OAH 82-2500-36550
MPUC IP-7006/WS-19-394
MPUC IP-7006/CN-19-309

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Application of Buffalo Ridge Wind, LLC for a Site Permit for the 109 MW Large Wind Energy Conversion System in Lincoln County, Minnesota

In the Matter of the Application of Buffalo Ridge Wind, LLC for a Certificate of Need for the 109 MW Large Wind Energy Conversion System in Lincoln County, Minnesota

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION

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FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION

This matter was assigned to Administrative Law Judge Barbara J. Case (ALJ) to conduct a public hearing and provide a summary of public testimony on the Certificate of Need (MPUC Docket No. 19-309) and Site Permit (MPUC Docket No. 19-394) Applications of Buffalo Ridge Wind, LLC (BRW or Applicant). The project proposes a 109 megawatt (MW)[1] wind energy conversion system in Lincoln County and Pipestone Counties (the Project). The Minnesota Public Utilities Commission (Commission) also requested that the ALJ prepare Findings of Fact, Conclusions of Law, and Recommendations on the merits of the Site Permit Application (SP Application) and provide recommendations, if any, on conditions and provisions for the proposed site permit.

A public hearing on the Site Permit and Certificate of Need (CON) Applications for the Project was held remotely, by video and telephone, on July 22, 2020. The time period for written comments from the public remained open until August 3, 2020. Responses were due by August 21, 2020.

Brian M. Meloy, Stinson LLP, 50 South Sixth Street, Suite 2600, Minneapolis, Minnesota 55402, Danell Herzig, Project Director of Development for BRW, and Richard Lampeter, Epsilon Associates, appeared on behalf of the BRW.

Larry Hartman and Raymond Kirsch, 445 Minnesota Street, Suite 1500, St. Paul, MN 55101 appeared on behalf of the Department of Commerce, Energy Environmental Review and Analysis (DOC-EERA).

[1] Due to modifications made during this proceeding, the projected capacity of the Project is 108.9 MW.

Kevin Pranis, Marketing Manager, 81 E. Little Canada Road, St. Paul, MN 55117, appeared on behalf of the Laborers District Council of Minnesota and North Dakota (LIUNA).

Charles E. Bruce, Public Advisor and Cezar Panait, Regulatory Engineer, 121 Seventh Place East, Suite 350, St. Paul, MN 55101 appeared on behalf of the Commission.

STATEMENT OF ISSUE

Has the BRW met the criteria to receive a Site Permit for the proposed approximately 109 MW Large Wind Energy Conversion System (LWECS) located in Lincoln and Pipestone Counties?

SUMMARY OF RECOMMENDATION

The ALJ concludes that BRW has satisfied the applicable legal requirements and, accordingly, recommends that the Commission grant a Site Permit for the Project, subject to the conditions discussed below.

Based on the Application and other evidence in the record, the ALJ makes the following:

FINDINGS OF FACT

I. PARTIES AND PARTICIPANTS

1. BRW is an indirect, wholly-owned subsidiary of NextEra Energy Resources, LLC (NEER).[2]

2. The DOC-EERA is authorized by Commission rules to hold public information meetings, to collect and analyze an BRW's SP Application and other information, and to provide an environmental report, analysis, and recommendation for the Commission's review.[3]

3. LIUNA, a democratic labor organization that, together with its five affiliated Local Unions, represents more than 12,000 construction workers and public employees in Minnesota and North Dakota, participated as a party in this proceeding.

II. SITE PERMIT APPLICATION AND RELATED PROCEDURAL BACKGROUND

4. On June 17, 2019, BRW submitted an application to the Commission for a Site Permit to construct and operate the 109 MW Project. The project would be located

[2] Exhibit (Ex.) 216 – Revised Application for Site Permit at 1 (August 12, 2019) (eDocket No. 20198-155124-01).
[3] Minn. R. 7849.1200-1700 (2019).

in Lincoln and Pipestone Counties in southwestern Minnesota, immediately southeast of the City of Lake Benton and southwest of the City of Tyler.[4] The Application was filed pursuant to Minnesota Statutes, section 216F.04 (2020), and Minnesota Rules, chapter 7854 (2019).

5. On July 24, 2019, the Commission issued a Notice of Comment Period on Application Completeness. The topics opened for comment were: (1) Should the Commission find the site permit application complete under Minnesota Rules, ch. 7854.0500? (2) Are there contested issues of fact with respect to the representations made in the application? (3) Should the application be referred to the Office of Administrative Hearings for a contested case proceeding? and (4) Are there other issues or concerns related to this matter?[5]

6. On August 12, 2019, BRW filed updates to its SP Application filed on July 17, 2019. These updates represented BRW's refinement of its turbine array, following input from DOC-EERA to minimize the projected sound levels of the Project.[6] The specific updates included:

- Changing turbine technology at certain turbine locations;
- Eliminating two turbines (turbines 16 and 20 as filed in the initial Application);
- Revising alternate turbines (turbines 7, 23, and 30 in the initial Application have been made alternates – these turbines now are Alt2, Alt4, and Alt5, respectively); and
- Running certain turbines (turbines 29, Alt2, Alt4, and Alt5) with noise reduction capability.[7]

7. On August 13, 2019, DOC-EERA provided comments on the completeness of the Application, concluding that it provides the information required by Minnesota Rule, chapter 7854 in a format that members of the public can access.[8] DOC-EERA staff also recommended that that the SP Application (July 17, 2019 and August 12, 2019 Revisions) and the Certificate of Need Application (CN Application) (July 12, 2019 and August 9, 2019 Revisions) be processed concurrently.[9]

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[4] Ex. 205 – Application for Site Permit at 5 (July 17, 2019) (eDocket No. 20197-154454-01).
[5] Ex. 304 – Notice of Comment Period (July 24, 2019) (eDocket No. 20195-152961-01).
[6] Ex. 216 – Revised Application for Site Permit at 1 (cover letter) (August 12, 2019; Ex. 100 – Comments and Recommendations on Application Completeness at 10 (August 13, 2019) (eDocket No. 20198-155166-01).
[7] Ex. 216 at 2.
[8] Ex. 100 – Comments and Recommendations on Application Completeness at 10 (August 13, 2019) (eDocket No. 20198-155166-01).
[9] *Id*. at 12.

8. On August 13, 2019, the Minnesota Pollution Control Agency (MPCA) filed comments on the completeness of BRW's SP Application. MPCA stated in its comments that it did not have any overarching concerns regarding noise from the Project, as related to state noise rules in Minn. R. ch. 7030 (2019), but clarified that the agency treats state noise standards as total standards, which includes noise from wind turbines and other ambient sources.[10] MPCA requested that BRW pay particular attention to and work with receptors #24 (participant), #44 (nonparticipant), and #244 (participant) during development, construction, and operation to ensure noise does not exceed standards set under Minn. R. ch. 7030.[11] MPCA also recommended that BRW minimize noise impacts during Project construction, including muffling equipment and working during daytime hours.[12] MPCA also requested to be contacted if wetland impacts cannot be avoided during siting, asked for clarification as to whether horizontal directional drilling would be utilized, noted particular practices that should be employed if compensatory mitigation is required, and requested that the Antidegradation Assessment should be mentioned along with the 401 Water Quality Certification in Section 11.0 of the Application.[13]

9. On August 20, 2019, BRW filed reply comments agreeing to work with the receptors indicated by MPCA, and minimize sound impacts during construction in accordance with MPCA's recommendations. BRW also clarified that in the event that permanent or temporary wetland impacts cannot be avoided during the siting of Project infrastructure, BRW will coordinate with appropriate agencies, including MPCA. BRW also indicated that it may use horizontal directional drilling if drilling is necessary, and clarified that while compensatory mitigation is not anticipated, in the event BRW does engage in compensatory mitigation, it agrees to implement the best management practices (BMPs) as suggested by MPCA. BRW also added the Antidegradation Assessment to the 401 Water Quality Certification in Section 11.0 of the Application.[14]

10. On August 22, 2019, LIUNA filed a petition for intervention, indicating that it sought to ensure that wind energy projects are being developed in a manner that advances the interests of local workers and communities, and is consistent with Minnesota's commitment to sustainable development and efficient use of resources.[15]

11. On September 10, 2019, BRW filed a letter indicating that it had no objection to LIUNA being granted full party status. BRW also clarified in the letter that although an engineering, procurement, and constructor contractor had not been selected at that time, BRW commits to use reasonable efforts to employ no less than 60% local labor during construction, with local labor defined as residing within Minnesota.[16]

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[10] Minnesota Pollution Control Agency, Comments at 1, August 13, 2019 (eDocket No. 20198-155152-01).
[11] *Id.*
[12] *Id.* at 1-2.
[13] *Id.* at 2.
[14] Ex. 220 – Reply Comments at 5-7 (August 20, 2019) (eDocket No. 20198-155327-01).
[15] Ex. 501 – Petition for Intervention (August 22, 2019) (eDocket No. 20198-155371-03).
[16] Ex. 222 – Letter Regarding LIUNA Request for Full Party Status (September 10, 2019) (eDocket No. 20199-155782-01).

12. On November 12, 2019, the Commission issued an Order (November 12 Order) accepting the SP Application as substantially complete, granting LIUNA's request to intervene, requesting the appointment of an Administrative Law Judge, establishing a procedural framework for review of the application, and extending procedural timelines for the Commission's completeness determination and issuance of a draft site permit (DSP) as set forth for set forth in its regulations. The Administrative Law Judge was not directed to report on the CON but was requested to:[17]

A. conduct the public hearing in accordance with Minn. R. 7850.3800, subp. 2 to 4, and as the administrative judge determines appropriate, Minn. R. 1405.0500; 1405.0600; 1405.0800; 1405.1900; and 1405.2200;

B. direct that intervention as a party is not required. Parties to the proceeding are the Department of Commerce, the BRW, and LIUNA. Other persons may participate as public participants or as otherwise prescribed;

C. request that state agencies participate in accordance with Minn. Stat. § 216E.10, subd. 3, to establish the types of filings necessary to facilitate proper record development (i.e., testimony, briefs, reply briefs, proposed findings and site permit recommendations) and a schedule for submitting those filings through the scheduling of a prehearing conference in accordance with Minn. R. 1405.1100, as determined appropriate;

D. emphasize the statutory time frame for the Commission to make final decisions on the application and encourage the BRW and others to adhere to a schedule that conforms to the statutory timeframe;

E. request interested persons to address whether the proposed LWECS project meets the criteria established under Minnesota Statutes chapter 216F and Minnesota Rules, chapter 7854;

F. prepare a report setting forth findings of fact, conclusions of law, and recommendations on the merits of the LWECS site permit application, and provide recommendations, if any, on conditions and provisions of the proposed site permit; and

G. direct that the hearing record be maintained through the

[17] Ex. 313 – Commission Order (November 12, 2019) (eDocket No. 201911-157439-01); *see also*, Dec. 20, 2019 Prehearing Transcript (eDocket No. 201912-158668-01), At the Prehearing Conference in this matter, Commission staff clarified that they would request state agencies to participate in this matter.

Commission's electronic e-Dockets filing system.

13. On November 15, 2019, the Commission issued a Notice of Public Information and Environmental Report Scoping Meeting to take place on December 5, 2019. Through the Notice, the Commission sought comments on the following six questions: (1) What potential human and environmental impacts of the proposed project should be studied in the environmental report and the draft site permit prepared for this project? (2) What are the possible methods to address (avoid, minimize, or mitigate) the potential impacts of the proposed project? (3) Are there other ways to meet the stated need for the project, instead of the proposed wind farm? If so, what alternatives to the project should be studied in the environmental report? (4) Are there any unique characteristics of the proposed site or the project that should be considered? (5) Are there any items missing or mischaracterized in the certificate of need or site permit applications? and (6) Are there other project related issues or concerns?[18]

14. As discussed in further detail below, written comments filed prior to the December 27, 2019, notice deadline were received from the Minnesota Department of Transportation (MnDOT), the Minnesota Department of Natural Resources (MnDNR), Carol Overland, Leslie Wigton, and Mike Czech.

15. On December 5, 2019, a Public Information and Environmental Report Scoping Meeting was held at 6:00 p.m. at the Lake Benton Community Center, 114 South Center Street, Lake Benton, MN, 56149. At the meeting, presentations were made by the Staff of the Commission, DOC-EERA, and BRW. The presentation provided detail on the Project, the Environmental Report (ER) to be prepared as part of the CON process, and the procedure for reviewing BRW's applications. As discussed in more detail below, oral comments were received at the meeting from Bob Worth, Mike Appel, Will Thomssen, Jim Nichols, Nate O'Reilly, and Dale Johnson.

16. On December 16, 2019, BRW confirmed that, pursuant to the Commission's November 12, 2019 Order and Minn. R. part 7854.0600, it had completed the applicable post-completion determination notice requirements.[19] BRW confirmed that it provided all required direct mail notices and newspaper publications concerning the Application. It further confirmed that copies of the Application were sent to public libraries and government offices within the Project boundary for public viewing and that a copy of the SP Application was sent to the Minnesota Historical Society.

17. On December 20, 2019, a prehearing conference took place before the Administrative Law Judge, involving representatives from BRW, LIUNA, EERA, and Commission Staff.

18. On January 8, 2020, the Administrative Law Judge issued a Scheduling Order (First Scheduling Order) setting forth the procedural schedule for the review of BRW's applications. The First Scheduling Order set March 6, 2020, as the date for the

[18] Ex. 315 – Notice of Public Meeting (November 15, 2019) (eDocket No. 201911-157565-02).
[19] Ex. 223 – Completion Notice Requirements (December 16, 2019) (eDocket No. 201912-158377-02).

Project's ER to be issued by DOC-EERA, and set March 26, 2020, as the date of the public hearing on the BRW's SP Application.[20]

19. On January 13, 2020, public comments were filed by the Minnesota Association of County Soil and Water Conservation Districts (MASWCD). It signaled its intent to work with the Commission to ensure that local Soil and Water Conservation Districts and landowners will be provided the opportunity to review and comment on proposed Project plans prior to construction.[21]

20. On January 13, 2020, DOC-EERA filed its ER Scoping Decision. The Scoping Decision reviewed the written and oral comments provided with regard to the ER, set forth the matters to be addressed in the ER, and identified alternatives to the Project (that support Minnesota's renewable energy objectives) to be examined in the ER. For alternatives, the ER specifically identified: (1) a generic 109 MW wind generation project sited elsewhere in Minnesota; (2) a 109 MW solar farm; and (3) a "no-build" option, and other possible renewable alternatives.[22]

21. On January 24, 2020, DOC-EERA submitted comments and recommendations addressing whether the Commission should issue a DSP for the Project and suggested conditions to the DSP should the Commission determine to issue one for the Project. DOC-EERA staff recommended the Commission issue a DSP for the Project and, as discussed in more detail below, proposed two special conditions for inclusion in the DSP.[23]

22. On February 7, 2020, the Commission issued a Notice of Commission Meeting, notifying parties that the question of whether the Commission should issue a preliminary DSP for the Project would be discussed at the Commission's February 20, 2020 Commission meeting.[24]

23. On February 11, 2020, the Administrative Law Judge issued an Amended Scheduling Order establishing the dates of March 2, 2020, and March 12, 2020, as the dates for the submission of comments and reply comments, respectively, on the CON Application.[25]

24. On February 13, 2020, Commission Staff submitted briefing papers in advance of the February 20, 2020 Commission meeting, reviewing comments submitted in the proceedings and recommending issuance of the DSP.[26]

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[20] Ex. 601 – Scheduling Order (January 8, 2020) (eDocket No. 20201-158914-01).
[21] Ex. 102 – Public Comment of MN Assoc. of Soil & Water Conservation Districts (January 13, 2020) (eDocket No. 20201-159059-01).
[22] Ex. 103 – Scoping Decision for Environmental Report (January 13, 2020) (eDocket No. 20201-159044-01).
[23] Ex. 106 – DOC EERA Comments and Recommendations on Preliminary Draft Site Permit (January 24, 2020) (eDocket No. 20201-159562-02).
[24] Ex. 320 – Notice of Commission Meeting (February 7, 2020) (eDocket No. 20202-160197-04).
[25] Ex. 602 – Amended Scheduling Order (February 11, 2020) (eDocket No. 20202-160313-02).
[26] Ex. 321 – Staff Briefing Papers (February 13, 2020) (eDocket No. 20202-160386-01).

25. On February 18, 2020, Commission Staff issued corrected briefing papers although carrying forward the same recommendations made in the February 13, 2020, briefing papers.[27]

26. On February 21, 2020, BRW filed its first Site Permit Application Amendment (First Site Permit Application Amendment) and its first CON Application Amendment (First CON Application Amendment). BRW indicated that these filings were necessary in order to modify the Project's wind turbine technology and layout, and thereby address a Federal Aviation Administration (FAA), Department of Defense (DoD), and U.S. Air Force (USAF) concern that the originally proposed wind turbine array may impact a common air route surveillance radar (CARSR).[28] With the First Site Permit Application Amendment, BRW submitted: (1) maps comparing the initial and revised wind turbine arrays;[29] revised Project maps;[30] a revised pre-construction sound analysis;[31] a revised shadow flicker analysis;[32] and, at the request of DOC-EERA, a decommissioning plan.[33] Details regarding the modifications associated with the First Site Permit Application Amendment and First CON Application Amendment are provided in detail in the sections below.

