STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS FOR THE
MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of the Application of Walleye Wind, LLC for a Certificate of Need for the up to 110.8 MW Walleye Wind Project in Rock County, Minnesota	MPUC Docket No. IP-7026/WS-20-384 OAH Docket No. 5-2500-37275

WALLEYE WIND, LLC'S PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION

June 2, 2021

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On Behalf of
Walleye Wind, LLC

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This matter was assigned to Administrative Law Judge James Mortenson ("ALJ") to conduct a public hearing on the Certificate of Need ("CON") (MPUC Docket No. 20-269) and Site Permit (MPUC Docket No. 20-834) Applications of Walleye Wind, LLC ("Walleye Wind" or "Applicant") for an up to 110.8 megawatt ("MW") wind energy conversion system in Rock County (the "Project") and to prepare a full report, including findings and recommendations, on the Site Permit Application. As discussed below, in its June 2, 2021 Reply Comments, Walleye Wind clarified that the projected capacity of the Project is up to 109.7 MW.[1]

A public hearing on the Site Permit and CON Applications for the Project was held remotely, by telephone, on May 4, 2021. The time period for written comments from the public remained open until May 20, 2021, with an allowance for the Department of Commerce, Division of Energy Resources ("DOC-DER") to submit comments on the CON no later than June 21, 2021. Responses were due by June 2, 2021, and June 28, 2021 with respect to responses to DOC-DER's comments.

Brian M. Meloy, Stinson LLP, 50 South Sixth Street, Suite 2600, Minneapolis, Minnesota 55402; Mike Weich, Project Director of Development for Walleye Wind; Chris Ollson, PHD, Health and Safety Consultant with Ollson Environmental Health Management; Jessica Miller, Environmental Consultant with ETC, Inc.; Peter Gorney, Project Engineer for Walleye Wind; Michelle Phillips, Environmental Specialist for Walleye Wind; Richard Lampeter, Sound and Shadow Flicker consultant with Epsilon Associates, Inc.; and Alex Pantouris, Senior Director Wind Fleet with Walleye Wind, appeared on behalf of the Applicant.

Suzanne Steinhauer, Environmental Review Manager, 445 Minnesota Street, Suite 1500, St. Paul, MN 55101 appeared on behalf of the Department of Commerce, Energy Environmental Review and Analysis ("DOC-EERA").

Mike Kaluzniak, Senior Energy Facility Planner, 121 Seventh Place East, Suite 350, St. Paul, MN 55101 appeared on behalf of the Minnesota Public Utilities Commission ("Commission").

[1] Post Hearing Reply Comments of Walleye Wind at 27 (June 2, 2021) ("Walleye Wind Post Hearing Comments").

STATEMENT OF ISSUE

Has the Applicant met the criteria to receive a Site Permit for the proposed approximately 109.7 MW Large Wind Energy Conversion System ("LWECS") located in Rock County, under the applicable sections of Chapter 216E and Chapter 216F of Minnesota Statutes and Chapter 7854 of Minnesota Rules?

SUMMARY OF RECOMMENDATION

The ALJ concludes that Walleye Wind 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. Walleye Wind is an indirect, wholly-owned subsidiary of NextEra Energy Resources, LLC ("NEER").[2]

2. DOC-EERA is authorized by the Commission to hold public information meetings, to collect and analyze Walleye Wind's Site Application, and to provide an environmental report,[3] summary, analysis, and recommendation for the Commission's review. DOC-DER is authorized to provide comments and recommendations on the CON Application.

II. SITE PERMIT APPLICATION AND RELATED PROCEDURAL BACKGROUND

3. On June 9, 2020, and as revised on November 3, 2020 and clarified on June 2, 2021, Walleye Wind submitted an application to the Commission for a Site Permit to construct and operate the up to 109.7 MW Project to be located in Rock County in southwestern Minnesota, west of the City of Luverne, near the South Dakota and Minnesota border.[4] The Application and its revision were filed pursuant to Minnesota Statutes § 216F.04 and Minnesota Rules Chapter 7854.

4. On July 21, 2020, the Commission issued a Notice of Comment Period on Application Completeness, requesting comment on:

- Does the certificate of need application contain the information required under Minnesota Rules 7849.0240, 7849.0250, and 7849.0700 to 7849.0340, as modified by the Commission's April 8, 2020 Order?

[2] Exhibit 235 – Amended Application for Site Permit at 1 (November 4, 2020) (eDocket No. **202011-168046-02**) ("Amended Site Application").

[3] Minn. R. 7849.1200-1700.

[4] Exhibit 235 – Amended Site Application at 6.

- Does the site permit application contain the information required under Minnesota Rule Chapter 7854.0500?
- Are there contested issues of fact with respect to the representations made in the applications?
- Should the applications be referred to the Office of Administrative Hearings for a contested case proceeding?
- Are there other issues or concerns related to this matter?[5]

5. On July 31, 2020, DOC-EERA commented that the Site Permit Application was substantially complete, and requested (i) clarification on the turbines that would be used under the "base case option" and an alternative "option 2"; and (ii) the status of the Applicant's efforts to obtain all required wind rights necessary for the Project.[6] The Laborers District Council of Minnesota & North Dakota ("LIUNA") commented that the Site Application and the CON Application provided the necessary information to be deemed complete.[7]

6. In its July 31, 2020 comments, Minnesota Department of Transportation, Office of Land Management ("MnDOT") commented that Walleye Wind should consider an alternative location for wind turbine no. 21, as MnDOT indicated that it has no interest in entering into the participation agreement needed to support the proposed location.[8]

7. On August 3, 2020, Walleye Wind submitted reply comments. In response to DOC-EERA's request clarification, Walleye Wind (a) explained that that its Base Case Option uses the General Electric ("GE") 2.32 MW as the safe harbor turbines, while Option 2 uses the GE 2.5 MW as the safe harbor turbines; and (b) committed to submitting an update showing the latest status of rights and any layout modifications.[9] Walleye Wind also provided additional information on Minnesota Municipal Power Agency's ("MMPA") Renewable Energy Standard ("RES") requirements, as MMPA has entered into a long-term power purchase agreement to purchase the output of the Project.[10] With respect to MnDOT's concern with regard to wind turbine no. 21, Walleye Wind indicated it would work with MnDOT on its relocation.[11]

8. On October 20, 2020, the Commission issued an Order ("October 20 Order") accepting the Site Application and CON Application as substantially complete, and directing that: (1) the public hearing held on the CON Application be held jointly with the public hearing on the Site Permit Application; and (2) Walleye Wind file status reports on its efforts to acquire the

[5] Exhibit 304 – Notice of Comment Period (July 21, 2020) (eDocket No. **20207-165151-01)**

[6] Exhibit 100 – DOC-EERA Comments and Recommendations on Application Completeness at 7 (July 31, 2020) (eDocket No. **20207-165478-02**).

[7] Exhibit 500 – LIUNA Comments at 1 (July 31, 2020) (eDocket No. **20207-165482-02**).

[8] Exhibit 702 – MnDOT comments at 1 (July 31, 2020) (eDocket No. **20207-165473-01**).

[9] Exhibit 229 – Walleye Wind Reply Comments at 1 (August 3, 2020) (eDocket No. **20208-165560-02**).

[10] *Id*. at 3.

[11] *Id.* at 4.

needed wind rights for the Project and information on its interconnection rights 14 days prior to the public information meeting on the draft site permit template.[12]

9. On November 4, 2020, Walleye Wind submitted an amended Site Permit Application that included the following changes:

- Two primary and three alternate wind turbine locations removed;
- Five primary wind turbines changed to alternate;
- Seven alternate wind turbines activated to primary;
- Fourteen wind turbines shifted locations;
- Four wind turbines changed from GE 2.82 MW to safe harbor model GE 2.32 MW turbines;
- Three wind turbines changed from a safe harbor GE 2.32 to model GE 2.82;
- Noise Reduced Operations ("NRO") technology was added to six model GE 2.82 wind turbines: and
- Three wind turbines model GE 2.82 changed hub heights.[13]

10. On November 19, 2020, the Commission issued a Notice of Comment Period on Walleye Wind's Amended Site Application, with initial comments due December 9, 2020, and reply comments due December 16, 2020.[14]

11. On December 3, 2020, Walleye Wind submitted confirmation that pursuant to the Commission's October 20 Order and Minn. R. part 7854.0600, it had completed the applicable post-completion determination notice requirements.[15] Walleye Wind confirmed that it provided all required direct mail notices and newspaper publications concerning the Application. Walleye Wind 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 Site Permit Application was sent to the Minnesota Historical Society.

12. On December 9, 2020, EERA filed comments on Walleye Wind's Amended Site Application noting that it does not believe that any information provided in the amended application or public comments filed in the record as of December 8, 2020, should cause a change in the Commission's acceptance in its October 20 Order.[16] LIUNA also filed comments recommending expedited review of the Project on December 9, 2020.[17]

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[12] Exhibit 310 – Commission Order Accepting Applications as Complete, Establishing Review Procedures, and Granting Variances at 5 (October 20, 2020) (eDocket No. **202010-167530-01**) ("Commission October 20 Order").

[13] Exhibit 234 – Walleye Wind Cover Letter re: Amended Site Application at 2 (November 4, 2020) (eDocket No. **202011-168046-01**).

[14] Exhibit 320 – Notice of Public Comment Period (November 19, 2020) (eDocket No. **202011-168440-02**).

[15] Exhibit 243– Completion Notice Requirements (December 3, 2020) (eDocket No. **202012-168741-01**).

[16] Exhibit 101 – Comments and Recommendations on Amended Certificate of Need and Site Permit Applications (December 9, 2020) (eDocket No. **202012-168895-01**).

[17] Exhibit 501 – LIUNA Comments (December 9, 2020) (eDockets No. **202012-168903-01**).

13. On December 18, 2020, the Commission issued a Notice of Public Information and Environmental Report ("ER") Scoping Meeting of Remote-Access Meeting to take place on January 5, 2021.[18] Through the Notice, the Commission sought comments at the Meeting or in writing by January 26, 2021 on the following questions: (1) What potential human and environmental impacts of the proposed Project should be considered in the ER and the draft site permit ("DSP")? (2) What are possible methods to minimize, mitigate, or avoid potential impacts of the proposed Project that should be considered in the ER and the DSP? (3) Are there any unique characteristics of the proposed site or the Project that should be considered? (4) Are there other ways to meet the stated need for the Project, for example, a different size project or a different type of facility? If so, what alternatives to the Project should be studied in the ER? (5) Are there any items missing or mischaracterized in any of the applications, or issues that need further development?

14. On December 21, 2020, Walleye Wind submitted an update of its Interconnection and Land Rights, indicating that it has a fully executed Generation Interconnection Agreement with the Midcontinent Independent System Operator, Inc. and, at that time, possessed approximately 80% of the land rights required to complete the Project, with the understanding that it has decided to drop turbine location no. 2.[19]

15. On January 5, 2021, the noticed Public Information and Environmental Report Scoping Meeting was held as a Remote-Access Meeting due to the COVID-19 pandemic. At the meeting, presentations were made by the Staff of the Commission, DOC-EERA and Walleye Wind, which provided detail on the Project, the ER to be prepared as part of the CON process, and the procedure for reviewing Walleye Wind's applications. As discussed in more detail below, oral comments were received at the meeting from the public and written comments were submitted after the meeting. Also, outside the scope and timing for the Public Information and Environmental Report Scoping Meeting, comments in support of Walleye Wind were submitted by LIUNA[20] and twenty individuals and representatives from the Project Area based on benefits to jobs and the economy as of March 4, 2021.[21] Also, three individuals submitted comments concerned about turbines placement or opposed to Walleye Wind, because of concerns with the Project or turbine placement as of March 4, 2021.[22] Comments were also submitted by Ms. Carol

[18] Exhibit 335 – Notice of Public Meeting (December 18, 2020) (eDocket No. **202012-169151-02**).

[19] Exhibit 244 – Walleye Wind Status Update (December 21, 2021) (eDocket No. **202012-169202-01**).

[20] Exhibit 500 – LIUNA Comments (July 31, 2020) (eDocket No. **20207-165482-02**).

[21] *See e.g.,* Exhibits 311 (eDockets No. **202011-168303-01**), 312 (eDockets No. **202011-168303-02**), 314-319 (eDockets Nos. **202011-168303-04**, **202011-168337-01**, **202011-168337-02**, **202011-168337-03**, **202011-168382-01** and **202011-168399-01**), 321-327 (eDockets Nos. **202011-168492-01**, **202011-168574-01**, **202011-168574-02**, **202011-168574-03**, **202011-168574-04**, **202011-168574-05** and **202011-168634-01**), 329 (eDocket No. **202011-168634-03**), 330 (eDocket No. **202011-168637-01**), 333 (eDocket No. **202012-168910-01**), 336-337 (eDocket Nos. **202012-169227**-01 and **202012-169354-01**) and 340 (eDocket No. **20211-169535-01**).

[22] *See* Exhibits 313 (eDockets No. **202011-168303-03**), 331 (eDockets No. **202011-168652-01**) and 334 (eDockets No. **202012-169126-01**).

Overland indicating an intent to potentially represent individuals in the proceeding.[23] MnDOT also filed comments expressing a concern with the location of wind turbine no. 21.[24]

16. On January 29, 2021, Walleye Wind clarified that it intends to construct 40 wind turbines, and provided new numbering of the primary and alternative turbines in its wind array, including the removal of turbine no. 21which MnDOT identified as a concern.[25]

17. On February 12, 2021, 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 recommended the Commission issue a DSP for the Project.[26]

18. On February 19, 2021, 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 March 4, 2021 Commission meeting.[27]

19. On February 24, 2021, Commission Staff submitted briefing papers in advance of the March 4, 2021 Commission meeting, reviewing comments submitted in the proceedings and recommending issuance of the DSP.[28]

20. On March 12, 2021, a prehearing conference via teleconference took place before ALJ Mortenson, involving representatives from Walleye Wind, DOC-EERA, and Commission Staff.

21. On March 18, 2021, Judge Mortenson issued a Scheduling Order ("First Scheduling Order") setting forth the procedural schedule for the review of Walleye Wind's CON and Site Applications. The First Scheduling Order set May 4, 2021 as the date of the public hearing on the Applicant's Site Application and the deadline for written comments from the public on May 20, 2021.[29]

22. On March 24, 2021, the Commission issued an Order: (1) authorizing issuance of the DSP, incorporating the proposed modification of DOC-EERA and specific Section 6.2 as proposed by Commission Staff; (2) requesting the ALJ to prepare a full report, including findings and recommendations on the Site Permit; and (3) directing Walleye Wind as the Applicant to:[30]

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[23] Exhibit 800 – Overland Comments (March 1, 2021) (eDocket No. **20213-171436-01**).

[24] Exhibit 702 – MnDOT Comments (July 31, 2020) (eDocket No. **20207-165473-01**).

[25] Exhibit 246 – Walleye Wind Informational Filing (January 29, 2021) (eDocket No. **20211-170488-02**).

[26] Exhibit 107 – DOC EERA Comments and Recommendations on Preliminary Draft Site Permit (January 24, 2020) (eDocket No. **20212-170942-01**).

[27] Exhibit 345 – Notice of Commission Meeting (February 19, 2021) (eDocket No. **20212-171137-01**).

[28] Exhibit 346 – Staff Briefing Papers (February 24, 2021) (eDocket No. **20212-171307-01**).

[29] Exhibit 601 – First Prehearing Order (March 18, 2021) (eDocket No. **20213-172016-02**).

[30] Exhibit 349 – Commission Order Issuing Draft Site Permit and Requesting ALJ Report (March 24, 2020) (eDocket No **20213-172143-01**) ("Commission March 24 Order").

> . . . maintain and file to eDockets combined site map(s) identifying each proposed and alternative turbine location by number, identifying receptor locations by number, and indicating the locations of roads, government-unit boundaries, and other major landmarks, for easy use by the public. The combined map(s) shall be clearly identified as such. All maps must be available at all public meetings. The applicant shall maintain a consistent numbering scheme throughout the project, and any time there is a turbine layout modification that would significantly change impacts on receptors, the applicant must file an updated version of the combined map(s) separately into the docket. All future direct notices sent to affected landowners with an identified receptor located on the property shall inform the landowner of the location of the reference maps in the docket file and shall identify the specific receptor number associated with that landowner's property.

23. On April 5, 2021, the Commission issued a Notice of Public Hearing to take place on May 4, 2021, indicating 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.[31] The Notice also indicated that due to the current COVID-19 pandemic, a remote-access public hearing would replace the standard in-person hearing. The notice also indicated that a comment period would be open through May 20, 2021 to address the following: "(1) Should the Commission issue a certificate of need for the proposed large wind energy conversion system? (2) Should the Commission grant a site permit for the proposed large wind energy conversion system? and (3) If granted, what additional conditions or requirements should be included in a permit?"[32]

24. On April 13, 2021, Walleye Wind submitted revised project maps as directed by the Commission in its March 24 Order[33] and also indicated it would mail the maps to affected landowners ahead of the May 4, 2021 hearing.[34] The cover map was also available at the May 4 public hearing in Walleye Wind's presentation.

25. On April 23, 2021, Walleye Wind submitted confirmation with the Commission that it has mailed a copy of Project maps filed on April 13, 2021 to potentially affected landowners in advance of the May 4, 2021 Public Hearing.[35] Included with the Project maps was a master list to allow landowners to identify their property in relation to proposed Project infrastructure.

26. Public Hearings were held, as scheduled, on May 4, 2021 at 1:00 p.m. and 6:00 p.m., with ALJ Mortenson presiding. The hearing was conducted remotely, by telephone, due to the dangers associated with the COVID-19 virus. At the Public Hearing, Project overviews were provided by Commission Staff, DOC-EERA, and Walleye Wind discussing the Project, the

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[31] Exhibit 351 – Notice of Public Hearing at 1 (April 5, 2021) (eDocket No. **20214-172592-01**). Exhibit 352 – Supplemental Notice (April 26, 2021) (eDocket No. **20214-173341-02**). Also, *see* Exhibit 252 – Affidavits of Publication of Notice in Newspapers (April 26, 2021) (eDocket No. **20214-173370-02**).

[32] Exhibit 352 – Supplemental Notice at 3.

[33] Exhibit 250 – Walleye Wind Updated Maps (April 13, 2021) (eDocket No. **20214-172884-01**).

[34] Exhibit 252 – Walleye Wind Affidavits of Mailing (April 26, 2021) (eDocket No. **20214-173290-01**).

[35] Exhibit 251 – Landowner Letter, Maps, and Mailing List (April 23, 2021) (eDockets No. **20214-173290-01**).

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, oral comments were received from the following 12 individuals: Nathan Runke, Alex Pouliot, Ms. Carol Overland, Patrick Baustian, Corey Krueger, Gary Overgaard, Kevin Pranis, Deborah Taubert, Belem Ozuna, Lucas Franco, Gregg Taubert, and Austin Carlson. These oral comments are discussed below.

27. By the May 20, 2021 deadline, written comments were received from (1) DOC-EERA; (2) Minnesota Department of Natural Resources ("MnDNR"); (2) LIUNA; (3) Walleye Wind Neighbors in Minnesota and South Dakota ("Walleye Neighbors"); and (4) other members of the public. These comments are discussed in detail below.

28. On June 2, 2021, Walleye Wind filed Post Hearing Comments responding to the comments submitted. These comments are discussed below.

III. CON APPLICATION AND RELATED PROCEDURAL BACKGROUND[36]

29. Given that the Project is over 50 MW, it qualifies as a "large energy facility," as defined in Minnesota Statutes § 216B.2421, subd. 2(1). Accordingly, pursuant to Minnesota Rules 7849.0200 and Minnesota Statutes § 216B.243, subd. 4, Walleye Wind is required to obtain a CON to construct and operate the Project.

