OAH 28-2500-40093
MPUC IP-7103/GS-22-451

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Application of Enbridge Solar (Plummer), LLC for a Site Permit for the up to 130 MW Plummer Solar Project in Red Lake County, MN

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In the Matter of the Application of Enbridge Solar (Plummer), LLC for a Site Permit for the up to 130 MW Plummer Solar Project in Red Lake County, MN	**SUMMARY OF PUBLIC TESTIMONY, FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION**

This matter was assigned to Administrative Law Judge Joseph C. Meyer to conduct public hearings on the Site Permit Application (Application) of Enbridge Solar (Plummer), LLC (Plummer Solar or Applicant) to construct an up to 130 megawatt (MW) solar energy generating system located in Emardville Township in Red Lake County, Minnesota (Project). The Public Utilities Commission (Commission) also requested that the Administrative Law Judge prepare a full report, with recommendations, for the Project's public hearings.

A public hearing on the Application was held on November 20, 2024, in Plummer, Minnesota. A virtual public hearing was held on November 21, 2024. The factual record closed on December 9, 2024, with the deadline for the Applicant's response to public comments.[1]

Christina K. Brusven and Bridget A. Duffus, Fredrickson & Byron, P.A.; and Heather Riome, Manager of Power Business Development, Jason Risdall, Manager of Regulatory Affairs, and Adam Sullivan, Legal Counsel, Enbridge Energy, L.P., appeared on behalf of the Applicant.

Jessica Livingston, Department of Commerce, Energy Environmental Review and Analysis, appeared on behalf of the Department of Commerce, Energy Environmental Review and Analysis unit (EERA).

Sam Lobby appeared on behalf of Commission Staff.

[1] The First Prehearing Order originally established a December 2, 2024 deadline for public comments. During the public hearing on November 21, 2024, the parties agreed to allow public comments until December 6, 2024.

STATEMENT OF THE ISSUE

Has the Applicant satisfied the criteria established in Minn. Stat. § 216E.03, subd. 7 (2022)[2] and Minn. R. 7850.4100 (2023) for a site permit for the Project?

SUMMARY OF RECOMMENDATION

The Applicant has satisfied the applicable legal requirements and, accordingly, the Commission should **GRANT** a site permit for the Project, subject to the conditions discussed below.

Based on the evidence in the hearing record, the Administrative Law Judge makes the following:

FINDINGS OF FACT

I. The Applicant

1. Plummer Solar is an independent power producer (IPP) and wholly-owned subsidiary of Enbridge Holdings (Green Energy) L.L.C.[3]

II. Procedural History

2. On September 30, 2022, the Applicant filed a Notice of its Intent to Submit a Site Permit Application under the Alternative Permitting Process for the Project under the Alternative Permitting Process of Minn. R. 7850.2800-.3900 in the fourth quarter of 2022.[4]

3. On March 5, 2024, the Applicant filed a second Notice of its Intent to Submit an Application to Submit a Site Permit Application under the Alternative Permitting Process in late first quarter or early second quarter 2024.[5]

4. On April 2, 2024, Plummer Solar filed the Application with the Commission.[6] The Applicant also submitted the Notice of Filing of the Site Permit Application to persons interested in the Project, the Commission's Energy Facilities General List, Local Officials, Tribes, and Property Owners as required by Minn. R. 7850.2100, subp. 2 (2023).[7]

5. On April 4, 2024, the Commission issued a Notice of Comment Period on Application Completeness, requesting initial comments by April 18, 2024, reply comments by April 25, 2024, and supplemental comments by April 30, 2024. The notice requested

[2] Minn. Stat. §§ 216B.001 - .08 were repealed with an effective date of July 1, 2025. 2024 Minn. Laws ch. 127, art. 43, §§ 15-16. All citations in this report are to the 2022 version of those statutory provisions, which were in effect at all times relevant to this proceeding.
[3] Exhibit (Ex.) PLU-3 at 1 (Application) (Apr. 2, 2024).
[4] Ex. PLU-1 (Notice of Intent to File under the Alternative Permitting Process) (Sep. 30, 2022).
[5] Ex. PLU-1 (Notice of Intent to File under the Alternative Permitting Process) (Mar. 5, 2024).
[6] Ex. PLU-3 (Application and Appendices A-L).
[7] Ex. PLU-2 (7850.2100 Project Notice) (Apr. 2, 2024).

comments on whether the Application contained the information required by Minn. R. 7850.3100; whether the Commission should appoint an advisory task force; whether there were contested issues of fact with respect to the representations made in the Application; whether the Commission should direct the Executive Secretary to issue an authorization to initiate consultation with the State Historic Preservation Office (SHPO) to the Applicant; and whether there were any other issues or concerns that should be considered.[8]