27. On February 26, 2020, the Commission issued an Order: (1) authorizing issuance of the DSP proposed by DOC-EERA; and (2) authorizing Commission Staff to modify the draft site permit to correct typographic and formatting errors, improve consistency, and ensure agreement with the Commission's final order in the matter.[34]

28. On March 5, 2020, the ER was filed by DOC-EERA in the CON docket. The ER provided an overview of the Project and its potential environmental impacts as compared to the project alternatives identified in the ER Scoping Decision. The ER found that BRW's project is "feasible and available." In comparing the project to solar power, the report notes that the cost of wind power is more favorable than solar and does not significantly impact crop production as a solar plant would.[35] Notice of the availability of the ER was provided in both the CON docket[36] and in the Environmental Quality Board Monitor.[37]

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[27] Ex. 323 – Staff Briefing Papers – Corrected (February 18, 2020) (eDocket No. 20202-160489-01).
[28] Ex. 226 – Site Permit Application Amendment (February 21, 2020); Ex. 225 - Amendment to Certificate of Need Application (February 21, 2020).
[29] Ex. 227 – Attachment A to Site Permit Amendment Application (February 21, 2020).
[30] Ex. 228 – Attachment B to Site Permit Application Amendment - Maps 1-12a (February 21, 2020); Ex. 29 - Attachment B to Site Permit Application Amendment - Maps 12b-24 (February 21, 2020).
[31] Ex. 230 – Attachments C and D to Site Permit Application Amendment (February 21, 2020).
[32] *Id.*
[33] *Id.*
[34] Ex. 324 – Commission Order (February 26, 2020) (eDocket No. 20202-160705-01).
[35] Ex. 110 – Environmental Report (Text) at 91 (March 5, 2020) (eDocket No. 20203-161004-01).
[36] Ex. 109 – Notice of Availability of Environmental Report (March 5, 2020) (eDocket No. 20203-160977-01).
[37] Ex. 108 – Notice of Availability of Environmental Report The EQB Monitor (March 9, 2020) Volume 44, No. 10 (March 9, 2020) (eDocket No. 20203-161205-01).

29. On March 6, 2020, the Commission issued a Notice of Public Hearing to take place on March 26, 2020. The Notice indicated that the hearing's purpose was to receive comments regarding the need for the proposed project and whether additional conditions should be included in the DSP.[38] The notice also indicated that a comment period would be open from March 6, 2020, through April 9, 2020, to address topics such as: (1) Is the proposed project needed and in the public interest? (2) What are the costs and benefits of the proposed project? (3) What are the environmental and human impacts of the proposed project and how can these impacts be addressed? (4) Should the Commission issue a certificate of need and a site permit for the project? and (5) Are there other project-related issues or concerns?[39]

30. On March 16, 2020, the Commission issued a Notice indicating that Commission meetings would be suspended from March 16, 2020, to March 27, 2020, due to the COVID-19 pandemic. This Notice suspended the BRW's hearing scheduled for March 26, 2020.[40]

31. On April 9, 2020, MnDNR submitted comments explaining that it had "recommended that turbines be located an additional 200 feet beyond the existing wind access buffer from DNR administered lands to allow for future repowering. Our concern is that increased rotor diameters and rotor swept zones could encroach on the wind access buffer near DNR administered lands and potentially increase avian and bat fatalities." The MnDNR noted that the DOC-EERA did not include MnDNR's recommendation in the DSP responding that "the record to-date does not suggest a future need for exemption nor does it support 200 feet as the likely extent of a hypothetical future exemption." The DNR responded in its comments that "while the DNR respects the Department's decision, we maintain that our agency would not support future exemptions to wind access buffers adjacent to DNR administered lands."[41]

32. On June 5, 2020, BRW filed its second Site Permit Application Amendment (Second Site Permit Application Amendment) and its second CON Application Amendment (Second CON Application Amendment). In these applications, BRW proposed to modify the Project's wind turbine technology for four safe harbor turbines and make revisions to the Project's turbine layout. BRW indicated that the change of the wind turbine technology for four safe harbor wind turbines was due to the delay in obtaining the results of the Midcontinent Independent System Operator Inc. (MISO)'s interconnection studies, which BRW stated moved the Project's in-service date from 2020 to 2021.[42] With the Second Site Permit Application Amendment, BRW submitted: a map comparing the initial wind turbine array, the First Site Permit Application Amendment wind turbine array, and the Second Site Permit Application Amendment wind turbine array;[43]

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[38] Ex. 325 – Notice of Public Hearing at 1 (March 6, 2020) (eDocket No. 20203-161034-02).
[39] *Id*. at 2.
[40] Ex. 326 – Press Release (March 16, 2020) (eDocket No. 20203-161276-01).
[41] Ex. 704 – Comments (April 9, 2020) (eDocket No. 20204-161940-01).
[42] Ex. 232 – Second Site Permit Application Amendment at 1-2 (June 5, 2020); Ex. 231 - Second Certificate of Need Application Amendment at 1-2 (June 5, 2020).
[43] Ex. 233 – Attachment A to Second Site Permit Application Amendment (June 5, 2020).

revised Project maps;[44] a revised pre-construction sound analysis;[45] a revised shadow flicker analysis;[46] an updated telecommunications study;[47] and a revised decommissioning plan.[48]

33. On June 10, 2020, the Administrative Law Judge issued a second Revised Scheduling Order (Second Revised Scheduling Order) setting forth a schedule for additional proceedings. The Second Revised Scheduling Order set July 22, 2020, as the date of the public hearing on the BRW's SP Application and indicated that comments would be accepted until August 3, 2020.[49]

34. On June 19, 2020, the Commission issued a Notice of Public Hearing, indicating that the hearing date for the Project would be July 22, 2020. The Notice also indicated that due to the current COVID-19 pandemic, a remote-access public hearing would replace the standard in-person hearing. In addition, the Notice also indicated that a comment period would be open until August 3, 2020, to address topics such as: (1) Is the proposed project needed and in the public interest? (2) What are the costs and benefits of the proposed project? (3) What are the environmental and human impacts of the proposed project and how can these impacts be addressed? (4) Should the Commission issue a certificate of need and a site permit for the project? and (5) Are there other project-related issues or concerns?[50] Affidavits of publication for the meeting notice were filed by the BRW.[51]

35. On June 23, 2020, DOC-EERA filed a revised ER in the CON docket. The revised ER took into account the changes contained in BRW's Second Application Amendment and reviewed the Project and its potential environmental impacts as compared to the Project alternatives identified in the ER Scoping Decision. Like the initial ER, DOC-EERA found that there was no combination of renewable technologies that is likely to be a feasible and available alternative to the Project.[52] Notice of the availability of the ER was provided in both the CON docket[53] and the Environmental Quality Board Monitor.[54]

36. The hearing was held as scheduled on July 22, 2020. The Administrative Law Judge conducted the hearing remotely, by video and telephone, due to the dangers

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[44] Ex. 234 – Attachment B to Second Site Permit Application Amendment 1 of 2 (June 5, 2020); Ex. 235 - Attachment B to Second Site Permit Application Amendment 2 of 2 (June 5, 2020).
[45] Ex. 236 – Attachment C to Second Site Permit Application Amendment (June 5, 2020).
[46] *Id*.
[47] *Id*.
[48] Ex. 237 – Attachment D to Second Site Permit Application Amendment (June 5, 2020).
[49] Ex. 603 – Revised Scheduling Order (June 10, 2020) (eDocket No. 20206-163878-02).
[50] Ex. 330 – Notice of Public Hearing (June 19, 2020) (eDocket No. 20206-164138-02).
[51] Affidavits of Publication for Lincoln County (July 15, 2020) (eDocket No. 20207-164933-02); Affidavit of Publication for Pipestone County (July 15, 2020) (eDocket No. 20207-164933-02).
[52] Ex. 113 – Environmental Report (Text) at 94-95 (June 23, 2020) (eDocket No. 20206-164214-01).
[53] Ex. 111 – Notice of Availability of Revised Environmental Report (June 23, 2020) (eDocket No. 20206-164215-01).
[54] Ex. 112 – Notice of Availability of Revised Environmental Report The EQB Monitor (June 29, 2020) Volume 44, No. 10 (June 29, 2020) (eDocket No. 20207-164475-01).

associated with the COVID-19 virus. At the hearing, Project overviews were provided by the Staff of the Commission, DOC-EERA, and BRW discussing the Project, the regulatory procedure to date, and the remaining process. Exhibits (i.e., documents previously filed throughout the proceeding) were also entered into the record, with no parties objecting. Following the Project overviews and entry of exhibits into the record, DOC-EERA posed several questions to BRW, to which BRW responded, and oral comments were received from the following six individuals: Lucas Franco; Bob Worth; Kris Houg; Will Thomssen; Nathan Buntrock; and Nate O'Reilly. The substance of these oral comments is discussed below.

37. By the August 3, 2020, deadline, written comments were received from: (1) DOC-EERA; (2) MnDNR; (3) The Nature Conservancy (TNC); (4) The International Union of Operating Engineers, Local 49 (Local 49); (5) LIUNA; (6) Roger Johnson; (7) Tara Kroger; and (8) Justin Erdman. The substance of these comments is discussed in detail below.

38. On August 18, 2020, TNC filed additional comments in this proceeding, withdrawing its request that the project be delayed.[55]

39. On August 21, 2020, BRW filed reply comments responding to the comments submitted. These comments are discussed in detail below.

III. CON APPLICATION AND RELATED PROCEDURAL BACKGROUND[56]

40. Given that the Project is over 50 MW, it qualifies as a "large energy facility," as defined in Minn. Stat. § 216B.2421, subd. 2(1) (2020). Accordingly, pursuant to Minn. R. 7849.0200 (2020) and Minn. Stat. § 216B.243, subd. 4 (2019), BRW is required to obtain a CON to construct and operate the Project.

41. On May 7, 2019, BRW filed a Request for Exemption from Certain Certificate of Need Application Content Requirements with the Commission requesting exemptions from certain CON data requirements.[57] Exemptions were requested primarily due to BRW being an independent power producer, and having already executed a power purchase agreement with Great River Energy (GRE).

42. On May 16, 2019, the Commission issued a Notice of Comment Period on Certificate of Need Exemption Requests, which opened an initial written comment period until May 28, 2019, and a reply comment period until June 4, 2019.[58]

[55] TNC Comments (August 18, 2020) (eDocket No. 20208-166057-01).
[56] In light of the fact that the Site Permit and CON proceedings were administered jointly but the ALJ was not directed to provide a report on the CON, the ALJ provides the procedural history related to the CON proceeding for the Commission's convenience.
[57] Ex. 200 – Petition For Exemption From Certain Certificate of Need Application Requirements (May 7, 2019) (eDocket No. 20195-152773-01).
[58] Ex. 300 – Notice of Comment Period (May 16, 2019) (eDocket No. 20195-152961-01).

43. On May 28, 2019, the Staff of the Department of Commerce, Division of Energy Resources (DOC-DER) filed comments recommending that the Commission approve the data exemption requests.[59]

44. On May 20, 2019, LIUNA filed comments indicating it did not object to the BRW's request for exemptions from certain CON requirements provided such an action does not foreclose or prevent full consideration of the Project's socioeconomic impacts.[60]

45. On June 19, 2019, the Commission issued a Notice of Commission Meeting scheduling a meeting for July 1, 2019, to consider whether to grant BRW's data exemption requests.[61] On June 1, 2019, the Commission convened and voted to approve BRW's data exemption requests.

46. On July 3, 2019, the Commission issued an Order Approving BRW's Data Exemption Requests.[62]

47. On July 12, 2019, BRW filed its CON Application.[63]

48. On July 24, 2019, the Commission issued a Notice of Comment Period on CON Application Completeness, announcing it would accept written comments through August 13, 2019, and reply comments through August 20, 2019.[64]

49. On August 9, 2019, BRW filed updates to BRW's CON Application filed on July 12, 2019. These updates represented BRW's refinement of its turbine array to optimize the sound levels of the Project following input from EERA.[65] The specific updates included:

- Changing turbine technology at certain turbine locations;
- Eliminating two turbines (turbines 16 and 20 as filed in the initial Application);
- Revising alternate turbines (turbines 7, 23, and 30 in the initial Application have been made alternates – these turbines now are Alt2, Alt4, and Alt5, respectively); and
- Running certain turbines (turbines 29, Alt2, Alt4, and Alt5) with noise reduction capability.

[59] Ex. 400 – Comments (May 28, 2019) (eDocket No. 20195-153161-01).
[60] Ex. 500 – Comments (May 28, 2019) (eDocket No. 20195-153193-01).
[61] Ex. 301 – Notice of Commission Meeting (June 19, 2019) (eDocket No. 20196-153693-01).
[62] Ex. 303 – Commission Order (July 3, 2019) (eDocket No. 20197-154183-01).
[63] Ex. 203 – Application for Certificate of Need (July 12, 2019) (eDocket No. 20197-154346-01).
[64] Ex. 304 – Notice of Comment Period (July 24, 2019) (eDocket No. 20197-154626-01).
[65] Ex. 214 – Revised Application for Certificate of Need (August 9, 2019) (eDocket No. 20198-155093-01).

50. On August 12, 2019, the DOC-DER filed written comments recommending that BRW provide the following:

- A discussion of the proposed facility's, and each of its alternatives, variable operating and maintenance costs in current dollars per kilowatt hour;
- A discussion of the facility's, and each of its alternatives, total cost in current dollars per kilowatt hour;
- An estimate of GRE's annual renewable energy credit (REC) requirements for the 2018-2032 planning period, and how the Project would help GRE comply with Minnesota Statutes, section 216B.1691, subp. 2a, which requires utilities in Minnesota to provide 25% of their total retail electric sales from eligible renewable resources by 2025; and
- A general overview of GRE's future renewable resource needs and how the Project helps GRE meet those needs.[66]

51. On August 20, 2019, BRW filed reply comments containing the additional information sought by DOC-DER.[67]

52. On August 22, 2019, LIUNA filed a petition for intervention (contemporaneously filed in the Site Permit docket), indicating that it sought to ensure that wind energy projects are being developed in a manner that advances the interests of local workers and communities, and is consistent with Minnesota's commitment to sustainable development and efficient use of resources.[68]

53. On August 23, 2020, DOC-DER responded to BRW's reply comments, indicating it recommended that the Commission find the CON Application complete.[69]

54. On October 17, 2020, Commission Staff filed briefing papers recommending the Commission: (1) accept the CON Application as substantially complete as of BRW's August 20, 2019, reply comments; (2) direct that the CON Application be reviewed using the informal review process; (3) set specific notice and procedural guidelines; (4) grant rule variances extending application completeness determination and public information meeting and ER scoping timelines; and (5) grant LIUNA's petition to intervene as a party in this docket.[70]

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[66] Ex. 401 – Comments (August 12, 2019) (eDocket No. 20198-155126-01).
[67] Exs. 220 and 221 – Reply Comments (August 20, 2019) (eDocket Nos. 20198-155327-01 and 20198-155327-03).
[68] Ex. 501 – Petition for Intervention (August 22, 2019) (eDocket No. 20198-155371-03).
[69] Ex. 402 – Response to Reply Comments (August 23, 2019) (eDocket No. 20198-155401-01).
[70] Ex. 310 – Staff Briefing Papers (October 17, 2019) (eDocket No. 201910-156691-01).

55. On October 24, 2020, the Commission voted to adopt Commission Staff's recommendations, as outlined in its October 17, 2020, briefing papers.

56. On November 12, 2020, the Commission issued an Order finding the CON Application to be substantially complete, directing the CON Application be reviewed using the informal review process, requiring Project notices, and granting LIUNA's petition for intervention.[71]

57. Later, on January 27, 2020, DOC-DER requested a 30-day extension from the date set in the First Scheduling Order to submit comments on the CON Application. DOC-DER indicated it would provide its comments by March 2, 2020.[72]

58. On March 2, 2020, DOC-DER recommended that the Commission consider the impacts detailed in the ER, and, if the impacts are acceptable, grant the Certificate of Need.[73]

59. The case procedure relevant to the joint processing of both the CON and SP Applications are provided in Section II.

IV. DESCRIPTION OF THE PROJECT

60. The Project's 108.9 MW will be generated using 36 General Electric (GE) 2.82 MW wind turbines and four GE 2.52 MW wind turbines. As noted below, several turbines will be run under noise reduced operating (NRO) mode, reducing the actual capacity of the Project from the nameplate of 111.6 MW to 108.9 MW. Three alternative turbines will be GE 2.82 MW models and two will be GE 2.52 MW models. The current turbine layout includes 40 primary turbine locations and 5 alternative turbine locations to provide flexibility in the event that development or constructability issues are encountered.[74] The Project also includes underground collection lines, crane walk paths, access roads, collector substation, meteorological (MET) towers, the operation and maintenance (O&M) facility, and other associated facilities.[75]

61. The Project's wind turbines consist of a foundation, tower, nacelle, hub, and three blades. The turbine towers are comprised of tapered steel cylinders consisting typically of three to four sections joined together via factory fabricated welds, which are automatically controlled and ultrasonically inspected during manufacturing per American National Standards Institute specifications.[76]

62. The Project will use 36 GE 2.82 wind turbines with 127.2.5-meter (417-foot) rotor diameters (RD) and 89-meter (292-foot) hub height towers and four GE 2.52 wind turbines with 116.5-meter (382-foot) RD and 90-meter (295-foot) hub height towers.[77]

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[71] Ex. 313 – Commission Order (November 12, 2019) (eDocket No. 201911-157439-01).
[72] Ex. 403 – Variance Request (January 27, 2020) (eDocket No. 20201-159644-01).
[73] Ex. 404 – Comments (March 2, 2020) (eDocket No. 20203-160876-01).
[74] Ex. 232 – Second Site Permit Application Amendment at 8-9 (June 5, 2020).
[75] Ex. 216 – Revised Application for Site Permit at 16 (August 12, 2019).
[76] *Id*. at 13.
[77] Ex. 232 – Second Site Permit Application Amendment at 8, 10 (June 5, 2020).

63. The Project is expected to have an operational life of approximately 25 years.[78]

64. An automated Supervisory Control and Data Acquisition system located at the Project substation will provide local and remote supervision and control of turbine equipment and performance.[79]

65. Each turbine will have a step-up transformer to raise the voltage to the 34.5 kilovolt (kV) collection line system. Energy from the turbines will be routed through an underground electrical collection system that will deliver power to the Northern States Power Company (NSP) 115 kV Buffalo Ridge Substation where it will be delivered at 34.5 kV to conductors owned and operated by NSP.[80]

66. BRW proposes to begin construction of the Project in mid-2021. Commercial operation of the Project is anticipated by November of 2021.[81]

67. BRW stated that it will partner with contractors who demonstrate a strong safety culture including management commitment and engagement, safe work policies and programs, employee involvement, and historic safe work performance indicators.[82]

V. SITE LOCATION AND CHARACTERISTICS

68. The estimated size of the Project Area is 17,609 acres (approximately 28 square miles or 73 square kilometers) of mostly agricultural cropland located in Lincoln and Pipestone Counties in southwestern Minnesota, immediately southeast of the City of Lake Benton and southwest of the City of Tyler.[83]

69. The Project is located in a rural, agricultural area. Permanent land disturbance will be approximately 35.9 acres for turbines and associated facilities.[84]

70. The Project's layout follows Commission guidelines (Minnesota Statutes, section 216F.03, Minnesota Rules, chapter 7854).