30. On February 13, 2020, Walleye Wind filed a Request for Exemption from CON Application Content Requirements with the Commission requesting exemptions from certain CON data requirements.[37] Exemptions were requested primarily due to Walleye Wind being an independent power producer and having already executed a power purchase agreement with MMPA.

31. On February 25, 2020, the Commission issued a Notice of Comment Period on CON Exemption Requests, which opened an initial written comment period until March 6, 2020, and a reply comment period until March 9, 2020.[38]

32. On March 3, 2020, DOC-DER filed comments recommending that the Commission approve the exemption requests.[39]

[36] In light of the fact that the Site Permit and CON proceedings were administered jointly, the ALJ provides the procedural history related to the CON proceeding for the Commission's convenience. The Commission's March 24 Order (Exhibit 349) requested a Report only on the Amended Site Application. The Commission's October 20 Order directed that the CON be evaluated under the information process. The description of the comments submitted in this proceeding by members of the public also include comments on CON matters.

[37] Exhibit 200 – Petition For Exemption From Certain Certificate of Need Application Requirements (February 13, 2020) (eDocket No. **20202-160409-01**).

[38] Exhibit 300 – Notice of Comment Period (February 25, 2020) (eDocket No. **20202-160692-01**).

[39] Exhibit 400 – DOC-DER Comments (March 3, 2020) (eDocket No. **20203-160906-01**).

33. On April 8, 2020, the Commission issued an Order adopting DOC-DER filed comments recommending approval of the CON exemption requests.[40]

34. On July 9, 2020, Walleye Wind filed its CON Application.[41]

35. On July 24, 2020, the Commission issued a Notice of Comment Period on CON Application Completeness, announcing it would accept written comments through July 31, 2020, and reply comments through August 7, 2020.[42]

36. On July 23, 2020, DOC-DER filed comments recommending that Walleye Wind provide the following information: clarification of the nominal generating capacity of the facility; a discussion of the facility's, and each of its alternatives', total cost in current dollars per kilowatt hour; an explanation of whether MMPA's RES requirements are projected to be satisfied over the 2019-2033 planning period; and an explanation of how the facility will contribute to satisfying MMPA's requirements over the 2019-2033 planning period.[43]

37. On July 31, 2020 LIUNA filed a comment recommending that the CON Application be deemed complete.[44]

38. Walleye Wind filed reply comments on August 3, 2020, providing the information requested by DOC-DER and requesting that the Commission find the CON Application complete.[45]

39. On August 19, 2020, Commission Staff filed briefing papers recommending the Commission find the CON Application as substantially complete.[46]

40. On October 20, 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, and requiring the issuance of Project notices.[47]

41. On November 4, 2020, Walleye Wind submitted an Amended CON Application that included the following changes:

- Two primary and three alternate wind turbine locations removed;
- Five primary wind turbines changed to alternate;
- Seven alternate wind turbines activated to primary;

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[40] Exhibit 303 – Commission Order (April 8, 2020) (eDocket No. **20204-161896-01**).

[41] Exhibit 202 – Application for Certificate of Need (July 9, 2020) (eDocket No. **20207-164773-01**).

[42] Exhibit 304 – Notice of Comment Period (July 21, 2020) (eDocket No. **20207-165151-02**).

[43] Exhibit 401 – DOC-DER Comments (July 23, 2020) (eDocket No. **20207-165203-01**).

[44] Exhibit 500 – LIUNA Comments (July 31, 2019) (eDocket No. **20207-165482-01**).

[45] Exhibit 229 – Walleye Wind Response to Reply Comments (August 3, 2020) (eDocket No. **20208-165560-01**).

[46] Exhibit 309 – Staff Briefing Papers (August 19, 2020) (eDocket No. **20208-166024-02**).

[47] Exhibit 310 – Commission October 20 Order.

- Fourteen wind turbines shifted locations;
- Four wind turbines changed from GE 2.82 MW to safe harbor model GE 2.32 MW turbines;
- Three wind turbines changed from a safe harbor GE 2.32 to model GE 2.82;
- NRO technology was added to six model GE 2.82 wind turbines: and
- Three wind turbines model GE 2.82 changed hub heights.[48]

42. On December 3, 2020, Walleye Wind submitted confirmation that pursuant to the Commission's October 20 Order and Minn. R. part 7854.0600, it had completed the applicable notice requirements.[49]

43. On February 4, 2021, 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 109.2 MW wind generation project sited elsewhere in Minnesota; (2) a 109.2 MW solar farm; and (3) a "no-build" option, and other possible renewable alternatives.[50]

44. On March 31, 2021, the ER and Appendices A-E were filed by DOC-EERA. 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.[51] On April 22, 2021, DOC-EERA submitted revised maps for the ER.[52]

45. Notice of the availability of the ER was provided in the CON docket[53] and in the Environmental Quality Board Monitor.[54]

46. On May 11, 2021, Judge Mortenson issued an extension until June 21, 2021 for DOC-DER to submit its comments on the CON Application, with Walleye Wind provided until June 28, 2021 to file any reply comments.[55]

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[48] Exhibit 231 – Walleye Wind Cover Letter, re: CON Application Amendment at 2 (November 4, 2020) (eDocket No. **202011-168044-01**).

[49] Exhibit 243 – Completion Notice Requirements (December 3, 2020) (eDocket No. **202012-168741-02**).

[50] Exhibit 106 – Scoping Decision for Environmental Report (February 4, 2021) (eDocket No. **20212-170700-01**).

[51] Exhibit 109 – Environmental Report (Text) at 91 (March 31, 2021) (eDocket No. **20213-172427-01**).

[52] Exhibit 110, 114, 115, 117 – DOC-EERA Corrected Maps (eDocket Nos. **20214-173241-01**; **20214-173241-02**; **20214-173241-03**; **20214-173241-04**).

[53] Exhibit 350 – Notice of Availability of Environmental Report (April 5, 2021) (eDocket No. **20214-172561-02**).

[54] Exhibit 121 – Notice of Availability of Environmental Report The EQB Monitor (April 27, 2021) Volume 45, No. 15 (April 27, 2021) (eDocket No. **20214-173419-02**).

[55] Order on Extension (May 11, 2021) (eDocket No. **20215-174065-01**).

47. On May 12, 2021, Carol Overland submitted a Notice of Appearance on behalf of Walleye Neighbors, as well as a request to submit written comments on June 28, 2021, or, in the alternative June 10, 2021.[56]

48. On May 13, 2021, Walleye Wind submitted an objection to the Walleye Neighbors' request to extend the comment date, asserting that Walleye Wind had not shown good cause to extend the date, and the extension of the comment date would jeopardize Walleye Wind's ability to construct the Project in 2021.[57]

49. On May 17, 2021, Walleye Neighbors replied to Walleye Wind, reiterating the request for additional time to submit its comments, based, in part, on Walleye Neighbors not engaging Ms. Overland until after the public hearing.[58] On May 20, 2021, LIUNA filed a letter opposing Walleye Neighbors request for additional time to file comments.[59]

50. On May 21, 2021, Judge Mortenson issued an order denying the Walleye Neighbors' request for an extension of the May 20 comment date.[60]

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

IV. DESCRIPTION OF THE PROJECT

52. The Project's up to 109.7 MW will be generated using no more than 40 wind turbines. The total capacity will be generated using a combination of three potential GE models including the 2.82 MW, 114 meter ("m") hub height turbine; the 2.82 MW, 89 m hub height turbine; and the safe harbor 2.32 MW, 80 m hub height turbine. In total, 36 GE 2.82 MW wind turbines and four GE 2.32 MW wind turbines will be constructed.[61] The rotor diameter ("RD") for the GE 2.82s MW is 127.2 m, while for the GE 2.32 MW the RD is 116.5 m.[62] All of the turbines will attach Low Noise Trailing Edge ("LNTE") serrations on the turbine blades to reduce sound impacts. LNTE serrations will be the same color as the turbine blades and will cover approximately 20-30% of the trailing edge of the outboard blade length. In addition to the LNTE some turbines may utilize NRO, if required, to ensure compliance with sound requirements. The NRO mode reduces the sound power level by lowering the rotor speed, which lowers the blade tip speed, and can modify the blade pitch.[63]

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[56] Notice of Appearance and Request for Extension of Walleye Neighbors (May 12, 2021) (eDocket No. **20215-174078-01**; **20215-174077-01**).

[57] Objection of Walleye Wind (May 13, 2021) (eDocket No. **20215-174138-02**).

[58] Reply of Walleye Neighbors to Objection (May 17, 2021) (eDocket No. **20215-174191-01**).

[59] Letter of LIUNA (May 20, 2021) (eDocket No. **20215-174334-02).**

[60] Order on Second Request for Extension (May 21, 2021) (eDocket No. **20215-174406-01**).

[61] Exhibit 235 – Amended Site Application at 8.

[62] *Id.* at 14.

[63] *Id*.

53. The Project's wind turbines will 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 through factory-fabricated welds, which are automatically controlled and ultrasonically inspected during manufacturing per American National Standards Institute specifications.[64]

54. 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. [65]

55. The Project is expected to have an operational life of approximately 30 years.[66]

56. 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.[67]

57. Each turbine will have a step-up transformer to raise the voltage to the 34.5 kilovolt collection line system. Energy from the turbines will be routed through an underground electrical collection system that will deliver power to the Walleye Wind Substation.[68]

58. Walleye Wind proposes to begin construction of the Project in August-September of 2021, with a commercial operation date of December 2021.[69]

59. Walleye Wind plans to use local contractors and suppliers, where feasible, for portions of construction, which will contribute to the overall economy of the region. Table 32 of the Amended Site Application provides a breakdown of construction jobs anticipated and the estimated use of local labor.[70]

V. SITE LOCATION AND CHARACTERISTICS

60. The estimated size of the project boundary ("Project Area") is 31,095 acres (49 square miles) of largely rural landscape with agriculture and pastures located in southwestern Minnesota, west of the City of Luverne, near the South Dakota-Minnesota border.[71]

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[64] *Id*. at 16.

[65] *Id*. at 1.

[66] *Id.* at 140.

[67] *Id*. at 16.

[68] *Id*. at 17.

[69] *Id.* at 139.

[70] *Id*. at 81.

[71] *Id*. at 6.

61. Land use within the Project Area is primarily agricultural. Permanent land disturbance will be approximately 48.70 acres for turbines and associated facilities.[72]

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

VI. WIND RESOURCE CONSIDERATIONS

63. Walleye Wind's affiliate NextEra Analytics, Inc. ("NextEra Analytics") assessed the wind resource for the Project. Two MET towers were used in NextEra Analytics' analysis. The data was collected in ten-minute intervals at the Project's location for an average of one year. Based on the measured data, the overall average wind speed based on the turbine locations is 8.25 m/s at hub height.[73]

64. The prevailing frequency and energy direction sectors are south and northwest respectively.[74]

65. Walleye Wind expects an annual net capacity factor of approximately 40.7% to 48.1% and a projected average annual output of 431,947 megawatt hours.[75]

VII. WIND RIGHTS AND EASEMENT/LEASE AGREEMENTS

66. Walleye Wind has substantially completed securing landowner agreements for wind rights and property easements necessary to support the Project. As of the December 21, 2020 compliance filing on wind rights, the Project had executed and recorded landowner agreements for 12,305 acres of private land within the Project Area, which is approximately 80% of the land required to complete the Project.[76] At the May 4, 2021 Public Hearing, Walleye Wind updated its land status, explaining that it secured approximately 95% of the wind rights required to complete the Project.[77]

VIII. COMMENTS SUBMITTED IN THE PROCEEDING

67. 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.

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[72] Exhibit 235 – Amended Site Application at 72, 74.

[73] *Id*. at 127.

[74] *Id*.

[75] *Id*. at 139.

[76] Exhibit 244 – Walleye Wind Compliance Filing – Interconnection and Land Rights Status (December 21, 2020 (eDocket No. **202012-169202-01**).

[77] Public Hearing Tr. at 23 (May 4, 2021 (1:00 pm session)) (eDocket No. **20215-174245-02**)).

68. Consistent with Minnesota Rule 7854.0900, Subp. 4, the Commission directed in its October 20 Order that a public information meeting be held and that the meeting must be held more than ten days prior to the end of the public comment period on the DSP.[78]

69. A Public Information and Environmental Report Scoping Meeting was held on January 5, 2021 at 6:00 p.m. via Remote-Access due to the COVID-19 pandemic.[79] A second public hearing was held remotely on May 4, 2021 at 1:00 and 6:00 pm.

A. Oral Comments at the January 5, 2021 Public Information and Environmental Report Scoping Meeting

70. The remote meeting started with overviews from Commission Staff, DOC-EERA, and Walleye Wind.[80]

71. In addition, there were a number of public comments. Lucas Franco, with LIUNA, spoke in support of the Walleye Wind, because the Project will contribute tens of millions of dollars to the economic activity in southwestern Minnesota during a time when economic opportunities are needed due to the impact of the COVID-19 pandemic.[81]

72. Celem Ozuna, with Local 563 Laborers Union, spoke in support of the Project, because it will help the families of Minnesota by adding jobs.[82] Dan McGowan, with the Laborers' Union, spoke in support of the project due to the clear need for jobs.[83] Julie Kindt, with Local 563 Laborers Union, spoke in support of the Project due to the income and benefits she has earned working on other wind projects, as well as the economic benefits that will endure to rural Minnesota.[84] Jim Nichols, a farmer in Lake Benton, spoke in support of the Project, because a wind turbine can provide more energy than an oil well, the rent payments and contribution to property taxes associated with sponsoring a wind turbine.[85]

73. Bruce Carlson, from South Dakota, stated his concerns with the proximity of the Walleye Wind turbines to the Minnesota-South Dakota border and asked to be on mailing list to be notified of future events.[86] Tara Kroger, from Local 563, explained that the Project was important for the economy and local jobs.[87] Nathan Runke, from Local 49, the Operating

[78] Exhibit 310– Commission October 20 Order.

[79] Exhibit 335 – Notice of Public Meeting (December 18, 2020).

[80] Exhibit 103 – Record of Public Comments Transcript, Environmental Report Scoping Meeting at 3-24 (January 22, 2021) (eDocket No. **20211-170142-01**).

[81] *Id*. at 24-27.

[82] *Id*. at 27-28.

[83] *Id*. at 28.

[84] *Id*. at 28-30.

[85] *Id*. at 31-32.

[86] *Id*. at 32-35.

[87] *Id*. at 37.

Engineers, stated that wind projects provide a great employment opportunity for skilled labor and economic impact to the state.[88]

74. Debbie Willard explained that she lives about a have mile away from the Minnesota border and was concerned about the safety and health impacts from the Project, as well as whether it will provide any benefits to South Dakota.[89] Gary Overgaard stated the Project will provide economic benefits and tax relief to the citizens of Rock County.[90] Cory Krueger, with Laborers Local 563, spoke in support of the Project, because it will offer skilled union workers employment to construct the wind turbines.[91]

75. Peter Bakken, a farmer and Beaver Creek Township supervisor, supported the project, because of the diversification afforded to a farmer's revenues and the ability to use the tax revenues from the Project to assist to maintain township culverts and bridges.[92] Jim Nichols also supported the Project in his comments, because in his experience the sound from the wind turbines is not an issue, during his 15 years as a wind turbine sponsor he has never seen a bird mortality from the turbine, and he is also not bothered by the lights on the wind turbines.[93] Brian Rockers, from the Laborers' Union, supported the Project due it providing jobs and contributing to taxes.[94]

76. Jane Lanphere, Executive Director of the Luverne Area Chamber, voiced her support for the wind Project, because of the economic, employment, added taxes, and environmental benefits the Project will provide to Minnesota and the United States.[95] Tara Kroger explained that she has worked on top of a wind turbine and sound is not a concern, and, further, she believes the Project will help the economy.[96] Gary Papik spoke in support of Walleye Wind as a Project that will be great for the community and is needed.[97]

B. Written Comments Pursuant to December 18, 2020 Notice

77. Pursuant to the Notice of Public Information and Environmental Report Scoping Meeting, issued on December 18, 2020, written comments were submitted by MnDOT, MnDNR, and the Minnesota Pollution Control Agency ("MPCA").

78. MnDOT requested that Walleye Wind: (1) not request access from I-90's right-of-way; (2) connect wind turbine no. 22's access road to CSAH-17; and (3) bore the collection line

[88] *Id*. at 38.

[89] *Id*. at 39-48.

[90] *Id*. at 48.

[91] *Id*. at 49-50.

[92] *Id*. at 50-52.

[93] *Id*. at 52-53.

[94] *Id*. at 54.

[95] *Id*. at 54-56.

[96] *Id*. at 56-57.

[97] *Id*. at 57.

that will cross I-90 and TH23. MnDOT also stated a concern with shadow flicker on I-90.[98] In response, Walleye Wind, as requested by MnDOT, committed to (1) not request access from I-90's right-of-way; (2) to connect wind turbine no. 22's access road to CSAH-17; and (3) to bore the collection line that will cross I-90 and TH23. Walleye Wind, through its coordination with MnDOT, also alleviated the agency's concern related to shadow flicker on I-90.[99]

79. MnDNR provided comments on the Project's impact on public waters; the Buffalo-Ridge Snowmobile Trail; dewatering; turbine feathering; Blanding's Turtles; and erosion control and invasive species prevention best practices.[100] In response, Walleye Wind, in collaboration with MnDNR, stated that it: (1) would submit the public waters work permit to cross implicated public waters by April 2021; (2) reviewed with the MnDNR the locations where collection lines will cross the Buffalo-Ridge Snowmobile Trail; (3) determined the Project does not fall within the Statewide Restriction or Drinking Water Supply Management Area; (4) committed to comply with the site permit's condition on wind turbine feathering; (5) reviewed the Project's crossing of creeks, and found that Blading's Turtle would not be impacted; and (6) will review and incorporate, as appropriate, MnDNR's best practices in its Standard Erosion Control and Invasive Species Prevention Best Practices. [101]

80. MPCA stated that it appreciated the sound modeling conducted in the proceeding and had no concerns with the sound impacts of the Project. MPCA also expected that a Stormwater Pollution Prevention Plan ("SWPPP") would be needed and approved by MPCA.[102]

81. Comments were also filed by individuals.[103] Kay Ames, a South Dakota resident, suggested the Project be moved into the middle of Minnesota, so she would not have to view it as a resident of South Dakota.[104]

82. Austin Carlson, a South Dakota resident, explained that the ER should consider potential human and environmental impacts from the Project, such as shadow flicker; sound, scenic views; decreased property values; change on the character of the community; how many landowners have lease agreements, but do not live in the area; livestock; wildlife; and ability to recycle wind turbine blades. Mr. Carlson also requested a review of what minimization, mitigation, and avoidance methods could be employed, including having any negative impacts remain solely within Rock County; and increasing the wind turbine setbacks for non-participants, including moving the six wind turbines close to the Minnesota-South Dakota border. Mr. Carlson

[98] Exhibit 703 – MnDOT Comments (January 27, 2021) (eDocket No. **20211-170313-01**).

[99] Exhibit 247 – Walleye Wind Reply Comments to MnDOT (February 24, 2021) (eDocket No. **20212-171310-02**).

[100] Exhibit 700 – MnDNR Comments (January 26, 2021) (eDocket No. **20211-170291-01**).

[101] Exhibit 249 – Walleye Wind Reply Comments to MnDNR (March 2, 2021) (eDocket No. **20213-171489-01**).

[102] Exhibit 704 – MPCA Comments (January 26, 2021) (eDocket No. **20211-170252-01**).

[103] Exhibit 104 – Public Scoping Comments - Compiled (February 1, 2021) (eDocket No. **20212-170594-02**).