6. On April 18, 2024, EERA filed its Comments and Recommendations on Application Completeness. EERA recommended that the Commission accept the Application as substantially complete, require Plummer Solar to continue researching and adopting strategies to mitigate the potential environmental impacts of the Project on minority groups or other groups of concern in the local community, not appoint an advisory task force, and request a full administrative law judge report with recommendations for the Project's public hearing.[9]

7. On April 25, 2024, the Applicant submitted Reply Comments concerning Application completeness requesting the Commission to accept the Application as substantially complete, authorize review of the Application under the Alternative Permitting Process under Minn. Stat. § 216E.04 and Minn. R. 7850.2800-.3900, find that there are no contested issues of fact with respect to the Project, set a schedule consistent with EERA's recommendation and refer the matter for public hearing and an administrative law judge report with recommendations, and find that an advisory task force is not warranted.[10]

8. On April 29, 2024, Plummer Solar submitted the Confirmation of Notice Compliance Filing for the Application documenting the Applicant's completion of notices required in connection with the Application.[11]

9. On May 2, 2024, the Commission issued a list of Consent Items, including the questions of whether the Commission should accept the application as complete, appoint an advisory task force, and direct the Executive Secretary to issue an authorization to the Applicant to initiate consultation with SHPO. The Consent Items set May 7, 2024, as the deadline for Commission review of these items.[12]

10. On May 7, 2024, the Commission issued an order accepting the Application as substantially complete, requiring the Applicant to continue researching and adopting strategies to mitigate the potential environmental impacts of the Project on minority groups or other groups of concern in the local community, declining to appoint an advisory task force, and requesting a full administrative law judge report with recommendations for

[8] Ex. PUC-1 (Notice of Comment Period on Application Completeness) (Apr. 4, 2024).
[9] Ex. EERA-1 at 6 (Comments and Recommendations Regarding Application Completeness) (Apr. 18, 2024).
[10] Ex. PLU-4 (Completeness Reply Comments) (Apr. 25, 2024).
[11] Ex. PLU-5 (Confirmation of Notice) (Apr. 29, 2024).
[12] Consent Items (May 2, 2024) (eDocket No. 20245-206322-01).

the Project's public hearing.[13] The Commission also issued signed minutes from the May 7, 2024 consent calendar subcommittee meeting.[14]

11. On May 14, 2024, the Commission issued a Notice of Public Information and Environmental Assessment (EA) Scoping Meetings scheduling meetings for May 29, 2024 (in-person in Plummer, Minnesota), and May 30, 2024 (remote-access via the WebEx platform), opening a public comment period until June 13, 2024, and requesting responses to three questions regarding the Project: (1) What potential human and environmental impacts of the proposed project should be considered in the environmental assessment?; (2) Are there any methods to minimize, mitigate, or avoid potential impacts of the proposed project that should be considered in the environmental assessment?; and (3) Are there any unique characteristics of the proposed project that should be considered in the EA?.[15]

12. On May 29 and 30, 2024, the Commission and EERA conducted Public Information and Scoping meetings. Four members of the public provided oral comments at these meetings.[16]

13. On June 12, 2024, the International Union of Operating Engineers Local 49 (IUOE Local 49) filed scoping comments.[17]

14. On June 13, 2024, the Applicant filed Scoping Comments in response to questions and issues raised during the public information and scoping meetings.[18]

15. On June 14, 2024, Laborers' International Union of North America, Minnesota & North Dakota (LIUNA) filed scoping comments.[19]

16. On June 26, 2024, EERA filed written public comments from the International Brotherhood of Electrical Workers Local Union No. 1426, IUOE Local 49, LIUNA, and Minnesota Tribal Contractors Council on the scope of the EA for the Project.[20] EERA also filed the transcripts from the in-person and the virtual Public Information and Scoping meetings.[21]

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[13] Ex. PUC-2 (Order) (May 7, 2024).
[14] Minutes (May 7, 2024) (eDocket No. 20245-206453-02).
[15] Ex. PUC-3 (Notice of Public Information and Environmental Assessment Scoping Meetings) (May 14, 2024).
[16] Ex. EERA-4 (Oral Public Comments on Scope of Environmental Assessment) (Jun. 26, 2024). The substance of these comments is summarized in section V of this report.
[17] IUOE Local 49 Scoping Comments (Jun. 12, 2024) (eDocket No. 20245-207649-01). The substance of these comments is summarized in section V of this report.
[18] Ex. PLU-6 (Scoping Comments) (Jun. 13, 2024).
[19] LIUNA Scoping Comments (Jun. 14, 2024) (eDocket No. 20246207687-01). The substance of these comments is summarized in section V of this report.
[20] Ex. EERA-3 (Written Public Comments on Scope of Environmental Assessment) (Jun. 26, 2024). The substance of these comments is summarized in section V of this report.
[21] Ex. EERA-4.