VI. WIND RESOURCE CONSIDERATIONS

71. BRW affiliate NextEra Analytics, Inc. (NextEra Analytics) assessed the wind resource for the Project. One MET tower was used in NextEra Analytics' analysis. The data was collected in ten-minute intervals at the Project's location for six years and five

[78] Ex. 216 – Revised Application for Site Permit at 130 (August 12, 2019).
[79] *Id*. at 13.
[80] *Id*. at 130.
[81] Ex. 232 – Second Site Permit Application Amendment at 20 (June 5, 2020).
[82] Ex. 216 – Revised Application for Site Permit at 75 (August 12, 2019).
[83] *Id*. at 5.
[84] Ex. 232 – Second Site Permit Application Amendment at 18 (June 5, 2020).

months. Based on the measured data, the overall average wind speed based on the turbine locations is 9.12 m/s at hub height.[85]

72. The prevailing frequency and energy direction sectors are south and northwest respectively.[86]

73. BRW expects an annual net capacity factor of approximately 47% to 54% and a projected average annual output of 480,250 MWh.[87]

VII. WIND RIGHTS AND EASEMENT/LEASE AGREEMENTS

74. BRW has substantially completed securing landowner agreements for wind rights and property easements necessary to support the Project. As of the filing of the Second Site Permit Application Amendment, the Project had executed and recorded landowner agreements for 15,736 acres of private land within the Project Area, which is roughly 89% of the land within the overall project boundary. Project facilities have been sited on leased land, and the current leasehold is sufficient to accommodate the proposed 108.9 MW project.[88]

VIII. COMMENTS SUBMITTED IN THE PROCEEDING

75. In deciding whether to grant or deny a Site Permit, the Commission considers any comments that are filed, the record of the public information meeting(s), and the information contained in the Application relevant to the criteria for issuing a Site Permit under Minnesota Rule 7854.0500.

76. Consistent with Minnesota Rule 7854.0900, subp. 4, the Commission directed in its November 12, 2019 Order that a public information meeting be held in a convenient location in the vicinity of the proposed Project and that the meeting must be held more than ten days prior to the end of the public comment period on the DSP.[89]

77. A Public Information and Environmental Report Scoping Meeting was held on December 5, 2019, at 6:00 p.m. at the Lake Benton Community Center, 114 South Center Street, Lake Benton, MN, 56149.[90] The meeting started with an overview presentation by Commission Staff, followed by a brief overview by BRW of the Project and comments by DOC-EERA.

78. A second Public Hearing was held before an Administrative Law Judge on July 22, 2020. The hearing was conducted remotely, by video and telephone. At the hearing, Project overviews were provided by the Staff of the Commission, DOC-EERA,

[85] Ex. 216 – Revised Application for Site Permit at 117 (August 12, 2019).
[86] *Id*. at 123.
[87] Ex. 232 - Second Site Permit Application Amendment at 20 (June 5, 2020).
[88] *Id*. at 9.
[89] Ex. 314 – Commission Order (November 12, 2019) (eDocket No. 201911-157447-01).
[90] Ex. 315 – Notice of Public Meeting (November 15, 2019) (eDocket No. 201911-157565-02).

and BRW discussing the Project, the regulatory procedure to date, and the remaining process.

A. Oral Comments at the December 5, 2019 Public Information and Environmental Report Scoping Meeting

79. In addition to the Project introductions given by the BRW, the Commission, and DOC-EERA, six speakers offered comments at the December 5, 2019, meeting: Bob Worth; Mike Appel; Will Thomssen; Jim Nichols; Nate O'Reilly; and Dale Johnson.[91]

80. Bob Worth, a farmer and the Mayor of the City of Lake Benton, expressed support for the Project, noting in his oral comments that turbine access roads have not inhibited his farming and have been helpful for him as a farmer in getting his commodities out of the fields. He also noted that the Project represents an opportunity for the community to benefit from the businesses and jobs it will provide.[92]

81. Mike Appel, in his oral comments, posed a question as to why there is a portion of the Project boundary extending into Fountain Prairie. DOC-EERA and BRW clarified that the boundary extension is a wind access buffer used to account for wind turbine setbacks.[93]

82. Will Thomssen, a union representative for Local 49, expressed full support for the Project, reflecting that the Project will create local job opportunities and generate local tax revenue.[94]

83. Jim Nichols, a long-time farmer in Lake Benton, commented on the benefits of wind energy development to Lincoln County. Mr. Nichols noted that the wind industry provides more than 50 permanent jobs in Lincoln County that provide for good wages and benefits, and he explained that the production taxes associated with wind benefit everyone in the community. Mr. Nichols also detailed how annual payments to landowners provide a benefit, as do road development agreements, which offer the local community financial protection with regard to road repair. Mr. Nichols also noted that wind energy is a crop that can be produced locally, transported instantaneously, and is an incredible deal for the consumers because of the inexpensive cost of power produced by wind. Mr. Nichols also commented on the influence that the Federal Energy Regulatory Commission and MISO have on determining additional transmission line costs, transmission line upgrades, and interconnections.[95]

84. Nate O'Reilly, a representative of the Ironworkers who erect and build wind turbines, spoke in support of the Project. He thanked the BRW for its commitment to hire local workers and encouraged the BRW to continue to do so. Mr. O'Reilly also asked

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[91] *Id*.
[92] Ex. 101 – Oral Comments on Scope of ER at 27-28 (December 18, 2020) (eDocket No. 201912-158427-01).
[93] *Id*. at 30-31.
[94] Ex. 101 – Oral Comments on Scope of ER at 32 (December 18, 2020) (eDocket No. 201912-158427-01).
[95] *Id*. at 33-35, 41.

when a construction contractor would be hired, to which the BRW relied that it would be approximately two to three months prior to the start of construction.[96]

85. Dale Johnson, in his oral comments, posed a question as to whether there would be transmission lines. BRW explained that there would be no transmission lines for the Project. BRW further stated that a parcel of land was procured for a substation adjacent to the Lake Benton substation and that all of the collector lines feed into the proposed substation.[97]

B. Written Comments Pursuant to November 15, 2019 Notice

86. Pursuant to the Notice of Public Information and Environmental Report Scoping Meeting, issued on November 15, 2019, MnDOT, MnDNR, MASWCD, Carol Overland, Leslie Wigton, and Mike Czech filed written comments.

87. MnDOT, in its comments, recommended the Commission consider the following recommendations for site permit conditions: (1) that the proposed access road for turbine number 11 be from County Road 6 versus US 14, or for the BRW to utilize an existing access road from US 14; and (2) that the following plans be submitted in a timely manner for proper review – (i) a crossing plan for the crane path affecting US 14, (ii) a traffic control plan, and (iii) a detour plan for temporary closures of any trunk highway.[98]

88. MnDNR filed comments addressing bat acoustic survey data, turbine locations, and prairie protection, and attached a Minnesota Natural Heritage Review letter dated April 5, 2019. Regarding bat acoustic survey data, MnDNR noted in its comments that it will provide a final risk determination after reviewing the results of the data.[99]

89. MnDNR also indicated that the assessed risk level will govern its post-construction fatality monitoring recommendations for the Project.[100]

90. MnDNR recommended that turbine locations should be reviewed to ensure they comply with the wind access buffer associated with MnDNR administered lands as a non-participating landowner. MnDNR noted that, as depicted on Map 2 of the site permit application, turbines 23, 28, 36, and Alt7 are located near two wildlife management areas (WMAs): Hole-in-Mountain WMA and Coteau Pit WMA. MnDNR noted that these turbine locations should be reviewed to confirm that they meet the 3-by-5 rotor diameter wind access buffer requirement.

91. MnDNR also stated that turbines should be sited an additional 200 feet beyond the existing wind access buffer from MnDNR administered lands to allow for future repowering, which may involve increased rotor diameters and rotor swept zones that could encroach on the wind access buffer near MnDNR administered lands. It further

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[96] *Id*. at 37-38.
[97] *Id*. at 40.
[98] Ex. 700 – MnDOT Comments (December 20, 2019) (eDocket No. 201912-158512-01).
[99] Ex. 701 – MnDNR Comments (December 26, 2019).
[100] *Id*.

noted that MnDNR does not support future exemptions to wind access buffers adjacent to MnDNR administered lands. Additionally, MnDNR noted that, extending the rotor sweep zone closer to habitat associated with DNR administered lands has the potential to increase avian and bat fatalities.[101]

92. MnDNR also recommended ongoing coordination related to the Prairie Protection Management Plan, documentation of calcareous fen avoidance, and post-construction fatality monitoring. MnDNR also recommended continued coordination to avoid impacts to rare species identified in the Natural Heritage Review letter dated April 5, 2019.[102]

93. MASWCD filed comments indicating its intent to work with the Commission to ensure that local Soil and Water Conservation Districts and landowners will be provided the opportunity to review and comment on proposed Project plans prior to construction.[103]

94. Leslie Wigton's written comments expressed concern that installation of collection lines associated with the Project may damage drainage tiles and interfere with a wildlife habitat situated on his property.[104]

95. Mike Czech's comments queried how interference with television signals are tested and questioned how BRW assesses whether there is the potential for interference.[105]

96. Carol A. Overland commented that the Project improperly uses a ground factor of 0.5 and that sound reports should not utilize anything other than a 0.0 ground factor. Ms. Overland explains that a ground factor of 0.0 is to be used for wind modeling because the wind source is elevated and ground conditions do not impede the direct path from the greatly elevated source to the receptor. Ms. Overland cites the Freeborn Wind case in support of her contention that wind developers are using an incorrect ground factor because that matter made clear that the state's limit for wind farm noise applies not only to sounds from the wind turbines but also from background noise such as road traffic. Ms. Overland argues that while the Freeborn Wind project used a ground factor of 0.0, subsequent projects are improperly using 0.5 or higher in order to meet the noise standard as clarified by the PUC and the Freeborn Wind report.[106]

C. DOC-EERA Comments

97. DOC-EERA filed comments and recommendations on January 24, 2020, taking into account the written and oral comments submitted by the state agency and individual commenters. As to MnDOT's recommended conditions, DOC-EERA expressed its view that the concerns noted in MnDOT's comments are addressed by existing site

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[101] *Id.*
[102] Ex. 701 – Comments (December 26, 2019) (eDocket No. 201912-158605-01).
[103] Ex. 102 – Public Comment of MN Assoc. of Soil & Water Conservation Districts (January 13, 2020) (eDocket No. 20201-159059-01).
[104] Ex. 800 – Comments by Leslie Wigton (December 27, 2019) (eDocket No. 201912-158645-01).
[105] Ex. 801 – Comments by Mike Czech (December 27, 2019) (eDocket No. 201912-158644-01).
[106] Carol A. Overland, Comments, December 18, 2019 (eDocket No. 201912-158454-08).

permit language in section 5.3.13 (Public Roads). As to MnDNR's recommendation that turbines be sited an additional 200 feet beyond the wind access buffer from MnDNR administered lands, DOC-EERA indicated that the record did not suggest a future need for exemption of the sort contemplated by MnDNR, nor did the record support 200 feet as the likely extent of a hypothetical future exemption. DOC-EERA therefore did not adopt MnDNR's recommendation into the DSP. DOC-EERA also proposed special conditions to the DSP based on comments received from Leslie Wigton and MASWCD. DOC-EERA also indicated that BRW would submit a proposed decommissioning plan in advance of the hearing.[107]

D. DOC-EERA Questions to BRW at July 22, 2020 Hearing

98. At the July 22, 2020, hearing, Larry Hartman, a representative of DOC-EERA, asked several questions of Richard Lampeter of Epsilon Associates, who prepared the sound and shadow flicker analysis for BRW.

99. First, Mr. Hartman asked Mr. Lampeter if all Project turbines will be equipped with low-noise trailing (LNTE) blades and that some but not all of these turbines will operate in NRO mode. Mr. Lampeter confirmed that the Project turbines would use LNTE blades and that ten turbines will run in NRO mode.[108]

100. Mr. Hartman followed by asking Mr. Lampeter if he could describe the features of a LNTE blade. Mr. Lampeter testified that an LNTE blade has a "sawtooth" shaped attachment that helps reduce the sound level at the tip of the turbine blade.[109]

101. Mr. Hartman also asked Mr. Lampeter to explain the choice to use a ground factor of 0.5 for the purpose of the sound modeling. Mr. Lampeter testified that the ground factor is a ground attenuation factor, which can range between zero and one. Mr. Lampeter explained that "zero" would be for a hard surface, such as pavement or concrete, and "one" would be for porous ground, such as farming land or grass. Mr. Lampeter further testified that a 0.5 ground attenuation factor was selected as a conservative factor and one that is consistent with the factors used for wind projects in the industry. Mr. Lampeter pointed out that there is some variability, but 0.5 is a common choice for assigning ground attenuation. Mr. Lampeter described the general approach to the sound modelling, including the setting of the ground factor, is to result in a conservative but realistic sound model.[110]

102. Mr. Hartman also asked Mr. Lampeter to explain the application of a 2 dBA uncertainty factor to the sound modelling results. Mr. Lampeter testified that the manufacturer of wind turbines typically assigns an uncertainty factor to turbines, typically around 2 dBA, which can then be added to the sound power level that is produced by the

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[107] Ex. 106 – DOC EERA Comments and Recommendations on Preliminary Draft Site Permit at 11-14 (January 24, 2020) (eDocket No. 20201-159562-02).
[108] Buffalo Ridge Wind Hearing Transcript (Hearing Tr.) at 26-27 (July 22, 2020) (eDocket No. 20208-165631-01).
[109] Hearing Tr. at 27-28 (eDocket No. 20208-165631-01).
[110] *Id*. at 28-29.

turbines in the model. Mr. Lampeter also explained that GE did not provide an uncertainty factor for the turbines to be used for the Project, so Mr. Lampeter assigned a 2 dBA factor given that it is typical of turbine manufactures in the industry.[111]

103. Mr. Hartman then asked Mr. Lampeter why a ground factor of 0.5 and an uncertainty factor of 2 dBA is reasonable and whether those assumptions generate an output that Mr. Lampeter expects to be confirmed by the post-construction monitoring. Mr. Lampeter testified that these inputs should yield a conservative, yet realistic result. Mr. Lampeter also testified that he is confident that in this case those are the appropriate inputs to the model.[112]

104. Mr. Hartman also asked whether BRW had made a choice regarding aircraft detection lighting system (ADLS) lighting for the Project. Ms. Danell Herzig, with BRW, testified that BRW has already selected a provider for an ADLS system and has submitted a package for the ADLS system to the FAA for approval.[113]

E. Oral Comments at the July 22, 2020 Hearing

105. Oral comments in support of the Project were provided at the July 22, 2020, hearing by six speakers: Lucas Franco; Bob Worth; Kris Houg; Will Thomssen; Nathan Buntrock; and Nate O'Reilly.

106. Lucas Franco, Research Manager for LIUNA, commented that the COVID-19 pandemic had negatively affected construction workers in the region. Mr. Franco commented that the Project would provide construction workers with a needed employment opportunity. Mr. Franco added that the Project would bring about $7 to $9 million in direct spending into the regional economy.[114]

107. Bob Worth, commenting as a farmer and the Mayor of the City of Lake Benton, noted that the access roads associated with the Project provide useful avenues for farming operations, and mentioned that the Project provides a valuable economic opportunity for a small town like the City of Lake Benton.[115]

108. Kris Houg, a representative of Local 49, commented that he supports the Project and spoke in favor of the usage of a local construction workforce, which he explained drives growth within the region; whereas, as Mr. Houg explained, the use of a non-local workforce would allow the economic benefits of the Project to migrate from the region.[116]

[111] *Id*. at 29-30.
[112] *Id*. at 30-31.
[113] *Id*. at 31-32.
[114] *Id*. at 33-35.
[115] *Id*. at 36-37.
[116] *Id*. at 38.

109. Will Thomssen, also a representative of Local 49, expressed support for the Project so long as it utilized a local workforce. Mr. Thomssen also noted the opportunity the Project would provide for young people to gain experience in the trades.[117]

110. Nathan Buntrock, a landowner in the area for the last 25 years, commented that the Project would serve as an economic benefit to the community and provide tax revenue. Mr. Buntrock also commented that the Project will compliment regional industries, such as corn, soybeans, small grain, and livestock producers in the area. Mr. Buntrock also commented on the potential for the Project to provide long-term jobs and growth in the area.[118]

111. Nate O'Reilly, business representative with Ironworkers Local 512, commented on the importance of utilizing a local workforce for Project construction. Mr. O'Reilly commented that using Minnesota workers can mean the difference of several million dollars staying in Minnesota local communities versus going out of state. Mr. O'Reilly also explained that the usage of local labor would mean more health care dollars are spent in-state at local hospitals and clinics, and estimated that, for just the Ironworkers, the Project could equal $650,000 to $850,000 in just health care dollars spent at the local hospitals and clinics.[119]

F. Written Comments in Advance of and Following the July 22, 2020 Hearing

112. DOC-EERA submitted comments on August 3, 2020, proposing additional DSP edits and additions.[120] The specific revisions proposed by DOC-EERA are discussed in more detail below.

113. MnDNR's July 31, 2020, comments noted that it and BRW have continued to coordinate regarding potential impacts. MnDNR noted in its comments that if fen impacts cannot be avoided, a Calcareous Fen Management Plan would be required. MnDNR also notes that an underground collection line is expected to intersect a Minnesota Biological Survey site and that it is MnDNR's understanding that horizontal directional drilling will be used by BRW to avoid impacts. MnDNR also advised that it uses prescribed fires to manage vegetation at the Hole-in-the-Mountain WMA and the Coteau Pit WMA, both of which are located within the Project boundary, and noted the smoke-related effects of such activity.[121]

114. MnDNR also noted TNC's comments, and indicated that MnDNR's guidance for commercial wind energy projects recommends considering effects to habitat associated with Important Bird Area's (IBAs) during project development. MnDNR

[117] *Id*. at 38-39.
[118] *Id*. at 39-41.
[119] *Id*. at 42-44.
[120] Comments of DOC-EERA (August 3, 2020) (eDocket No. 20208-165565-01).
[121] Comments of MnDNR (July 31, 2020) (eDocket No. 20207-165490-01).

informed that IBAs are identified by Audubon Minnesota in partnership with MnDNR and are part of an international conservation effort aimed at conserving critical bird habitats.