[104] *Id.*

further requested consideration in the ER of the unique characteristics and could a different size project or different project type.[105]

83. Baylee Carlson, a South Dakota resident, stated concerns related to the wind projects impact on viewshed, sound, health impacts, livestock, wildlife, and shadow flicker. Baylee Carlson requested consideration of minimization, mitigation, and avoidance methods in the form of greater setbacks, sound reduction technology, the relocation of wind turbines near West Palisades Cemetery.[106] Brian and Wendy Carlson, South Dakota residents, stated concerns that South Dakota residents near the proposed Project are not getting an equal voice in the Project's approval process.[107] Bruce Carlson, a South Dakota resident, stated concerns related to the Project's impact on viewshed, sound, health, livestock, property values, GPS, television, and phone interruptions, and the placement of the Project near the South Dakota border.[108]

84. Rhonda Drewes, a South Dakota resident, stated concerns associated with the Project's impact on sound, infrasound, quality of life, livestock, shadow flicker, and property values.[109]

85. Jordan Dumke, a South Dakota resident, who recently moved because of other wind farm development in South Dakota, is concerned that wind projects are not good for and divides the community, and the sound and shadow flicker is harmful to humans, damages roads, destroys wildlife, and decreases property values.[110]

86. Mark Ericksen, a South Dakota property owner who also owns rental property near the South Dakota-Minnesota border, is concerned that the Project will have negative impacts because of the sound it produces and the view of the Project from his rental property, which will reduce his income.[111] Jack Jeb opposes the Project, because of its impacts on landscape, property values, communications, and livestock, and wildfires, as well as the lack of value the Project provides to South Dakota.[112]

87. Eric Kientopf is concerned the Project will have unsightly wind turbines, will produce sound, and negatively impact livestock and humans.[113]

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[105] *Id.*

[106] *Id.*

[107] *Id.*

[108] *Id.*

[109] *Id.*

[110] *Id.*

[111] *Id.*

[112] *Id.*

[113] *Id.*

88. Jeff Maassen opposes the Project, because it is close to the South Dakota border and due to the 2,500 foot proximity of a wind turbine to his property, which could cause damage and spread debris.[114]

89. Randall and Amy Pullman, residents of South Dakota, oppose the Project, stating their property is one mile away from several proposed wind turbines. The Pullman's concerns include the wind turbines impact on viewshed, sound output, health, wildlife, livestock, property values, and the lack of benefits to South Dakota.[115]

90. The International Union of Operating Engineers wrote to strongly support the Project and applaud Walleye Wind for its commitment to using local labor, which ensures economic benefits to the local community.[116]

91. LeRoy and Cathy Schroeder, residents of Rock County, support the Project and the positive impact it will have on the surrounding areas.[117]

92. William K. Thomssen, from Lake Benton, Minnesota, and a member of International Union of Operating Engineers, supports Walleye Wind, because of the job creation for heavy equipment operators.[118]

93. Bryan K. Vielmette, a resident of South Dakota, opposes the Project due to its impact on viewshed and the amount of coal energy used to create the wind turbine, the disposal of the wind turbines and the payback period associated with wind turbines.[119]

94. Bethany Waysman, a South Dakota resident, is concerned that the wind turbines will impact viewshed, sound, property values, low frequency sound, health, birds, bats, wildlife, crop yield, livestock, roads, and the lack of benefits to South Dakota.[120]

95. Mr. and Mrs. Robert Williamson, South Dakota residents, are concerned that the wind turbines will impact property values, viewshed, migratory birds, wildlife, disposal of the wind turbines, as well as the lack of notice in the news and other sources that the Project was being proposed.[121]

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[114] *Id.*

[115] *Id.*

[116] *Id.*

[117] *Id.*

[118] *Id.*

[119] *Id.*

[120] *Id.*

[121] *Id.*

96. Richard Zoeller, a Minnesota resident, is concerned that the Project will impact viewshed, wildlife, property values, and sound.[122]

97. Rob Flak opposes the Walleye Wind project because it will degrade local property values, cause hardships, impact viewshed, nesting birds and bats, and animals.[123]

C. DOC-EERA Comments

98. On February 12, 2021, DOC-EERA filed comments and recommendations with respect to the issuance of the DSP, taking into consideration public and agency comments.[124] Specifically, DOC-EERA requested that the DSP incorporate DOC-EERA's proposed minor technical changes to make the permit consistent with LWESC site permits. DOC-EERA also recommended the following modifications to Section 7.5 of the DSP related to avian and bat protection:

- Require at least two years of post-construction monitoring (Section 7.5.1);
- Clarify the Avian and Bat Protection Plan ("ABPP") revision process from the draft provided in the July 9, 2020 application, through changes made during the permitting process, and ongoing modifications based on annual audits of ABPP practices (Section 7.5.2);
- Add the Department to the review list for quarterly incident reports (section 7.5.3); and
- Clarify reporting expectations for immediate reports on bird or bat fatalities or injuries by differentiating thresholds for a single turbine location (5 birds or bats within 5 days) from the entire project (20 birds or bats within 5 days) (Section 7.5.4).

99. DOC-EERA also proposed changes to the decommissioning Section 11.1 to conform it to recent wind and solar decommissioning permit conditions and the recommendations of the Solar and Wind Decommissioning Working Group. With respect to MnDOT's questions related to shadow flicker impact on travelers, DOC-EERA indicated it would address the issue in the ER.

D. Public Comments and Questions at the May 4, 2021 1:00 p.m. and 6:00 p.m. Hearings

100. The following speakers expressed support for the Project at the May 4, 2021 hearings: (1) Nathan Runke with the International Operating Engineers Local 49 indicated his support for the Project due to its positive impact on jobs;[125] (2) Alex Poulit, the field director for the Minnesota Land and Liberty Coalition, indicated support for the Project;[126] (3) Patrick Boston, Major of the City of Luverne, Minnesota supports the Project, because of its positive impact on

[122] *Id.*

[123] *Id.*

[124] Exhibit 107 – DOC EERA Comments and Recommendations on Preliminary Draft Site Permit (February 12, 2021) (eDocket No. **20212-170942-01**).

[125] Public Hearing Tr. at 37 (May 4, 2021 (1:00 pm session)) (eDocket No.**20215-174245-02**)).

[126] *Id.* at 39.

jobs, tax base, and the local economy;[127] (4) Corey Krueger, a construction laborer with Laborers Local 563, supports Walleye Wind due to its creation of jobs and the transition to renewable energy;[128] (5) Gary Overgaard, a farmer and resident of Rock County, supports the Project, because of its impact on economic development and tax relief;[129] (6) Kevin Pranis of LIUNA supports Walleye Wind, because it will improvement the environment; Walleye Wind's commitment to maximize the use of local labor; and the need for the Project to increase the use of clean energy for the cities served by MMPA;[130] (7) Jane Lanphere, executive director of the Luverne Area Chamber and manager of the Luverne Convention and Visitors Bureau, supports the Project, because of the need for renewable energy, and the positive impact it will have on the economy, jobs, the community, and agriculture;[131] (8) Belem Ozuna supports Walleye Wind due to its positive impact on the economic and construction jobs, and the company's commitment to maximizing the use of local labor;[132] and (9) Lucas Franco supports the Project, because of Walleye Wind's committed to maximize the use of local labor and the associated wages.[133]

101. The following speakers opposed or expressed concerns with the Project at the May 4, 2021 hearings: (1) Carol Overland questioned the Applicant on the following subjects: decommissioning of MinWind project; whether the CON includes the decommissioned capacity from the MinWind project; the use of a 0.5 ground attenuation factor in the sound study; the distance of the turbines from residents; the setback required by MnDOT; and shadow flicker from the Project exceeding 30 hours in some cases;[134] (2) Deborah Taubert, expressed a concern with how close wind turbines are to her family, noting that five wind turbines would be within 4,000 feet of her house;[135] (3) Greg Taubert opposes the Project, asserting the wind turbines are too close to his family, including his wife who suffers from vertigo and could be negatively impact by the wind turbines; and that he has young drivers in his family and construction traffic is a concern;[136] (4) Austin Carson noted his opposition to the Project, asserting that there has been a decrease in community outreach by the developer each time the project moved; the individuals who support the Project are motivated to support by the positive financial impact they will experience; the wind turbines will be able to be seen for 20 miles away; and the wind turbines near the South Dakota border should be moved.[137]

[127] Public Hearing Tr. at 40-41 (May 4, 2021 (6:00 pm session)) (eDocket No. **20215-174245-04**).

[128] *Id.* at 41-42.

[129] *Id.* at 42.

[130] *Id.* at 43-44.

[131] *Id.* at 49-51.

[132] *Id.* at 51.

[133] *Id.* at 52-53.

[134] *Id.* at 27-40, 61-72.

[135] *Id.* at 45-49, 80.

[136] *Id.* at 53-60.

[137] *Id.* at 72-79.

E. Written Comments associated with the May 4, 2021 Public Hearing Comment Period

102. On May 20, 2021, DOC-EERA and MnDNR submitted comments, including proposing additional DSP edits and additions.[138] Walleye Neighbors also requested various revisions to the DSP. The specific DSP revisions proposed by DOC-EERA, MnDNR and Walleye Neighbors are discussed in more detail below.

103. The following written comments from the public were submitted in support of the Project:[139] (1) Anthony Bly from Garretson, South Dakota, supports the Project as good for Rock County and because of the great job that Walleye Wind has done in preparing for a successful project; (2) Craig Oftedahl, Superintendent of Luverne Public Schools, supports the Project, because of Walleye Wind's long-term commitment to the community, including a $5,000 donation to the school district's robotics program, and the Project's positive impact on state, local, and property taxes; (3) Marilyn Bloemendaal from Luverne, Minnesota supports Walleye Wind based on its investment in the community, the creation of jobs, the removing of currently unused wind turbines, improving roads, the additional source of income it provides for farmers and landowners, increasing the tax base, and adding renewable energy to allow Rock county to contribute to a better world; (4) Gary Helenson from Beaver Creek, Minnesota, wrote in general support of the Project: (5) Larry Lanphere from Luverne, Minnesota, supports the Project, because it is clean energy, good for the earth, landowners, and the community; (6) Cathy Schroder from Beaver Creek, Minnesota supports the Project and looks forward to hosting a wind turbine; (7) Leroy Schroder, of Beaver Creek Minnesota, supports the Project as helping to reduce the price of electricity; (8) Dan Matus from Sheldon, Iowa generally supports the Project; (8) Michael Daley, Executive Director of the Worthington Minnesota Area Chamber of Commerce, strongly supports the Project due to the creation of 200 construction jobs, impact on economic development and taxes and contribution to the local economy, and the advancement of clean energy from the wind; (9) LIUNA appreciates the efforts Walleye Wind is making to maximize local benefits and ensuring skilled local workers are hire to construct the Project, which, in turn, create meaningful and tangible local benefits to the community and the families of the local construction workers; LIUNA also supports the issuance of a Site Permit and CON to Walleye Wind, because it will help Minnesota meet its climate goals, while providing affordable electricity to the members of MMPA which serves LIUNA members in cities such as Buffalo and Chaska; (10) Bruce Peterson, Interim Vice President for Strategy at Minnesota West Community and Technical College, supports the Project, based on its positive economic impact and good jobs; (11) Joe Schomacker, Minnesota State Representative, District 22A (Rock County) submitted comments supporting the Project citing investment in rural Minnesota and tax revenue estimated to be $2.3 million in state and local taxes, including $592,000 in property taxes. Mr. Schomacker also noted that Walleye Wind is partnering with Rock County's communities for the long haul, having participated in the local Chamber of Commerce, donated to the robotics program at Luverne High School and to Hills-Beaver Creek schools to purchase Kindle Fire tablets; and (12)

[138] Comments of DOC-EERA (May 20, 2021) (eDocket No. **20215-174355-01**); Comments of MnDNR (May 20, 2021 (eDocket No. **20215-174335-01)**

[139] Written Comments in Support (eDocket No. **20215-173854-01; 20215-173922-01**; **20215-173967-01; 20215-174088-02**; **20215-174317-01; 20215-174366-02; 20215-174422-01; 20215-174442-02**).

Jon Dinger from Luverne Minnesota noted his support for the Project and the investment in clean energy and appreciated Walleye Wind's partnership with the Rock County community.

104. The following written comments from the public were submitted opposing or expressing concern with the Project: [140] (1) Mike Gangstad from Luverne, Minnesota, indicated that he does not wish to hear or see the wind turbines; that prime farmland should not be taken out of production for the Project; and there is no need for the Project given that there is sufficient generation capacity and wind power cannot replace baseload generation required for reliability; (2) Greg Beaner, the Mayor of Garretson, South Dakota, expressed concerns with the lack of notice of the Project to the residents of South Dakota, and the Project's impact on traffic during construction, the sound from the wind turbines, and interference to the wireless utility reporting system; (3) Rodney Lowe does not support the project, because the wind turbines may have a negative impact on wildlife, and, therefore, requests that wildlife habitat not be impacted by wind turbines; (4) Ronald and Kay Ames wrote that there are six proposed wind turbines within a mile and half from their farm, and they are concerned of the impact the wind turbines will have on wildlife and livestock, humans, property values, and the viewshed; (5) Ryan Nelson from Garretson, South Dakota submitted written comments and exhibits on the lack of notice to South Dakota residents and the community at large and the negative impact of the Project on property values and concerns with infrasound, low frequency sound, the use of a 0.5 ground attenuation factor to model sound; (6) Brent and Bethany Waysman from Garretson, South Dakota expressed concerns with the Project's impact on viewshed, human health and wellness, the sound from the Project (although they are modeled to be at 35 dBA), quality of life, infrasound, low frequency sound, and the lack of notice of the proposed Project; (7) Lance Crawford from Valley Springs, South Dakota opposes the Project, because of its impact on viewshed, property values and enjoyment of the property, health, sound, aerial spraying; (8) the Walleye Neighbors assert that Walleye Wind, DOC-EERA, and the DSP rely too much on standards for siting wind farms under 25 MW and shadow flicker levels need to be addressed; (9) Jarrod Smart from Valley Springs, South Dakota believes that the Project will negatively impact the community, including the impact of the Project due to the proximity of wind turbines to the border with South Dakota; the sound resulting from the wind turbines; the proximity to Palisades State Park; the blinking red lights; the traffic and damage to roads; lack of dust control; viewshed and shadow flicker. Mr. Smart is also concerned that while he lives a mile away from the Project he did not receive notice of it; Mr. Smart requests that wind turbine nos. 23, 22, 29, 30, and 31, and alternative turbine location 4 be moved to east of Highway 23, and make the wind turbine heights shorter; (10) Charles Brown representing the Garretson Sportsmen's Club stated his opposition to the Project as an eyesore; (11) Lisa Weyer from the South Dakota Parks and Wildlife Foundation noted that the Foundation has raised over $1 million in private funds to purchase 267 acres of adjoining property to expand the Palisades State Park and that a large wind farm would take away from the natural resources and beauty of the area when people are enjoying the outdoors; (12) Cindy Heiberger asked that the Commission order the same set backs on the Minnesota-South Dakota boarder that are in place for Minnesota or deny the Project; (13) Rick and Donna Zoellner from Beaver Creek, Minnesota expressed concerns with viewshed, noise and shadow flicker and

[140] Written Comments in Opposition or Expressing Concern (eDocket No. **20215-173923-01; 20215-173924-01 20215-174143-02; 20215-174279-02**; **20215-174269-02**; **20215-174379-01; 20215-174379-03; 20215-174379-05; 20215-174379-07; 20215-174379-09; 20215-174341-02; 20215-174338-02; 20215-174377-02; 20215-174421-01; 20215-174423-01; 20215-174422-01; 20215-174442-02; 20215-174472-01**; **20215-174498-01**; **20215-174499-02)**.

requested that the wind turbine closest to their property be moved; (14) Baylee Carlson from the Garretson area raised concerns regarding viewshed, noise, shadow flicker and the lack of transparency on the development process and requested that turbines be moved further away from the South Dakota border; (15) Bruce & Dinal Carlson from Garretson, South Dakota oppose the Project and expressed concerns with notice; aerial spraying with the tall wind turbines nos. 27, 28, and 29 so close to the land they farm; and shadow flicker, noise, heath and property value impacts; (16) Brian Carlson from Garretson, South Dakota opposes the Project and expressed concerns regarding notice and inadequate consideration of South Dakota residents, impacts from shadow flicker and noise and impacts to quality to life; (17) Wendy Carlson from Garretson, South Dakota opposes the Project and expressed concerns regarding noise and requested the Project be moved further east into Minnesota; (18) Amy Pullman from Garretson, South Dakota raised concerns with noise, shadow flicker, and potential health impacts from the Project and requests that turbines closest to the South Dakota border be moved further into Minnesota to mitigate negative impacts on South Dakota; (19) Randall Pullman from Garretson, South Dakota raised concerns regarding environmental impacts, noise, lack of notice, and the likelihood of successfully completing the Project; (20) Shannon Nordstrom from Garretson, South Dakota opposes the Project and is concerned with impacts to wildlife and Palisades State Park and expressed concerns with noise and shadow flicker; (21) Eric Kientopf and Michael Scholten on behalf of the Red Rock Township Supervisors in South Dakota commented on the lack of notice and engagement with the impacted communities in South Dakota and raised concerns with road use and requested that a 1 mile setback from the Minnesota South Dakota state border be imposed to ensure safety and quality of life for their residents; (22) Keturah Baker from Garretson, South Dakota, opposes the Project due to the proximity of wind turbines nos. 28 and 29 to his residence, approximately one mile, the sound from the wind turbines, the impact on wildlife, the shadow flicker from the wind turbines, and the impact on viewshed; (23) Austin Carlson from Garretson, South Dakota, opposes the placement of wind turbines near the South Dakota border, and requests that those wind turbines be moved to the locations of the MinWind wind turbines that will be decommissioned; he opposes the current wind array due to its impact on viewshed, the lack of notice to South Dakota residences, whether the wind turbines are needed, the impact of the Project on sound, shadow flicker, infrasound, humans, livestock, and wildlife; because it adds additional infrastructure since it is not replacing coal or natural gas plant; and the negative economic impact the Project will have on South Dakota; and (24) Gregg Taubert from Beaver Creek, Minnesota opposes the Project due to its impact on the viewshed, sound, the proximity of the wind turbines to his and his families' residences, and the impact on property values.

105. Jason Walker of the Southwest Regional Development Commission, submitted written comments briefly outlining some data related to the Project without making a recommendation or indicating support or opposition.[141]

[141] Written Comments of Southwest Regional Development Commission (May 18, 2021) (eDocket No. **20215-174273-02**).

F. Post Hearing Reply Comments of Walleye Wind

1. Responses to Members of the Public

106. In response to the comments at the May 4, 2021, Walleye Wind submitted Post Hearing Comments on June 2, 2021 addressing: (1) the need and reliability of the Project; (2) safety, quality of life, and health impacts concerns; (3) benefits of the Project to South Dakota; (4) notification to South Dakota residents; (5) viewshed concerns; (6) property values impacts; (7) wildlife impacts; (8) recycling of wind turbines; (9) requests that turbines be moved further away from the South Dakota border; (10) impacts to prime farmland; (11) impacts to GPS, wireless utility supporting system, television, and phone systems; (12) impacts to roads; (13) concerns with debris from wind turbines; and (14) impacts on aerial spraying.[142]

107. With respect to concerns regarding the need for, and reliability of, the Project, Walleye Wind noted that the Amended CON Application demonstrated that the Project is needed to assist in providing electricity for MMPA members and to further MMPA's efforts to meet and exceed the Minnesota RES and other clean energy requirements.[143] Walleye also explained that Minnesota's Next Generation Energy Act of 2007 requires that utilities in Minnesota provide 25% of their total retail electric sales from eligible renewable resources by 2025. Additionally, the Minnesota legislature has specified aggressive goals for the reduction of greenhouse gas emissions across all sectors, including the electric sector. The Legislature's specific goal is to "reduce statewide greenhouse gas emissions across all sectors producing those emissions to a level at least 15 percent below 2005 levels by 2015, to a level at least 30 percent below 2005 levels by 2025, and to a level at least 80 percent below 2005 levels by 2050."[144] Therefore, Walleye explained that the Project will serve to meet this broader legislative goal as well as the specific electricity and renewable energy needs of MMPA.[145]

108. In addition, in Walleye Wind explained that in its August 3, 2020 Reply Comments it provided a table that showed the annual REC deficits MMPA would experience if Walleye Wind is not constructed and operated.[146] Finally, Walleye Wind noted that the Project has been studied by MISO through the interconnection study and agreement process and that a generation interconnection agreement with MISO was executed on January 29, 2020.[147]

109. In response to the comments that the Project would negatively impact safety, Walleye Wind explained that it will implement numerous safety measures, including the following: (1) the entire collection system will be designed to meet applicable requirements of the National Electric Safety Code ("NESC"); (2) prior to construction, Walleye Wind will coordinate with applicable local and state road agencies to ensure all relevant permits are obtained, delivery plans are communicated, traffic management plans are implemented where necessary, and weight

[142] Post Hearing Comments of Walleye Wind (June 2, 2021).