17. On June 28, 2024, the Administrative Law Judge issued a first prehearing order establishing a schedule for this proceeding.[22]

18. On July 8, 2024, EERA filed the Environmental Assessment Scoping Decision for the Project.[23]

19. On July 11, 2024, EERA filed the Notice of Environmental Assessment Scoping Decision.[24]

20. On August 14, 2024, the Commission filed a sample solar site permit.[25]

21. On August 15, 2024, Plummer Solar filed additional correspondence with the SHPO and the Leech Lake Band of Ojibwe Tribal Historic Preservation Office (THPO).[26]

22. On October 18, 2024, the second prehearing order was issued scheduling a prehearing conference for November 15, 2024, to discuss logistical issues for the public hearings.[27]

23. On October 28, 2024, EERA filed the EA for the Project.[28] Also, the Commission filed a Notice of Public Hearings and Availability of Environmental Assessment providing for an in-person hearing on November 20, 2024, in Plummer, Minnesota and a remote hearing on November 21, 2024, via the WebEx platform. The Commission also requested comments from the public on (1) whether the Commission should grant a site permit for the proposed solar energy generating system, and (2) if granted, what additional conditions or requirements should be included in the site permit. The Commission stated that it would accept written comments through December 6, 2024.[29]

24. On October 30, 2024, EERA filed the notification of the publication of the EA sent to the THPOs.[30] EERA also filed the notification of the publication of the EA sent to state and federal agencies.[31]

25. On November 7, 2024, the Department of Commerce filed a notice of public hearings, comment period, and the EA's availability in the *EQB Monitor*.[32]

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[22] First Prehearing Order (Jun. 28, 2024).
[23] Ex. EERA-5 (Environmental Assessment Scoping Decision) (Jul. 11, 2024).
[24] Ex. EERA-6 (Notice of Environmental Assessment Scoping Decision) (Jul. 11, 2024).
[25] Ex. PUC-4 (Sample Solar Site Permit) (Aug. 14, 2024).
[26] Ex. PLU-7 (Additional Agency Correspondence) (Aug. 15, 2024).
[27] Second Prehearing Order.
[28] Ex. EERA-7 (Environmental Assessment and Appendices A-D) (Oct. 28, 2024).
[29] Ex. PUC-5 (Notice of Public Hearings and Availability of Environmental Assessment) (Oct. 28, 2024).
[30] Ex. EERA-10 (EA Provided to Tribal Historic Preservation Officers) (Oct. 30, 2024).
[31] Ex. EERA-9 (EA Provided to Permitting Agencies) (Oct. 30, 2024).
[32] Ex. EERA-11 (EQB Monitor Notice of EA Availability, Public Hearings, Comment Period) (Nov. 7, 2024).

26. On November 18, 2024, the Applicant filed initial comments on the EA.[33]

27. On November 19, 2024, the Commission filed the Affidavit of Publication showing that the notice of public hearings and the EA's availability was published in the *Red Lake Falls Gazette* newspaper on November 5, 2024.[34] The Commission also filed a handout of the Public Hearing presentation.[35]

28. Also on November 19, 2024, the Minnesota Pollution Control Agency (MPCA) sent a letter to the Commission indicating that it had no comments on the EA. This letter was subsequently filed on November 20, 2024, as a public comment.[36]

29. On November 20, 2024, EERA also filed a certificate of mailing showing that it had mailed a copy of the EA to the Thief River Falls Public Library, as well as a letter it had sent to the Thief River Falls Public Library asking it to make the EA available for patrons of the library.[37]

30. On November 20, 2024, a public hearing was held at Plummer City Hall in Plummer, Minnesota. Four individuals commented at this public hearing.[38]

31. On November 21, 2024, a remote public hearing was held via the Webex platform. No comments were offered at that hearing.[39]

32. Between December 3, 2024, and December 6, 2024, written comments were filed by the Upper Sioux Community THPO, the Department of Natural Resources (DNR), IUOE Local 49 and North Central States Regional Council of Carpenter (NCSRC of Carpenters), and EERA.[40]

33. On December 9, 2024, the Applicant filed comments in response to the written and oral public comments offered during the public hearing comment period ending on December 6, 2024.[41]

