

Minnesota Department of Natural Resources

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January 12, 2012

Larry Hartman, State Permit Manager
Minnesota Office of Energy Security
85 7th Place East, Suite 500
St. Paul, MN 55101

Re: AWA Goodhue Wind Avian and Bat Protection Plan and Acoustic Bat Monitoring
[PUC Docket Number: IP-6701/WS-08-1233]

Dear Mr. Hartman:

The Minnesota Department of Natural Resources (DNR) has reviewed the Avian and Bat Protection Plan (ABPP) and Acoustic Bat Monitoring Pre-Construction Results for the AWA Goodhue Wind Project and provides the following comments.

The ABPP for the Goodhue Wind Project is one of the first ABPPs to be developed. These plans are useful tools to assist wind developers and agencies with coordination regarding avoidance, minimization, and mitigation for impacts to wildlife. The Goodhue Wind Project has been a unique project because it was developed during a time when wildlife agencies were writing guidance documents. Rare and protected species were also discovered during later stages of project development. Due to unique circumstances, the DNR encourages the EFP to continue to refine required Avian and Bat Protection Plan content for future projects and not to consider the content of this ABPP to be precedent setting. Reviewers are concerned that there is more of a focus on why species were present and past coordination than robust construction-stage plans for surveys and operational activities. Project history, notes on why species are present, and risk analyses, are important items to include, but should not be the primary focus. Though the ABPP does briefly discuss survey methodology and operational training, these sections should be more robust. Detailed plans would likely be helpful for personnel working on-site and may clarify the logistics of implementing project goals.

3.1.4 Bat Special Condition: As detailed in the ABPP and the Bat Monitoring Report, the Site Permit Section 13.1.2 states "The Permittee shall install a minimum of two Anabat detectors on each temporary or permanent meteorological tower....One Anabat detector on each meteorological tower shall be mounted at 5 meters,...one at rotor swept area." The DNR understands that currently there is one temporary meteorological tower within the project boundary which is why two Anabat detectors were used in the 2011 bat surveys. However, page 54, Section 9.2.3.2 Bats, states that "Anabat data collection will occur...on one or two permanent met towers from May 1 to November 15, 2012." AWA Goodhue, LLC proposes to construct two permanent meteorological towers (Section 1.1). According to permit language, the Anabat detectors for the 2012 bat survey season should be placed on both permanent meteorological towers and the temporary meteorological towers. The DNR further suggests that if feasible, the temporary meteorological tower be placed in an area that is more representative of bat habitat. In addition to adhering to the Site Permit, having multiple Anabat detectors would reduce the chance of completely losing blocks of recording time due to equipment malfunctions.

The 2011 bat survey data resulted in a total of 2,188 bat passes, 33.18% of which were unknown calls that were excluded from the species composition results. Removing these calls from the species composition results is misleading. The unknown calls should be included in the analysis; however, the ABPP and Bat

Monitoring Report should include a discussion on why there was such high number of unknown calls and how the 33.18% of unknowns affects the interpretation of the results. The height the majority of the unknown calls occurred at is also unclear. It is also important to note that this information was not included in the Executive Summary of the Bat Monitoring Report in the summary of the species composition results which are presented in table format.

It is difficult to distinguish between silver-haired bats and big brown bats and between northern long-eared bats and little brown bats, yet bat passes are positively identified to each of these four species. The document(s) should provide some justification for these positive ids. In particular, it is notable that there are a low number of big brown bats compared to silver haired bats. Big brown bats are much more numerous in Minnesota; it is likely that the silver-haired bats were misidentified unless the met tower was located in a flyway corridor.

The missing bat survey data from late August through September is unfortunate. The DNR recommended dates for monitoring are July 1st through October 15th. The majority of season in which ideal monitoring results could have collected was missed. The 2012 proposed bat survey is proposed to occur May 1st through November 15th which will capture that time period; however comparative data between the years will be lacking.

5.1 Bald Eagles: The ABPP acknowledges additional reports of eagle nests and includes additional locations of nests. The DNR has received reports from local citizens of additional nests and citizen reports indicate a possibility of 6-7 nests producing fledglings. The ABPP includes a report of one nest in the footprint being active, and two in the buffer, and does not include information on whether nestlings were fledged. The DNR encourages the Department of Commerce, Energy Facility Permitting (EFP) to coordinate with the United States Fish and Wildlife Service (USFWS) regarding these varied reports.

The ABPP indicates that the eagle nest in T11, R15, S27 is inactive, yet it is also states this nest was built in 2011. It is unclear how a nest can be designated as inactive in the same year it was built. This statement should be corrected or clarified.

DNR staff observed an adult eagle sitting in a nest located off 215th Ave (T111, R15, S27) during a site visit on December 29, 2011. This nest was reported to be inactive by Westwood.