115. MnDNR also explained that the proposed project overlaps with the Prairie Coteau Complex IBA. This particular IBA consists of six non-contiguous areas that emphasize the remaining prairie and grassland habitat in this agricultural landscape.[122]

116. TNC indicated that the MnDNR should be engaged in discussions around minimizing impacts to the IBA, although MnDNR does not have regulatory authority over IBAs. MnDNR acknowledged that TNC's recommendation to relocate turbines farther from the Hole-in-the-Mountain Prairie Preserve could benefit wildlife as well as the recreational experiences of visitors to nearby Hole-in-the-Mountain WMA, which is adjacent to MnDNR lands.[123]

117. Local 49 expressed in its July 6, 2020, comments that its biggest concern was that BRW has not made a commitment to using local labor and paying area wage standards for craftworkers. Local 49 noted that the use of local labor keeps the economic benefits of the community within the region.[124]

118. LIUNA filed comments on July 23, 2020, indicating that the Project will contribute tens of millions of dollars in economic activity to southwestern Minnesota at a time when workers throughout the state desperately need new economic opportunities. LIUNA explained that hundreds of thousands of Minnesotans have applied for unemployment insurance, including 45,996 construction workers statewide, of which 2,798 live in the Southwest Planning Region. LIUNA also noted that the Project will deliver other positive economic benefits, including lease revenues, property taxes, and local spending to Minnesota communities.[125]

119. TNC commented in regard to the potential impact of wind turbine development on the remaining native prairie and prairie obligate species in Lincoln and Pipestone Counties. TNC noted that this area includes its Hole-in-the-Mountain Prairie Preserve, which comprises one of the few intact natural areas on Buffalo Ridge. The Hole-in-the-Mountain Prairie Preserve is located adjacent to and immediately west of the proposed project.

120. TNC stated that because it was not consulted regarding the Hole-in-the-Mountain Prairie Preserve, the hearing comment period was its first opportunity to provide public comments.

121. TNC indicated that the footprint of wind energy can be large and impactful, and that it prefers to see the development of wind energy completed in a way that avoids and minimizes its impact to native ecosystems and their biodiversity. TNC also noted that it encourages tower and infrastructure development on previously disturbed land with

[122] *Id.*
[123] Comments of MnDNR (July 31, 2020) (eDocket No. 20207-165490-01).
[124] Comments of Local 49 (July 6, 2020) (eDocket No. 20207-164662-01).
[125] Comments of LIUNA (July 23, 2020) (eDocket No. 20207-165195-02).

buffer allowances that account for indirect impacts of wind turbines on wildlife. TNC also noted that the Project is a significant intensification of development in this part of Buffalo Ridge, involving new towers and turbines much closer to native prairie and TNC's preserve boundary than in the past. Two maps submitted by TNC illustrates the expansion of the project area and proposed turbines into the IBA. Map 1 illustrates that none of the existing turbines and few of the decommissioned turbines were in the IBA. In contrast, nine of the proposed turbines are placed in the IBA. Map 2 illustrates that ten of the proposed turbines are on the edges of undisturbed prairie.[126]

122. TNC also expressed concern over the proximity of the turbines to the Coteau IBA. It noted that the Project will cause grassland fragmentation. TNC also urged the Commission to delay a CON and Site Permit for the Project until the environmental impacts of turbine location are considered, reviewed and addressed.[127]

123. TNC subsequently filed a letter dated August 18, 2020, withdrawing its request that the Commission delay its processing of BRW's applications in order to allow for further evaluation. Specifically, TNC stated in its letter that it "do[es] not intend to pursue further action on this project through the PUC process."

124. Roger Johnson indicated that he had questions: (i) regarding a proposed tower site on his property and whether it was being shifted to a drainage tile field; (ii) regarding the location of an access road leading to the turbine; and (iii) regarding what farming conditions would be like around the turbine.[128]

125. Tara Kroger, who has worked in construction over 20 years, noted that the Project would create good jobs for construction workers and bring new workers to the industry. Ms. Kroger also noted that the utilization of local workers has added benefits in that local workers know and appreciate the land, wildlife, and soils of the region.[129]

126. Justin Erdman noted that wind turbines are a valuable resource but transmit the electricity that they generate outside the region instead of in the community where they are erected. Mr. Erdman also noted the he did not see the Project as having a financial benefit to the local economy, and that the only benefactors are large landowners. Mr. Erdman also noted the noise and shadow flicker that can emanate from the wind turbines. He indicated that any landowner experiencing sound or shadow flicker from the Project turbines should be compensated. Mr. Erdman also notes that the Project and related construction could create hazardous road conditions.[130]

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[126] Comments of The Nature Conservancy (July 28, 2020) (eDocket No. 20207-165432-01); Map 1 – Proposed, Decommissioned and Existing Wind Towers in Relation to Conservation Lands and Prairie Coteau Complex Important Bird Area; Map 2- Proposed Wind Tower Locations in Relations to Mapped Native Prairie.
[127] Comments of The Nature Conservancy (July 28, 2020) (eDocket No. 20207-165432-01).
[128] Comments of Linda Johnson (July 27, 2020) (eDocket No. 20207-165340-01).
[129] Comments of Tara Kroger (August 3, 2020) (eDocket No. 20208-165561-03).
[130] Comments of Justin Erdman (August 3, 2020) (eDocket No. 20208-165561-01).

G. Responsive Written Comments of BRW

127. In response to the DSP conditions outlined by DOC-EERA in its comments, BRW indicated that it was agreeable to DOC-EERA's proposed condition revisions.[131] The conditions proposed by DOC-EERA are provided in detail in Section XI, below.

128. BRW responded to MnDNR's July 31, 2020, comments by indicating that it had conducted extensive turbine siting analysis for the Project, much of it in consultation with MnDNR, and does not believe that any turbine relocations are warranted.[132]

129. BRW responded to the MnDNR's concerns about the overlap of the Project with the IBA, stating that the boundary does not indicate actual land use within that area. BRW stated that the IBA area within the Project boundary is over 80% cultivated row crops or other development and that eight of the nine Project turbines that overlap the IBA are located in cultivated row crops, while the ninth turbine is located in non-native grassland along an access road used for the previous Buffalo Ridge wind project. BRW states that the nine turbines, although within the IBA, were sited by BRW with a focus on utilizing disturbed areas to the maximum extent possible in order to minimize environmental impacts. BRW also contended that the IBA designation was intended to protect birds in the rich and diverse grassland bird community found to the west of the Project boundary on TNC lands not directly impacted by the proposed project.[133]

130. In responding to the July 6, 2020, comments of Local 49, BRW indicated that it had, in fact, made a commitment regarding the use of local labor. Specifically, BRW clarified that "although an engineering, procurement, and constructor contractor has not been selected at this time, BRW commits to use reasonable efforts to employ no less than 60% local labor during construction, with local labor defined as residing within Minnesota."[134]

131. In responding to LIUNA's July 23, 2020, comments, BRW stated that it concurs with LIUNA that the Project will provide substantial benefits to the region and the State of Minnesota as a whole.[135]

132. BRW responded to TNC's July 30, 2020, comments by noting BRW's disagreement with TNC's statement that it had no prior opportunity to provide comments on the Project. BRW replied that, within the docket, it is documented that TNC was provided notification of the Project as early as November of 2019, when it was sent a Project notice (indicating an opportunity to provide comments), as well as the Site Permit and Certificate of Need Applications. BRW also explained that Project notices were published in local newspapers and that TNC would also have received notice of the March 2020 hearing (subsequently cancelled) and the July 2020 hearing.[136]

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[131] Comments of BRW (eDocket No. 20208-166108-03) (August 21, 2020).
[132] *Id*. at 6.
[133] *Id*.
[134] *Id*.
[135] *Id*.
[136] *Id.*

133. With regard to infrastructure siting, BRW stated that the Project boundary is located within a highly disturbed and fragmented landscape due to intensive agriculture. With regard to the Prairie Coteau IBA, six turbines of the previously operating Buffalo Ridge wind farm, which were operational from 1996 to 2017, were located in this IBA. BRW argues that wind turbines have previously operated within the IBA in the same general location without incident. The BRW also notes that the proposed Project would only include nine turbines in the IBA, eight of which are located in cultivated row crops. The ninth turbine is located in non-native grassland along an access road used for the previous Buffalo Ridge wind project.[137]

134. With regard to TNC's concerns regarding prescribed fires, BRW and TNC have agreed to jointly develop a Smoke Management Agreement. With regard to TNC's comments regarding the intensification of development, BRW commented that for the prior Buffalo Ridge LWECS, 73 turbines were previously operating within 4.4 miles of the Preserve boundary; but, for the proposed Project, BRW proposes to develop only 40 turbines for the current project within 5.2 miles of the Preserve boundary. With regard to the potential moves of Turbines 22-25, 27, 28, 33, and 37, BRW noted that those turbines are sited within row crops, with the exception of Turbine 22, which is located within non-native grassland proximate to the previous wind turbine access road. BRW also posited that the Shaffer study cited by TNC has limited applicability to the Project. BRW stated that the Shaffer study specifically chose wind farms for inclusion in the study that were "situated within expanses of native grassland," which means for the wind farms studied, cropland comprised only between 0 to 20% of the study area. In contrast, the Project area is comprised of 80% row crops.[138]

135. In responding to Roger Johnson's July 26, 2020, comments BRW indicated it has reached out to Roger Johnson for the purpose of resolving his questions.[139]

136. In response to Tara Kroger's August 3, 2020 comments, BRW indicated that it agrees with Ms. Kroger's comments that the Project will bring valuable job opportunities to the region and agrees that engaging and utilizing local labor is an important aspect of Project construction.[140]

137. BRW responded to Justin Erdman's August 3, 2020, comments by indicating that, even though the power generated by the Project may flow from the local area supporting the Project, the local economic benefits of the Project are not dependent on the power flow from the Project. BRW disagrees with Mr. Erdman's assertion that the Project lacks local economic benefits. To this point, BRW indicated that the record demonstrates that the Project will result in: (i) approximately 200 temporary construction job opportunities; (ii) increased local business, provide annual on-going compensation for all participating landowners; (iii) the delivery of nearly 109 megawatts of clean energy; and (iv) ensure significant future economic benefits are generated for the local community

[137] *Id*. at 9.
[138] *Id*. at 8.
[139] *Id*.
[140] *Id*.

(i.e., approximately $600,000 per year in generation taxes generated). BRW also noted that it is compensating landowners participating in the Project, but BRW does not find it necessary, or realistic, to provide compensation to each and every landowner that experiences some level of sound or shadow flicker. Lastly, BRW explained that road use for the Project will be governed by an agreement, and that it does not expect the Project to create road hazards, either during construction or operation.[141]

IX. FACTORS FOR ISSUING A SITE PERMIT

138. Wind energy projects are governed by Minnesota Statute, chapter 216F (2020) Minnesota Rules chapter 7854. Minn. Stat. § 216F.01, subd. 2 defines a "large wind energy conversion system" as any combination of wind energy conversion systems with a combined nameplate capacity of five MW or more. Minn. Stat. § 216F.03 requires that a LWECS be sited in an orderly manner compatible with environmental preservation, sustainable development, and the efficient use of resources.

139. In addition, when deciding whether to issue a Site Permit for a LWECS, the Commission considers the factors set forth in Minn. Stat. § 216E.03, subd. 7 (2020), which specifies, in relevant part, that the Site Permit determination "shall be guided by, but not limited to," the following considerations:

> (1) evaluation of research and investigations relating to the effects on land, water and air resources of large electric power generating plants and high-voltage transmission lines and the effects of water and air discharges and electric and magnetic fields resulting from such facilities on public health and welfare, vegetation, animals, materials and aesthetic values, including baseline studies, predictive modeling, and evaluation of new or improved methods for minimizing adverse impacts of water and air discharges and other matters pertaining to the effects of power plants on the water and air environment;
>
> (2) environmental evaluation of sites and routes proposed for future development and expansion and their relationship to the land, water, air and human resources of the state;
>
> (3) evaluation of the effects of new electric power generation and transmission technologies and systems related to power plants designed to minimize adverse environmental effects;
>
> (4) evaluation of the potential for beneficial uses of waste energy from proposed large electric power generating plants;

[141] *Id*.

(5) analysis of the direct and indirect economic impact of proposed sites and routes including, but not limited to, productive agricultural land lost or impaired;

(6) evaluation of adverse direct and indirect environmental effects that cannot be avoided should the proposed site and route be accepted;

(7) evaluation of alternatives to the BRW's proposed site or route proposed pursuant to subdivisions 1 and 2;

(8) evaluation of potential routes that would use or parallel existing railroad and highway rights-of-way;

(9) evaluation of governmental survey lines and other natural division lines of agricultural land so as to minimize interference with agricultural operations;

(10) evaluation of the future needs for additional high-voltage transmission lines in the same general area as any proposed route, and the advisability of ordering the construction of structures capable of expansion in transmission capacity through multiple circuiting or design modifications;

(11) evaluation of irreversible and irretrievable commitments of resources should the proposed site or route be approved; and

(12) when appropriate, consideration of problems raised by other state and federal agencies and local entities.

140. The Commission must also consider whether the BRW has complied with all applicable procedural requirements.

141. The Commission's rules require the BRW to provide information regarding any potential impacts of the proposed Project, potential mitigation measures, and any adverse effects that cannot be avoided as part of the application process.

X. APPLICATION OF SITING CRITERIA TO THE PROPOSED PROJECT

A. Socioeconomic Considerations

142. The Project is located in southwestern Minnesota in an agricultural/rural region within Lincoln and Pipestone Counties. The 2010 census population for Lincoln County was 5,896, while the U.S. Census 2017 American Community Survey population estimate for Lincoln County was 5,724, representing a population decrease of approximately 3.7%. The 2010 census population for Pipestone County was 9,596, while the 2018 census population for Pipestone County was 9,047, representing a population decrease of approximately 5.7%. The county seat of Lincoln County is the City of Ivanhoe,

Minnesota, located approximately 11 miles (17 kilometers) north of the Project Area, and the county seat of Pipestone County is the City of Pipestone, Minnesota, located approximately 12.5 miles (20 kilometers) southwest of the Project Area.[142]

143. As indicated in the record and supported by most of the comments from the local community, the Project will positively impact the region by adding infrastructure, temporary and permanent jobs, increasing the counties' tax base, and providing lease payments to Project participants. The communities near the Project are also expected to receive positive economic benefits as construction will necessitate the need for numerous temporary and full-time positions. Approximately 200 construction and 7 to 12 full-time operations and maintenance jobs are expected as part of the Project. BRW plans to use local contractors and suppliers, where feasible, for portions of construction which will contribute to the overall economy of the region. Purchase of products to construct and operate the facilities such as fuel, equipment, services, and supplies will benefit businesses in the counties as well as the state.[143]

144. Wind energy infrastructure in the Project Area will provide long-term positive economic benefits to local landowners, the state, and the local economy of southwestern Minnesota. Landowners in the Project Area will benefit from annual lease payments and, in accordance with state and county law, BRW will pay applicable property tax and production taxes on the land and energy production to local governments. For example, the Project will pay a Wind Energy Production Tax to the local units of government of $0.0012 per kWh of electricity produced. This would result in an annual Wind Energy Production Tax of $500,000 to $600,000 paid to Lincoln County once the Project is operational.[144]

145. The Project is not anticipated to significantly change the demographics of the Project Area or Lincoln and Pipestone Counties.[145] Further, the construction of the Project will not displace residents or change the demographics of the Project Area.

146. The Project's demographic and socioeconomic impacts are expected to be beneficial.

B. Land-Based Economies

147. Land use within the Project Area is primarily cultivated cropland, accounting for approximately 13,462 acres of cultivated land or about 79.7% of the Project Area. An additional 2,255.4 acres or approximately 13.4% of the Project Area is grassland/herbaceous habitat. According to the 2012 USDA Agricultural Census Report, more than 80% of the land in Pipestone County (approximately 290,940 acres) was used for agriculture on approximately 699 farms. Corn, soybeans, and forage crops are the primary crops grown in Pipestone County, while swine and cattle are the predominant livestock raised in the county. Market value of agricultural products sold in the County for

[142] Ex. 216 – Revised Application for Site Permit at 20 (August 12, 2019).
[143] *Id*. at 82.
[144] *Id*. at 82-83.
[145] *Id*. at 21.

2012 was approximately $198.6 million, with crop markets at approximately $135.2 million and livestock markets at approximately $63.4 million. Approximately 59.1% of the Project Area is classified as prime farmland, while 26.3% is classified as prime farmland, if drained. Additionally, 5.9% of land within the Project Area is not prime farmland and 8.0% is considered farmland of statewide importance.[146]

148. The Project is not expected to significantly impact agricultural land use or the general character of the area. While an average 0.75 acres of land per turbine will be taken out of agricultural production for the life of the Project to accommodate the turbine pad, access roads, and ancillary facilities, the landowners may continue to plant crops near, and graze livestock up to, the gravel roadway around each turbine pad. The placement of turbines in agricultural fields is suggested in the U.S. Fish and Wildlife Service (USFWS) Land-Based Wind Energy Guidelines. The primary impact to active agricultural land will be the reduction of crop production on a total of approximately 37 acres of farmland in the Project Area. During construction, agricultural practices may be interrupted in areas that are typically farmed and construction activities may result in the temporary reduction in access to those areas and damage to drain tiles. This economic impact is offset by BRW through lease payments agreed to by the landowner. Large-scale environmental impacts to agriculture or agricultural lands are not anticipated with the placement of turbines, access roads, and ancillary facilities in agricultural fields.[147] Further, the record shows that the presence of the Project will not significantly impact the agricultural land use.