[33] Ex. PLU-9 (Nov. 18, 2024).
[34] Affidavit of Publication (Nov. 19, 2024) (eDocket No. 202411-212155-01).
[35] Handout-Commission (Nov. 19, 2024) (eDocket No. 202411-212154-01).
[36] MPCA Comments (Nov. 19, 2024) (eDocket No. 202411-212195-01).
[37] Certificate of Mailing (Nov. 19, 2024) (eDocket No. 202411-212175-01).
[38] Plummer 6:00 p.m. Public Hearing Transcript (Tr.) at 21-34 (Nov. 20, 2024).
[39] WebEx 6:00 p.m. Public Hearing Tr. at 27-29 (Nov. 21, 2024).
[40] Upper Sioux Community THPO Comments (Dec. 3, 20204) (eDocket No. 202412-212649-01); DNR Comments (Dec 6, 2024) (eDocket No. 202412-212797-01); IUOE Local 49 and NCSRC of Carpenters (Dec 6, 2024) (eDocket No. 202412-212781-01); EERA Hearing Comments (Dec 6, 2024) (eDocket No. 202412-212770-01). The substance of these comments is summarized in section V of this report.
[41] Ex. PLU-10 (Response to Public Comments) (Dec. 9, 2024).

34. On December 17, 2024, the Applicant filed its Proposed Findings of Fact, Conclusions of Law, and Recommendations,[42] as well as a letter indicating a proposed change to Draft Site Permit Special Condition 5.5.[43]

35. On January 8, 2025, EERA filed its reply to hearing comments as well as its response and proposed edits to the Applicant's proposed findings.[44]

III. Description of the Project

36. The Project consists of an up to 130 MW alternating current (AC) photovoltaic (PV) solar energy generating facility and associated facilities in Emardville Township in Red Lake County, Minnesota.[45] The Project will include solar panels and tracking racking systems; inverters; an electrical collection system; an operations and maintenance (O&M) facility; a Project substation and interconnection facilities; electrical cables, conduit, switchgear, and metering equipment; step-up transformers; supervisory control and data acquisition (SCADA) system; access roads; several weather stations; stormwater management system; a short (<1,500 ft) aboveground 115 kilovolt (kV) transmission line; fencing and gates; ancillary equipment or buildings as necessary; and temporary facilities such as laydown yards, temporary site offices, parking, improvements to public and private roads and driveways for delivery of materials and equipment, storage and staging of equipment prior to installation as needed.[46]

37. The Project will connect to an existing Otter Tail Power Company 115 kV transmission line immediately adjacent to the Protect site, via a short (<1,500 foot) aboveground 115 kV transmission line. The length of the transmission line depends on the location of the utility switching station which has not yet been finalized.[47]

38. The Project will provide up to 130 MW of renewable power capacity and generate an average of up to approximately 253,500 megawatt hours (MWh) annually.[48]

39. In order to meet the Project's commercial operation date by December 31, 2027, the Applicant plans to begin construction of the Project in 2026.[49]

40. Plummer Solar is the permittee for the Project.[50]

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[42] Plummer Solar's Proposed Findings of Fact, Conclusions of Law, and Recommendations (Dec. 17, 2024) (eDocket No. 202412-213122-01).
[43] Applicant Correspondence (Dec. 17, 2024) (eDocket No. 202412-213122-02).
[44] EERA Reply Comments (Jan. 8, 2025 (eDocket No. 20251-213669-01); EERA Reply Comments-Attachment A (edits to Applicant Proposed Findings) (Jan. 8, 2025) (eDocket No. 20251-213669-02).
[45] Ex. PLU-3 at 1 (Application).
[46] Ex. PLU-3 at 10 (Application).
[47] Ex. PLU-3 at 10 (Application).
[48] Ex. PLU-3 at 1 (Application).
[49] Ex. PLU-3 at 5 (Application).
[50] Ex. PLU-3 at 4 (Application).

IV. Site Location and Characteristics

41. The Project is located in Emardville Township, in Red Lake County, Minnesota near the town of Plummer, Minnesota. US Highway 59 runs north-south approximately 0.8 mile west of the Project Site[51] and County State Aid Highway (CSAH) 1/180th St. SE runs east-west through the Project Site.[52]

42. Plummer Solar has 100 percent land control for the Project, which is 855 acres of private land either under lease or owned by Plummer Solar and its affiliates, with the exception of the public road right-of-way (ROW) (Land Control Area). Based on preliminary Project design, the Applicant estimates that up to 796.9 acres of the 855 acres are necessary to accommodate the final design of the up to 130 MW Project.[53]

43. The Project is proposed at up to 130 MW AC nameplate capacity. The capacity may be reduced depending on the outcome of studies underway with the Midcontinent Independent System Operator (MISO).[54]

44. The Project has not made a final selection of solar panels, but anticipates using approximately 293,448 PV panels.[55]