5.1.2 Eagle Movements: The DNR encourages discussion of flight paths in project planning for wind energy projects. It should be noted, however, for Exhibits 5-8, information such as eagle heights and coverage in the detail shown is questionable without the use of a monitoring device. For example, it would be difficult for an observer to determine with reliable accuracy whether a bald eagle was flying within 100 meters of a turbine within the rotor swept zone without a reference point marking turbine locations. It would also be difficult to accurately observe and report from a roadside point in rolling terrain for flights as far as ¾ miles away. The report included a note on these exhibits and rightly indicated caution in interpretation. Though a discussion of estimated flight paths is helpful, these practical limitations should be considered and included within the results discussions.

5.1.3.1 Migration / Breeding Surveys: This section indicates that point count surveys were compromised by a baiting program. Documentation from the Board of Animal Health (BAH) or from the DNR indicating a baiting program has not been included in the report. Staff discussions with conservation officers in the area indicate that there is no known movement of deer carcasses for the purpose of baiting eagles occurring within the project footprint. It is also notable that if baiting were occurring, there is no specific regulation DNR reviewers have been able to identify disallowing eagle baiting specifically, though there may be

applicable regulations related to disposal of farm animals. Minnesota baiting laws refer primarily to baiting game species. Also, the understood purpose of surveying for avian activity is to determine species presence and level of activity. Results should be reported for agency review regardless of the reason a species is present. In addition, if the presence of a road kill or properly or improperly handled deceased farm animal is affecting data, this should be documented and noted within the presentation of all data.

5.1.3.2 Winter Aerial Surveys: Westwood indicates they will follow USFWS survey protocol including a minimum helicopter flight heights. The DNR has received reports from citizens that helicopters may be flying lower than what is recommended by USFWS survey protocol. It is understood that the Federal Aviation Administration has been informed of the possibility of lower than recommended or required flight heights. This information is being provided to inform other necessary agency coordination or action, as this topic is not within the jurisdiction of the DNR.

No data has been submitted to date for flights that were to occur in November 2011. This data may inform the ABPP or coordination between the company and the USFWS. The DNR would also appreciate the opportunity to review avian survey data.

5.1.3.3 Winter Ground Surveys: The ABPP seems to communicate that eagles are using the project area primarily due to carcass dump sites, garbage dumps, and promiscuous ice fishing. Though this information is notable because it may explain certain use areas within the project area, it should not be considered a reason for disregarding eagle activity data. It appears that eagles are present in the project footprint and they are actively using a large portion of the area. The focus should be on applicable federal protections and minimization of impacts.

5.3 Trumpeter Swans: It should be noted that the trumpeter swan nest is located within the 2 mile buffer of the project footprint. The ABPP indicated that this nest will be observed in the spring of 2012 to check for activity, and if there is activity Westwood will monitor the nest up to 4 times during the breeding season to document bird movements. Swans will not likely move substantially during the breeding season. The most appropriate time to conduct swan observations would be over each of the seasons including breeding, summer post fledging, and fall migration to understand swan movements. This would provide a better understanding of swan usage of the area. Usage information collected should be relative distance from the nest site as identified by landowner property being used, type of habitat being used and time of year.

6.1 Number/Selection of Turbines for Monitoring: The project developer is proposing to conduct fatality monitoring on turbines in closest proximity to woodlands and/or wetlands for the most suitable avian and bat habitat. A discussion of how this data could be compared to pre-construction bat data should be included.

7.2 Bald Eagle, Page 25: Westwood indicates they cannot predict the collision risk for bald eagles using the USFWS recommended model because of the eagle baiting program. As mentioned before, there does not seem to be documentation that the incidences of carcass presence in the project area or the removal of a road kill to a ditch constitutes an intended baiting program by residents. It is currently unclear if anything improper has occurred because there is no documentation of any violation of regulations. It is also unclear whether, if there was documentation of any improper handling of carcasses, that this activity should be interpreted as an organized program to bait eagles. DNR staff familiar with the Goodhue Wind Project area indicated if carcasses were regularly left in fields, it would likely not draw birds from a significant distance, but may concentrate local birds in areas within the project footprint instead of being dispersed in the project footprint. The extent or reality of any baiting seems unconfirmed and the relevance to federal laws regarding a possible eagle take seems questionable. Therefore the DNR recommends that any collision modeling requested by the USFWS be completed and results provided to reviewing agencies.

As wind projects are developed in Minnesota and eagle populations recover, the possibility for eagle presence at sites with farming activities, ice fishing, or occasional presence of road kill carcasses seems likely to be a relatively common situation. Recent review efforts for projects with eagle presence tended to focus on verifying species presence, observing behavior and discussing impact minimization efforts. Any precedence set of reviewing minimization or mitigation proposals differently because of farming activities, ice fishing, or road kill may be a difficult approach to take consistently in Minnesota.