C. Recreation and Tourism

149. Lincoln County and Pipestone County offer tourism and recreational opportunities throughout the year. In 2017, annual leisure and hospitality expenditure in Lincoln County was approximately $6.2 million, which equated to about 137 tourism-related jobs in the County. Generally, tourism in Lincoln County focuses on promoting the area's cultural history as well as outdoor recreational activities. Lincoln County offers tourism draws such as the Lincoln County Pioneer Museum, the Heritage Center, and the Hole-in-the-Mountain Prairie, while local community events include the Opera House Spring Play and the Steak Fry at the Legion Hall.[148]

150. Pipestone County offers tourism and recreational opportunities throughout the year. In 2015, annual leisure and hospitality expenditure in Pipestone County was approximately $11.7 million, which equated to about 318 tourism-related jobs in the county. Generally, tourism in Pipestone County focuses on promoting the area's cultural history as well as outdoor recreational activities. Pipestone County offers tourism draws such as the Pipestone National Monument, the Pipestone County Museum, historic district walking tours, and Split Rock Creek State Park, while local community events include Pipestone Ghost Walks, the Watertower Festival, and Pipestone Civil War Days.[149]

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[146] *Id*. at 77.
[147] *Id*. at 77-78.
[148] *Id*. at 80.
[149] *Id*. at 81.

151. There are 46 WMAs, 10 Waterfowl Protection Areas, 1 Scenic and Natural Area, 2 State Aquatic Management Areas, 31 Walk-In Access (WIA) Program parcels, 5 county parks, 1 city park, and 3 snowmobile trails located within 10 miles of the Project Area. Two WMAs, one snowmobile trail, and one WIA occur within the Project boundary. These public resources provide recreational and tourism opportunities including biking, camping, wildlife watching, hunting, fishing and snowmobiling.[150]

152. The Project facilities are expected to be located mostly on private lands, and, therefore, relatively few, if any, direct impacts are anticipated on existing recreational facilities and tourism activities. Proposed setbacks from recreational facilities, public roads, and non-leased properties will minimize any indirect impacts. Potential impacts will be mostly visual in nature, as the Project may alter the viewshed from public lands within and around the Project Area. However, turbine structures are already a feature type within the viewshed of the Project Area. Therefore, the Project is not anticipated to have a negative effect on area tourism.[151]

153. Applicant maintains, and the record suggests, that few or no direct impacts to recreational activities or tourism are anticipated as a result of the Project.[152]

D. Land Use

154. Lincoln County's Comprehensive Plan and Pipestone County's Comprehensive Plan (including the County's Water Plan) serve as a land use planning tool with the intent to guide the direction of community future growth. The plans include an overview of existing county-wide land use, cities, and townships, as well as future land use, demographic analysis, housing trends, economic development, and environmental characteristics.[153]

155. The Project is consistent with Lincoln County's Comprehensive Plan and the Pipestone County's Comprehensive Plan goals to conserve farmland and natural resources, support economic and sustainable development, and provide a positive benefit to its citizens. BRW maintains, and the record suggests, that the proposed Project will be compatible with the rural, agricultural character of Lincoln County.[154]

156. To regulate land use, the Lincoln County Zoning Ordinance establishes five separate zoning districts: Flood Plain Management District; Urban Expansion District; Rural Preservation Management District; Shoreland Management District(s); and the Business and Industry District. All five of these districts are present in the Project Area. The Project is primarily located within the Rural Preservation Management District of Lincoln County, and only in the Agriculture District of Pipestone County. No Project Infrastructure is located within Pipestone County. BRW has sited all Project infrastructure

[150] *Id*.
[151] *Id*.
[152] *Id*.
[153] *Id*. at 23.
[154] *Id*. at 24.

out of incorporated areas and Urban Expansion Districts to minimize potential impacts on future urban growth. The Project will be compatible with the rural, agricultural character of Lincoln County and Pipestone County and the goals and policies regarding urban growth set forth in Lincoln County's comprehensive plan.[155]

157. Two Conservation Reserve Enhancement Program (CREP) easements and one Permanent Wetland Preserves (PWP) Program easement are located in the Project Area. The CREP property within the northern half of Project Area covers a total of 0.14 acres, with an additional 20.7 acres extending outside of the Project Area to the east. No Reinvest in Minnesota properties are present in the Project Area. BRW is continuing to work to obtain information on any Conservation Reserve Program (CRP) easements that may exist within the Project Area. BRW will attempt to avoid and preserve CRP easements to the maximum extent practicable if a landowner is found to have such an easement on their property.[156]

158. The locations of the CREP and PWP easements have been incorporated into Project planning so that these locations will be avoided and not disturbed by Project activities. No Project infrastructure or construction easements will be located in CREP or PWP areas. CRP easements will be located in coordination with participating landowners. If CRP easements are determined to be present, the locations will be incorporated into Project planning as it relates to turbine and road layout, and any other associated construction activities and these lands will be avoided to the maximum extent practicable. If the Project requires the placement of permanent infrastructure within CRP land, the BRW has committed to working with the landowner to remove the land from the CRP program and commits to cover the costs of any penalties incurred due to the removal of the easement from the program.[157]

E. Noise

159. The Project is subject to sound level requirements in Minn. R. ch. 7030 for Noise Pollution Control. These rules are enforced by MPCA through the use of Noise Area Classifications (NAC) that are defined in subpart 2 of Minn. R. 7030.0050 in terms of land use. The noise standards for each NAC are defined in subpart 2 of Minn. R. 7030.0040 (2019).

160. Sound levels are measured and quantified using the logarithmic decibel (dB) scale. A sound level meter is used to measure sound. It contains "weighting networks" (e.g., A-, C-, Z-weightings) to adjust the frequency response of the instrument. The most commonly used weighting network is A-weighting because it most closely approximates how the human ear responds to sound at various frequencies. The A-weighting network is the accepted scale used for community sound level measurements; therefore, sounds are frequently reported as detected with a sound level meter using this weighting. These sound levels are reported in decibels designated as "dBA".

[155] *Id*. at 25-27.
[156] *Id*. at 27-28.
[157] *Id*. at 28.

161. An ambient sound level survey was conducted to characterize the current acoustical environment in the community surrounding and within the Project Area. Ambient sound levels were measured at five locations for approximately nine days based on a preliminary wind turbine layout.[158]

162. The sound impacts associated with the proposed wind turbines were predicted using the Cadna/A sound level calculation software developed by DataKustik GmbH. A total of 411 receptors in proximity to the Project Area were input into the Cadna/A model. These receptors were modeled as discrete points at a height of 1.5 meters above ground level to mimic the ears of a typical standing person.[159] A total of 45 Project-related wind turbines (40 proposed + 5 alternates) of which 6 are proposed to be GE 2.52 MW wind turbines and 39 are proposed to be GE 2.82 wind turbines. Select GE 2.82 MW wind turbines (Turbines 8, 17, 19, 20, 21, 29, 33, 36, 38, and Alt5) are proposed to run under a NRO. All wind turbines are proposed to have LNTE blades that limit noise generation.[160]

163. The highest predicted worst-case Project Only L_{50} sound level at a modeling receptor is 47 dBA. L_{50} is the sound level exceeded 50 percent of the time. It is the median level observed during the measurement period. The highest modeled Project Only L_{50} sound level at a non-participant receptor is still 45 dBA. The highest modeled L_{50} sound level from the Project + existing non-Project (i.e., Ruthton Wind Turbines) + Future Non-Project (i.e., Lake Benton Wind II) scenario was 52 dBA and occurred at one participating location (receptor 44). The second highest modeled L_{50} sound level from the Project + Ruthton Wind Turbines + Lake Benton Wind II scenario is 48 dBA and occurs at two locations: non-participating receptor 42; and participating receptor 64.[161]

164. Compliance with MPCA noise standards will be accomplished, in part, by BRW including in its design a 1,400-foot setback from residences. Also, consistent with the 3 rotor distance (3 RD) and 5 rotor distance (5 RD) setback requirement, properties not participating in the Project are to have turbines set back at least 1,251 feet (382 meters) (3 RD) from their property in non-prevailing wind directions and at least 2,085 feet (636 meters) (5 RD) from their property in prevailing wind directions for the GE 2.82 MW turbine model. For the GE 2.52 MW turbine model, properties not participating in the Project are to have turbines set back at least 1,147 feet (349.5 meters) (3 RD) from their property in non-prevailing wind directions and at least 1,911 feet (582.5 meters) (5 RD) from their property in prevailing wind directions.[162]

165. BRW's modeling of existing noise, which was conducted with third party datasets, indicates the one receptor exceeds the MPCA limit of 50 dBA. The Project Only sound level at this receptor is 40 dBA.[163]

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[158] *Id*. at 31.
[159] *Id*. at 32-33.
[160] Ex. 232 – Second Site Permit Application Amendment at 12-13 (June 5, 2020).
[161] *Id.* at 13-14.
[162] *Id.* at 14.
[163] Ex. 216 – Revised Application for Site Permit at 33-34 (August 12, 2019).

166. As Mr. Lampeter testified at the July 22, 2020 Public Hearing, to help meet the sound standard, the Project turbines will use LNTE blades, and 10 turbines will run in NRO mode. Also, the sound modelling employed by BRW uses a 0.5 ground factor, which is commonly employed for sound modelling and serves as a conservative, but realistic, sound modelling assumption. Similarly, the usage of a 2 dBA uncertainty factor, as BRW has done in its modelling, is a realistic and reliable assumption to guide the sound modelling. BRW's expectation is that these assumptions will yield accurate results in the post-construction sound modelling.[164] While there was no direct response to Ms. Overland's contentions regarding 0.0 being the appropriate ground factor, it is difficult, outside of a contested case hearing, to test Ms. Overland's hypotheses. Moreover, while wind turbines have been operating in this region for many years, only one resident expressed concern with noise from the Project and the majority of residents supported the Project without raising noise as a concern. Additionally, the DSP requires the project to comply with the noise standards established by the MPCA and turbines will be removed from service if necessary to comply with the noise standards.[165]

167. The Project meets the MPCA state noise standards. The Project was designed to minimize the sound levels due to the wind turbines at the homes in the community, while also meeting the other constraints of the project design and regulatory requirements.[166]

168. The record demonstrates that BRW has minimized impacts from noise. Further, the DSP contains adequate conditions to monitor and mitigate sound from the Project. Section 4.2 requires that "wind turbine towers shall not be located closer than 1,000 feet from all residences or the distance required to comply with the noise standards pursuant to Minn. R. 7030.0040, established by the MPCA, whichever is greater."[167] Section 4.3 requires turbines to be placed in appropriate locations to ensure compliance with noise standards set forth in Minnesota Rules, chapter 7030. Finally, Section 7.4 of the DSP requires the Permittee to conduct post-construction noise monitoring. The study will determine the noise levels at different frequencies and at various distances from the turbines at various wind directions and speeds.[168]

F. Visual Impacts

169. Aesthetic quality and appeal of a region generally derive from the terrain, natural features (e.g., lakes, rivers, ponds, etc.), native flora, and cultural features. Individual observers will have differing opinions on the aesthetic appeal of a region and impacts that may alter the quality. Those likely to be viewing the proposed Project include permanent observers (residents) and temporary observers (motorists, tourists, or recreationalists passing by or using the area intermittently). Residents within and in the vicinity of the Project Area are expected to have a higher sensitivity to the potential

[164] Hearing Tr. at 27-31 (eDocket No. 20208-165631-01).
[165] Ex. 107 – DOC-EERA Preliminary Draft Site Permit (eDocket No. 20201-159562-03)
[166] Ex. 216 – Revised Application for Site Permit at 36 (August 12, 2019).
[167] Ex. 107 – DOC-EERA Preliminary Draft Site Permit (eDocket No. 20201-159562-03).
[168] *Id.*

aesthetic impacts than temporary observers as they will look at the Project more frequently than those individuals periodically passing through the area.[169]

170. No new transmission lines are proposed for the Project.[170]

171. The general topography of the Project Area is described as undulating, rolling relief with approximate elevations between 1,742 and 1,982 feet (531 and 604 meters) above mean sea level. The Project Area generally has higher elevations in the central and northwestern sections, with lower elevations in the northeast, southeast, and southwest. Agricultural fields, farmsteads, grasslands, and rolling topography visually dominate the Project Area. The landscape can generally be classified as rural open space.[171]

172. There are currently no wind turbines within the Project Area. However, the Lake Benton II Wind Farm and the Ruthton Wind Farm are located within one mile of the Project Area. A total of 2 turbines from Lake Benton II and a total of 24 turbines from Ruthton Wind Farm are located within 1 mile of the Project Area. These existing wind facilities contain turbines of various heights and RD. An additional 8 wind farms are located within 10 miles (16.1 kilometers) of the Project Area.[172]

173. The towers will not be illuminated except as required by the FAA as reflected in Section 5.3.28 of the DSP. The FAA requires obstruction lighting or marking of structures over 200 feet above mean sea level because they have the potential to obstruct air navigation.[173]

174. Visual impacts may also be noticeable to users of public lands and public snowmobile trails within and in the vicinity of the Project Area. However, the Project will not be introducing a new feature type to the landscape because existing wind turbines and other power related infrastructure are prevalent within and in the vicinity of the Project Area.[174]

175. A study of the Project's impact regarding shadow flicker was conducted using WindPRO, a sophisticated modeling software program. The study created detailed shadow flicker maps across the entire Project area and at specific locations using shadow receptors. The study used discrete modeling points, including sensitive receptors, such as mobile homes, residential, and industrial areas. The WindPRO modeling was refined by incorporating sunshine probabilities and wind turbine operational estimates by wind direction over the course of a year. A 31-year hourly time series for wind speed and wind direction at 90 meters above ground level was used to calculate the typical annual number of operational hours per wind direction sector. Based on this dataset, the wind turbines

[169] Ex. 216 – Revised Application for Site Permit at 37 (August 12, 2019).
[170] *Id*. at 38.
[171] *Id.* at 37.
[172] *Id.* at 37-38.
[173] *Id*. at 39.
[174] *Id*.

would operate 98% of the year. “Expected,” and less realistic “worst-case” scenarios were also run.[175]

176. The predicted expected annual shadow flicker duration for the Project ranged from 0 hours, 0 minutes per year to 42 hours, 11 minutes per year. The maximum modeled expected annual flicker at a non-participating receptor (receptor 154) is 28 hours, 51 minutes. The majority of the receptors (295) were predicted to experience no annual shadow flicker. Sixty-seven locations were predicted to experience some shadow flicker but less than 10 hours per year. The modeling results showed that 40 locations would be expected to have 10 to 30 hours of shadow flicker per year. Nine receptors are expected to have over 30 hours of flicker per year. The modeled worst-case annual shadow flicker duration ranged from 0 hours, 0 minutes per year to 124 hours, 40 minutes per year. The maximum flicker was at a receptor with pending participation. The maximum predicted annual flicker at a participating receptor was 42 hours, 11 minutes.[176]

177. The DSP appropriately addresses shadow flicker. Section 7.2 of the DSP requires the BRW to provide the Commission with data on shadow flicker for each residence of non-participating landowners and participating landowners within and outside of the Project boundary potentially subject to turbine shadow flicker exposure. The data will include the modeling results, assumptions made, and the anticipated level of exposure from turbine shadow flicker for each residence. BRW will also be required to provide documentation on its efforts to avoid, minimize, and mitigate shadow flicker exposure.[177]

G. Public Services and Infrastructure

178. The Project is located in rural southwestern Minnesota. A network of roads and utilities provide access, electricity, water supply, and telephone service to rural residences, farmsteads, small industry, and unincorporated areas.[178]

179. Existing road infrastructure within the Project Area consists primarily of county and township roads that typically follow section lines, as well as farmstead driveways and farming access roads. The primary route through the Project Area is County State Aid Highway (CSAH) 6 that travels north and south, and CSAH 9 and U.S. Highway 14, which travel east and west. Though not in the Project Area, U.S. Highway 75 and State Highway 23 are the main access routes into the Project and to nearby communities. The county roads and township roads used to access the proposed Project access roads and turbine locations are either two-lane paved roads or gravel roads.[179]

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[175] *Id*. at 40-41.
[176] Ex. 232 – Second Site Permit Application Amendment at 15-16 (June 5, 2020).
[177] Ex. 107 – DOC-EERA Preliminary Draft Site Permit (eDocket No. 20201-159562-03).
[178] Ex. 216 – Revised Application for Site Permit at 44 (August 12, 2019).
[179] *Id*. at 45.

180. Trunk Highway (TH) 75 has the highest average annual daily traffic (AADT) count with 2,400 vehicles per day, while the lowest traffic volume was County Road 117 with 45 vehicles per day. AADT data was not available for several roads within the Project Area; however, with the exception of TH 75, the AADT data ranged from 30 to 1,250 vehicles per day. Therefore, it can be inferred that roads lacking AADT data would likely support similar traffic, or potentially less traffic, per day.[180]

181. Construction traffic is expected to generate approximately 500 trips per day during peak construction. Local roads can accommodate this additional traffic as the functional capacity of a two-lane paved rural highway is in excess of 5,000 vehicles per day. However, some minor, short-term traffic delays within and near the Project site may occur during turbine and equipment delivery and construction activities.[181]

182. MnDOT's recommended that the Commission consider the following site permit conditions: (1) that the proposed access road for turbine number 11 be from County Road 6 versus US 14, or for the BRW to utilize an existing access road from US 14; (2) that the following plans be submitted in a timely manner for proper review – (i) a crossing plan for the crane path affecting US 14 (ii) a traffic control plan; and (iii) a detour plan for temporary closures of any trunk highway.[182] The concerns noted in MnDOT's comments are addressed by DSP language in section 5.3.13 (Public Roads).[183]

183. In particular, Section 5.3.13 of the DSP provides that BRW will identify all state, county, or township roads that will be used for the project. It shall notify the Commission and the state, county, or township governing body having jurisdiction over the roads to determine if the governmental body needs to inspect the roads prior to use of these roads. This Section further requires that prior to the use of such roads, BRW shall make satisfactory arrangements (approved permits, written authorizations, road use agreements, development agreements, etc.) with the appropriate state, county, or township governmental body having jurisdiction over roads to be used for construction of the Project. These arrangements will address, among other issues, maintenance and repair of roads that may be subject to increased impacts due to transportation of equipment and project components.[184]

184. Telephone service in the Project Area is provided to farmsteads, rural residences, and businesses by Alltel Corporation and AT&T Mobility Spectrum. One cellular tower was discovered within the Project Area and 11 cellular towers were discovered within 25 kilometers (15.5 miles) of the Project Area.[185]

185. No microwave towers were identified in the Project Area. Seven microwave links were identified near the Project Area and four were found to intersect the Project

[180] *Id*.
[181] *Id*. at 49-50.
[182] Ex. 700 – Comments (December 20, 2019) (eDocket No. 201912-158512-01).
[183] Ex. 107 – DOC-EERA Preliminary Draft Site Permit (eDocket No. 20201-159562-03).
[184] *Id.*
[185] Ex. 216 – Revised Application for Site Permit at 46 (August 12, 2019).