V. Summary of Public Comments

A. Scoping Comments

45. Four members of the public provided oral comments during the Public Information and Environmental Assessment Scoping Meeting held at Plummer City Hall, Plummer Minnesota, on May 29, 2024. The four commenters expressed concerns about setbacks from township roads, tax incentives for the Emardville Township and the county, potential for a buffer from the Project to impact surrounding hunting lands, potential for hunting bullets to impact solar panels and cause environmental issues, disposal of the solar panels after their life cycle, and the impacts on aesthetics of the farmland.[56]

46. No members of the public spoke during the virtual Public Information and Environmental Assessment Scoping Meeting held on May 30, 2024.[57]

47. IOUE Local 49's scoping comments supported the Project, noted that Plummer Solar agreed to use local contractors and union labor for the Project as well as

[51] The Project Site is generally defined as the area within the security fencing and includes the land needed for the Project components and for operation and maintenance of the Project. Ex. PLU-3 at 11 (Application).
[52] Ex. PLU-3 at 11 (Application). The Application also included a map showing the Project Site. Ex. PLU-3 at App. B, Fig. 1.
[53] Ex. PLU-3 at 11 (Application).
[54] Ex. PLU-3 at 11 (Application).
[55] Ex. PLU-3 at 11 (Application).
[56] Ex. EERA-4 at 20-35 (Public Information and Environmental Assessment Scoping Meeting Transcript) (May 29, 2024).
[57] Ex. EERA-4 at 23 (Public information and Environmental Assessment Scoping Meeting Transcript) (May 30, 2024).

Plummer Solar's commitment to "use best efforts to support and deploy Native American, veteran, and diverse business and workforces" for the Project.[58] IOUE Local 49 also praised the Project's job opportunities, property and production tax contributions, and the lack of a need for additional transmission lines.[59]

48. LIUNA's scoping comments highlighted Plummer Solar's commitment to work with organized labor and indicated that it hoped the EA would consider the Project's interconnection status, proposed addition of battery storage, and impact on the impact of "family-supporting construction jobs and career opportunities" on local workers and communities.[60]

49. International Brotherhood of Electrical Workers Local Union No. 1426's scoping comments expressed support for the Project's potential impact on clean energy goals, the environmental considerations included in the development of the Project, and the anticipated employment opportunities of the Project.[61]

50. The Minnesota Tribal Contractors Council's scoping comments were supportive of the Project because of the job opportunities it would create for tribal members, the commitment to use best efforts to use "union, Tribal, local, veteran, and diverse businesses, and workforces," and the benefit to tribes and local Minnesota communities of increased demand for goods and services to support construction and ongoing operations.[62]

B. Public Hearings

51. Four commenters offered oral comments during the public hearing at Plummer City Hall in Plummer, Minnesota on November 20, 2024.[63]

52. An organizer from a labor union who had previously worked on a project with the Applicant offered comments supportive of the project. Specially, this commenter extoled the Applicant's safety and environmental practices and its use of local labor.[64]

53. The Red Lake County Environmental Officer expressed concerns about potential disposal costs at the eventual end of the Project's life, especially if the Project were to experience a change in ownership. This commenter also expressed concerns about the need for setbacks on road ROWs and their impact on the ability to clear roads during snowfall. The Applicant, EERA, and Commission Staff provided information in response to this commenter.[65]

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[58] Ex. EERA-3 (IOUE Local 49 Scoping Comments) (Jun. 12, 2024).
[59] Ex. EERA-3 (IOUE Local 49 Scoping Comments) (Jun. 12, 2024).
[60] Ex. EERA-3 (LIUNA Scoping Comments) (Jun. 13, 2024).
[61] Ex. EERA-3 (International Brotherhood of Electrical Workers Local Union No. 1426 Scoping Comments).
[62] Ex. EERA-3 Minnesota Tribal Contractors Council Scoping Comments) (Jun. 12, 2024).
[63] Plummer 6:00 p.m. Public Hearing Tr. at 21-34 (Nov. 20, 2024).
[64] Plummer 6:00 p.m. Public Hearing Tr. at 21:30-23:13 (Nov. 20, 2024).
[65] Plummer 6:00 p.m. Public Hearing Tr. at 23:19-30:25 (Nov. 20, 2024).

