent to rivers or large wetlands be modified according to "Mitigating Bird Collisions with Power Lines: The State of the Art in 1994". Both publications can be obtained by writing or calling the Edison Electric Institute, P.O. Box 266, Waldorf Maryland 20604-0266 (1-800-334-5453) or visiting their website at [www.eei.org](http://www.eei.org).

### **Threatened and Endangered Species**

A list of federally threatened and endangered species that may occur within the proposed project's area of influence is enclosed (enclosure 2). Section 10(a)(1)(B) of the ESA allows non-Federal parties planning activities that have no Federal nexus, but which could result in the incidental taking of listed animals, to apply for an incidental take permit. (A Federal nexus exists whenever an activity is conducted, funded, or licensed or permitted by a Federal agency). The application must include a habitat conservation plan (HCP) laying out the proposed actions, determining the effects of those actions on affected federally-listed fish and wildlife species and their habitats (often including proposed or candidate species), and defining measures to minimize and mitigate adverse effects. The Service does not believe that a determination of "no effect" is appropriate for the proposed project area because of, but not limited to, the presence of migrating whooping cranes in this area. However, due to the project location outside of the main migration corridor with only 5% of all confirmed whooping crane sightings in North Dakota, the Service believes that with conservation measures included as part of the project, a determination of "may effect, not likely to adversely affect" for the whooping crane may be appropriate. Effective conservation measures to avoid or reduce potential impacts to whooping cranes include: burying all new electrical transmission lines or if new lines cannot be buried, marking all new overhead transmission lines with visual marking devices such as aviation marker balls, swinging plates, spiral vibration dampeners, or swan flight diverters.

The Aransas Wood Buffalo Population (AWBP) of whooping cranes is the only self-sustaining

migratory population of whooping cranes remaining in the wild. These birds breed in the wetlands of Wood Buffalo National Park in Alberta and the Northwest Territories of northern Canada, and overwinter on the Texas coast. Whooping cranes in the AWBP annually migrate through North Dakota during their spring and fall migrations.

Endangered whooping cranes have been documented using roosting habitat in the vicinity of the proposed project area. The proposed site is located outside the primary 180 mile-wide migration corridor that includes 95% of all confirmed whooping crane sightings in North Dakota (enclosure 3). However, the presence of suitable roosting and feeding habitat for whooping cranes in the project area and confirmed whooping crane sightings in the project vicinity, document the potential for whooping crane presence in the proposed project area. The proposed wind energy project has the potential to affect whooping cranes during their annual spring and fall migration through North Dakota. Potential effects may be direct (e.g. collision mortality) or indirect (e.g. avoidance of the site resulting in cranes seeking alternate habitat). The interactions of whooping cranes with wind turbines and wind farms are currently not fully known, although it is expected that these large birds with relatively low maneuverability are susceptible to mortality via collisions with turbines. Currently, collisions with power lines are the greatest known source of mortality for fledged whooping cranes and have accounted for the death or serious injury of at least 46 whooping cranes since 1956.

### **Fish and Wildlife Service Property Interests**

The Service administers Waterfowl Production Area fee title as well as wetland and grassland easements throughout North Dakota. A review of the County plat books indicate Service property interests (wetland easements highlighted in yellow and fee title highlighted in green) are located in the planning area (enclosure 4). Contact Mr. Ed Meendering, Supervisory Wildlife Refuge Specialist, Valley City Wetland Management District, 11515 River Road, Valley City, North Dakota 58072-9619 (701-845-3466), for more specific information relative to Service property interests. Following are some suggestions and explanations of the various land interests the Service is responsible for in the proposed project area.

Wetland easements (yellow) are legal agreements with private landowners that permanently protect wetland basins from being drained, burned, leveled, or filled.

The primary responsibility in protecting these easements is to review all proposed uses to ensure that the requests are compatible with Service easement regulations and various laws and policies. Therefore, these comments and suggestions are made in an attempt to accomplish three goals: 1) avoid impacts to Service grassland and wetland easements in the project area as much as possible; 2) if unavoidable, ensure that any proposed turbine and associated infrastructure impacts (roads, buried collection lines, transmission lines, sub-stations, etc.) on any Service easement areas are kept to an absolute minimum; and 3) investigate all potential alternatives to eliminate or reduce impacts to easement areas to protect the integrity of the easement.

With these goals in mind, the Service offers the following comments:

- **Wetland Easements:** The Service manages a number of wetland easements in the proposed project area. Without a map showing the proposed turbine and road locations, it is not possible at this time to identify specific concerns with turbines and roads. The National Wetlands Inventory (NWI) identifies many of the area's wetlands; however, many of the small, shallow temporary wetland basins may not be recognized on NWI photography. You should make all reasonable efforts to avoid facility placement and disturbance to wetland easements. If your plans indicate a proposal to locate project facilities on Service wetland easements, the Service will review aerial photography along with field inspections to review construction stakes to make sure all wetland basins are avoided. In addition, it is important to make sure that access roads do not alter individual wetland basins and their individual watersheds.
- **NEPA Review:** As mentioned, if Service lands are proposed to be impacted, the Service will be required to conduct an analysis of impacts and examine alternatives, pursuant to NEPA.