Area. The identified microwave links are owned and operated by State of Minnesota, Minnesota Valley Television Improvement Corporation, and Subarctic Media, LLC.[186]

186. A Project beam path study was conducted by NextEra Analytics. As part of the study, NextEra Analytics calculated Worst Case Fresnel Zones (WCFZ). The WCFZ for the identified microwave links were calculated, and the appropriate turbine offset was applied by BRW to minimize any harmful impact. The WCFZs are determined by the 2nd Fresnel zone radius obtained at the midpoint of the microwave link. Utilization of the WCFZ and including an offset to account for the turbine blade length has enabled Project turbines to be sited such that impacts to identified microwave beam paths are avoided.[187]

187. No active AM or FM radio towers are within the Project Area. One AM tower and one FM tower were identified within 25 kilometers (15.5 miles) of the Project Area. The AM tower has the call sign KLOH and the FM tower has the call sign KARZ.[188]

188. There are 17 licensed television towers within 100 kilometers (62.1 miles) of the Project Area, including one that is within 50 kilometers (31.1 miles) of the Project Area and likely to be broadcasting to the region. Most of the television towers within 100 miles (161 kilometers) of the Project Area are low power stations or translator stations that have a limited range and are not anticipated to experience reception degradation. Two full power stations (call signs KDLT-TV and KSMN) have a possibility of experiencing reception degradation if the Project is in line-of-sight. These towers are located 79.9 kilometers (49.6 miles) and 38.9 kilometers (24.2 miles) from the Project.[189] In the unlikely event that TV interference is reported following Project construction, BRW will work with affected residents or businesses to determine the cause of interference and, when necessary, reestablish TV reception and service in a timely manner.[190]

189. The Project is not anticipated to impact telephone or internet services. Underground utilities, if any, will be located using a utility locate service, and collection line locations will be coordinated with local telecommunications providers to ensure proper route identification per Minnesota's Gopher State One Call Marking System, and to ensure that there will be no impact to existing telephone lines or other underground utilities. Harmful interference associated with cellular towers is not likely, as cellular transitions or packet switching occurs when a cellular link becomes unavailable.[191]

190. In addition, Section 5.3.17 of the DSP requires that the Project not interfere with telecommunications and that prior to the pre-construction meeting, BRW submit to the Commission an assessment of television and radio signal reception, microwave signal patterns, and telecommunications in the project area.

[186] *Id*. at 46-47.
[187] *Id*. at 47.
[188] *Id*.
[189] *Id*. at 48.
[190] *Id*. at 53.
[191] *Id*. at 50.

191. Public services within the Project Area are provided by the Lincoln County Sheriff, Lincoln County Ambulance, Tyler Ambulance, Holland Fire Department, Ruthton Volunteer Fire Department, and the Lake Wilson Fire Department. A communications center within the Lincoln County Sheriff's Office in the City of Ivanhoe dispatches all 911 calls for the county, including for fire, medical and police emergencies.[192] During operation, BRW commits and the record supports that, the Project will not interfere with emergency services.[193]

H. Public Health and Safety

192. Public health and safety issues associated with the Project are primarily related to turbine operation (including noise and shadow flicker), electromagnetic fields (EMF), stray voltage, and aviation.[194]

193. Potential safety and security impacts associated with the construction of the Project include human emergencies and accidents, natural hazards, hazardous materials incidents, and traffic accidents. Potential safety and security impacts associated with the operation of the Project, though rare, include danger of falling ice, unauthorized access to electrical and mechanical components of turbines, and turbine malfunction or collapse. The Project complies will all required setbacks, and each turbine will be regularly inspected and maintained in good repair and condition. In addition to proactive maintenance, modern turbine technology has reduced these potential operational risks to insignificant rates.[195]

194. Each turbine can be accessed through a lockable steel door at the base of the tower, through which the nacelle and turbine blades can be accessed. Inside each tower, platforms are accessible via ladder or lift which are equipped with fall arresting safety systems.[196]

195. Based upon current research regarding EMFs, and the separation distances being maintained between transformers, turbines, and collector lines from public access and occupied residences, EMFs associated with the Project Area are not expected to have an impact on public health and safety. Electrical equipment will be grounded per American National Standards Institute and National Electrical Safety Code guidelines to ensure safety and reliability.[197]

196. Correctly connecting and grounding electrical equipment will prevent potential issues related to "stray voltage." Stray voltage is typically not associated with underground electric collector lines, which connect to the Project substation and are not

[192] *Id*. at 74.
[193] *Id*.
[194] *Id*. at 68-72.
[195] *Id*. at 74.
[196] *Id*. at 13.
[197] *Id*. at 71.

tapped or diverted for other uses. Therefore, stray voltage is not expected to have an impact on public health and safety.[198]

197. There are no registered public airports located within the Project Area. The closest registered airport is the Tyler Municipal Airport located approximately 2.1 miles (3.4 kilometers) away from the northeastern extent of the Project Area. No active aviation towers within the Project Area have been identified. Aviation towers provide radio communications related to air traffic. Four aviation towers are located within 15.5 miles of the Project Area.[199] FAA Determinations of No Hazard will be obtained for any tower location prior to installation and any location will have appropriate lighting and marking as required by the FAA.[200] During the proceeding, BRW modified the wind turbine technology and layout within the original 17,609-acre Project Area to address a FAA, DoD, and USAF concern that the originally proposed wind turbine array may impact a CARSR.[201]

198. Several requirements of the DSP will mitigate any impacts to public health and safety. For instance, Section 5.3.26 of the DSP requires that BRW provide educational materials to landowners adjacent to the site and, upon request, to interested persons about the Project and any restrictions or dangers associated with the Project. BRW will provide any necessary safety measures such as warning signs and gates for traffic control or to restrict public access. BRW will also submit the location of all underground facilities, as defined in Minn. Stat. § 216D.01, subd. 11 (2020), to Gopher State One Call following the completion of construction at the site.[202]

199. Section 10.10 of the DSP also BRW to prepare an Emergency Response Plan in consultation with the emergency responders having jurisdiction over the facility prior to Project construction. A copy of the plan, along with any comments from emergency responders, will be filed with the Commission at least 14 days prior to the pre-construction meeting and a revised plan, if any, at least 14 days prior to the pre-operation meeting. BRW will as provide as a compliance filing confirmation that the Emergency Response Plan was provided to the emergency responders and Public Safety Answering Points (PSAP) with jurisdiction over the facility prior to commencement of construction. Finally, BRW will register the facility address or other location indicators acceptable to the emergency responders and PSAP having jurisdiction over the facility.[203]

200. The record demonstrates that BRW has taken steps to minimize and mitigate impacts to public safety and aviation. In light of these mitigation measures and the requirements of the DSP, it is not anticipated, and the record supports, that the construction and operation of the Project will have a significant impact on public health and safety or aviation.

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[198] *Id*.
[199] *Id.* at 72.
[200] *Id*. at 18.
[201] Ex. 226 – Site Permit Application Amendment at 1 (February 21, 2020).
[202] Ex. 107 – DOC-EERA Preliminary Draft Site Permit (eDocket No. 20201-159562-03).
[203] *Id.*

I. Hazardous Materials

201. Potentially hazardous materials associated with the Project Area would likely include petroleum products (diesel fuel, gasoline, propane, heating oil, lubricants, and maintenance chemicals), pesticides, and herbicides used in prior or ongoing agriculture related activities. Contaminants associated with asbestos and lead-based paint may be present due to the age of many of the farmsteads within the Project Area. Polychlorinated biphenyls associated with pad-mounted and pole-mounted transformers may also be present.[204]

202. Prior to construction, the BRW will conduct an ASTM International–conforming Phase I Environmental Site Assessment to identify and avoid existing recognized environmental conditions (RECs) within the Project Area, particularly associated with facilities identified by the MPCA database. Information from the Phase I Environmental Site Assessment will be used to identify and avoid, if necessary, any identified RECs. If RECs cannot be avoided, appropriate remediation, if required, will be conducted to avoid potential concerns associated with RECs. Any wastes generated during any phase of the Project will be handled and disposed of in accordance with Minnesota Rule Chapter 7045, local rules and regulations, and the site specific Spill Prevention, Control, and Countermeasure Plan.[205]

203. Further, Section 5.3.23 of the DSP requires that all waste and scrap that is the product of construction shall be removed from the site and all premises on which construction activities were conducted and properly disposed of upon completion of each task. In addition, Section 5.3.24 of the DSP requires BRW to take all appropriate precautions against pollution of the environment and makes BRW responsible for compliance with all laws applicable to the generation, storage, transportation clean up, and disposal of all wastes generated during construction and restoration of the site.[206]

204. The record demonstrates that BRW has taken steps to avoid and minimize potential impacts. Further, the DSP contains adequate conditions to monitor and mitigate potential impacts from solid and hazardous wastes.

J. Soils and Topography

205. The Project Area is largely comprised of five soil complexes: Barnes-Buse complexes; Kranzburg-Brookings complexes; Singsaas-Oak Lake complexes; Parnell consociations; and Lakepark consociations. These soils are generally composed of silt loam to clay loam soils that are moderately dark in color and occur on level to steep slopes. These soils are generally deep, poorly drained to well drained, and are formed from loess, glacial till, and lacustrine deposits on glacial till.[207]

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[204] Ex. 216 – Revised Application for Site Permit at 76 (August 12, 2019).
[205] *Id*. at 76-77.
[206] Ex. 107 – DOC-EERA Preliminary Draft Site Permit (eDocket No. 20201-159562-03).
[207] *Id*. at 84.

206. The concrete turbine foundations will require up to approximately 2,400 cubic yards of excavation depending on soil requirements and turbine size. It is anticipated that the freestanding tubular wind turbine towers will be erected on reinforced concrete spread footing foundations. The bearing surface of the foundation will be at a depth up to approximately 12 feet (approximately 4 meters), with a total width of up to approximately 68 feet (approximately 21 meters). The tubular steel tower will be connected to the concrete foundation through a base plate and high strength anchor bolts embedded in the concrete foundation. Approximately 35 tons of steel will be required in the rebar design of the foundation for structural support.[208]

207. The underground electrical collector and communication systems will connect each turbine to the proposed substation. Approximately 28 miles of underground collection line will be installed.[209] A Storm Water Pollution Prevention Plan (SWPPP) and National Pollutant Discharge Elimination System (NPDES) permit will be obtained prior to construction. BRW will employ BMPs to ensure that excavated material is contained, exposed soil is protected, restored material is stabilized and disturbed areas are re-vegetated with non-invasive species. Significant adverse Project-related impacts to wetlands are not anticipated because of design considerations and the implementation of stormwater BMPs. Compensatory mitigation may be required if certain state or federal impact thresholds are surpassed. Currently, compensatory mitigation is not anticipated for the development of the Project.[210]

208. The general topography of the Project Area is described as undulating, rolling relief with approximate elevations between 1,742 and 1,982 feet (531 and 604 meters) above mean sea level. The Project Area generally has higher elevations in the central and northwestern sections with lower elevations in the northeast, southeast, and southwest.[211]

209. Some limited, localized impacts to the topography within the Project Area will come from the construction of turbine pad sites, access roads, and associated Project facilities. Anticipated impacts, however, will be minor in nature as construction of these features will not require significant excavation or fill for foundations or road bases.[212]

K. Groundwater Resources

210. Groundwater resources are not abundant or widely distributed within this portion of the state because of lower precipitation rates and the quaternary and bedrock geology present in this region. The limited groundwater resources in this region have prompted the establishment of an extensive network of water pipelines which transport groundwater from a few select areas with productive groundwater wells to the majority of the region.[213]

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[208] *Id*. at 127.
[209] Ex. 232 – Second Site Permit Application Amendment at 12 (June 5, 2020).
[210] Ex. 216 – Revised Application for Site Permit at 93 (August 12, 2019).
[211] *Id*. at 37, 83.
[212] *Id*. at 83.
[213] *Id*. at 85.

211. Major impacts to groundwater resources and wells are not expected from Project related activities due to BRW's abidance of water-related setbacks and the minimal water-related needs of the Project. A well will be installed to fulfill the O&M building water requirements.[214]

L. Surface Water and Floodplain Resources

212. Buffalo Ridge (a glacial moraine) divides the Project Area into two primary drainage basins:

(1) The southwestern portion of the Project Area generally drains south and west. This area is located within the Lower Big Sioux River Watershed, which is part of the Big Sioux River Watershed, which is part of the Missouri River Basin.

(2) The central and northeastern portions of the Project Area generally drain north and east. This area is located within the Redwood River Watershed, which is part of the Minnesota River Watershed, which is part of the Mississippi River Basin.[215]

The Project Area contains approximately 24.7 acres of National Hydrography Dataset waters.[216]

213. The MnDNR Commissioner may formally designate lakes for wildlife management under the authority of Minn. Stat. § 97A.101, subd. 2(a) (2020), after notice and a hearing. There are no MnDNR designated wildlife lakes within the Project Area. There are also no identified outstanding resource value waters or trout streams within the Project Area.[217]

214. Surface waters will remain largely unimpacted because the Project will be designed to avoid or minimize adverse impacts to surface waters. Permanent dewatering will not occur, though the possibility exists that temporary dewatering of turbine foundations and collection lines will occur as needed. Temporary or permanent impacts to surface water runoff may be associated with crane paths, access roads, turbine pads, subsurface electrical collector lines, the substation, and the O&M facility.[218]

215. Significant adverse Project-related impacts to surface waters or floodplains are not anticipated because of design considerations and the implementation of stormwater BMPs.[219]

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[214] *Id*. at 86.
[215] *Id*.
[216] *Id*. at 87.
[217] *Id*. at 88.
[218] *Id*.
[219] *Id*. at 90.

M. Wetlands

216. The Project Area contains both isolated wetlands and wetlands associated with watercourses scattered across the Project Area. The Project Area is dominated by freshwater emergent wetlands with some mapped emergent, shrub/scrub, and forested wetlands. According to the MnDNR update to the USFWS National Wetland Inventory (NWI) database, the Project Area contains approximately 848.2 acres of mapped NWI wetlands and open waterbodies (4.9% of the Project Area).[220]

217. BMPs will be employed by BRW to ensure that excavated material is contained, exposed soil is protected, restored material is stabilized, and disturbed areas are re-vegetated with non-invasive species. Significant adverse Project-related impacts to wetlands are not anticipated because of design considerations and the implementation of stormwater BMPs.[221]

218. Further, Section 4.6 of the DSP requires that wind turbines and associated facilities not be placed in public waters wetlands, except that electric collector or feeder lines may cross or be placed in public waters or wetlands subject to applicable permits and approvals. Further, wetland and water resources disturbed by construction will be restored to pre-construction conditions, in accordance with applicable permits and landowner agreements.[222]

N. Vegetation

219. The Project Area contains approximately 13,462 acres of cultivated land or about 79.7% of the Project Area. In addition to cultivated lands, agricultural regions typically also include idle lands, pastures and grasslands. The Project Area contains approximately 213.3 acres of pastures, or approximately 1.3% of the Project Area, and approximately 2,255.4 acres of grassland/herbaceous habitat, or approximately 13.4% of the Project Area. The remaining land cover type within the Project Area consists primarily of developed/disturbed space.[223]

220. Four native plant communities are located within the Project Area, two of which are ranked as imperiled, Dry Hill Prairie and Mesic Prairie.[224]

221. MnDNR has mapped 39 native prairies within the Project Area. The Dry Hill Prairie (Southern) prairie type makes up the majority of the native prairie areas at approximately 223.1 acres (90.3 hectares) within the project area. Two prairies are classified as Basswood - Bur Oak - (Green Ash) Forest, accounting for approximately 24.8 acres (10 hectares) of the Project Area. The MnDNR describes this prairie type as forest dominated by basswood, bur oak, or green ash, with northern red oak abundant, with shrub layer, occurring on well drained clay soils formed in bedrock sediments, with

[220] *Id*. at 91.
[221] *Id*. at 93.
[222] Ex. 107 – DOC-EERA Preliminary Draft Site Permit (eDocket No. 20201-159562-03).
[223] Ex. 216 – Revised Application for Site Permit at 94 (August 12, 2019); Figure 10, Land Cover Map.
[224] *Id*. at 95.

a hummocky landscape. Two prairies are classified as Mesic Prairie (Southern), and are characterized as grass dominated, forb rich, and occurring on somewhat poorly drained to well-drained loamy soils. This prairie type accounts for approximately 4.4 acres (1.8 hectares) of the Project Area. One prairie is classified as Seepage Meadow/Carr, Tussock Sedge Subtype, accounting for approximately 1.9 acres (0.8 hectares) of the Project Area. The MNDNR describes this prairie type as meadow dominated, with sedge species diversity, and groundwater seepage present.[225]

222. Approximately 0.2% of the total Project Area will be permanently converted to sites for wind turbines or other Project infrastructure.[226] Vegetation will be removed during construction and installation of Project infrastructure to allow for construction of turbine pads, access roads, substation, and O&M facilities. BRW will design the site to place the majority of Project infrastructure in agricultural fields.[227]