54. The mayor of Plummer inquired about the Applicant's plans for weed control at the Project Site. The Applicant and EERA provided information in response to this commenter.[66]

55. The supervisor for Emardville Township expressed concerns about the impact of construction equipment on township roads and the potential for that to require additional blading or graveling of those roads. The Applicant and EERA provided information in response to this commenter.[67]

C. Written Public Comments

56. MPCA reviewed the EA and had no comments.[68]

57. The Upper Sioux Community THPO filed comments stating that the Project is located in an area where the Dakota lived, prayed, hunted, gathered, battled, and buried their relatives. The Upper Sioux Community THPO determined that there were no concerns or further comments on the activities of the proposed Project. The Upper Sioux Community THPO indicated that their preference for Section 106 consultation would be to receive notification of rediscovered cultural resources and human remains. The Upper Sioux Community THPO also commented that if ground disturbance from the Project inadvertently uncovers any human remains, funerary objects, or artifacts, then ongoing work must stop and the SHPO and the Upper Sioux Community THPO be contacted as soon as possible.[69]

58. DNR filed comments recommending that the Site Permit for the Project include a special permit condition that requires shielded and downward facing lighting and lighting that minimize blue hue because of the impact that LED lighting that is high in blue light can have on birds, insects, and other animals. DNR also recommended a special permit condition requiring the permittee to utilize non-chloride products for onsite dust control during construction because chloride products do not break down in the environment and can accumulate to levels that are toxic to plants and wildlife. DNR also recommended including a special condition requiring the use of wildlife-friendly erosion control measures in order to prevent small animals becoming entangled or loose fibers polluting waterways. DNR also encouraged the Applicant to coordinate with the DNR area wildlife staff and the Department of Commerce to develop a satisfactory fencing plan to minimize impacts to wildlife. DNR also provided comments on Plummer Solar's Vegetation Management Plan (VMP) and encouraged continued coordination with the Vegetation Management Plan Working Group (VMPWG). DNR also noted it supports the section of Draft Site Permit encouraging the Applicant to meet the standards of the Minnesota Habitat Friendly Solar Program, and to not plant non-native species.[70]

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[66] Plummer 6:00 p.m. Public Hearing Tr. at 31:6-32:12 (Nov. 20, 2024).
[67] Plummer 6:00 p.m. Public Hearing Tr. at 32:18-34:10 (Nov. 20, 2024).
[68] MPCA Comments (Nov. 19, 2024) (eDocket No. 202411-212195-01).
[69] Upper Sioux Community THPO Comments (Dec. 3, 20204) (eDocket No. 202412-212649-01).
[70] DNR Comments (Dec 6, 2024) (eDocket No. 202412-212797-01).

59. IOUE Local 49 and NCSRC of Carpenters filed comments supportive of the project and stating that the project will "generate good paying jobs for local workers" and support "ongoing efforts to meet Minnesota's 100% by 2040 carbon free law."[71]

60. EERA filed comments on the draft decommissioning plan, the draft VMP, and the changes between the sample site permit and the proposed Draft Site Permit. Regarding the decommissioning plan, EERA recommended a number of modifications to the draft decommissioning plan. EERA also provided comments on the Project's draft VMP on behalf of the VMPWG. EERA recommended revising the plan to clarify or provide additional info on visual screening plans, site preparation, seedbed preparation, management, grazing, herbicide, monitoring, and reporting. EERA also recommended that additional maps be added. Regarding the Draft Site Permit special conditions, EERA summarized the changes it made from the Commission's sample site permit, reflected in the Draft Site Permit included with the EA. EERA revised its proposed special condition 5.5 on the short-eared owl and marbled godwit, noting that the reference in the original proposed language to avoiding impacts to habitat during migratory season was actually intended to be a recommendation to avoid impacts during nesting season (April – July) rather than migratory season.[72]

61. On December 9, 2024, Plummer Solar filed comments in response to the public comments made at the public hearings and submitted during the public comment period. Plummer Solar also provided additional corrections and clarifications to the EA and comments on conditions proposed in the Draft Site Permit. Plummer Solar identified additional clarification and corrections to the description in the EA of the Project's interconnection. Plummer Solar noted it will consider EERA's comments in preparing the updated decommissioning plan but suggested a modification to EERA's comments regarding the description of the use of generation output. Plummer Solar provided additional comments on the Draft Site Permit and recommended modifications to Sections 4.3.17 and 5.5. Plummer Solar responded to DNR's December 6, 2024 comments stating that it does not object to special conditions recommended by DNR for facility lighting, dust control, and wildlife-friendly erosion control. Plummer Solar stated that it would continue to coordinate with DNR and EERA regarding the Project's perimeter fence. Plummer Solar reiterated its commitment to working with the VMPWG regarding the Project's VMP. Plummer Solar also responded to comments made by the Red Lake County Environmental Services Officer at the public hearing regarding the Project's setbacks, stating that the Project's perimeter fence is appropriately set back from public road rights-of-way and county ditches and that the proposed design will allow adequate space for maintenance activities including snow removal and dredging. Plummer Solar also responded to public comments regarding decommissioning of the Project. Plummer Solar responded to questions from township and city representatives, explaining that the VMP and AIMP contain a plan for control of invasive and noxious weeds, that Plummer Solar would work with the appropriate road authority regarding work within road ROW, and that Plummer Solar would ensure that roads used by the Project during construction are repaired to at least pre-construction conditions at Plummer Solar's expense. Plummer

[71] IOUE Local 49 and NCSRC of Carpenters Comments (Dec. 6, 2024) (eDocket No. 202412-212781-01).
[72] EERA Hearing Comments (Dec 6, 2024) (eDocket No. 202412-212770-01).