### **High Value Habitat Avoidance**

The proposed project area is located in the Drift Prairie Glaciated Plains region of North Dakota and includes areas of native mixed-grass prairie. Since the 1800s, North Dakota has lost approximately 75-90 percent of its native grasslands, primarily due to crop production. The Service recommends avoiding construction or disturbance on native prairie areas.

Native prairie has significant natural resource values including:

- Provides habitat for a number of migratory and resident grassland birds whose populations are declining.
- Provides nesting habitat for millions of waterfowl.
- Contains 200-300 plant species, which provide genetic diversity important to agriculture and medicine.
- Provides habitat for thousands of insects including the Dakota skipper, a candidate species for listing under the ESA, and other butterflies (Ex: Regal fritillary, Tawny crescent).
- Crucial for soil and water conservation.
- Provides recreational opportunities (hunting, bird watching/wildlife observation, hiking).
- Living laboratories for scientific research.

Our review of NWI maps indicate that wetland areas are located within the project area. NWI data can be accessed directly by visiting their website at ([wetlands.fws.gov](http://wetlands.fws.gov)). Section 404 of the Clean Water Act regulates placement of fill materials in certain wetlands. A Corps of Engineers'

404 permit may be required if fill material will be placed in aquatic sites including wetlands. Contact Mr. Dan Cimarosti, Regulatory Office, Corps of Engineers, 1513 South 12th Street, Bismarck, North Dakota 58504 (701-255-0015), to determine their permit requirements. If a 404 permit is required, the Service will provide recommendations on this project to the Corps.

Other high value wildlife habitat types in North Dakota include wooded draws and riparian forests. We recommend that you avoid construction of wind towers and appurtenant facilities in the above habitat types whenever possible.

Construction activities should be conducted in a manner that will minimize impacts to the wildlife and the existing habitat in the project area. Where impacts are unavoidable, we recommend that you:

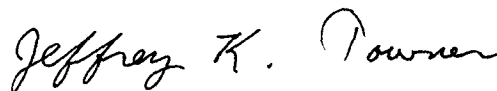
- Schedule construction for late summer or fall/early winter so as not to disrupt waterfowl or other wildlife during the breeding season (February 1 to July 15). If work is proposed to take place during the breeding season or at any other time which may result in the take of migratory birds or active nests, the Service recommends that the project proponent arrange to have a qualified biologist conduct a field survey of the affected habitats to determine the absence or presence of nesting migratory birds. If nesting migratory birds are found, we request you contact this office, suspend construction, or take other measures, such as maintaining adequate buffers, to protect the birds until the young have fledged. The Service further recommends that field surveys for nesting birds, along with information regarding the qualification of the biologist(s) performing the surveys, and any avoidance measures implemented at the project site, be thoroughly documented and that such documentation be shared with the Service and maintained on file by the project proponent at least until such time as construction on the proposed project has been completed.
- Avoid construction in native prairie, if possible, and reseed disturbed native prairie with a comparable native grass/forb seed mixture. Obtain seed stock from nurseries within 250 miles of the project area to insure the particular cultivars are well adapted to the local climate.
- Minimize grassland disturbance by using fewer, larger turbines and limiting new road construction.
- Use underground transmission lines between turbines, as well as to the primary substation.
- Locate appurtenant facilities to avoid placement of fill in wetlands along the route.
- Install and maintain appropriate erosion control measures to reduce sedimentation and water quality degradation of wetlands and streams near the project area.
- Replace unavoidable wetland losses with functionally equivalent wetlands.

## Research, Monitoring, and Assessment

We encourage project proponents to conduct collision monitoring studies designed to determine the effect of several factors, such as site selection, turbine designs, the layout of wind plants, wind plant operations, habitat alteration, and changes in available perching and nesting sites, on bird deaths. The Avian Subcommittee of the National Wind Coordinating Committee (NWCC) has developed a guidance document to assist wind energy developers in designing studies that will produce credible and comparable results of avian interaction with wind power plants. The NWCC document, "Studying Wind Energy/Bird Interactions: A Guidance Document. Metrics and methods for determining or monitoring potential impacts on birds at existing and proposed wind energy sites," can be obtained by contacting the National Wind Coordination Committee, c/o RESOLVE, 1255 23<sup>rd</sup> Street, Suite 275, Washington, D.C. 20037, or by visiting their website at ([www.nationalwind.org](http://www.nationalwind.org)).

Given the Service requirements and recommendations above, as well as possible unforeseen issues that may arise, we encourage you to build sufficient planning time for coordination with the Service into your project timeline. Thank you for the opportunity to comment. If you require further information as project planning proceeds, please contact Terry Ellsworth of my staff, or contact me directly, at (701) 250-4481, or at the letterhead address.

Sincerely,



Jeffrey K. Towner  
Field Supervisor  
North Dakota Field Office

Enclosures (4)

cc: Supervisory Wildlife Refuge Specialist, Valley City WMD  
Regulatory Office, Army Corps of Engineers, Bismarck  
(Attn: D. Cimarosti)  
ND Public Service Commission, Bismarck  
Director, ND Game & Fish Department, Bismarck  
(Attn: M. McKenna)