223. BRW commits in its Site Permit Application to avoid Sites of Biodiversity Significance that are ranked as high or outstanding.[228] BRW also states that should Project infrastructure be planned in areas ranked moderate or below, BRW will coordinate with MnDNR regarding potential impacts to these areas. BRW further commits to avoid Mapped Native Plant Communities to the extent practical, and where Project infrastructure is planned in these areas, field verification as to whether these areas exhibit native plant communities has occurred and will continue as project details are developed. BRW states that, though the project has been designed to avoid impacts to Native Plant Communities, should infrastructure be planned in areas mapped as Native Plant Communities, it will be coordinated with MnDNR. If the location of Project infrastructure shifts within the Project Area, BRW will attempt to avoid impacts to Native Plant Communities and will coordinate with MNDNR as appropriate.[229] BRW estimates no permanent impacts to Native Plant Communities.[230]

224. Further, Section 4.7 of the DSP provides that Project facilities will not be placed in native prairie unless addressed in a Prairie Protection and Management Plan, and shall not be located in areas enrolled in the Native Prairie Bank Program. This section further requires BRW to prepare a Prairie Protection and Management Plan in consultation with MnDNR if native prairie is identified within the site boundaries. The plan will address steps that will be taken to avoid impacts to native prairie and mitigation to unavoidable impacts to native prairie by restoration or management of other native prairie areas that are in degraded condition, by conveyance of conservation easements, or by other means agreed to by BRW, MnDNR, and the Commission.[231]

225. Additionally, BRW has agreed to avoid impacts to conservation land such as WMAs and will ensure that turbine locations are not placed less than five rotor

[225] *Id*. at 96.
[226] Ex. 232 – Second Site Permit Application Amendment at 18 (June 5, 2020).
[227] Ex. 216 – Revised Application for Site Permit at 97 (August 12, 2019).
[228] *Id.* at 96.
[229] *Id.* at 97.
[230] *Id.*; Table 8.18.2.
[231] Ex. 216 – Revised Application for Site Permit at 93 (August 12, 2019).

diameters on the prevailing wind directions and three rotor diameters on the non-prevailing wind directions from the perimeter of the WMAs as required by Section 4.1 of the DSP.[232]

226. TNC noted in its comments that the Project represents a significant intensification of development, involving new towers and turbines that are closer to native prairie and TNC's Preserve boundary than in the past.[233] BRW responds that no Project infrastructure is planned in native prairie and only one turbine is planned in non-native grassland that is currently used for pasture. All other turbines are sited in cultivated row crop fields. Also, as previously noted, a Prairie Protection and Management Plan will be developed by BRW in coordination with MnDNR to determine best management practices for protecting grasslands during construction.[234]

227. TNC also noted in its comments that locations proposed for turbines 22-25, 27, 28, 33, and 37 would have harmful impacts on native prairie, on conservation lands, and on wildlife, especially grassland birds that utilize that habitat.[235] Addressing TNC's concerns regarding native prairie, but not the project's potential negative impact on grassland birds, BRW responded that all the identified turbines are sited within row crops, with the exception of Turbine 22, which is located within non-native grassland proximate to the previous wind turbine access road.[236]

228. The record demonstrates that BRW utilized previously disturbed areas for turbine siting, thereby minimizing further habitat fragmentation for native prairie habitat and the wildlife.[237] TNC in its August 18, 2020, submission withdrew its previous comments that the Commission delay its processing of BRW's applications in order to allow for further evaluation. Specifically, TNC stated in its letter that it "do[es] not intend to pursue further action on this project through the PUC process."

229. The record demonstrates that BRW has committed to taking steps to avoid and minimize impacts to vegetation. While the DSP conditions to monitor and mitigate the Project's potential impacts on vegetation are minimal, the record indicates that almost all of the land being used for the project was previously disturbed agricultural land and none is native prairie.

O. Wildlife

230. Large electric generation projects have the potential to impact various types of wildlife. Habitats in a project's environmental setting provide forage and shelter for various mammals, reptiles, amphibians, birds and insects, both resident and migratory.[238]

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[232] *Id*. at 98.
[233] Comments of The Nature Conservancy (July 28, 2020) (eDocket No. 20207-165432-01).
[234] Comments of BRW (August 21, 2020).
[235] Comments of The Nature Conservancy (July 28, 2020) (eDocket No. 20207-165432-01).
[236] *Id.*
[237] Comments of BRW (August 21, 2020).
[238] Ex. 232 – Second Site Permit Application Amendment at 38 (June 5, 2020).

231. Approximately 19.6 percent of the project area is within one of the six segments of the Prairie Coteau Important Bird Areas.[239] In addition, the range of the project is greatly expanded from the earlier Buffalo Ridge wind project. Moreover, as TNC indicates and its maps illustrate, 9 turbines are scattered throughout an IBA. This area previously held only 5 turbines which were clustered close together.[240]

232. In its current project proposal, BRW sited the turbines in cultivated fields and designed the infrastructure to avoid or minimize impacts on the native plant communities, grasslands, wetlands and streams. BRW contends it has designed the project to avoid or minimize impacts on avian species of concerns.[241]

233. A modified Tier 1 and Tier 2 site assessment was completed for the Project Area during preparation of the comprehensive Wildlife Conservation Strategy (WCS) and it serves Minnesota's requirement for an Avian and Bat Protection Plan (ABPP). Information for documenting responses to the Tier 1 and Tier 2 questions in the WCS/ABPP was gathered through MnDNR and USFWS database research, and other publicly available resources. Tier 1 questions help to determine potential environmental risk at the landscape scale, while Tier 2 questions help to determine potential environmental risk at the project scale. Specific Tier 2 site visits were not conducted, and BRW relied on observations during the Tier 3 studies and one site visit to evaluate the presence or absence of native grasslands.[242]

234. Aerial surveys were conducted from a helicopter to identify raptor and eagle stick nests within and near the Project Area. Three successive years of aerial raptors nest surveys were collected during 2017-2019 within and near the Project Area. For the 2017 aerial raptor nest survey effort, raptor nests were surveyed within one mile (1.6 kilometers), and eagle nests within 10 miles of the Project Area. A total of 25 raptor nests were recorded during 2017 aerial surveys, and no bald eagle nests were located within the Project Area. Two occupied, active bald eagle nests were located 1.5 and 8.0 miles outside the Project Area and within the surveyed 10-mile buffer. Other nests observed during the aerial survey included four occupied, active red-tailed hawk (*Buteo jamaicensis*) nests, two occupied, active great horned owl (*Bubo virginianus*) nests, and 17 unoccupied, inactive nests of unknown raptor species. No unoccupied, inactive nests were consistent in size and shape with an eagle nest.[243]

235. For the 2018 aerial raptor nest survey effort, raptor nests were surveyed within one mile (1.6 kilometers), and eagle nests within five miles (8.0 kilometers) of the Project Area. A total of 31 raptor nests were recorded, of which one occupied, active bald eagle nest was located 1.5 miles (2.4 kilometers) from the 2019 proposed Project Area, north of Lake Benton. Other raptor nests observed during aerial surveys included 4 occupied, active red-tailed hawk nests, 1 occupied, active great horned owl nest, and

[239] Revised Environmental Report at 39 (June 23, 2020) (eDocket No. 20206-164214-01).
[240] TNC Comments July 28, 2020 (eDocket No. 20207-165432-01).
[241] Revised Environmental Report at 39 (June 23, 2020) (eDocket No. 20206-164214-01).
[242] Ex. 216 – Revised Application for Site Permit at 99 (August 12, 2019).
[243] *Id*. at 102.

24 unoccupied, inactive nests of unknown raptor species. No unoccupied, inactive nests were consistent in size and shape with an eagle nest.[244]

236. For the 2019 aerial raptor nest survey effort, raptor nests were surveyed within one mile, and eagle nests within five miles, of the Project Area. One occupied, active bald eagle nest was documented 1.5 miles north from the Project Area across Lake Benton, with the eagle nest at the same location as in the 2017 and 2018 surveys. No bald eagle nests, or large nests consistent in size and shape for an eagle, were identified within the proposed Project Area.[245]

237. Other wildlife likely to utilize the Project Area include white-tailed deer, raccoon, coyote, red and gray fox, Virginia opossum, gray squirrel, fox squirrel, thirteen-lined ground squirrel, striped skunk, short-tailed weasel, and badger.[246]

238. The USFWS provides distribution lists of federally listed threatened, endangered, and candidate species on a county-by-county basis. The USFWS county list indicates that Lincoln and Pipestone Counties are within the range (i.e., has documented records, harbors critical habitat, and/or has the potential to harbor critical habitat for the designated species) of certain federally listed threatened species. Specifically, the northern long-eared bat, the western prairie fringed orchid (*Platanthera praeclara*), and two butterflies, the Poweshiek's skipperling and the Dakota skipper. The area also potentially is home to the federally listed endangered Topeka shiner, a fish. In the state of Minnesota, the western prairie fringed orchid and the Dakota skipper are designated by the state as endangered.[247]

239. No MnDNR Waterfowl Feeding and Resting Areas are located within or adjacent to the Project Area.[248]

240. Field and desktop studies indicate that wildlife usage in the Project Area is comparable to that documented at other wind energy conversion systems sited in agricultural areas of the Midwest. Impacts to wildlife and wildlife habitat are expected to be minimal because grasslands, wooded areas, shrublands, and other areas identified as important to wildlife will be avoided whenever possible. Additionally, these important wildlife features occur in relatively small amounts within the Project Area. Impacts to wildlife would primarily occur to avian and bat populations. There is a likelihood that bird and bat fatalities will occur at the Project, but these fatalities are unlikely to affect populations of most species, including species of a conservation concern. Direct impacts to birds and bats, because of Project construction and operation, are not expected to differ markedly from those reported by other previous studies in agricultural settings within Minnesota.[249]

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[244] *Id*.
[245] *Id*.
[246] *Id*.
[247] *Id*. at 105.
[248] *Id*. at 112.
[249] *Id*. at 112-13.

241. Further, the DSP provides protection of wildlife resources, specifically avian and bat protection. Section 7.5.1 of the DSP requires BRW to utilize a qualified third party to conduct two full years of avian and bat fatality monitoring following the commencement of commercial operation. Monitoring activities and results will be coordinated directly with MnDNR, USFWS, and the Commission. Detailed monitoring protocols, agency coordination, and any avoidance and minimization measures shall be detailed in the project's ABPP as required by the DSP.[250]

242. Section 7.5 of the DSP also includes requirements to maintain an updated ABPP in coordination with MnDNR, USFWS, and the Commission, and submit quarterly and immediate incident reports. The ABPP includes standards for minimizing impacts to avian and bat species during construction and operation of wind energy projects. It has been developed in a manner that is consistent with the guidelines and recommendations of the USFWS Wind Energy Guidelines.[251]

243. Any large energy project will have some negative impact on flora and wildlife, including insects, birds, and bats. As TNC's comments illustrate, it can be difficult to balance the, sometimes harmonious and sometimes conflicting, goals of developing renewable energy and preserving natural ecosystems. The record demonstrates that BRW has taken steps to minimize and mitigate impacts to wildlife. It is not anticipated that the construction and operation of the Project will have a significant impact on wildlife given these steps and the requirements of the DSP.

P. Rare and Unique Natural Resources

244. Large electric generation facilities have the potential to negatively impact rare and unique natural resources. The majority of the rare and unique natural features identified during MnDNR's NHIS data review for the project area is butterflies and vascular plants. These are primarily concentrated in the western edge of the project area in association with existing state-owned WMA properties, TNC's Hole-In-The Mountain Prairie, and grassland dominated areas.[252]

245. The USFWS provides distribution lists of federally listed threatened, endangered, and candidate species on a county-by-county basis. The USFWS county list indicates that Lincoln and Pipestone Counties are within the range (i.e., has documented records, harbors critical habitat, or has the potential to harbor critical habitat for the designated species) of the federally listed threatened northern long-eared bat, western prairie fringed orchid (*Platanthera praeclara*), Poweshiek's skipperling, and Dakota skipper, and the federally listed endangered Topeka shiner. In the state of Minnesota, the

[250] Comments of DOC-EERA (August 3, 2020) (eDocket No. 20208-165565-01);
Comments of DOC-EERA with DSP Modifications (Sept. 4, 2020) (eDocket No. 20209-166418-01).
[251] Comments of DOC-EERA (August 3, 2020) (eDocket No. 20208-165565-01);
Comments of DOC-EERA with DSP Modifications (Sept. 4, 2020) (eDocket No. 20209-166418-01).
[252] Ex. 113 – Environmental Report (Text) at 51-53 (June 23, 2020) (eDocket No. 20206-164214-01).

western prairie fringed orchid and the Dakota skipper are designated by the state as endangered.[253]

246. Results from the MnDNR NHIS database review for the Project Area indicated 129 element occurrence records (EOR) of 27 different types of rare plants or animals within 1 mile of the Project Area. Seventy-four percent of EORs were outside the specified 2.5-mile Project boundary. The mapped occurrences include 11 records of 9 vertebrate species, with only 2 species, Blanding's turtle and Richardson's ground squirrel, within the Project Area. Among invertebrates, there are 49 records from among 8 invertebrate species, with 69% of EORs outside the Project Area. Among the 10 plant species, there are 40 EORs, with 78% outside the Project Area. The NHIS maintains that it is not an exhaustive inventory, and thus does not represent all occurrences of rare features within the state. In addition, ecologically significant features for which the NHIS has no records may exist within the Project Area.[254] MnDNR has mapped rare and unique native plant communities as part of its NHIS database. These native plant communities have the potential to provide habitat for rare species of flora and fauna.[255]

247. The impetus for the listing of the northern long-eared bat by USFWS was primarily due to the threat posed by the white-nose syndrome (WNS), a fungal disease that has affected several bat populations. The decision to list the bat as threatened with a 4(d) rule provides protection to address conservation needs of this bat species. For areas in the United States where WNS affects bat populations, the conservation measures provided in the 4(d) rule exempt "take" (defined under the ESA as harming, harassing, or killing of protected species) as a result from certain activities. The USFWS consider all Minnesota counties to be a part of the WNS zone as of June 30, 2017, and thus the Project Area is within the WNS zone. The 4(d) rule applies to the Project Area, but would only affect the project in terms of tree clearing restrictions if a roost tree was confirmed within the Project. The closest known northern long-eared bat roost tree to the Project Area is approximately 140 miles to the northeast in Carver and Scott Counties.[256]

248. The current layout attempts to minimize impacts to avian species and their habitats by concentrating activity in agricultural lands. By siting the turbines in cultivated fields and designing the associated infrastructure to avoid or minimize impacts on the native plant communities, grasslands, wetlands, and streams, BRW has designed the Project facilities to avoid and minimize impacts on avian grassland species of concern, including direct (mortality) and indirect (displacement, habitat loss, and fragmentation) impacts.[257]

249. The majority of identified rare and unique natural features flagged during the MnDNR's NHIS data review for the Project Area are of grassland-associated invertebrates (butterflies) and vascular plants concentrated in the eastern edge of the Project Area in association with existing state-owned WMA properties, and TNC's Hole-

[253] Ex. 216 – Revised Application for Site Permit at 105 (August 12, 2019).
[254] *Id*. at 108.
[255] *Id*. at 111.
[256] *Id*. at 105-06.
[257] *Id*. at 113.

In-The-Mountain Prairie, and grassland dominated areas. Proactive avoidance of native grassland habitat and public lands within the Project Area has been suggested by the MnDNR to the greatest extent practicable. Furthermore, limiting impacts to native grassland and wetland areas during the construction and siting process will reduce the potential impacts for these rare and unique natural features.[258]

250. MnDNR noted in its July 31, 2020, comments that TNC had recommended relocating turbines to avoid harmful impacts to native prairie, conservation lands, and wildlife within the IBAs and TNC's Hole-in-the-Mountain Prairie Preserve. MnDNR acknowledged that TNC's recommendation to relocate turbines farther from the Hole-in-the-Mountain Prairie Preserve could benefit wildlife as well as the recreational experiences of visitors to nearby Hole-in-the-Mountain WMA.[259] The overlap of the IBA with the Project boundary, however, does not indicate actual land use within that area; in fact, the IBA area within the Project boundary is over 80% cultivated row crops or other development. Also, eight of the nine Project turbines that overlap the IBA are located in cultivated row crops, while the ninth turbine is located in non-native grassland along an access road used for the previous Buffalo Ridge wind project. These nine turbines, even though technically within the IBA, were sited with a focus on utilizing disturbed areas to the maximum extent possible in order to minimize environmental impacts. The IBA designation was intended to protect birds in the rich and diverse grassland bird community found to the west of the Project boundary on TNC lands.[260]

251. While noting that some of its concerns still stand, TNC withdrew its request that the Commission delay the certificate of need and site permit for the project. TNC acknowledged the difficulty of and numerous constraints involved in relocating turbines and towers at this stage of the process. TNC has been in discussions with BRW, is committed to working collaboratively with BRW, and is focusing on the compatibility of the mutual operations, especially regarding prescribed fire on its lands essential to maintaining native prairie. TNC stated that it does not intend to pursue further action on the project through the PUC process.[261]

252. Sections 4.6, 4.7, 7.1, and 7.5 of the DSP, as modified, identify conditions to monitor and mitigate the Project's potential impacts on rare and unique natural resources including wildlife.[262]

Q. Cultural and Archaeological Resources

253. The majority of the Project Area is located in the Prairie Lakes archaeological sub-region, with a small portion of the northeast corner occurring within the Southwest Riverine archaeological sub-region. The Prairie Lakes Archaeological Region covers most of southwestern and south central Minnesota and includes a small

[258] *Id*. at 114.
[259] Comments of MnDNR (July 31, 2020) (eDocket No. 20207-165490-01).
[260] Comments of BRW (August 21, 2020).
[261] Comments of TNC (Aug. 18, 2020) (eDocket No. 20208-166057-01).
[262] Comments of DOC-EERA (August 3, 2020) (eDocket No. 20208-165565-01);
Comments of DOC-EERA with DSP Modifications (Sept. 4, 2020) (eDocket No. 20209-166418-01).

portion of northeast Pipestone County. Archaeological resources are predominantly concentrated along Lake Benton and its associated drainages in this area; specifically, resources would be expected near water sources on terraces, bluffs, and hilltops. However, archaeological resources have been documented in all kinds of landforms within the region.[263]