Solar also responded to written comments from MPCA, the Upper Sioux Community THPO, LIUNA, and IUOE Local 49 and NCSRC of Carpenters.[73]

VI. Certificate of Need

62. The Project is exempt from certificate of need requirements pursuant to Minn. Stat. § 216B.243, subd. 8(a)(7) (2024) because Plummer Solar is an IPP that submitted a site permit application.

VII. Site Permit Criteria

63. Large electric power generating plants (LEPGP) are governed by Minn. Stat. §§ 216E.001 - .18 and Minn. R. 7850.1000 - .5600. Minn. Stat. § 216E.01, subd. 5, defines a "large electric power generating plant" as "electric power generating equipment and associated facilities designed for or capable of operation at a capacity of 50,000 kilowatts or more."

64. The Project is subject to the Commission's siting authority under Minn. Stat. § 216E.02. Therefore, a site permit is required prior to construction of the Project.[74]

65. An LEPGP powered by solar energy is eligible for the alternative permitting process authorized by Minn. Stat. § 216E.04 (2022).[75] Plummer Solar filed the Application under the process established by the Commission in Minn. R. 7850.2800 - .3900 (2023).[76]

66. For an LEPGP permitted under the alternative permitting process, the Department of Commerce is required to prepare an EA for the Commission containing information on the human and environmental impacts of the proposed project and addressing mitigating measures. The EA is the only state environmental review document required to be prepared on the Project.[77]

67. When deciding whether to issue a site permit for an LEPGP, the Commission is required to consider the following:

A. effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services;

B. effects on public health and safety;

C. effects on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining;

[73] Ex. PLU-10 (Response to Public Comments).
[74] *See* Minn. Stat. § 216E.02, subd. 2.
[75] Minn. Stat. § 216E.04, subd. 2(8).
[76] Ex. PLU-1 (Notice of Intent to Submit a Site Permit) (Mar. 5, 2024).
[77] Minn. Stat. § 216E.04, subd. 5.

D. effects on archaeological and historic resources;

E. effects on the natural environment, including effects on air and water quality resources and flora and fauna;

F. effects on rare and unique natural resources;

G. application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;

H. use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries;

I. use of existing large electric power generating plant sites;

J. use of existing transportation, pipeline, and electrical transmission systems or rights-of-way;

K. electrical system reliability;

L. costs of constructing, operating, and maintain the facility which are dependent on design and route;

M. adverse human and natural environmental effects which cannot be avoided; and

N. irreversible and irretrievable commitments of resources.

68. The record contains sufficient information to permit an evaluation of the Project under the established criteria.

VIII. Application of the Statutory Siting Criteria to the Proposed Project

A. Human Settlement

69. The Commission is required to consider the Project's effect on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services.[78]

1. Displacement

70. Displacement can occur when residences or other buildings are located within a proposed site or ROW. If the buildings would potentially interfere with the safe

[78] Minn. R. 7850.4100(A).

operation of a project, they are typically removed from the site or ROW and relocated. Displacements from large energy facilities are rare and are more likely to occur in heavily populated areas where avoiding all residences and businesses is not always feasible than in rural areas where there is more room to adjust site boundaries or ROWs to accommodate the proposed energy facility.[79]

71. There are no residences, businesses, or structures such as barns or sheds located within the Project's area of land control, and none will be displaced by the Project. Accordingly, no mitigation is proposed.[80]

2. Aesthetics

72. Aesthetics refers to the visual quality of an area as perceived by the viewer and forms the impression a viewer has of an area. Aesthetics are subjective, meaning their relative value depends upon the perception and philosophical or psychological responses unique to individuals. Impacts to aesthetics are equally subjective and depend upon the sensitivity and exposure of an individual. How an individual values aesthetics, as well as perceived impacts to a viewshed, can vary greatly.[81]

73. The visible elements of the solar facility will consist of new PV arrays, transformers and inverters, up to seven weather stations, an O&M facility, a new substation and a short transmission line, and security fencing surrounding the project.[82]

74. The Project will be a noticeable change in the landscape, converting approximately 769.9 acres of agricultural fields into solar production. Although the change will be noticeable, there are other existing infrastructure features in the landscape including gravel roads, transmission and distribution lines, and substations. The project will be immediately adjacent to an existing substation and pump station facilities that have long operated in the area. How an individual viewer perceives the change from a field of corn to a field of solar panels depends, in part, on how a viewer perceives solar panels.[83]