[143] Public Hearing Tr. at 30 (May 4, 2021 (6:00 pm session)).

[144] *See* Minn. Stat. § 216H.02, Subd. 1.

[145] Post Hearing Comments of Walleye Wind at 6-7.

[146] *Id.*; Exhibit 229 – Walleye Wind Reply Comments at 3.

[147] Exhibit 244 – Walleye Wind Status Update at 2.

limits are not exceeded; (3) the Project may also require the temporary closing or relocating of part of the snowmobile trails to ensure the safety of construction personnel and recreationists during construction activities; (4) electric equipment will be properly grounded.[148] With respect to construction traffic in South Dakota, Walleye Wind confirmed that there are no plans to use South Dakota roads during construction, and, therefore, there will be no impact to South Dakota roads or traffic impacts during construction.[149]

110. Walleye Wind also noted that its Amended Site Application addresses electromagnetic fields ("EMF"), and the potential for electric fields, magnetic fields, and stray voltage hazards.[150] According to Walleye Wind, extensive research has been conducted by the National Institute of Environmental Health Sciences and that there is no conclusive evidence of negative health impacts from EMF that may be emitted from transmission lines and transformers. Further, Walleye Explained that the separation distances being maintained between transformers, turbines, and collector lines from public access and homes, shows that EMFs associated with the Project are not expected to have an impact on public health and safety. Electrical equipment will be grounded per American National Standards Institute and NESC guidelines to ensure safety and reliability. Grounding the electrical equipment will prevent potential issues related to stray voltage.[151] Also, Walleye Wind explained that stray voltage is typically not associated with underground electric collector lines, which connects to the Project substation. Therefore, Walleye explained that stray voltage is not expected to have an impact on public health and safety. No Project facilities, including underground collection lines, transformers, and transmission lines will be installed in South Dakota.[152]

111. With respect concerns regarding sound from the Project turbines, Walleye Wind explained that it conducted a sound study that showed that the Project complies with the MPCA's Sound Standards set forth in Minn. R. 7030.0040.[153] Further, Walleye Wind asserted that concerns with the use of a 0.5 ground factor were unsupported.[154] As testified by Richard Lampeter at the May 4 Public Hearing, Walleye Wind's sound expert, the study appropriately used a ground attenuation factor of 0.5:[155]

> 0.5 is representative of the land use there, and in addition it's a -- it is one of the inputs, and it's best to look at the various modeling inputs as a whole, as you can adjust different inputs. But as a whole we have found that the modeling as -- methodology as outlined yields conservative results when compared to post-

[148] Post Hearing Comments of Walleye Wind at 7-8 (June 2, 2021) (citing Amended Site Application at 17, 51, 67, 70).

[149] Post Hearing Comments of Walleye Wind at 8.

[150] *Id*.

[151] *Id*.

[152] Exhibit 235 – Amended Site Application at 69-70.

[153] Post Hearing Comments of Walleye Wind at 8-9.

[154] *Id.* at 9.

[155] Public Hearing Tr. at 34 (May 4, 2021 (6:00 pm session)); Exhibit 241 – Amended Sound Study at 6-4 to 6-5 (November 4, 2020) (eDocket No. **202011-168046-03**).

> construction measurements. So that's just one of several that go into the analysis and in combination result in predicted-modeled sound levels that would be equal to or above the measured values under worst-case conditions.

112. With respect to health concerns related to noise, Walleye Wind explained that peer-reviewed scientific studies and a National Association of Regulatory Utility Commissioners' report show there is no correlation between wind farms and low frequency and infrasound impacting health.[156]

113. With respect to shadow flicker, Walleye Wind explained that it will comply with the Section 7.2 of the DSP, including documenting efforts to avoid, minimize, and mitigate shadow flicker exposure.[157] Furthermore, at the public hearing, Walleye Wind noted that its witness, Chris Ollson PHD, who specializes on the health and welfare impacts of wind farms, testified that the Walleye Wind Project has been designed from a sound and shadow flicker standpoint will not negatively impact human health and welfare.[158]

114. Walleye Wind explained that given the interest from South Dakota residents on sound and shadow flicker issues, it shows that highest modelled sound at a South Dakota resident is 39 dBA and shadow flicker is 9:17 hours annually, and that the closest wind turbine 3,212 feet from any resident.[159] The sound and shadow flicker levels are well below levels that would impact health and welfare, as well as well below the MPCA's sound level requirements and 30-hour annual shadow flicker.[160] Therefore, Walleye Wind asserted that the evidence in the record shows that the Project will not negatively impact health and welfare.

115. In response to questions on whether South Dakota will benefit from the Project, Walleye Wind noted that Mike Weich, the project developer, testified:[161]

> As far as the benefits, sir, of the project potentially in South Dakota, there are benefits of the Walleye Wind project via its location on the border for South Dakota as well. As the environmental report states, Walleye Wind will not emit pollutants into the air during its operations; therefore, South Dakota like Minnesota will get the benefits of wind generation that does not produce pollutants into the air. There's also certainly a possibility due to the location of the project that local South Dakota hotels, businesses, and restaurants will see an economic uptick during the construction from the needs of construction workers for the project.

116. Consistent with Mr. Weich's testimony, Walleye Wind explained in its Amended Site Application that:

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[156] Exhibit 241 – Amended Sound Study at 8-2.

[157] Post Hearing Comments of Walleye Wind at 9.

[158] Public Hearing Tr. at 48, 54-55, 61-62 (May 4, 2021 (6:00 pm session)).

[159] Post Hearing Comments of Walleye Wind at 9-10.

[160] *Id*.

[161] Public Hearing Tr. at 77-78 (May 4, 2021 (6:00 pm session)).

> Local businesses within Rock County are expected to experience a short-term positive increase in revenue generation during the construction phase of the Project due to the purchase of goods and services. Patronage at hotels and restaurants, the purchase of consumer goods and services by the various workers associated with the Project, as well as the purchase of materials such as fuel, concrete, and gravel from local vendors will generate revenue for local businesses. It is anticipated that the largest increase in economic activity would be located near the Project, between Luverne and Jasper, Minnesota. The economic impact could also expand into towns and cities within adjacent counties such as Pipestone and Nobles Counties in Minnesota, **Minnehaha County in South Dakota**, and Lyon County in Iowa. (emphasis added)[162]

Therefore, Walleye Wind concluded that South Dakota will not only benefit from the Project's zero carbon emissions, it could benefit from a positive economic impact to local businesses during construction.

117. In response concerns that South Dakota residents did not receive adequate notice of the Project, Walleye Wind explained that for its initial Application, Walleye Wind complied the notice requirements set forth in Minn. R. 7854.0600, Subp. 3, which requires that Walleye Wind provide copies of the accepted application to "each landowner within the boundaries of the proposed Large Wind Energy Conversion System (LWECS) site." Therefore, the landowner list did not include South Dakota residences, because South Dakota is not with the Project's boundary as all Project facilities are located entirely within Minnesota.[163]

118. In addition, in response to South Dakota residents' requests at the January 5, 2021 public scoping meeting, South Dakota landowners within a half mile of the Project's boundary were included in notices going forward, including the notice for the public hearing on May 4, 2021, and receipt of the PUC ordered maps that included turbine locations in relationship to receptors, including receptors in South Dakota.[164] Finally, as Mr. Weich noted at the May 4, 2021 public hearing: "[A]s a courtesy prior to filing this application, we did each out to Minnehaha County to understand if they would want a presentation on the project. They did not accept that invitation and did not think we needed to make a presentation to the county and to the community."[165]

119. With respect to concerns raised with respect to viewshed impacts, Walleye Wind explained that the existing viewshed is long and open agricultural landscape, which is includes residences, buildings, shelter belts, and small wooded lots. In addition, Walleye Wind noted that there are numerous wind turbines near the Project are, as well as transmission lines.[166] In particular, Walleye Wind explained that of the 123 wind turbines are in the area, with 114 located within a 10-mile radius around the Project Area and 67 of the 123 turbines located within 10 miles

[162] Post Hearing Comments of Walleye Wind at 10.

[163] *Id.* at 11.

[164] *Id*.

[165] Public Hearing Tr. at 77 (May 4, 2021 (6:00 pm session)).

[166] Post Hearing Comments of Walleye Wind at 11-12.

of a proposed turbine location for the Project.[167] Therefore, while the Project's wind turbines will be visible, Walleye Wind asserted that the evidence shows the Project will not be a new view in the landscape of the Project area, as other wind farms and transmission lines are also visible.

120. With respect to concerns with impacts on property values, Walleye Wind testified that there is no anticipated impact on property values.[168] Walleye Wind conclusion is supported by the ER, which provides:[169]

> In December 2009, the United States Department of Energy Lawrence Berkeley National Laboratory released a technical analysis of wind energy facilities' impacts on the property values of nearby residences. Using a variety of different analytic approaches, the report found no evidence that sales price of homes surrounding wind facilities were measurably affected by either the view of wind facilities or the distance of the home to those facilities. Though the analysis acknowledged the possibility that individual homes or small numbers of homes may be negatively impacted, it concluded that if these impacts do exist, their frequency is too small to result in any widespread, statistically observable impact.

Therefore, Walleye Wind stated that contrary to the generalized concerns regarding property values in the vicinity of the Project, the evidence shows that Project should not negatively impact property values.[170]

121. With respect to concerns with impacts to wildlife, Walleye Wind noted that Walleye Wind completed extensive wildlife studies prior to submittal of the Amended Site Application.[171] Walleye Wind also utilized the U.S. Fish and Wildlife Service ("USFWS") Land-based Wind Energy Guidelines for assessing and addressing wildlife concerns during all stages the Project's development. Additionally, the Amended Site Application and the Wildlife Conservation Strategy included therein, includes an Avian and Bat Protection Plan, which sets forth Walleye Wind's strategies for protecting wildlife during the construction and operation of the Project.[172]

122. According to Walleye Wind, through the careful siting of the Project, avoidance, or minimization of potential impacts on sensitive areas and wildlife, preparation of the WCS and a Prairie Protection and Management Plan, implementation of construction best management practices, post-construction monitoring, and other active measures ensure that Project facilities will have limited impact on surrounding wildlife.[173] With respect to impact on agricultural activities, Walleye Wind noted that landowners may continue to plant crops near and graze

[167] *Id.* at 12.

[168] *Id.* (citing Public Hearing Tr. at 48-49 (May 4, 2021 (6:00 pm session)).

[169] Exhibit 109 – Environmental Report (Text) at 91.

[170] Post Hearing Comments of Walleye Wind at 12.

[171] *Id.* at 13.

[172] *Id.*

[173] *Id*.

livestock up to the gravel roadway around each turbine pad and that feedlot impacts will also be avoided during construction.[174]

123. With respect to concerns with recycling wind turbines, Walleye Wind explained that planned decommissioning methods are provided in Walleye Wind's Decommissioning Plan.[175] According to Walleye Wind, with recent advancements in the reuse of fiberglass, now virtually all wind turbine components can be recycled. When turbines are decommissioned, crews will separate components, and, wherever possible, recycle the components in the region where the wind farm is located. Recognizing there was a need to recycle wind turbine blades to keep them out of local landfills, Walleye Wind worked with blade manufacturers and suppliers to develop a plan to ensure blades from our wind projects would be recycled.[176] Walleye Wind also frequently donates decommissioned turbine components to colleges and wind technician programs across the country to provide students with hands-on job training.[177]

124. With respect to the requests that Walleye Wind move turbines away from the South Dakota border, Walleye Wind explained that the nearest wind turbine to any South Dakota resident is 3,212 feet, and the next closest is 3,640 feet away.[178] The wind turbines, therefore, are already considerable distances from South Dakota residents. Further, Walleye Wind explained that moving the turbines to another part of the Project Area will not relieve South Dakota residents nor Minnesota residents from the visibility of the wind turbines, as the landscape that already includes other wind turbines and transmission infrastructure.[179] In addition, Walleye Wind explained that any moving of the turbines could increase the impact sound and shadow flicker to Minnesota residents, and require execution of new wind rights easements. Walleye Wind asserted that the record shows that the current layout appropriately reflects the interests of Minnesota landowners that are actively participating in the Project, while mitigating the impacts on non-participating landowners through setback requirements set forth in the DSP.[180]

125. In its Post Hearing Comments, Walleye Wind asserted that The Project will not materially impact the use of prime farmland.[181] Crops will be able to be planted up to the gravel roadway around each turbine pad and up to the access roads. Further, Table 30 of the Amended Site Application shows that of the total Project Area of 31,095 acres, less than 20 acres of prime farmland and less than 10 acres of prime farmland, if drained, will be permanently impacted. Therefore, Walleye Wind concludes that the Project minimally impacts prime farmland.[182]

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[174] Exhibit 235 – Amended Site Application at 74-78; 103-126.

[175] Post Hearing Comments of Walleye Wind at 14.

[176] *Id.*

[177] *Id*.

[178] *Id.* at 14-15.

[179] *Id*.

[180] *Id*.

[181] *Id.* at 15.

[182] Exhibit 235 – Amended Site Application at 76.

126. With respect to concerns related to impacts to telecommunications, radio and television service, Walleye Wind explained that it has conducted an Electromagnetic Interference Analysis (Appendix D) as part of the Amended Site Application. The analysis summarizes the following within the Amended Site Application: the known microwave beam paths (Section 8.6.2 Communication Systems), television towers (Section 8.6.3 Television), telephone service (Section 8.6.4 Cell Towers and Broadband Interference), and aviation towers (Section 8.9.2 Aviation).[183] According to Walleye Wind, the Project has been sited to minimize any anticipated impacts to microwave beam paths, television reception, radio reception, communication lines, cell phone reception, internet services, or aviation communications within Minnesota and South Dakota.[184]

127. With respect to impacts to roads, Walleye Wind explained in its Amended Site Application it showed that temporary impacts are expected to public roads during the construction phase of development as materials, personnel, and equipment will be brought in via existing highways and roads.[185] Walleye Wind indicated that it will complete all necessary road improvements required for the construction of the Project, along with formalizing a road development agreement with applicable roadway authorities to ensure that impacted or damaged roadways will be restored to their original condition or better. The Project will utilize only roads entirely located in Minnesota consisting of federal, state, Rock County, or local township roads for access to the Project for construction.[186] Also, all wind turbines will be setback no less than 250 feet from roads.[187]

128. While it is unlikely debris will fall from the wind turbines, if it does, Walleye Wind explained that its operations and maintenance team will coordinate with local emergency management officials via their standard operating procedures to address any such debris.[188] Pursuant to Section 10.11 of the DSP, Walleye Wind will prepare an Emergency Response Plan which will include procedures to be followed in the event that a wind turbine is damaged.[189] Therefore, Walleye Wind concluded it will appropriately address the unlikely event of debris falling from a wind turbine.

129. With respect to the concern that the Project will impact aerial spraying, Walleye Wind explained that as explained in Section 8.9.2 of the Amended Site Application, Walleye Wind's operations will coordinate with crop dusting plane pilots, and will work with them on a case-by-case basis.[190] Walleye Wind asserted that there should be no adverse impact to aerial

[183] Post Hearing Comments of Walleye Wind at 15-16.

[184] *Id.* at 15.

[185] *Id.* at 16.

[186] *Id*.

[187] Exhibit 235 – Amended Site Application at 51 (stating "Walleye Wind will formalize road development agreements with applicable roadway authorities to ensure that impacted or damaged roadways will be restored to their original condition or better. Walleye Wind will require that the general contractor be in contact with the relevant road authorities during construction.").

[188] Post Hearing Comments of Walleye Wind at 16-17.

[189] Commission March 24 Order at 24-25.

[190] Post Hearing Comments of Walleye Wind at 17.

spraying, because Walleye Wind will work with landowners to curtail turbines, as needed, so that crops can be dusted safely.[191]

130. In their comments, Walleye Neighbors allege that the DSP inappropriately relies on site permit standards applicable to wind projects less than 25 MWs in size.[192] In response, Walleye Wind explained that the Walleye Neighbors concede that the Commission has rejected such criticisms after 'being challenged on this repeatedly.'[193] According to Walleye Wind, the standard conditions incorporated into the DSP have been adopted in numerous Site Permits issued by the Commission.[194]

2. Response to Agency Comments

131. In its May 20 Comments, DOC-EERA requests that a revised decommissioning plan be submitted prior to the start of construction, including updated map and turbine numbering, information on the Project's landscape and infrastructure, the anticipated date of commercial operations, information and costs associated with the decommissioning of the existing MinWind III-IX (also known as Perch Wind) project.[195]

132. In its Post Hearing Comments, Walleye Wind indicated it is amendable to providing the additional information and making the revisions to the decommissioning plan as requested by DOC-EERA and submitting the revised plan prior to the start of construction.[196]

133. In its May 20 Comments, MnDNR requests that erosion and sediment control practices should be implemented and maintained near these streams and tributaries during crossings and construction, and, therefore, specifically requests that Walleye Wind following the USFWS Recommendations for Projects Affecting Waters Inhabited by Topeka Shiners in Minnesota.[197]

134. In its Post Hearing Comments, Walleye Wind committed to following the USFWS Recommendations noted by MnDNR.[198]

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[191] *Id*.

[192] Walleye Neighbors' Comments at 3 (May 20, 2021).

[193] *Id.*

[194] Post Hearing Comments of Walleye Wind at 17-18 (citing *In the Matter of the Application of Buffalo Ridge Wind Energy, LLC for a Site Permit for the 109 MW Large Wind Energy Conversion System in Lincoln and Pipestone Counties, Minnesota,* DOCKET NO. IP-7006/WS-19-394, ORDER GRANTING CERTIFICATE OF NEED AND ISSUING SITE PERMIT (January 5, 2021)).

[195] Hearing Comments of DOC-EERA (May 20, 2021) (eDockets No. **20215-174355-01**).

[196] Post Hearing Comments of Walleye Wind at 2.

[197] Comments of MnDNR (May 20, 2021) (eDockets No. **20215-174335-01**).

[198] Post Hearing Comments of Walleye Wind at 2.

IX. FACTORS FOR ISSUING A SITE PERMIT

135. Wind energy projects are governed by Chapter 216F of the Minnesota Statutes and Chapter 7854 of the Minnesota Rules. 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.

136. 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, 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;
>
> (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 applicant'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."

137. The Commission must also consider whether the Applicant has complied with all applicable procedural requirements.

138. The Commission's rules require the Applicant 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

139. The Project is located in southwestern Minnesota in an agricultural/rural region within Beaver Creek, Luverne, Martin, and Springwater Townships in Rock County, Minnesota. Additional municipalities within 5-miles of the Project boundary include the cities of Luverne, Hills and Steen, Minnesota, as well as Valley Springs, Garretson, and Sherman, South Dakota. The City of Luverne, located approximately 3-miles east of the Project, is the county seat for Rock County. The 2010 census population for Rock County was 9,687 (U.S. Census Bureau 2010) with a population density of 20.1 individuals per square mile, while the U.S. Census 2018 ACS population estimate for Rock County was 9,414, representing a decrease of approximately -2.8% (U. S. Census Bureau 2018).[199]

140. As indicated in the record and supported by most of the comments from the local community in Minnesota, which cited the fact that the Project will positively impact the region by adding infrastructure, temporary and permanent jobs, increasing the Rock County's tax base, and providing lease payments to Project participants. Most of the comments in opposition to the project were filed by South Dakota residents, who are further removed from the both the economic benefits and potential impacts of the Project. The record shows that the communities near the Project are

[199] Exhibit 235 – Amended Site Application at 23.

also expected to receive positive economic benefits as construction will necessitate the need for numerous temporary and full-time positions.

