



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Twin Cities Field Office
4101 American Blvd E.
Bloomington, Minnesota 55425-1665

February 18, 2011

Suzanne Steinhauer
State Permit Manager
Minnesota Department of Commerce
Office of Energy Security
85 7th Pl E, Suite 500
St. Paul, MN 55101

Re: Black Oak Wind Farm Site Permit Application Review
Stearns County, Minnesota
FWS TAILS #32410-2009-FA-0145

Dear Ms. Steinhauer:

This is in response to the Office of Energy Security request for comments on the Site Permit Application for the proposed Black Oak Wind Farm in Stearns County, Minnesota. The proposed project includes the installation of wind turbines, and associated infrastructure including roads, transmission lines, and staging areas. Representatives from the U.S. Fish and Wildlife Service (Service), HDR, Geronimo Wind, Minnesota Department of Natural Resources (MN DNR), and you visited the project site on January 28, 2011. The Service provided a letter regarding recommendations for the proposed Black Oak Wind Farm to Geronimo Wind and HDR on March 26, 2010. Our letter was included in Appendix E of the Site Permit Application submitted by Geronimo Wind.

This letter is not intended to replace previous comments and recommendation the Service provided to Geronimo Wind and HDR. Our recommendations in this letter are intended to assist OES staff in making informed decisions regarding recommendations to carry forward to the Public Utility Commission (PUC).

Geronimo Wind is not proposing to complete pre-construction avian surveys at the proposed Black Oak Wind Farm site, but rather utilize data from pre-construction surveys completed at the nearby Paynesville Wind Farm. The Service recognizes the importance of utilizing data from the Paynesville Wind Farm studies, but it should not be utilized in place of gathering site specific data. The proposed Black Oak Wind Farm when compared to the Paynesville Wind Farm is surrounded by significantly more Federal and State lands intended for wildlife production. There are 16 Waterfowl Production Areas (WPAs) located within 5 miles of the proposed Black Oak Wind Farm, two of which are directly adjacent to the proposed macro-siting boundary, Behnen and Trisko WPAs. Without site specific data, a conservative approach would predict high avian flight activity throughout the Black Oak Wind Farm site as local and migrant birds move

between the quality habitat within the WPAs and Wildlife Management Areas (WMAs) located in close proximity of the proposed project.

Pre-construction Avian Survey Recommendations

A Raptor Nest Survey should be completed in the winter or early spring, prior to leaf-out, to identify all potential raptor nests within the proposed project boundary and within two miles of the proposed Black Oak Wind Farm. Raptor Nest Activity Surveys should be completed in April 2011 to determine which of the identified raptor nests are active. Active raptor nest locations should be monitored to assess the daily movement patterns of any species of raptor. During the incubation and rearing stage, adult birds should be tracked for at least 4 hours twice per week until consistent activity patterns are established.

The Service recommends observational bird surveys for the entire Black Oak Wind Project site to document all species identified, direction of flight, and height of flight. The project proponent should utilize this flight survey data to assist in micro-siting the individual turbines. Flight Path Surveys as well as Point Count Surveys could be particularly useful for turbine siting if flight path survey locations are sited between the Behnen and Trisko WPA and Behnen WPA and Padua WMA. Currently, proposed turbine placements are within these potential avian flight pathways.

Regarding the string of turbines located in the southeast corner of the Black Oak Wind Farm, the following statement was provided to Geronimo Wind in our March 26, 2010 letter.

“Shoreland bird and waterfowl species may be more prevalent in the southeast corner of the proposed project area as there is a complex wetlands and open water habitat adjacent to the proposed project boundary in this area. If turbines will be placed within the southeast corner of the proposed project site we strongly recommend that observation surveys be completed to determine bird species that may be moving through this area during spring and fall migration, and bird species that may be in the area throughout the summer.”

Geronimo has committed to conducting preconstruction inventory work which will identify existing natural resources and habitats within the proposed project site. There are a number of records of upland sandpiper and marbled godwit in the vicinity of the project. Should the habitat survey confirm habitat for either of these species within a ¼ mile of any proposed turbine, breeding bird surveys may be necessary to determine the utilization of habitat areas.

Bat Survey Recommendations

The Service recommends Geronimo and their consultants conduct rigorous assessments of bat use within the proposed Black Oak Wind Farm site. We recommend installation of two AnaBat SDI detectors per meteorological tower within the project area. Data should be collected from April 15 - November 15, 2011 and extend into the operational phase of the project. One AnaBat

detector should be mounted at 5 meters above ground, and the other should be mounted as close to the rotor-swept area as possible. The AnaBat's sensitivity should be adjusted to detect a calibration tone at 20 meters. AnaBat units must monitor from 0.5 hour before sunset until 0.5 hour after sunrise. This will help to gauge bat activity and to some degree, to determine bat species/guild composition within the project area during spring and fall migration and the maternity season.

Depending on AnaBat data, the use of mobile horizontally- and vertically-scanning radar to study the direction, altitude, and numbers of flying animals moving through and within the project area during the fall and spring migration of bats may be warranted. Such information could inform project design and operation to help minimize potential mortality associated with the project.

Post Construction Survey Recommendations

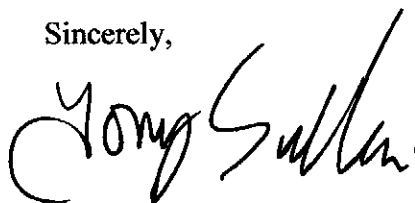
The Service recommends the project be monitored post-construction to determine impacts to migratory birds and bats. A specific post-construction monitoring plan should be prepared and reviewed by the Service and should include a scientifically robust, peer reviewed methodology of mortality surveys. Generally the Service recommends surveys be conducted for a minimum of three years following construction to assess impacts to birds and bats. The duration of post construction surveys is project specific and will be determined in part upon pre- construction survey results. We also recommend that the post-construction mortality studies be conducted by an independent third party contractor with expertise in bird/bat mortality monitoring. Results of mortality surveys and other forms of monitoring should be used to adjust operations to reduce mortality if necessary and feasible, as well as improve design and siting of future wind generation facilities. **The Developer or its contractor should provide to this office each year, no later than December 31, copies of annual bird/bat mortality monitoring reports.**

Turbine Layout

After reviewing the three turbine types and associated layouts being considered for the Black Oak Wind Farm, the Service prefers the Vestas V112 layout as identified in the Site Permit Application. Our preference for the Vestas V112 layout over the GE 1.6xle and the Vestas V90 layouts is due to the reduced number of turbines and the reduction in creating flight path barriers that result from the placement of turbines on the landscape.

Thank you for the opportunity to provide comments on this proposed project. Please contact Rich Davis, Fish and Wildlife Biologist, at (612) 725-3548, ext. 2214, or Pete Fasbender, Deputy Field Supervisor, at (612) 725-3548, ext. 2207 if we can be of further assistance.

Sincerely,

A handwritten signature in black ink that reads "Tony Sullins". The signature is written in a cursive style with a large, looping initial "T".

Tony Sullins
Field Supervisor

cc: Jamie Schrenzel, MN DNR
Scott Glup, USFWS Litchfield WMD