The DNR does not recommend the removal of perches or woody cover to reduce prey. The DNR also does not recommend altering the local habitat features to reduce use by one species. In order to significantly reduce usage by area wildlife, substantial habitat alteration may be necessary, which is not recommended. It is also unclear if measures are proposed for the life of the project.

Curtailment should allow for the option of complete shutdown of a turbine if deemed necessary by the Department of Commerce, considering review of wildlife agencies.

7.3 Loggerhead Shrikes: The DNR appreciates efforts made to avoid quality loggerhead shrike habitat. If there are any changes to turbine layouts, these should be reviewed by wildlife agencies to discuss continued efforts to avoid loggerhead shrike habitat.

Section 7.3 states: “The AWA Goodhue team found no literature or documentation supporting the assertion that shrikes will avoid wind turbines, resulting in displacement of shrikes from suitable habitats.” Though this statement, taken literally, seems accurate, it could be misleading because it may imply that a body of research exists regarding avoidance of turbines by loggerhead shrikes. It is the understanding of DNR staff that this is a new area of research. DNR recommendations regarding this state-listed threatened species have been relatively precautionary due to the lack of existing data regarding wind energy impacts on loggerhead shrikes and due to the rare status of the species.

7.5 Bats: The report states that AWA minimized potential effects on bats by siting turbines away for woodlands wherever practical. Though any avoidance measures taken during site planning are appreciated and encouraged, for this site, turbines are currently planned to be located next to a large wooded area. Turbines 1-9 are located about 200 meters or less with some turbines along the wood line. This wooded area was discussed in a DNR comment letter dated October 24, 2008 as an area that “may have conservation value at the local level as habitat for native plants and animals...” and should be considered during project design and implementation.

8.1.2 Construction: Though the DNR has no specific comments on this topic, reviewers note that the report does not acknowledge any potential impacts to NRCS/SWCD structures (retention ponds, grassed waterways, terraces, etc) known to occur in the project vicinity with turbine or road access placement. These structures were put in place with federal funds and have protection on them in the sense that the landowner is liable for any action that may damage or compromise the effectiveness of these structures. This information may be useful for EFP staff or the project developer when ensuring compliance with various regulations.

8.2.1.1 Turbine Siting: Some uncertainty regarding the number of active bald eagle nest seems apparent. Therefore, it is not currently clear if all active bald eagle nests have been avoided. The project developers state that a 1 mile setback from eagle nests will be included in project planning. It appears to that one active nest in the footprint is within one mile of a turbine (turbine 37). This comment applies to Section 8.2.2.2 language used as well. It also appears that there are two eagle nests within 1 mile of turbines 26, 27, 29, 30, A52 as depicted on the provided Exhibits. If the two red dots, named alleged eagle nests on the western side

of the footprint (Exhibit 3) are actually active eagle nests, they are well within 1 mile of a turbine (turbines 26, 27, 29, 30, A52).

8.2.1.3 Food Base Management: The ABPP states that the USFWS recommended food based management. It is not clear if this recommendation is an option included in guidance documents or a specific recommendation for this site. The DNR has concerns regarding the impact of food based management on other species, including the state-listed threatened loggerhead shrike. Prey for the loggerhead shrike includes rodents. Activities that might reduce rodent presence could negatively impact food sources for shrikes.

Species of Greatest Conservation Need have also been observed within the project footprint. A plan to avoid restoring native habitat could affect these other species.

Nesting platforms have not been found by DNR staff to be successful for eagle in southeastern Minnesota. Construction of these nest structures requires monitoring and maintenance. If this mitigation were to be used, this monitoring and maintenance should be described.

8.4.1.1: Turbine layout revisions: Text indicates turbine 16 was eliminated, but the numbered bullet points do not concur that this turbine was eliminated, nor does the map in Exhibit 12. The more detailed maps show the elimination of Turbines 16 and 28, but don't show movement of Turbine 6. Maps should be reviewed for accuracy and to ensure compliance with permit conditions regarding avoidance of loggerhead shrike habitat.

8.6.1 Raptor Nests: As discussed above, the DNR does not support habitat modification as a mitigation method to minimize an area's attractiveness for nesting.

8.7.1 Bats: The ABPP includes an assessment that woods in the project vicinity are not large enough to appear on land cover mapping. This assessment seems incorrect. Exhibit 16 is a USGS cover map and it shows forested cover. Though forested blocks are relatively small, they still provide important wildlife habitat. More discussion of why avoiding forested blocks was not practical should be included, particularly for Turbines 1-9.

Thank you for the opportunity to provide comments regarding the Goodhue Wind Project Avian and Bat Protection Plan and bat survey results. Please contact me with any questions.

Sincerely,



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