141. Overall, the Project will have a moderately positive impact on the region by adding temporary and permanent jobs, increasing the county's tax base, and providing lease payments to participating landowners. 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 that include good-paying jobs which help develop a skilled clean-energy workforce. Approximately 150 to 185 jobs over the five to seven-month construction period and 4 full-time O&M jobs are expected as part of the Project. Walleye Wind plans to use local contractors and suppliers, where feasible, for portions of construction, which will contribute to the overall economy of the region.[200]

142. 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, while, in accordance with state and county law, Walleye Wind will pay applicable property tax and production taxes on the land and energy production to local governments. The Project will pay a Wind Energy Production Tax to the local units of government of $0.0012 per kilowatt-hour of electricity produced. This would result in annual Wind Energy Production Tax payments ranging from approximately $80,000 to $600,000 in the first year, and between $400,000 and $600,000 annually after the first year in Rock County [201]

143. The Project is not anticipated to significantly change the demographics of the Project Area or Rock County. For example, the Project will avoid impacts to resources important to Native American tribes by working with area tribes to identify and avoid these resources during design and construction. Walleye Wind contacted thirty-one Native American tribes with expected ancestral ties to the Project area of which thirteen responded. None of the respondents indicated a concern with the Project's location. No additional mitigation measures for population density are proposed as the Project is not expected to impact the demographics of the local community.[202]

144. According, the record shows that, with respect to demographics, the Project will have a moderately positive impact on the region.

B. Land-Based Economies

145. Land use within the Project Area is primarily agricultural. There are no economically important forestry resources within the Project Area, and quarries, gravel, and sand pits exist throughout Rock County, but are largely inactive, abandoned, or their use is limited to private landowners. The 2016 National Landcover Database indicates that cultivated crops account for approximately 27,041-acres or approximately 87% of the Project Area. An additional 7% of land is indicated as hay/pasture/grassland/herbaceous land cover, much of which is used for

[200] *Id*. at 80-81.

[201] *Id*. at 81.

[202] *Id*. at 25.

livestock grazing. According to the 2017 USDA Census of Agriculture County Profile for Rock County, Minnesota, over 93% of the land in Rock County (roughly 287,871-acres) was used for agriculture on approximately 701 farms. Corn, soybeans, hay, and oats are the primary crops grown in Rock County, while swine and cattle are the predominant livestock raised in the county. The market value of agricultural products sold in the county for 2017 was approximately $419 million, with crop markets at approximately $143.2 million and livestock markets at approximately $275.9 million.[203]

146. While an average of 1.32-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, substation, O&M facility, and ancillary facilities, landowners may continue to plant crops near and graze livestock up to the gravel roadway around each turbine pad. This assumes 0.25-acres of permanent impact at each turbine location, (including the concrete foundation and gravel ring around the foundation), 16-feet wide permanent access roads, 0.1-acres of permanent impact for the MET tower, approximately 10-acres for the O&M facility and the Walleye Wind Substation. The primary permanent impact to active agricultural land will be the reduction of crop production on a total of approximately 47.4 acres of cultivated crop production in the Project Area (0.15% of the total Project Area).[204]

147. Collector lines will not result in permanent impacts as they will be installed entirely underground below the plow zone. All collection lines will be buried approximately 3 to 4 feet (0.9 to 1.2 m). Large-scale impacts to agriculture or agricultural lands are not anticipated with the placement of turbines, access roads, and ancillary facilities in agricultural fields.[205]

148. While some commenters expressed concerns regarding the impact the use of prime farmland.[206] Table 30 of the Amended Site Application shows that of the total Project Area of 31,095 acres, less than 20 acres of prime farmland and less than 10 acres of prime farmland, if drained, will be permanently impacted.[207] Therefore, the record shows that Project will have minimal impacts on prime farmland.

149. The record also shows that the permanent loss of approximately 47.4 acres of agricultural land will not result in the loss of agricultural-related jobs or net loss of income, until such time that the project is decommissioned, and the land restored. Revenue lost from the removal of land from agricultural production will be offset by lease payments to individual landowners according to their respective contracts with Walleye Wind.[208]

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[203] *Id*. at 74, 78-79.

[204] *Id.* at 75.

[205] *Id.*

[206] Post Hearing Comments of Walleye Wind at 15.

[207] Exhibit 235 – Amended Site Application at 76.

[208] *Id.* at 75-78.

150. Therefore, the record shows that the presence of the Project will not significantly impact the agricultural land use or general character of the area.

C. Recreation and Tourism

151. Rock County offers tourism opportunities throughout the year. According to Minnesota's Tourism and the Economy Fact Sheet 2019 (Explore Minnesota 2019), in 2017, annual leisure and hospitality expenditure in Rock County was approximately $10.8 million. There were about 269 tourism-related jobs in the Rock County in 2017, seven of which were in state government and the rest were in private industry.[209]

152. Snowmobiling is a popular activity in Rock County with several miles of trails offering a potential tourism draw. More specifically, approximately 91-miles of snowmobile trails are found throughout Rock County. Approximately 3.2-miles of the Buffalo-Ridge Snowmobile Trail run through the Project Area itself, and portions of the Buffalo-Ridge Trail also run through the surrounding 5-mile area. A local group called the Rock County Sno-Masters maintains groomed trails within Rock County that connect Pipestone and Nobles Counties.[210]

153. Turbines will be set back at least 250 feet from snowmobile trails to minimize the potential for ice throw. No direct impacts to tourism are anticipated as a result of the Project.[211] Also, as explained in its March 2, 2020 comments, Walleye Wind will continue to coordinate with the applicable agencies on addressing issues related to the impact of construction on snowmobile trails. [212]

154. Further, the record shows that 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.[213] However, as described below, turbine structures are already a feature type within the viewshed of the Project Area. Thus, the record shows that the Project will not have a direct impact on recreation and tourism.

D. Land Use

155. Neither Rock County nor the townships within the Project Area have adopted a comprehensive plan; however, Rock County has adopted local zoning and ordinances that are applicable to wind energy conversion systems ("WECS") under 5 MW. As part of the record, Rock County provided a letter on July 6, 2020 indicating that the County supports a finding that

[209] *Id*. at 79.

[210] *Id*. at 64, 80.

[211] *Id*. at 67, 80.

[212] Exhibit 249 – Walleye Wind Reply Comments to MnDNR.

[213] Exhibit 235 – Amended Site Application at 80.

there is good cause not to apply the County's standards to the Project. Further, Walleye Wind's Project occurs primarily within county-zoned agricultural districts.[214]

156. Therefore, the record shows that Walleye Wind is not likely to impact future zoning and expansion of incorporated areas in the vicinity of the Project, and development of the Project will allow for the continued agricultural use.[215] Accordingly, the Project will not directly impact Rock County or the local townships' regulation of land use.

E. Sound

157. 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 Section Minn. R. 7030.0050 in terms of land use. The sound standards for each NAC are defined in subpart 2 of Minn. R. Section 7030.0040.

158. 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 the 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".[216]

159. 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.[217]

160. 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 665 receptors within 1.5 miles of the Project Area, with 222 receptors located in South Dakota were modelled. These receptors were modeled as discrete points at a height of 1.5 m above ground level to mimic the ears of a typical standing person.[218] All wind turbines are proposed to have LNTE blade attachments that limit noise generation, while some turbines may also utilize NRO, if require to ensure compliance with the sound standards.[219]

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[214] *Id.* at 25.

[215] *Id.* at 25-27.

[216] *Id.* at 30.

[217] *Id*. at 29.

[218] *Id*. at 34.

[219] *Id.* at 14.

161. 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% 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 45 dBA. Accordingly, total sound levels (Project + Existing Non-Project + non-wind-turbine ambient) will meet the Minnesota limit of 50 dBA when non-wind-turbine ambient sound levels are less than or equal to 47 dBA. The predicted total sound levels are shown for when ambient (non-wind-turbine) L50 sound levels are 35, 40, 45, 47, and 50 dBA. As found in the ambient measurement study, ambient nighttime sound levels can exceed 47 dBA. Non-wind-turbine ambient sound levels can fluctuate due to sound sources such as ground-level winds, vehicular traffic, birds, and vegetation rustle, all of which have the potential to cause ambient sound levels to be equal to or exceed the MPCA L50 nighttime limit of 50 dBA. In these instances, the increase to the non-wind-turbine ambient sound level will be zero to two decibels since the highest modeled Project-Only sound level is 47 dBA. Under conditions where two sound levels have the same or very similar characteristics a 2-dBA change is imperceptible to the average person.[220]

162. Compliance with MPCA standards setbacks will also be accomplished through establishing setbacks for turbines of at least 1,400 feet from residential developments, except for two turbines, which would be located approximately 1,325 feet and 1,355 feet from receptors, respectively. The Applicant will also conduct a post-construction sound level measurement program to evaluate compliance with respect to MPCA noise standards.[221] Additionally, 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 (381 m) (3 RD) from their property in non-prevailing wind directions and at least 2,085 feet (636 m) (5 RD) from their property in prevailing wind directions for the GE 2.82 MW turbine model. For the GE 2.32 MW turbine model, properties not participating in the Project are to have turbines set back at least 1,146 feet (349 m) (3 RD) from their property in non-prevailing wind directions and at least 1,910 feet (582 m) (5 RD) from their property in prevailing wind directions.

163. Given the interest from South Dakota residents on sound issues, Walleye Wind confirmed that that the closest wind turbine is 3,212 feet from any residence and the highest modelled sound at a South Dakota residence is 39 dBA, which is well below MPCA sound thresholds.[222]

164. In response to Walleye Neighbors and concerns expressed by members of the public regarding the use of a ground attenuation factor of 0.5 in the sound modeling, as testified by Richard Lampeter, Walleye Wind's sound expert, the study appropriately used a ground attenuation factor of 0.5:[223]

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[220] *Id.* at 34.

[221] *Id.* at 38.

[222] Walleye Wind Post Hearing Comments at 8-9 (June 2, 2021).

[223] *Id.* at 9; Public Hearing Tr. at 34 (May 4, 2021 (6:00 pm session)); Exhibit 241 – Amended Sound Study at 6-4 to 6-5 (November 4, 2020) (eDocket No. **202011-168046-03**).

> 0.5 is representative of the land use there, and in addition it's a -- it is one of the inputs, and it's best to look at the various modeling inputs as a whole, as you can adjust different inputs. But as a whole we have found that the modeling as -- methodology as outlined yields conservative results when compared to post-construction measurements. So that's just one of several that go into the analysis and in combination result in predicted-modeled sound levels that would be equal to or above the measured values under worst-case conditions.

165. Additionally, the record also shows that it is an industry standard to use a 0.5 ground attenuation factor as has been recognized by the Commission in issuing recent Site Permits where such a ground factor was used.[224]

166. With respect to concerns raised with regard to the health impact from wind farms and low frequency and infrasound, as explained in the Amended Site Application, Appendix B peer-reviewed scientific studies and a National Association of Regulatory Utility Commissioners report showed that there is no correlation between wind farms and low frequency and infrasound impacting health.[225] Furthermore, at the May 4 public hearing, Walleye Wind's witness, Chris Ollson PHD, who specializes, in part, on the health and welfare impacts of wind farms, also testified that the Walleye Wind Project has been designed from a sound and shadow flicker standpoint will not negatively impact human health and welfare.[226]

167. Finally, the DSP contains adequate conditions to monitor and mitigate sound from the Project. Section 4.3 requires that "the wind turbine towers shall be placed such that the Permittee shall, at all times, comply with noise standards established by the MPCA as of the date of this permit and at all appropriate locations. The noise standards are found in Minnesota Rules Chapter 7030. Turbine operation shall be modified, or turbines shall be removed from service if necessary to comply with these noise standards."[227] 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. Thus, the record shows that Project meets or exceeds the MPCA state noise standards.

F. Visual Impacts

1. Generally

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

[224] *See e.g., In the Matter of the Application of Buffalo Ridge Wind Energy, LLC for a Site Permit for the 109 MW Large Wind Energy Conversion System in Lincoln and Pipestone Counties, Minnesota,* DOCKET NO. IP-7006/WS-19-394, ORDER GRANTING CERTIFICATE OF NEED AND ISSUING SITE PERMIT at 11 (January 5, 2021).

[225] Exhibit 241 – Amended Sound Study at 8-2.

[226] Public Hearing Tr. at 48, 54-55, 61-62 (May 4, 2021 (6:00 pm session)).

[227] Exhibit 349 – Commission March 24 Order.

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 aesthetic impacts than temporary observers as they will look at the Project more frequently than those individuals periodically passing through the area.[228]

170. The City of Beaver Creek is located within the southwestern portion of the Project. Additional municipalities within 5-miles of the Project include the cities of Luverne, Hills, and Steen, Minnesota; and Garretson, and Valley Springs, South Dakota. The closest portion of Luverne, which is the county seat of Rock County, is approximately 2-miles east of the Project, while the main portion of the city is approximately 4-miles east of the Project. Hills is approximately 3.6-miles south of the Project, and Steen is approximately 4-miles southeast of the Project. Garretson is approximately 3-miles west of the Project, and Valley Springs is approximately 1.6-miles southwest of the Project.[229]

171. While some commenters (particularly residents of South Dakota) have alleged that the Project will fundamentally alter the viewshed in the area, the record demonstrates that area has numerous wind turbines already present. There are 119 turbines located approximately 4-miles northeast of the Project, which are part of the 200 MW Prairie Rose I Wind Farm. Two more turbines are located 14-miles north of the Project. These 750 MW NEC Micon turbines are associated with Olsen Farms. There are seven wind turbines located within the Project Area itself, which will be decommissioned in 2021. The removal of Perch Wind turbines will lessen the overall visual impacts on local landowners in this area. There are also four turbines located approximately 0.6-miles south of the Project (MinWind I and II). These projects are part of a farmer-owned venture, and they came online in 2002. Each of the projects consists of two Micon 950 kilowatt turbines. MET towers associated with each of these wind facilities may be present on the landscape as well.[230]

172. There are also two existing transmission lines running a total of approximately 14.9-miles in a northeast-to-southwest trending direction through the southern portion of the Project. The transmission line to the north is a 161 kilovolt ("kV") line and the transmission line to the south is a 345 kV line. Approximately 27.1-miles of additional existing transmission lines are located within 2-miles of the Project. A short (approximately 500 feet) new 161 kV generation tie line to the existing Substation is proposed as part of this Project.[231]

173. Walleye Neighbors and members of the public expressed viewshed concerns related to the distance of wind turbines from Blue Mounds State Park and Palisades State Park in South Dakota.[232] As explained in Walleye Wind's Post Hearing Comments, however, the closest

[228] Exhibit 235 – Amended Site Application at 38.

[229] *Id*. at 39.

[230] *Id.*

[231] *Id.* at 40

[232] Walleye Neighbors' May 20 Comments at 8-9.

turbines to Blue Mounds State Park are approximately 6.7 miles, with another wind turbine approximately 7 miles away, and there are no wind turbines within 5 miles of the park.[233] The nearest wind turbines to Palisades State Park are approximately 3.4 miles, with another wind turbine approximately 3.5 miles away, and only six turbines within 5 miles of the park. Also, as explained above, there are numerous wind turbines and two high voltage transmission lines in the viewshed of the Project. Thus, the distance of the Project facilities from the parks coupled with the already existing viewshed that includes electric infrastructure, mitigates any Project specific impacts to the viewshed.

174. Further, the record shows that Walleye Wind will implement the following mitigation measures to minimize potential visual impacts: (1) turbines will be uniform in color; (2) turbines will not be located in sensitive areas such as public parks, Wildlife Management Areas ("WMA"), scientific and natural areas ("SNA"), or Waterfowl Protection Areas ("WPA"); (3) turbines will be illuminated to meet the minimum requirements of Federal Aviation Administration ("FAA") regulations for obstruction lighting of wind turbine projects and will utilize an Aircraft Detection Lighting System or Lighting Intensity Dimming Solution system when Walleye Wind can obtain these technologies based on commercial constraints and delivery scheduling; (4) electric collection lines will be buried to minimize above-ground structures within the Project Area; (5) existing roads will be used for construction and maintenance, as appropriate, to minimize the number of new roads constructed; and (6) temporarily disturbed areas will be converted back to cropland or otherwise reseeded with native seed mixes appropriate for the region.[234]

175. The record shows that Walleye Wind has appropriately addressed the visual impact of the Project in the context of the existing infrastructure and landscape.

2. Shadow Flicker

176. With respect to wind turbines, shadow flicker can be defined as an intermittent change in the intensity of light in a given area resulting from the operation of a wind turbine due to its interaction with the sun. An observer experiences repeated changes in the brightness of the room as shadows cast from the wind turbine blades briefly pass by windows as the blades rotate. In order for this to occur, the wind turbine must be operating, the sun must be shining, and the window must be within the shadow region of the wind turbine, otherwise there is no shadow flicker.[235] Minnesota does not have a specific rule or regulatory standard defining the amount of shadow flicker acceptable for a commercial wind project.

177. With respect to the shadow flicker produced by the Project, a Project-specific shadow flicker analysis was conducted using the software package, WindPRO version 3.3. The WindPRO modeling was further refined by incorporating sunshine probabilities and wind turbine operational estimates by wind direction over the course of a year. The values produced by this further refinement are known as the "expected" shadow flicker. The predicted expected annual shadow flicker duration for the 443 receptors in Minnesota ranged from 0 hours, 0 minutes per

[233] Walleye Wind Post Hearing Comments at 21-22.

[234] Exhibit 235 – Amended Site Application at 47-48.

[235] *Id.* at 43.

year to 45 hours, 49 minutes per year. The maximum expected shadow flicker was at a participating receptor (#331). The maximum expected worst-case annual shadow flicker at a non-participating receptor (#84) is 38 hours, 36 minutes. While the maximum expected worst-case annual shadow flicker at a targeted receptor (#94) is 42 hours, 34 minutes. Eleven receptors in Minnesota are expected to have over 30 hours of flicker per year, four of which are non-participating receptors.[236]

178. Given the interest from South Dakota residents concerning shadow flicker impacts, Walleye Wind notes that the closest wind turbine is 3,212 feet from any residence in South Dakota and the highest modelled shadow flicker is 9:17 hours annually.[237]

179. To mitigate shadow flicker, Walleye Wind will use site-specific mitigation measures to address shadow flicker impact, as appropriate, including the following: (1) meeting with the homeowner to determine the specifics of their complaint; (2) investigating the cause of the complaint; and (3) providing the homeowner with mitigation alternatives including shades, blinds, awnings or plantings.[238] The DSP also contains requirements to address shadow flicker impacts.

180. In its May 20, 2021 post hearing comments, DOC-EERA proposed the following edits to DSP Section 7.2 related to shadow flicker:

> **7.2 Shadow Flicker**
> At least 14 days prior to the pre-construction meeting, the Permittee shall provide 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. Information shall include the results of modeling used, assumptions made, and the anticipated levels of exposure from turbine shadow flicker for each residence. The Permittee shall provide documentation on its efforts to avoid, minimize, and mitigate shadow flicker exposure. ~~The results of any modeling shall be filed with the Commission at least 14 days prior to the pre-construction meeting to confirm compliance with conditions of this permit.~~ The Permittee shall prepare a Shadow Flicker Management Plan detailing the results of any shadow flicker modeling, assumptions made, levels of exposure prior to implementation of planned minimization and mitigation efforts, planned minimization and mitigation efforts, and planned communication and follow up with resident. The Shadow Flicker Management Plan shall be filed with the Commission at least 14 days prior to the preconstruction meeting to confirm compliance with conditions of this permit.
>
> Should shadow flicker modeling identify any residence of a non-participating landowner that will experience in 30 hours, or more, of shadow flicker per year, the Permittee must specifically identify these residences in the Shadow Flicker Management Plan. If through minimization and mitigation efforts identified in the Shadow Flicker Management Plan the

[236] *Id*. at 46-47; Exhibit 242 – Amended Shadow Flicker Study at 3-7 (November 4, 2021) (eDocket **20201101-168046-09**).