254. In February 2019, BRW met with the State Historic Preservation Office (SHPO) and Minnesota Office of the State Archaeologist (OSA) to gather cultural resources records related to the Project Area. A Phase Ia cultural resources literature review (literature review) was conducted for the Project Area as well as one mile surrounding the Project Area. The literature review did not identify historic properties listed on the National Register of Historic Places (NRHP), Minnesota State Historic Sites Network, or the Minnesota State Register of Historic Places located within the Project Area.[264]

255. The literature review identified 2 NRHP listed architectural resources, 18 other architectural resources, 12 archeological sites, and 6 site leads documented within the area evaluated. The two NRHP architectural inventory resources are the Ernest Osbeck House and the Lake Benton Opera House and Kimball Building, both of which are located outside of the Project Area in the City of Lake Benton, Minnesota. The Ernest Osbeck House is listed on the NRHP under Criteria B and C and is significant for its association with Ernest Osbeck, grocery merchant and commercial and social developer, and as one of the most prominent residential structures in the City of Lake Benton. The Lake Benton Opera House and Kimball Building are listed on the NRHP under Criterion A and are significant as well-preserved structures that played a central role in the cultural and commercial development in the community of Lake Benton.[265]

256. Two architectural resources are located within the northwest corner of the Project Area. The resources are highway segments, and the inventory forms do not provide date of construction or the NRHP eligibility evaluation. One other architectural resource within the Project Area was identified as a historic precast concrete box bridge and exists within Hope Township. The remainder of the other architectural resources are outside of the Project Area but are located within a mile of the Project Area. A large portion of these are located in the City of Lake Benton. Further, these resources have not been evaluated for the NRHP.[266]

257. The literature review identified four previously recorded archaeological sites and one site lead within the Project Area. The four sites are isolated finds of single pieces of lithic debitage. The site lead is considered an undetermined site type. There are ten previously documented archaeological sites and five archaeological site leads within one mile of the Project Area. The eight sites include seven prehistoric period archaeological sites and one historic period archaeological site. Three of these sites have not been

[263] Ex. 216 – Revised Application for Site Permit at 54 (August 12, 2019).
[264] *Id*. at 54.
[265] *Id*. at 54-55.
[266] *Id*. at 55.

formally evaluated for the NRHP, three sites have been deemed eligible for the NRHP, and two sites have been investigated and recommended as not eligible for the NRHP. The five archaeological site leads include four undetermined sites and one prehistoric mound group site. All five site leads have not been formally evaluated for the NRHP.[267]

258. Prior to initiating archaeological surveys, BRW conducted micrositing to identify suitable locations for facility components. BRW invited several Native American tribes in the area to participate in micrositing and subsequent archaeological surveys and various tribes participated including Spirit Lake Tribe, Yankton Sioux Tribe, Upper Sioux Community, Rosebud Sioux Tribe, and Lower Sioux Indian Community. BRW will coordinate with the participating tribes to ensure that any tribal concerns are addressed. Coordination with tribes is expected throughout the duration of the Project.[268]

259. BRW will attempt to avoid impacts to previously recorded archaeological resources that are considered significant and to any discovered significant archaeological, architectural, or Native American sensitive resources during all phases of the Project. If significant archaeological resources are identified, the integrity and significance of the resource(s) will be assessed in terms of the potential for NRHP eligibility. If the identified resource(s) are determined to be significant and cannot be avoided by the Project, further investigation and mitigation of the resource may be needed and will be coordinated with the tribes, SHPO, and OSA. While avoidance of archaeological resources would be the preferred option, mitigation of impacts to NRHP-eligible archaeological resources may be necessary. The results of this investigation or mitigation will be described and documented on a case-by-case basis by compilation into a report, or reports, and shared with the tribes, SHPO, and OSA. BRW will develop and implement an Unanticipated Discoveries Plan to be followed if cultural resources or human remains are inadvertently discovered to ensure that the appropriate authorities (SHPO and OSA, as applicable) are involved quickly and in accordance with local and state regulations.[269]

260. The DSP also adequately addresses archeological and historical resources. Section 5.3.16 of the DSP requires BRW to make every effort to avoid impacts to identified archaeological and historic resources. If a resource is encountered, BRW is required to contact and consult with SHPO and OSA. Where feasible, avoidance of the resource is required. Where not feasible, mitigation must include an effort to minimize Project impacts consistent with SHPO and the State Archaeologist's requirements. In addition, before construction, workers will be trained about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties are found. If human remains are found during construction, BRW is required by the DSP to immediately halt construction at such location and promptly notify local law enforcement and the State Archaeologist. Construction at such location shall not proceed until authorized by local law enforcement or the State Archaeologist.

[267] *Id*. at 56.
[268] *Id*. at 58.
[269] *Id*. at 59.

261. With these avoidance and mitigation measures in place and requirements of the DSP, impacts on cultural and archeological resources are expected to be minimal.

XI. SITE PERMIT CONDITIONS

A. February 26, 2020 DSP Conditions

262. The DSP issued on February 26, 2020, includes a number of proposed permit conditions, some of which have been discussed above. Many of these conditions were established as part of the site permit proceedings or other wind turbine projects permitted by the Commission. The record reflects that comments received by the Commission have been considered in development of the DSP for this Project.

263. DOC-EERA proposed special conditions to the DSP based on comments received from Leslie Wigton and MASWCD.[270] In the DSP, those two proposed conditions read as follows:

> **6.1 Leslie Wigton Property**
>
> The Permittee shall work with Mr. Leslie Wigton of Lake Benton, MN to locate and/or relocate the proposed underground collection cables in such a manner that shall: 1) avoid the potential for interference on the existing drain tiles or proposed modifications or additions to future drain tiles that Mr. Wigton can provide prior to construction; and 2) avoid harm or damage to lands and grasses established and maintained for wildlife. The Permittee shall file documentation describing how harm or damage to existing or proposed drain tiles and lands and grasses established for wildlife will be avoided or describe any agreement reached by the Permittee and Mr. Wigton. This documentation shall be filed at least two weeks prior to the pre-construction meeting (Section 10.1).
>
> **6.2 Soil and Water Conservation District (SWCD) and Landowner Review of Plans**
>
> The Permittee shall provide the local SWCD and participating landowners with the opportunity to review and comment on detailed access road plans, and all other infrastructure plans and designs in order to minimize the potential to pond and divert water creating gully erosion or the potential to cause damage or failure to existing conservation practices, such as terrace(s), sediment control basin(s) or diversion(s) prior to finalization and installation. The Permittee shall file documentation verifying compliance at least two weeks prior to the pre-construction meeting.

[270] Ex. 106 – DOC EERA Comments and Recommendations on Preliminary Draft Site Permit at 11-14 (January 24, 2020) (eDocket No. 20201-159562-02).

264. On August 21, 2020, BRW indicated in its comments that it is agreeable to proposed special conditions 6.1 and 6.2.[271]

B. August 3, 2020 DOC-EERA Recommended Conditions

265. On August 3, 2020, DOC-EERA made updates and modifications to the DSP, and included additional recommended Site Permit Conditions.[272]

266. With regard to ADLS, DOC-EERA recommended adoption of the additional language underlined below for Condition 5.3.28:[273]

> **5.3.28 Federal Aviation Administration Lighting**
>
> Towers shall be marked as required by the FAA. There shall be no lights on the towers other than what is required by the FAA. This restriction shall not apply to infrared heating devices used to protect the wind monitoring equipment.
>
> The Permittee shall install and employ an FAA-approved lighting mitigation system. Such a system shall use aircraft detection (aircraft detection lighting system, ADLS), dimming (light intensity dimming solution, LIDS) or other FAA-approved mitigation method. The Permittee shall describe the lighting mitigation system used for the project in its site plan.

267. On August 21, 2020, BRW indicated in its comments that it was agreeable to this additional language proposed for Site Permit Condition 5.3.28.[274]

268. With regard to the "Other Permits and Regulations" compliance filing included in the DSP, DOC-EERA recommended adoption of the additional language underlined below for condition 5.6.2: [275]

> **5.6.2 Other Permits and Regulations**
>
> The Permittee shall comply with all applicable state rules and statutes. The Permittee shall obtain all required permits for the project and comply with the conditions of those permits unless those permits conflict with or are preempted by federal or state permits and regulations. At least 14 days prior to the preconstruction meeting, the Permittee shall submit a filing with a detailed status update of all permits, authorizations, and approvals that have been applied for specific to the project. The detailed status update shall include the permitting agency or authority, the name of the permit,

[271] Comments of BRW (August 21, 2020).
[272] Comments of DOC-EERA (August 3, 2020) (eDocket No. 20208-165565-01).
[273] *Id*.
[274] Comments of BRW (August 21, 2020).
[275] Comments of DOC-EERA (August 3, 2020) (eDocket No. 20208-165565-01).

authorization, or approval being sought, contact person and contact information for the permitting agency or authority, brief description of why the permit, authorization, or approval is needed, application submittal date, and the date the permit, authorization, or approval was issued or is anticipated to be issued.

The Permittee shall demonstrate that it has obtained all necessary permits, authorizations, and approvals by filing an affidavit stating as such, prior to commencing project construction.

The Permittee shall provide a copy of any such permits, authorizations, and approvals upon Commission request. The Permittee shall comply with all terms and conditions of permits or licenses issued by the Counties, cities, and municipalities affected by the project that do not conflict with or are not pre-empted by federal or state permits and regulations.

A list of the permits known to be required is included in the permit application. The Permittee shall submit a copy of such permits to the Commission upon request.

269. On August 21, 2020, BRW indicated in its comments that it was agreeable to this additional language proposed for Site Permit Condition 5.6.2.[276]

270. DOC-EERA also proposed new language for the "Operational Phase Fatality Monitoring" and "Avian and Bat Protection Plan" conditions, which under DOC-EERA's modified DSP, read as follows: [277]

7.6 Operational Phase Fatality Monitoring

The Permittee shall utilize a qualified third party to conduct a minimum of two full years of avian and bat fatality monitoring following the commencement of the operational phase of the project. Monitoring activities and results will be coordinated directly with MN DNR, USFWS, and the Commission. Detailed monitoring protocols, agency coordination, and any avoidance and minimization measures will be detailed in the project's ABPP.

7.9 Avian and Bat Protection Plan

The Permittee shall comply with the provisions of the most recently filed and accepted version of the Avian and Bat Protection Plan (ABPP). The initial version of the ABPP submitted for this project as part of the Month, Day, Year Site Permit Application, and all necessary revisions that occur during the permit issuance process will be incorporated into a Permit Version. The Permit Version of the ABPP will be filed with the Commission 14 days before

[276] Comments of BRW (August 21, 2020).
[277] Comments of DOC-EERA (August 3, 2020) (eDocket No. 20208-165565-01).

the preconstruction meeting, and revision will include any updates associated with the final construction plans and site plans.

The ABPP must address steps to be taken to identify and mitigate impacts to avian and bat species during the construction phase and the operation phase of the project. The ABPP shall also include formal and incidental post-construction fatality monitoring, training, wildlife handling, documentation (e.g., photographs), and reporting protocols for each phase of the project.

The Permittee shall, by the 15th of March following each complete or partial calendar year of operation, file with the Commission an annual report detailing findings of its annual audit of ABPP practices. The annual report shall include summarized and raw data of bird and bat fatalities and injuries and shall include bird and bat fatality estimates for the project using agreed upon estimators from the prior calendar year. The annual report shall also identify any deficiencies or recommended changes in the operation of the project or in the ABPP to reduce avian and bat fatalities and shall provide a schedule for implementing the corrective or modified actions. The Permittee shall provide a copy of the report to the Department of Commerce – Energy Environmental Review and Analysis, Minnesota Department of Natural Resources and to the U.S. Fish and Wildlife Service (FWS) at the time of filing with the Commission.

271. On August 21, 2020, BRW indicated in its comments that it was agreeable to this additional language proposed for these two conditions.[278]

272. With regard to the "Immediate Incident Reports" condition included in the DSP, DOC-EERA recommended adoption of modified language, struck through or underlined below, for Condition 7.12: [279]

7.12 Immediate Incident Reports

The Permittee shall notify the Commission, Department of Commerce Energy Environmental Review and Analysis staff (DOC EERA), the FWS, and the DNR within 24 hours of the discovery of any of the following:

(a) five or more dead or injured birds or bats, at an individual turbine location, within a five-day reporting period;

(b) Twenty or more dead or injured birds or bats, across the entire site, within a five-day reporting period;

[278] Comments of BRW (August 21, 2020).
[279] Comments of DOC-EERA (August 3, 2020) (eDocket No. 20208-165565-01).

(c) one or more dead or injured state threatened, endangered, or species of special concern; ~~federally listed species, including species proposed for listing~~; or

(d) one or more dead or federally listed species, including species proposed for listing; or ~~one or more dead or injured bald or golden eagle(s)~~.

(e) one or more dead or injured bald or golden eagle(s).

273. On August 21, 2020, BRW indicated in its comments that it was agreeable to these modifications to Site Permit Condition 7.12.[280]

274. DOC-EERA also proposed a replacement decommissioning condition for Condition 11.1, which read as follows: [281]

11.1 Decommissioning Plan

The Permittee shall comply with the provisions of the most recently filed and accepted Decommissioning Plan. The initial version of the Decommissioning Plan was submitted for this project as part of the July 17 and August 9, Site Permit Applications. The Permittee shall file an updated decommissioning plan, incorporating comments and information from the permit issuance process and any updates associated with the final construction plans, with the Commission 14 days before the preconstruction meeting. The decommissioning plan shall be updated every five years following the commercial operation date.

The plan shall provide information identifying all surety and financial securities established for decommissioning and site restoration of the project in accordance with the requirements of Minn. R. 7854.0500, subp. 13. The decommissioning plan shall provide an itemized breakdown of costs of decommissioning all project components, which shall include labor and equipment. The plan shall identify cost estimates for the removal of turbines, turbine foundations, underground collection cables, access roads, crane pads, substations, and other project components. The plan may also include anticipated costs for the replacement of turbines or repowering the project by upgrading equipment.

275. On August 21, 2020, BRW indicated in its comments that it was agreeable to these modifications to Site Permit Condition 11.1.[282]

276. Based upon the record and agreement of DOC-EERA and BRW, the proposed changes to the DSP are reasonable.

[280] Comments of BRW (August 21, 2020).
[281] Comments of DOC-EERA (August 3, 2020) (eDocket No. 20208-165565-01).
[282] Comments of BRW (August 21, 2020).

277. Based on the foregoing Findings of Fact and the record in this proceeding, the Administrative Law Judge respectfully recommends that the Commission adopt of the following:

CONCLUSIONS OF LAW

1. Any of the foregoing Findings of Fact more properly designated as Conclusions of Law are hereby adopted as such.

2. The Commission has jurisdiction over the Application pursuant to Minn. Stat. § 216F.04.

3. The BRW, EERA, and the Commission have complied with all applicable procedural requirements for obtaining an amended Site Permit under chapter 216F of the Minnesota Statutes and chapter 7854 of the Minnesota Rules, including publishing the application notice in a newspaper of general circulation in Pipestone County; mailing the notice and application to the county board, each city council, and each township board in Pipestone County, where the Project is to be located; and holding a public informational meeting and comment period. Minn. R. 7854.0500; Minn. R. 7854.0900.

4. The Draft Site Permit, as modified by DOC-EERA through September 4, 2020, contains a number of important mitigation measures and other reasonable conditions.

5. The Site Permit for the Project should be conditioned in a number of respects, including those mitigation measures and other reasonable conditions included in the Draft Site Permit as modified by DOC-EERA through September 4, 2020

6. The Project, with the Draft Site Permit conditions revised as set forth above, satisfies the site permit criteria for an LWECS under Minnesota Statutes §§ 216F.03 and 216E.03, subd. 7, and meets all other applicable legal requirements.

7. The Project, with the permit conditions discussed above and included in the Draft Site Permit, does not present a potential for significant adverse environmental effects as those terms are used in the Minnesota Environmental Rights Act and the Minnesota Environmental Policy Act.

8. The Administrative Law Judge was authorized to hold the July 22, 2020, hearing remotely due to the COVID-19 pandemic, with such authority having been assured through Executive Order No. 20-58 (2020). The Order authorized the Commission to hold in-person meetings, hearings, or other gatherings by telephone and other electronic means in accordance with Minnesota Statutes 2019, section 13D.021.

9. Any of the foregoing Conclusions of Law which are more properly designated Findings of Fact are hereby adopted as such.

Based on the Findings of Fact and Conclusions of Law contained herein and the entire record of this proceeding, the ALJ hereby makes the following recommendation:

RECOMMENDATION

Issuance of a Site Permit to Buffalo Ridge Wind, LLC to construct and operate the up to 108.9 MW Buffalo Ridge Wind Project in Lincoln and Pipestone Counties, and that the issued Site Permit contain the conditions as set forth in the foregoing Findings of Fact and Conclusions of Law.

Dated: October 1, 2020

BARBARA J. CASE
Administrative Law Judge

MINNESOTA
OFFICE OF
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October 1, 2020

See Attached Service List

Re: ***In the Matter of Buffalo Ridge Wind, LLC 109 MW Buffalo Ridge Wind Project in Lincoln and Pipestone Counties***

OAH 82-2500-36550
MPUC WS-19-394; CN-19-309

To All Persons on the Attached Service List:

Enclosed and served upon you is the Administrative Law Judge's **FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION** in the above-entitled matter.

If you have any questions, please contact me at (651) 361-7888, lisa.armstrong@state.mn.us, or via facsimile at (651) 539-0310.

Sincerely,

LISA ARMSTRONG
Legal Assistant

Enclosure
cc: Docket Coordinator

STATE OF MINNESOTA
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600 NORTH ROBERT STREET
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CERTIFICATE OF SERVICE

In the Matter of Buffalo Ridge Wind, LLC 109 MW Buffalo Ridge Wind Project in Lincoln and Pipestone Counties	OAH Docket No.: 82-2500-36550 MPUC WS-19-394; CN-19-309

Lisa Armstrong certifies that on October 1, 2020, she served the true and correct **FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION** by electronic service to the following individuals:

MPUC WS-19-394

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MPUC CN-19-309

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