[237] Walleye Wind Post Hearing Comments at 9 (June 2, 2021).

[238] Exhibit 235 – Amended Site Application at 48.

Permittee is not able to reduce anticipated shadow flicker exposure at a nonparticipating landowner's residence to less than 30 hours per year a shadow flicker detection systems will be utilized during project operations to monitor shadow flicker exposure at the residence. The Shadow Flicker Management Plan will detail the placement and use of any shadow flicker detection systems, how the monitoring data will be used to inform turbine operations, and a detailed plan of when and how turbine operations will be adjusted to mitigate shadow flicker exposure exceeding 30 hours per year at any one receptor. The results of any shadow flicker monitoring and mitigation implementation shall be reported by the Permittee in the Annual Project Energy Production Report identified in Section 10.9 of this Permit.

Commission staff and EERA staff will be responsible for the review and approval of the Shadow Flicker Management Plan. The Commission may require the Permittee to conduct shadow flicker monitoring at any time during the life of this Permit.

181. Walleye Wind confirmed that DOC-EERA's proposed edits and additions to Section 7.2 of the to the DSP are acceptable, with the addition of the following language: "In the event that Walleye Wind and a non-participant landowner with modelled expected shadow flicker of 30 hours or more a year reach a mutual agreement on the mitigation of the shadow flicker, Walleye Wind is not required to implement a Shadow Flicker Management Plan for that non-participant. Walleye Wind will notify the Commission of any such mutual agreement on the mitigation of shadow flicker."[239]

182. The record shows that such a provision addresses the DOC-EERA's concerns with potential impacts on non-participating landowners and allows Walleye Wind to address any concerns directly with the landowner. Therefore, Walleye Wind has demonstrated that it will reasonably mitigate impacts from shadow flicker.

G. Public Services and Infrastructure

183. The Project is located in rural southwestern Minnesota. A network of existing roads and utilities provide access, electricity, water supply, and telephone service to rural residences, farmsteads, small industry, and unincorporated areas. Water wells and septic systems are used within the Project Area to provide for household needs. The Project is expected to have a minimal effect on existing services and infrastructure and will be constructed and operated in accordance with associated federal, state, and local permits and laws. Industry construction and operation standards and prudent utility practices will also be followed. Extensive public service and infrastructure mitigation measures are not anticipated because only minor impacts to services and infrastructure are expected.[240]

184. U.S. Highway 75 and Interstate 90 are the main access routes into the region of the Project and would likely be used as corridors to bring materials and equipment to the site. The functional capacity of a two-lane paved rural highway is in excess of 5,000 vehicles per day, far

[239] Walleye Wind Post Hearing Comments at 19 (June 2, 2021).

[240] Exhibit 235 – Amended Site Application at 48.

greater than the maximum amount of construction traffic that is expected during peak construction. The peak amount of construction traffic is estimated to be 700 vehicles in a ten to twelve-hour workday. However, some minor, short-term traffic delays within and near the Project Area may occur during turbine and equipment delivery and construction activities. [241]

185. To mitigate the minor impacts, Walleye Wind has spaced turbines and access roads to reduce congestion. For example, the majority of access roads are proposed off of local roads and avoid major highways that cross and border the Project. Prior to construction, Walleye Wind will coordinate with applicable local and state road agencies to ensure all relevant permits are obtained, delivery plans are communicated, traffic management plans are implemented where necessary, and weight limits are not exceeded. Walleye Wind will formalize road development agreements with applicable roadway authorities to ensure that impacted or damaged roadways will be restored to their original condition or better. Walleye Wind will require that the general contractor be in contact with the relevant road authorities during construction. During operations, only a few O&M crew workers will utilize roads within the site for regular inspections and maintenance. Traffic is not expected to noticeably increase during the operations phase of the Project. [242]

186. While several South Dakota residents raised concerns with respect to damage to roads and increased construction traffic, Walleye Wind confirmed that it does not intend to use roads in South Dakota during Project construction.[243]

187. MnDOT also requested the following commitments from Walleye Wind that Walleye Wind would: (1) not request access from I-90's right-of-way; (2) connect wind turbine no. 22's access road to CSAH-17; and (3) bore the collection line that will cross I-90 and TH23. MnDOT also stated a concern with shadow flicker on I-90.[244] In response, Walleye Wind, committed to (1) not request access from I-90's right-of-way; (2) to connect wind turbine no. 22's access road to CSAH-17; and (3) to bore the collection line that will cross I-90 and TH23. Walleye Wind, through its coordination with MnDOT, also alleviated the agency's concern related to shadow flicker on I-90.[245]

188. Other safeguards related to roads are also included in the DSP. Section 5.3.13 of the DSP provides that Walleye Wind will identify all state, county, or township roads that will be used for the project.[246] Walleye Wind will 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, Walleye Wind shall make satisfactory arrangements (approved permits, written authorizations, road use agreements, development agreements, etc.) with the appropriate state,

[241] *Id.* at 50.

[242] *Id.* at 51.

[243] Walleye Wind Post Hearing Comments at 8 (June 2, 2021).

[244] Exhibit 703 – MnDOT Comments (January 27, 2021) (eDocket No. **20211-170313-01**).

[245] Exhibit 247 – Walleye Wind Reply Comments to MnDOT (February 24, 2021) (eDocket No. **20212-171310-02**).

[246] Exhibit 349 – Commission March 24 Order.

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.[247]

189. Therefore, Walleye Wind will reasonably mitigate the minor impacts from the Project with respect to infrastructure, including roads.

190. With respect to communication systems, Walleye Wind conducted an Electromagnetic Interference Analysis. The analysis identified one microwave tower within the Project Area and eight microwave beam paths that intersect the Project Area. The beam paths within the vicinity of the Project are owned and operated by the state of Minnesota, East River Electric Power, T-Mobile, and Sprint Spectrum. No active AM or FM radio towers were identified within the Project Area. One AM tower (KQAD) and four FM (KLQL, KNWC-FM, KTWB, and KXRB-FM) radio towers are located within 15.5-miles of the Project. Land mobile stations will be used within the Project Area for several reasons, such as communications between maintenance crews for the Project, public safety, emergency response, and local government communications. Typically, land mobile stations are unaffected by wind projects due to their radio systems with multiple transmitters to provide redundancies that allow their signal to broadcast through wind turbines.[248]

191. To mitigate the Project's impact to communication system, Walleye Wind will implement a buffer of 74 m around WCFZ. Turbines are located outside of these buffers to mitigate any impact on the signal. In addition, while impacts to AM/FM radio are not anticipated, due to the distance between existing radio towers and the Project, Walleye Wind will address any reception impacts which may arise following construction of the Project on a case-by-case basis. If impacts do occur, additions or changes to transmitters, receivers, or amplifiers can also be made to communication systems to minimize impacts. Further, in the unlikely event that land mobile licenses experience impacts to coverage due to the Project, Walleye Wind will address these issues on a case-by-case basis. If interference does occur, additions or changes to transmitters, receivers, or amplifiers can also be made to communication systems to minimize impacts.[249]

192. Walleye Wind's mitigation measures to address the impact of the Project on communication systems are reasonable.

193. There are no digital or analog television ("TV") towers located within the Project Area, there are 43 licensed TV towers within approximately 62-miles of the Project. Of these 43 stations, nine are located within 31-miles of the Project and are likely to be broadcasting to the region. Most of the TV towers within approximately 62-miles of the Project are low power stations or translator stations that have limited range and would not be expected to experience reception interference. Ten full-power towers (call signs KTTW, KELO-TV, KSFY-TV, KSMN, KDLT-

[247] Exhibit 235 – Amended Site Application at 51.

[248] *Id.* at 51-53.

[249] *Id*.

TV, KCSD-TV, KUSD-TV, KWSD, KWSD, and KWSD) have a possibility of experiencing reception interference if a turbine is in the line-of-sight between the TV tower and the receptor.[250]

194. Although the Electronic Interference Analysis indicated that TV interference from the Project is expected to be limited, to mitigate the impact of the Project on TV, Walleye Wind will: (1) log the report and determine if the interference is Project-related; (2) meet with the complainant and the local communications technician to determine the status of the affected TV reception equipment; (3) discuss with the complainant the option of: (a) installing a combination of high gain antenna and/or a low noise amplifier; or (b) entering into an agreement to provide a monetary contribution (equal to the cost of installing the recommended equipment) toward comparable Direct Broadcast Satellite ("DBS") service; (4) at the complainant's election, Walleye Wind will either install the recommended equipment or enter into an agreement to reimburse the complainant for the cost of comparable DBS service; (5) if the complainant chooses DBS service, Walleye Wind will consider the matter closed upon installation of the satellite dish; (6) if the complainant selects antenna and/or amplifier installation and later reports continued interference issues, Walleye Wind will send a technician to the property to assess the status of the equipment and provide any necessary repairs; (7) if Project-related interference remains an issue, Walleye will propose an agreement that reimburses the complainant for the cost of comparable DBS service and will remove the antenna and/or amplifier equipment, unless it was initially installed to service multiple households; and (8) if Walleye Wind and the complainant are unable to reach an agreement to resolve interference-related issues, Walleye Wind will report the concern as an unresolved complaint and defer to the Commission's dispute resolution process to resolve the matter.[251]

195. The record shows that Walleye Wind's approach to mitigating TV interference is reasonable.

196. 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, Walleye Wind submitted an assessment of television and radio signal reception, microwave signal patterns, and telecommunications in the Project Area.[252]

197. Telephone service in the Project Area is provided to farmsteads, rural residences, and businesses through both landlines and wireless signals. The Electromagnetic Interference Analysis identified one cellular tower within the Project Area as well as an additional four towers within 15.5 miles of the Project Area. The towers are owned and operated by AT&T Mobility Spectrum LLC and Alltel Cooperation. Broadband is provided by 18 providers within Rock County including Sprint, T-Mobile, and Verizon Wireless. In order to avoid potential physical impacts to underground telecommunication lines, all existing underground lines will be located using a utility locate service, and collection line locations will be coordinated with local

[250] *Id*. at 54-56.

[251] *Id*. at 56-57.

[252] Exhibit 349 – Commission March 24 Order.

telecommunications providers to ensure there will be no direct impacts to existing telephone lines.[253]

198. Walleye Wind's mitigation of undergrounding its lines is reasonable.

H. Public Health and Safety[254]

199. Public health and safety issues associated with the Project are primarily related to turbine operation, EMF, stray voltage, and aviation. Extensive research has been conducted by the National Institute of Environmental Health Sciences regarding EMFs. To date, there is no conclusive research evidence that EMFs stemming from power lines pose significant impacts to health EMFs from underground electrical collection and feeder lines dissipate quickly and relatively close to the source due to the fact that they are buried underground, heavily insulated, and also shielded. Research has shown that electrical fields surrounding buried lines are negligible and magnetic fields ("MF") often dissipate significantly within approximately three feet of stronger EMF sources, such as transmission lines and transformers. In addition, 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 tapped or diverted for other uses.[255] The record shows that the Project will not result in a health or safety issue due to EMF, MF, and stray voltage.

200. There are three active registered airports and one active heliport located within 10-miles of the Project Area. Public airports nearest the Project are the Quentin Aanenson Field Airport (3.53- miles east) and the Rock Rapids Municipal Airport (9.72-miles southeast). Walleye Wind has coordinated through the militaries informal review process and identified the existence of a NORAD radar coverage overlapping the project boundary. Walleye Wind has negotiated a mitigation agreement with the U.S. Air Force which is currently being reviewed by the U.S. Air Force's counsel for approval. Walleye wind will continue to coordinate with Air Force officials to ensure the project is sited in accordance with military requirements. As an early design mitigation Walleye Wind submitted the proposed location of the turbines and associated Project facilities to the FAA in early December 2018 for an aeronautical study and has received determinations of no hazard for each wind turbine and MET tower location. In order to avoid potential impacts to air traffic, Walleye Wind will mark and light the wind turbines to comply with FAA requirements. Walleye Wind's operations will coordinate with crop dusting plane pilots, and will work with them on a case-by-case basis. If notified prior to aerial application activities in the Project vicinity, Walleye Wind can adjust turbine direction to create flyways through the wind farm when advance notice of flight plans is provided. This can facilitate crop dusting activities in the Project vicinity. If requested, Walleye Wind may also shut down the turbines to reduce air turbulence to allow for aerial application within or near the Project.[256]

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[253] Exhibit 235 – Amended Site Application at 57.

[254] Health and safety issues concerning noise and emergency services are addressed elsewhere in these Findings of Fact.

[255] Exhibit 235 – Amended Site Application at 67-69.

[256] *Id*. at 70-73.

201. Walleye Wind has reasonably addressed the Project's impact on aviation.

202. The predominant land use in the Project Area is agriculture. Potentially hazardous materials within the Project Area may 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/or lead-based paint may be present due to the age of the farmsteads within the Project Area. Polychlorinated biphenyls associated with pad-mounted and pole-mounted transformers may also be present. In addition, trash or junk piles are a common occurrence in rural regions such as the Project Area, particularly in wooded areas. Due to the presence of hazardous materials during Project construction and operations, there is the potential for spills and/or leaks to occur. The primary concerns associated with these potential spills and/or leaks are the potential impacts to surface and groundwater resources and the potential for soil contamination within the Project Area.[257]

203. To avoid potential impacts to water and soil resources, new and used oils will be stored within the O&M building or inside a secondary containment structure. Secondary containment will prevent impacts and will ensure that leaks, if they occur, will be contained. Additionally, a site-specific Spill Prevention, Control, and Countermeasure Plan ("SPCC") will be created for both the construction and operational phases of the Project. The SPCC will detail the appropriate storage, cleanup, and disposal of hazardous wastes to ensure potential impact are avoided.[258]

204. Several requirements of the DSP will also mitigate any impacts to public health and safety. For instance, Section 5.3.26 of the DSP requires that Walleye Wind 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. Walleye Wind will provide any necessary safety measures such as warning signs and gates for traffic control or to restrict public access. Walleye Wind 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.

205. Section 10.11 of the DSP also Walleye Wind 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 preconstruction meeting and a revised plan, if any, at least 14 days prior to the pre-operation meeting. Walleye Wind 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. Walleye Wind will register the facility address or other location indicators acceptable to the emergency responders and PSAP having jurisdiction over the facility.

[257] *Id*. at 73-74.

[258] *Id*. at 74.

206. Members of the public submitted comments expressing concern with ice throw from turbine blades and debris. In response, Walleye Wind explained that during wind turbine operations, Walleye Wind turbines will shut down when there is a buildup of ice on the blades that causes an imbalance, which mitigates ice throw.[259] With respect to debris, Walleye Wind explained that while it is unlikely debris will fall from the wind turbines, if it does, Walleye Wind's operations and maintenance team will coordinate with local emergency management officials via their standard operating procedures to address any such debris.[260] Further, pursuant to Section 10.11 of the DSP, Walleye Wind will prepare an Emergency Response Plan which will include procedures to be follow in the event that a wind turbine is damaged.[261] Given Walleye Wind's operational mitigation of ice throw or debris and the requirements of the DSP, the record shows that the potential for ice throw and debris is appropriately mitigated.

207. The record demonstrates that Walleye Wind 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.

I. Soils and Topography

208. The topography of the Project Area is generally flat but contains undulating terrain typical of Minnesota and eastern South Dakota and is comprised of 41 soil types. Soils within the Site range from poorly drained to excessively drained. Three soil types account for nearly half of the soils (45%) within the Project Area and are generally composed of silt loams with 0-10% slopes. Construction and operation of the Project will result in short and long-term impacts to soils within the Project Area. Short-term impacts will result from the clearing of vegetation, generation of dust, and the excavation, stockpiling, and redistribution of soils.[262]

209. Walleye Wind anticipates 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 m), with a total width of up to approximately 68 feet (approximately 21 m). 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 32 tons of steel will be required in the design of the foundation for structural support. The concrete turbine foundations will require up to approximately 2,500 cubic yards of excavation depending on soil requirements and turbine size. Depending upon final design, up to 400 cubic yards of concrete will be required for each foundation.[263]

[259] Walleye Wind Post Hearing Comments at 16-17 (June 2, 2021).

[260] *Id*.

[261] March 24 Order at 24-25.

[262] Exhibit 235 – Amended Site Application at 82-86.

[263] *Id.* at 137.

210. The underground electrical collector and communication systems will connect each turbine to the proposed substation. Approximately 37 miles of underground collection line will be installed.[264]

211. To mitigate the impact of the Project on soils and topography, following the completion of construction, impacted soils that will not continue to be used for operation of Project facilities, will be restored to pre-construction condition in accordance with landowner lease agreements. Also, compacted soils will be ripped up with a grader and revegetated. Soil will be used as backfill, spread out around the construction areas, graded in some locations to drain away from turbines, and topped with gravel or topsoil as appropriate. Areas where infrastructure is not located, will be topped with topsoil and revegetated. In addition, obtaining a National Pollutant Discharge Elimination System ("NPDES") permit, the implementation of a Stormwater Pollution Prevention Plan and best practices will ensure that appropriate measures will be taken to protect surface water form direct and 87 indirect impacts of sedimentation and erosion caused by construction and operation of the Project while simultaneously preventing any adverse impacts to soil resources. At the end of the Project's life, Walleye Wind will decommission the Project and soils will be returned back to agricultural use as required by Section 11 of the DSP.[265]

212. The record shows that Walleye Wind mitigation measures and DSP requirements to minimize the impact for topography and soils is reasonable.

J. Groundwater Resources

213. Groundwater within Minnesota is separated into six provinces based on the geology and bedrock of the various regions. The Project is located in the Western Province. Aquifers in the Western Province occur locally under unconsolidated sediments of sands and gravel. Major unconfined aquifers within Rock County are associated with the Rock River and Beaver Creek. Beaver Creek crosses through southern portions of the Project Area. Major impacts to groundwater resources and wells are not expected from Project-related activities due to setbacks from water wells and the minimal water-related needs of the Project. A well will be installed to fulfill the O&M building water requirements. The water used for dust abatement and other construction needs would either come from a local well or may be trucked in from a suitable local source and stored at the laydown yard. The source of water will be determined closer to construction. Construction dewatering may occur depending on the weather, soil conditions, and specific locations. Dewatering consists of the removal of surface water and/or groundwater by diverting and/or removing construction areas within water features or wet areas, as needed for construction.[266]

214. Overall, the construction and operation of the proposed Project is not expected to impact groundwater resources, and Walleye Wind is required to comply with all state and county standards related to groundwater, including obtaining a permit for the well associated with the

[264] *Id.* at 18.

[265] *Id*. at 82-83, 86-87.

[266] *Id*. at 87-88.

O&M building.[267] Therefore, the record shows that Walleye Wind will not adversely impact groundwater resources.

K. Surface Water and Floodplain Resources

215. The Project Area is within the Rock and Lower Big Sioux watersheds. Both watersheds are part of the larger Missouri River Basin. In Minnesota, the Missouri River Basin drains approximately 1,783- square miles (approximately 1,141,120-acres) of Lincoln, Murray, Nobles, Jackson, and Rock counties. This water basin is significant to the agricultural industry in Minnesota due to its highly rich soils. Approximately 60% of the watershed is currently in cropland land use. According to the USGS National Hydrography Dataset and the Minnesota Public Waters Inventory, the approximate mileage of streams within the Project Area is 33.56-miles.[268]

216. Permanent impacts to rivers and streams may occur in relation to the installation of permanent culverts that would allow continual roadway access to turbine locations without impeding natural hydrology of the landscape. Temporary impacts may result from the installation and removal of temporary culverts/crossings below the ordinary high-water mark to allow for access throughout the Project and temporary sedimentation from construction runoff. Temporary impacts to surface waters may also occur when collection lines are installed beneath waterway surfaces. During this process, temporary dewatering of the feature may be required to ensure the collection line is safely and correctly installed. Collection line installment across waterways will be done through horizontal directional drilling (boring) and is not anticipated to directly impact steams on-site of the Project. To address impacts to surface water and floodplains, Walleye Wind will obtain a NPDES permit and implement a SWPPP.[269]

217. Walleye Wind will also employ best management practices ("BMP") consistent with MPCA's (2000) Stormwater Best Management Practices Manual. The implementation of these best management practices will ensure that excavated material is contained, exposed soil is protected, restored material is stabilized, and disturbed areas are revegetated with appropriate plant species. Use of BMPs will also ensure that access roads and drainage ways will be designed in a manner that allows water to flow unrestricted from upper portions of the watershed to lower portions of the watershed. Significant adverse Project-related impacts to surface waters and/or floodplains are not anticipated because of design considerations and the implementation of Stormwater BMPs.[270]

218. The aforementioned BMPs will not only be employed to protect topsoil and minimize soil erosion but will also protect surface water quality and floodplain resources from direct and indirect impacts. In addition, should dewatering be necessary, Walleye Wind will implement mitigation measures to address dewatering and ensure sediment laden water will not be

[267] *Id*. at 88.

[268] *Id*. at 88-89.

[269] *Id.* at 90.

[270] *Id.*

directly discharged to surface waters.[271] The record shows that Walleye Wind's mitigation measures appropriately minimize any impact to surface waters and floodplains.

L. Wetlands

219. The Project Area contains both isolated wetlands and wetlands associated with watercourses. The Project Area primarily consists of freshwater emergent wetlands concentrated along streams, with a smaller amount of riverine wetlands, and some mapped shrub/scrub and forested wetlands are also scattered throughout the landscape. The Protect Area contains approximately 1,656-acres of wetlands (approximately 5.3% of the total acreage). The majority of the water resources mapped are freshwater emergent and riverine wetlands. Turbines and MET towers will be sited in upland, higher elevation areas to maximize the wind resource and, as such, are likely to avoid wetlands and surface waters that are typically found at lower elevations. Access roads and Project infrastructure will be designed and sited to avoid or minimize permanent impacts to wetlands to the greatest extent feasible. Temporary impacts to wetlands may occur based on construction corridors.[272]

220. To mitigate the impact to wetlands, Walleye Wind will avoid impacts to wetland areas, where possible, and to minimize impacts to wetlands in cases where the impacts cannot be avoided. Wetlands near areas of construction activity will be marked to ensure that construction crews avoid these areas. Directional drilling of collector and communication lines may be utilized to avoid or reduce the amount of acreage where wetland impacts occur. Consistent with the MPCA's (2000) Stormwater Best Management Practices Manual, Walleye Wind will implement BMPs to protect topsoil, minimize soil erosion, and protect wetland resources from direct and indirect impacts. Minimizing soil erosion near wetlands helps to protect the wetland water quality, reduces the likelihood for fill of the wetland, and helps to maintain the integrity of the wetland. Wetland soils and moderately to steeply sloped ground can also be subject to sheet and rill erosion or slumping. Depending on site specific needs, employment of seasonal construction scheduling, retaining stumps if tree clearing occurs, temporary timber matting, erosion control blankets, mulch, straw bales, rolls, tackifiers (*i.e.,* chemical compounds that increase the stickiness of adhesives so as to help seed or soil stay in place), temporary seeding, hydromulch, or sediment fencing may be used to manage soil erosion. Also, Walleye Wind will implement the SWPPP and obtain a NPDES permit will be obtained prior to construction to mitigate any impacts.[273]

221. 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.

[271] Exhibit 235 – Amended Site Application at 90-91.

[272] *Id*. at 92-93.

[273] *Id*. at 93-94.

222. Based on the requirements of the DSP and Walleye Wind's strategy to avoid wetland and mitigation measures to minimize any impact, the record shows Walleye Wind is reasonably minimizing the impact to wetlands.

M. Vegetation

223. The Project Area contains approximately 27,040 acres of cultivated land or about 86.95.7% of the Project Area. In addition to cultivated lands, agricultural regions typically also include idle lands, pastures, and grasslands. The Project Area contains approximately 1,796 acres of pastures, or approximately 5.78% of the Project Area, and approximately 384 acres of grassland/herbaceous habitat, or approximately 1.24% of the Project Area. There are thirty-one Sites of Biodiversity Significance that are located within or partially within the Project Area and within 1-mile of the Project Area. The Project Area contains only 1.4-acres of native Dry Hill Prairie, and high-quality prairie habitat is not likely to be present within the Project Area.[274]

224. Vegetation will be removed during construction and the installation of Project infrastructure to allow for construction of turbine pads, access roads, MET tower, substation, and O&M facilities. Temporary vegetation impacts will occur during the construction of access roads, crane walks, turning radii, equipment laydown areas, construction area, collection line installation, and/or intersection improvements. As with the permanent impacts, most of the temporary impacts to vegetation (approximately 834 of the 862 acres) are also anticipated to occur on cultivated cropland. Impacts were estimated based on preliminary site layouts and include impacts of all 46 turbine locations, including alternate locations.[275]

225. To mitigate the Project's impact on vegetation, Walleye Wind will avoid direct permanent and temporary impacts to natural areas, including wetlands, native plant community types, and Sites of Biodiversity Significance within the Project Area, including native prairies, to the extent feasible. Following construction, these temporary vegetation impacts will be restored to previous conditions. Walleye Wind will coordinate with the local Natural Resources Conservation Service office to ensure the reseeding of these areas is with locally sourced native mixes and will use BMPs to limit the transfer of invasive species during construction such as washing construction vehicles. In addition, while impacts to native prairies are not expected, Walleye Wind will prepare a prairie protection and management plan in consultation with the MnDNR as required in Section 4.7 of the DSP. The plan will be completed and submitted with the preconstruction filings. The prairie protection plan will detail efforts to avoid impacts to prairies through site design and BMPs should work within native plant communities be necessary.[276]

226. Based on these mitigation measures and the requirements of the DSP, the record shows that Walleye Wind will attempt to avoid sensitive vegetation and implement reasonable mitigation measures to minimize any temporary impacts to vegetation.

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[274] *Id*. at 94-97.

[275] *Id*. at 98-100.

[276] *Id*. at 101.

N. Wildlife

227. The USFWS Land-based Wind Energy Guidelines were issued, on March 23, 2012, to provide a structured and scientific approach to assessing and addressing wildlife concerns during all stages of land-based wind energy development. Wildlife species, including avian and bat species, with the potential to exist within and nearby the Project, were determined through Tier 1 (Preliminary), Tier 2 (Site Characterization), and Tier 3 (Field) studies. Following the finalization of the current Project Area, Walleye Wind's consultant ECT completed an additional Site Characterization Study for the Project Area and a surrounding 1-mile buffer in June 2020. Information for this 2020 study was gathered through MnDNR and USFWS database research, additional publicly available desktop resources, and a site visit by a qualified biologist in November 2019.[277]

228. One Tier 3 Avian Use Survey and two Raptor Nest Surveys were previously conducted by WEST within the vicinity of the Project. The Avian Use study was conducted monthly from January 29, 2018-December 17, 2018 and followed both USFWS and MnDNR guidance. WEST documented a total of 673 large bird observations and 935 small bird observations. No federally listed threatened or endangered species were observed during surveys or incidentally. However, 16 sensitive avian species were documented. Twelve of these species were designated as species of greatest conservation need, while three of these species: American white pelican (*Pelicanus erythrorhynchos*), Franklin's gull (*Leucophaeus pipixcan*), and short-eared owl (*Asio flammeus*) were also designated as Minnesota species of special concern.[278]

229. In 2019, ECT developed an Avian Use Study plan to provide an ornithological baseline dataset for the project Area This one-year pre-constructions study plan includes eagle use surveys conducted across all ecological season/survey periods (*i.e.,* spring, summer, fall, and winter) and general avian migration surveys conducted during the spring and fall migration periods. The study plan commenced in late August 2019 and will continue through mid-August 2020. Due to Project siting changes, the study plan was adjusted in November 2019 to ensure that adequate survey coverage is provide in keeping with agency guidelines. Preliminary results from the August 2019-March 2020 survey period indicated that occurrences of both bald and golden eagles within the Project Area as well as one state threatened species, the loggerhead shrike (*Lanius ludovivianus*), and five Minnesota special concern species: greater prairie-chicken (*Tympanuchus cupido*), American white pelican, Franklin's gull, peregrine falcon (Falco peregrinus), and lark sparrow (*Chondestes grammacus*). A single juvenile golden eagle was also observed with the Project Area in the Fall of 2019.[279]

230. On March 24-25, 2016 and April 17-19, 2018 WEST conducted aerial-based raptor nest surveys to help evaluate the potential impacts of Project construction on raptors within preliminary Project boundaries. Surveys within the preliminary Project Area and 1-mile buffer documented all potential raptor nests, including bald eagles, while the surveys up to the 10-mile buffer focused only on identifying potential bald eagle nests. Raptor nest surveys were conducted

[277] *Id.* at 101-103.

[278] *Id*. at 104.

[279] *Id*. at 104-105.

from a helicopter via transects through the preliminary Project Area. Nest surveys in 2016 identified two known active bald eagle nests approximately 9-10 miles southwest of the Project Area along the Sioux River in South Dakota. Additional raptor nest surveys by WEST in 2018 also indicated three active nests and one occupied inactive nest within the 10-mile of the Project Area. No Eagle nests were recorded within the Project Area during nest surveys in 2016 or 2018. Following revision of the Project Area layout, ECT conducted aerial nest surveys of the current Project Area between February 26-29, 2020. These aerial helicopter surveys evaluated 0.5-mile transects within the revised Project Area boundary as well as 1-mile transects within a 10-mile buffer. A follow-up ground-based survey was also conducted on April 1, 2020 to ascertain species of unknown nests identified within the Project Area during the aerial survey. The surveys indicated a total of 88 nest structures within the Project Area including red-tailed hawk and great horned owl nests. No federally or state-listed threatened or endangered raptor species were observed nesting within the Project Area or the associated buffers during this survey. A total of 10 active bald eagle nests were observed during the Spring 2020 surveys within 10-miles of the current Project Area, five of which were newly identified nests not previously observed in 2016 or 2018. One alternate nest was also identified within the 1-mile buffer to the east of the Project. This nest was considered previously active but was determined failed by an ECT avian biologist. No bald eagle nests were observed within the Project Area.[280]

231. 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.[281]

232. General acoustic bat surveys were conducted by WEST in the spring, summer, and fall of 2016 at stations within the Project Area and a surrounding 1-mile buffer located in cropland habitat, representing potential turbine locations, and forest edge habitat containing features attractive to bats. Approximately 77% of bat passes at the cropland station were classified by WEST as a low frequency, which potentially includes species such as big brown bats, hoary bats, or silver-haired bats. However, only 23% of the bat passes at the cropland station were identified as high frequency, which potentially includes species such as the eastern red bat, little brown bat, or the northern long-eared bat. In March 2020, WEST conducted further analysis into the high frequency passes recorded to determine the potential for northern long-eared bat to occur within the Project Area and 1-mile buffer. A qualified bat biologist reviewed a potential northern long eared-bat call recorded during the 2018 survey period. The biologist determined that the call did not have the diagnostic features of a standard northern long-eared bat call and was most likely a feeding buzz emitted by an eastern red bat or an evening bat. No acoustic evidence of northern long-eared bats was observed during the 2018 surveys within the vicinity of the Project Area.[282]

233. The Rock County Waterfowl Production Area is located approximately 6 miles northeast of the Project boundary along the Rock River east of Blue Mounds State Park and is managed by the Windom Wetland Management District.[283]

[280] *Id*. at 105-106.

[281] *Id*. at 106.

[282] *Id*. at 106-107.

[283] *Id*. at 107.

234. While a number of comments were submitted by members of the public related to concerns with Project impacts on wildlife, Walleye Wind will implement numerous mitigation measures to avoid or minimize the impact of the Project on Wildlife, including:[284]

- Preparing a WCS/ABPP. The WCS/ABPP incorporates standards for minimizing impacts to avian and bat species during construction and operation of the Project;
- Maintaining the required setback distances from WMAs, Aquatic Management Areas, National Wildlife Refuge, WPAs, SNAs, and state parks to reduce risk to waterfowl and grassland-associated birds when siting turbines in the Project Area;
- Avoiding or minimizing disturbance of individual wetlands or drainage systems during Project construction;
- Avoiding or minimizing the placement of turbines in high-quality grassland or pasture areas that may act as native grasslands for breeding grassland bird species;
- Coordinate with local Natural Resources Conservation Service staff to revegetate non-cropland and pasture areas disturbed during construction or operation of the wind facility with native seed mixes appropriate to the region; and
- Complying with the DSP Section 7.5.5 on turbine feathering from April 1 to October 31 each year of operation.[285]

235. Further, the DSP provides adequate protection of wildlife resources, specifically avian and bat protection. For example, Section 7.5.1 of the DSP requires Walleye Wind 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 will be detailed in the project's ABPP.[286]

236. Based on Walleye Wind's commitments in this proceeding to implement mitigation measures to avoid or minimize the impact of the Project on wildlife coupled with the conditions protecting wildlife in the DSP, the record demonstrates that the Project will not have a significant impact on wildlife.

O. Rare and Unique Natural Resources

237. 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 Rock 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 one federally endangered and five

[284] *Id*. at 111-13.

[285] Exhibit 249 – Walleye Wind Reply Comments to MnDNR at 3; Exhibit 349 – Commission March 24 Order at 19-20 of DSP.

[286] Exhibit 349 – Commission March 24 Order at 18 of DSP.

federally threatened species: the Northern long-eared bat, the red knot, the Topeka shiner, the Dakota skipper, the prairie bush clover, and western prairie fringed orchid.[287]

238. Results from the MnDNR Natural Heritage Information System ("NHIS") database review for the Project Area identified one state endangered and one state threatened species with the potential to occur within or near the Project Area, as well as three species of special concern, one watch list species, and five mussel species, all of which are listed and categorized in Table 47 of the Amended Site Application.[288]

239. With regard to native plants, the NHIS identified one small areas of native community, Hill Prairie (Southern) within the Project Area. One additional native community type is also located within the 1-mile buffer: Seepage Meadow/Carr, Tussock Sedge Subtype. Native Prairies within the Project Area are limited to one 1.37-acre area within southern portions of the Project near Beaver Creek, Minnesota. Avoidance of native prairie communities within the Project Area and 1-mile buffer should limit impact.[289]

240. With respect to areas of biodiversity significance, the NHIS indicated that 39 areas throughout the Project Area and the adjacent area of the 1-mile buffer have been reviewed by Minnesota Biological Survey and assigned a rank of Moderate or Below. No areas within the Project Area or 1-mile buffer were ranked as High or Outstanding.[290]

241. To mitigate the Project's impact on rare and unique natural resources, Walleye Wind started by designing siting the Project and implementing mitigation measures to avoid or minimize the impacts, similar with its strategy to do the same with wildlife.[291] Therefore, the following mitigation measures build on those already committed to protect wildlife: (1) employing BMPs to minimize the impact on the Topeka shiner; (2) developing a WCS/ABPP that establishes standards for minimizing impacts to eagles and other avian species during construction and operation; and (3) developing a Native Prairie Protection Plan that will address steps taken to avoid impacts to native prairie habitats and mitigation plans should impacts be deemed unavoidable.[292]

242. In addition, Sections 4.6, 4.7, 7.1, and 7.5 of the DSP impose conditions to monitor and mitigate the Project's potential impacts on rare and unique natural resources.[293] Thus, based on Walleye Wind's mitigation measures combined with the conditions on the DSP, the Project's impact on rare and unique natural resources will not be significant.

[287] Exhibit 235 – Amended Site Application at 113-116.

[288] *Id*. at 116-119.

[289] *Id*. at 120-121.

[290] *Id*. at 121.

[291] *Id*. at 111.

[292] *Id*. at 125-126.

[293] Exhibit 349 – Commission March 24 Order at 4, 16-19 of DSP.

P. Cultural and Archaeological Resources

243. The Applicant began investigating cultural resource concerns for the Project in November 2019. Walleye Wind conducted a Phase 1a Cultural Resources Literature Review (Phase 1a) for the Project by reviewing NRHP, SHPO, and Office of the State Archaeologist (OSA) records; available historic atlases; and historic maps. Based on SHPO guidance, a 2-mile radius around the Project was used to identify NRHP-listed resources and cemeteries that could be directly or visually impacted by the proposed Project. A 1-mile radius around the Project was used to identify archaeological sites and unevaluated architectural resources for direct impacts. The Phase Ia report is included in Appendix E of the Application. Two NRHP-listed architectural resources are within the Project Area, and two NRHP-listed architectural resources are within 2-miles of the Project Area. Also, six recorded architectural resources were identified within the Project Area, and three architectural resources were identified within 1-mile of the Project Area. The majority of these resources are bridges. The remaining three resources include one church, one school, and one farmstead. These nine architectural resources are currently unevaluated for their listing in the NRHP. Four cemeteries (Palisades Cemetery, Pleasant View Cemetery (MN), Beaver Valley Cemetery, and West Palisades Cemetery) are located within the Project Area. Two additional cemeteries (Springwater Cemetery and Pleasant View Cemetery (South Dakota)) are located within 2-miles of the Project Area. Eight archaeological sites were identified within the Project Area, and two archaeological sites were identified within 1-mile of the Project Area.[294]

244. Walleye Wind invited several tribes with ties to the Project Area to participate in micrositing and archaeological surveys. This resulted in participation by the Yankton Sioux, Sisseton Wahpeton Oyate, Rosebud Sioux, Lower Sioux, and Cheyenne River Sioux during micrositing, archaeological surveys, or both. Tribal participation is anticipated during additional archaeological surveys as well. Tribal participation in micrositing included small teams of tribal participants trained in Traditional Cultural Properties ("TCP") identification and trained archaeologists that inspect all planned infrastructure locations to assist in identifying suitable locations for facility components and avoiding important cultural resources. Where TCPs are identified at a location, Walleye Wind makes adjustments to planned infrastructure to avoid TCPs and other important resources, where practicable. Five archaeological sites and three isolated finds have been found during micrositing and archaeological survey efforts to date.[295]

245. Although Walleye Wind has designed the Project to avoid a direct impact to cultural and archaeological resources and will coordinate with Tribal Historic Preservation Offices to avoid impacts to TCPs, in the event during construction a previous unidentified resource is discovered, Walleye Wind will implement its Unanticipated Discovery Plan which required reporting and coordination with the applicable agency. [296]

246. The DSP also adequately addresses archeological and historical resources. Section 5.3.16 of the DSP requires Walleye Wind to make every effort to avoid impacts to identified archaeological and historic resources. If a resource is encountered, Walleye Wind is required to

[294] Exhibit 235 – Amended Site Application at 58-63.

[295] *Id*.

[296] *Id.* at 63-64.

contact and consult with SHPO and OSA. Where feasible, avoidance of the cultural 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, Walleye Wind 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.

247. Given the requirements of the DSP and Walleye Wind's design to avoid a direct impact to cultural and archaeological resources, and plans to coordinate with tribal and state agencies, as applicable, if an unidentified resource is discovered, the record shows that Walleye Wind's potential impact to cultural and archaeological resources is reasonable.

XI. SITE PERMIT CONDITIONS

A. DSP Conditions

248. The DSP issued in the Commission March 24 Order, 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 for large wind turbine projects permitted by the Commission. Comments received by the Commission have been considered in development of the DSP for this Project.

249. In its May 20, 2021 post hearing comments, DOC-EERA proposed the following revisions to Section 7.2 of the DSP related to shadow flicker:

> **7.2 Shadow Flicker**
> At least 14 days prior to the pre-construction meeting, the Permittee shall provide 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. Information shall include the results of modeling used, assumptions made, and the anticipated levels of exposure from turbine shadow flicker for each residence. The Permittee shall provide documentation on its efforts to avoid, minimize, and mitigate shadow flicker exposure. ~~The results of any modeling shall be filed with the Commission at least 14 days prior to the pre-construction meeting to confirm compliance with conditions of this permit.~~ The Permittee shall prepare a Shadow Flicker Management Plan detailing the results of any shadow flicker modeling, assumptions made, levels of exposure prior to implementation of planned minimization and mitigation efforts, planned minimization and mitigation efforts, and planned communication and follow up with resident. The Shadow Flicker Management Plan shall be filed with the Commission at least 14 days prior to the preconstruction meeting to confirm compliance with conditions of this permit.
>
> Should shadow flicker modeling identify any residence of a non-participating landowner that will experience in 30 hours, or more, of shadow flicker per year, the Permittee must

specifically identify these residences in the Shadow Flicker Management Plan. If through minimization and mitigation efforts identified in the Shadow Flicker Management Plan the Permittee is not able to reduce anticipated shadow flicker exposure at a nonparticipating landowner's residence to less than 30 hours per year a shadow flicker detection systems will be utilized during project operations to monitor shadow flicker exposure at the residence. The Shadow Flicker Management Plan will detail the placement and use of any shadow flicker detection systems, how the monitoring data will be used to inform turbine operations, and a detailed plan of when and how turbine operations will be adjusted to mitigate shadow flicker exposure exceeding 30 hours per year at any one receptor. The results of any shadow flicker monitoring and mitigation implementation shall be reported by the Permittee in the Annual Project Energy Production Report identified in Section 10.9 of this Permit.

Commission staff and EERA staff will be responsible for the review and approval of the Shadow Flicker Management Plan. The Commission may require the Permittee to conduct shadow flicker monitoring at any time during the life of this Permit.

250. In its June 2, 2021 Post Hearing Comments, Walleye Wind that DOC-EERA's proposed edits and additions Section 7.2 of the DSP were acceptable, with the addition of the following language: "In the event that Walleye Wind and a non-participant landowner with modelled expected shadow-flicker of 30 hours or more a year reach a mutual agreement on the mitigation of the shadow-flicker, Walleye Wind is not required to implement a Shadow Flicker Management Plan for that non-participant. Walleye Wind will notify the Commission of any such mutual agreement on the mitigation of shadow-flicker." In support of this addition, Walleye Wind states that such a provision addresses the DOC-EERA's concerns with potential impacts on non-participating landowners and allows Walleye Wind to address any concerns directly with the landowner.[297]

251. The ALJ finds that DOC-EERA's proposed revisions to Section 7.2 of the DSP, with the Applicant's minor revision, is reasonable and will appropriately mitigate impacts from shadow flicker.

252. In its May 20, 2021 comments, MnDNR requested that the DSP include a new permit condition that requires Walleye Wind to avoid stream crossings during the Topeka shiner spawning season, mid-May through mid-August, if streamflow is present.[298]

253. Walleye Wind also stated that it is agreeable to MnDNR's proposed new condition, and would recommend it read: "The Permittee shall not conduct any stream crossing activities from mid-May through Mid-August, if streamflow is present in the stream."[299]

254. The ALJ finds that the addition of MnDNR's requested permit condition as proposed by the Applicant is reasonable.

[297] Walleye Wind Post Hearing Comments at 19.

[298] Comments of MnDNR (May 20, 2021).

[299] Walleye Wind Post Hearing Comments at 19.

255. In its Post Hearing Comments, Walleye Wind clarified that the DSP should be revised to reflect a maximum generating capacity of 109.7 MW, instead of 109.2 MW. While it is correct that the Project could be constructed with a capacity of 109.2 MW, there is a potential for an additional 0.5 MW in capacity due to changes from primary turbine site to an alternate turbine site, which, in turn, impacts the use of NRO and slightly reduces Project capacity. Specifically, for the Walleye Wind Project, NRO will be one of Modes 1, 2 and 3, with 3 being the most restrictive. Walleye Wind plans to use NRO at the following six turbine locations: Wind Turbines 4, 5, 30, 31, 32, and Alternate 8. If the planned primary turbines for construction are used, the project capacity will be 109.2 MWs. However, if turbine location Alternative 7 is not constructed, turbine location Turbine 4 will then need to operate under NRO Mode 2, instead of NRO Mode 3 and Turbine 5 will operate under normal operation instead of NRO Mode 1. In this scenario, the Project capacity increases by 0.5 MW to 109.7 MWs, because of Turbine 4 operating with less NRO at the NRO Mode 2 and Turbine 5 not operating in NRO Mode 1.[300]

256. The ALJ finds that Walleye Wind's clarification of the Project capacity should an alternative turbine location be used is reasonable. Regardless of the slight increase in capacity resulting from the use of alternative turbine locations, Walleye Wind will be required to adhere to the noise standards established by MPCA as reflected in the DSP. Accordingly, Walleye Wind reasonably requested that the DSP when finalized reflect that Project capacity could be up to 109.7 MW rather than 109.2 MW.

257. In their May 20, 2021 comments, Walleye Neighbors requested a number of revisions to the DSP.[301] For the reasons noted below, the requested revisions are rejected.

258. Walleye Neighbors claim that Section 4.1 does not include typical conditions related to the placement of wind turbines no closer than 5 RD on the prevailing wind directions and 3 RD on the non-prevailing wind directions from a non-participant.[302] However, the plain language of Section 4.1 of the DSP includes the following language:

> Wind turbine towers shall not be placed less than five rotor diameters on the prevailing wind directions and three rotor diameters on the non-prevailing wind directions from the perimeter of the property where the Permittee does not hold the wind rights, without the approval of the Commission.

The ALJ finds that this Section is clear and adequately addresses the concerns with setbacks from non-participating landowners.

259. Walleye Neighbors assert that Section 4.2 which requires that wind turbines comply with the MPCA sound requirements only requires that the wind turbines be 1000 feet from all residences.[303] Walleye Neighbors' reading of the Section is misplaced. This Section requires

[300] Walleye Wind Post Hearing Comments at 27.

[301] Comments of Walleye Neighbors (May 20, 2021).

[302] Walleye Neighbors' May 20 Comments at 3.

[303] *Id.* at 4.

turbines to be setback greater than 1000 feet if required to comply with MPCA's sound requirements. Walleye Wind's nearest turbine to any resident is alternative turbine location no. 8, which is 1,325 feet away from receptor 147, and all turbine locations are modelled to comply with MPCA sound requirements.[304] Therefore, there is no need to revise Section 4.2, which is unambiguous.

260. Walleye Neighbors assert that Section 4.3 inappropriately allows Walleye Wind to use a 0.5 ground attenuation factor and does not require verification of the use of NRO mode.[305] As noted above, it is an industry standard to use a 0.5 ground attenuation factor, which has been recognized by the Commission in issuing recent Site Permits where such a ground factor was used.[306] Further, under Section 7.4 of the DSP, Walleye Wind is required to conduct a post construction sound study to demonstrate compliance with MPCA's sound requirements, which will confirm and test modeling results and assumptions. Similarly, Walleye Wind has already committed to use NRO, as required, to comply with MPCA's sound requirements. Therefore, the requirement to conduct a post construction sound study to verify compliance with MPCA's sound requirements, coupled with its commitment to use NRO, as required, negates any need to modify Section 4.3 as requested by Walleye Neighbors.

261. Walleye Neighbors assert that Sections 4.4 and 5.3.13 regarding setbacks of 250 feet from public roads is insufficient, given concerns with ice throw from the wind turbines and MnDOT's concerns with the 250-foot setback.[307] During wind turbine operations, Walleye Wind explained that turbines will shut down when there is a buildup of ice on the blades that causes an imbalance, which mitigates ice throw.[308] In addition, the record shows Walleye Wind has coordinated with MnDOT on the location of the wind turbines and turbine no. 22, the closest turbine to I-90, is 620 feet from the fence line north of I-90 and 690 feet to the north edge of the shoulder. This distance is more that 1x1 the turbines height which is 528 feet.[309] Thus, given Walleye Wind's operational mitigation of ice throw, as well as MnDOT's concurrence with turbine placement, there is no need to revise Sections 4.4 and 5.3.13 of the DSP.

262. In the context of Section 4.5 of the DSP, Walleye Neighbors raise viewshed concerns related to the distance of wind turbines from Blue Mounds State Park and Palisades State Park.[310] As explained in Walleye Wind's Post Hearing Comments, the closest turbines to Blue Mounds State Park are approximately 6.7 miles, with another wind turbine approximately 7 miles away, and there are no wind turbines within 5 miles of the park.[311] The nearest wind turbines to

[304] Walleye Wind Post Hearing Comments at 20.

[305] Walleye Neighbors' May 20 Comments at 5-7.

[306] *See e.g., In the Matter of the Application of Buffalo Ridge Wind Energy, LLC for a Site Permit for the 109 MW Large Wind Energy Conversion System in Lincoln and Pipestone Counties, Minnesota,* DOCKET NO. IP-7006/WS-19-394, ORDER GRANTING CERTIFICATE OF NEED AND ISSUING SITE PERMIT at 11 (January 5, 2021).

[307] Walleye Neighbors' May 20 Comments at 7-8.

[308] Walleye Wind Post Hearing Comments at 21.

[309] *Id*.

[310] Walleye Neighbors' May 20 Comments at 8-9.

[311] Walleye Wind Post Hearing Comments at 21-22.

Palisades State Park are approximately 3.4 miles, with another wind turbine approximately 3.5 miles away, and only six turbines within 5 miles of the park. Also, as explained above, there are numerous wind turbines and two high voltage transmission lines in the viewshed of the Project. Thus, the distance of the wind turbines from the parks, coupled with the already existing viewshed that includes infrastructure, demonstrates there is no need or basis to revise Section 4.5 of the DSP.

263. Walleye Neighbors assert that Section 4.10 related to internal turbine spacing should be more than 3 RD in the non-prevailing wind directions and 5 RD on the prevailing wind directions, and the condition should require oversight of the Applicant's determination to move up to 20% of the wind turbines closer than the 3 RD by 5 RD setback rule.[312] The purpose of Section 4.10 is ensuring economic use of wind resources, as moving turbines closer to each other can impact the ability of the wind turbine to produce energy due to waking from another turbine. Therefore, there is already an economic incentive for Walleye Wind not to move wind turbines closer together as it could impact Project economics. Also, DSP imposes additional setbacks, such as setbacks for sound, which must be complied with notwithstanding the flexibility afforded in Section 4.10. Thus, for these reasons, Walleye Neighbor's requested changes to Section 4.10 is not reasonable.

264. Walleye Neighbors assert that Section 5.1 related to complaints is not adequate and should be revised to require timely responses to complaints and associated mitigation, and "not require a landowner to sign a waiver of effects agreement" to get relief.[313] There is no evidence that supports revising Section 5.1 beyond the standard language, because there is no evidence that Walleye Wind will perform to any less of a standard on complaints and responsiveness to landowner concerns than is required in the DSP. The Commission can assess and address any complaints and requests for relief that are submitted.

265. Walleye Neighbors assert that Section 5.3.17 should include language that any issue related to interference must be addressed without a requirement that the complainant execute a waiver.[314] Walleye Wind has already committed to detailed processes to remedy any inference the project causes with electronic devices, such as radio, television, and cell towers. These procedures do not require the landowner sign a waiver to obtain mitigation. In the event a waiver was sought, it would only be sought if the landowner was in mutual agreement that waiver was reasonable.[315] Thus, there is no need to revise Section 5.3.17.

266. Walleye Neighbors assert that Section 7.2 on shadow flicker should prohibit the allowance of shadow flicker over 30 hours annually.[316] Acceptance of DOC's edits to Section 7.2 as revised herein adequately addresses the issue of non-participants experiencing shadow flicker over 30 hours, with the understanding that Walleye Wind can mutually agree with non-participants on a mitigation plan that allows for that residence to experience more than 30 hours of shadow

[312] Walleye Neighbors' May 20 Comments at 9.

[313] *Id.*

[314] *Id.*

[315] Walleye Wind Post Hearing Comments at 23.

[316] Walleye Neighbors' May 20 Comments at 9-12.

flicker. A similar mitigation and consultation process was recently approved by the Commission in issuing a Site Permit.[317] With the additions of DOC-EERA and Walleye Wind to Section 7.2, there is no need to further revise this Section of the DSP.

267. Walleye Neighbors assert that Section 7.4 should mandate that the post construction sound study be completed within 6 months as opposed to 18-months, and sound studies should be mandated for any substantive sound complaint within the Project footprint.[318] According to Walleye Wind, the number of sound experts who can to conduct these studies are limited and it is impracticable to mandate the study be completed in 6 months when the resources are limited. Further, it is not appropriate to require a sound study based on a complaint. Sound studies generally costs $100,000, if not more, and the complaint may be resulted to a mechanical issue that can be resolved without a study.[319] The Commission ultimately has the authority to order a sound study should it find such a study is warranted. Accordingly, Walleyes Neighbors' proposed revisions to Section 7.4 is unnecessary.

268. Walleye Neighbors recommend that Section 7.5.2 hardwire curtailments due to bird and bat mortalities.[320] The record shows that Walleye Wind has completed a number of studies related to the impact of the Project on birds and bats, and has also developed, and will continue to refine, a WCS. In addition, Section 7.5 of the DSP set forth a comprehensive regulatory scheme to monitor and address bird and bat mortalities, and, including the feathering of wind turbine blades from April 1 to October 31. There is no reasonable basis to mandate additional feathering or curtailments for Walleye Wind. Thus, the revisions to Section 7.5.2 proposed by Walleye Neighbors are not reasonable.

269. Walleye Neighbors assert that Walleye Wind should be required more than 14 days prior to the pre-construction meeting to demonstrate it has wind rights as part of Section 8.1.[321] At the May 4, 2021 public meeting, Walleye Wind indicated it had 95% of the wind rights needed to construct and operate the Project,[322] and in its Post Hearing Comments, indicated that it has wind rights for 98% of the Project.[323] Given the fact that Walleye Wind is not planning to start construction until early Fall, there is no need to require a showing of wind rights at 100% earlier than required under the standard timeline reflect in Section 8.1 of the DSP.

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[317] *See e.g., In the Matter of the Application of Buffalo Ridge Wind Energy, LLC for a Site Permit for the 109 MW Large Wind Energy Conversion System in Lincoln and Pipestone Counties, Minnesota,* DOCKET NO. IP-7006/WS-19-394, ORDER GRANTING CERTIFICATE OF NEED AND ISSUING SITE PERMIT at 14 (January 5, 2021) ("Permit condition 7.2 Shadow Flicker is amended to include a requirement that the permittee shall provide a discussion detailing the communications with all the landowners with the expected shadow flicker of more than 30 hours regarding possible mitigations and the complaint process.").

[318] Walleye Neighbors' May 20 Comments at 12.

[319] Walleye Wind Post Hearing Comments at 24.

[320] Walleye Neighbors' May 20 Comments at 12.

[321] *Id*.

[322] Public Hearing Tr. at 21 (May 4, 2021 (6:00 pm session)) ("In Section 7 of the amended site application and subsequent updates, Walleye Wind has explained the status of wind rights, which currently sits at 95 percent.").

[323] Walleye Wind Post Hearing Comments at 25.

270. Walleye Neighbors request that the Commission open a docket to review its complaint procedures set forth in Section 9 of the DSP.[324] This request is beyond the scope of this proceeding. Although the Commission has the discretion to open such a docket if it so desires, there is no evidence in this record that support the need for such a proceeding.

271. Walleye Neighbors assert the pre-construction and pre-operations meeting should be noticed as part of Sections 10.1 and 10.2.[325] Walleye Neighbors' concern that without notice the public would be unable "to verify if studies and documents are produced"[326] is unwarranted. All studies, reports, and compliance matters that are required to be filed prior to such meetings under the terms and conditions of the DSP are required to be filed in the Commission docket and publicly available for review. The ALJ finds there is no reason to depart from past practice with respect to Sections 10.1 and 10.2 of the DSP.

272. Walleye Neighbors recommend that Section 10.11 require a plan and timeline to train of Emergency Responders, with no basis or explanation.[327] Given the lack of any foundation for such a request, the ALJ declines to adopt the suggestion.

273. Walleye Neighbors request that the Project decommissioning plan (Section 11) should be revised to require the entire foundation to be removed, a contingency factor for cost estimates, the cost of labor, estimate of time it will take to return the land to reasonable productivity, and a prohibition on transferring of decommissioning responsibility to the landowner.[328] In response, Walleye Wind confirmed that it has the complete responsibility for decommissioning, not the landowner.[329] Further, Walleye Wind indicated that its cost estimates are best efforts based on current information. In addition, Walleye Wind explained that Walleyes Neighbors' generalized implication that removal of the entire foundation is better than extracting four feet of foundation is misguided for the following reasons:

1. Removing the entire foundation can cause new and more damage to surrounding area, particularly wetlands.

2. Landowners generally want decommissioning to be practicable and precise so it does not interrupt crop production or result in more restoration. Requiring the entire foundation be extracted could impact crop production and will result in longer decommission and restoration efforts.

3. Walleye Wind is already required to work with MPCA to ensure that any remove or concrete meets their regulatory requirements, and, therefore, the Commission

[324] Walleye Neighbors' May 20 Comments at 13.

[325] *Id.*

[326] *Id.*

[327] *Id*.

[328] *Id.* at 12-13.

[329] Walleye Wind Post Hearing Comments at 26.

should defer to MPCA on the removal of foundation to four feet, rather than mandating a new requirement in the Site Permit.[330]

Based on Walleye Wind's responses and the changes to the decommissioning plan requested by DOC-EERA and accepted by the Applicant, the ALJ finds that no additional changes to the decommissioning plan and Section 11 are warranted.

274. Walleye Neighbors assert the Site Permit should address impacts on property values.[331] As explained above and in the ER, there is no evidence that property values will be negatively impacted by the Walleye Wind Project. Therefore, there is no basis to include a condition on property values in the DSP.

275. Based upon the record, the ALJ finds that the proposed changes to the DSP from the DOC-EERA, as revised by Walleye Wind are reasonable, as well as the proposed condition by MnDNR that is acceptable to Walleye Wind. The proposed conditions of those opposing the Project to move wind turbines farther away from the South Dakota border and the proposed conditions of the Walleye Neighbors are not supported by the record in this proceeding, and, therefore, not adopted.

276. Based on the foregoing Findings of Fact and the record in this proceeding, the Commission adopts 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 Applicant, 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 Rock County; mailing the notice and application to the county board, each city council, and each township board in Rock 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. In addition, with respect to the notice for the May 4, 2021 public hearings, written notice was provided to directly to landowners in South Dakota and notice was published in the Garretson Gazette in South Dakota.

4. The Draft Site Permit contains a number of important mitigation measures and other reasonable conditions.

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[330] *Id*.

[331] Walleye Neighbors' May 20 Comments at 14.

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.

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 216E03, 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 pursuant to the Minnesota Environmental Rights Act and/or the Minnesota Environmental Policy Act.

8. The ALJ was authorized to hold the May 4, 2021 hearing remotely due to the COVID-19 pandemic, with such authority having been assured through Executive Order No. 20-58 (2020), which 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 Walleye Wind, LLC to construct and operate the up to 109.7 MW Walleye Wind Rock County, and that the issued Site Permit contain the conditions as set forth in the foregoing Findings of Fact and Conclusions of Law.

Dated: _____

_____

Administrative Law Judge James Mortenson