75. For residents outside the Project vicinity and for others with low viewer sensitivity, such as travelers along U.S. Highway 59 N, aesthetic impacts are anticipated to be minimal. For these viewers, the solar panels would be relatively difficult to see due to fencing and vegetation, or would be visible for a very short period. For residents in the Project vicinity and for others with high viewer sensitivity traveling on local roads in the Project vicinity, such as 180th Street SE, aesthetic impacts are anticipated to be moderate to significant.[84]

76. Current fields of corn, soybeans, and winter wheat will be replaced with acres of solar panels. Panels will have a relatively low profile. When level to the ground

[79] Ex. EERA-7 at 92.
[80] Ex. EERA-7 at 92.
[81] Ex. EERA-7 at 38.
[82] Ex. EERA-7 at 40.
[83] Ex. EERA-7 at 40.
[84] Ex. EERA-7 at 41.

they will be five to eight feet tall, with a maximum height of nine to twelve feet off the ground at maximum tilt. Construction of the new 1.3-acre project substation, the associated transmission line and the one-acre O&M facility will also present new visual impacts. The collector pole and related dead-end structure will support aboveground conductors within the substation and are expected to be approximately 95 feet tall, depending on final design. The O&M facility will include a SCADA system, an area for maintaining and storing equipment, and a parking lot. The Project's 115 kV transmission line will be a short line, less than 1,500 feet in length. The nearest residence is approximately 500 feet from the project transmission line. An existing 115 kV transmission line is presently located adjacent to the project area.

77. PV panels are designed to absorb light to convert it to electricity. Compared to clear glass, which typically reflects approximately eight percent of the sunlight, PV panels typically reflect approximately three percent of the sunlight when the panels are directly facing the sun.[85]

78. Aesthetic impacts can be mitigated through individual agreements with neighboring landowners (sometimes referred to as "good neighbor agreements").[86] Plummer Solar has committed to working with all landowners adjacent to the Project to develop a visual screening plan and implement screening that is specific to the particular landowner.[87]

79. Aesthetic impacts can be minimized through standard or special permit conditions.[88]

80. Aesthetic impacts can be minimized by locating the facilities so that they are not immediately adjacent to homes, ensuring that damage to natural landscapes during construction is minimized, and shielding the facilities from view by terrain or vegetation. Impacts from facility lighting can be minimized by using shielded and downward facing light fixtures and using lights that minimizes blue hue.[89] While relatively few trees exist within the Project Area, Plummer Solar has designed the Project to avoid tree clearing to the extent practicable, and to break up the view of the arrays in some areas. The distance from the closest residence to a solar array is 320 feet; the next-closest residence is located 702 feet away.[90] Nearby residences are at least partially surrounded by natural vegetation screening.[91] Plummer Solar is in discussions with the most affected, nearest landowner about potential addition of vegetation screening and how to address aesthetic concerns.[92]

[85] Ex. EERA-7 at 41.
[86] Ex. EERA-7 at 42.
[87] Ex. PLU-9 at 6.
[88] Ex. EERA-7 at 41.
[89] Ex. EERA-7 at 41.
[90] Ex. PLU-3 at 44 (Application).
[91] Ex. PLU-3 at 42-44 (Application).
[92] Ex. PLU-3 at 44 (Application); Ex. PLU-9 at 6.

81. In its initial comments on the EA, the Applicant proposed the following special condition:

5.7 Visual Screening Plan

The Permittee shall develop a site-specific Visual Screening Plan. The Visual Screening Plan shall be designed and managed to mitigate visual impacts to adjacent residences.

The Visual Screening Plan shall at a minimum include:

(a) objectives for screening of adjacent residences; and

(b) a description of the types of trees and shrub species to be used, the location of plantings, and plans for installation, establishment, and maintenance.

The location of trees and shrubs included in the Visual Screening Plan that are located within the Permittee's site control shall be included in the Site Plan filed under Section 8.3.

At least 14 days prior to the pre-construction meeting, the Permittee shall file:

(a) the Visual Screening Plan;

(b) documentation of coordination between landowners adjacent to the site boundary; and

(c) an affidavit of its distribution of the Visual Screening Plan to landowners adjacent to the site boundary.[93]

82. The Applicant also proposed modifications to Section 4.3.8 (Aesthetics) of the Draft Site Permit to focus the condition on adjacent landowners who are most affected by the visual screening plan contemplated by Special Permit Condition 5.7, and removing a reference to considering input from the local unit of government because the site permit would preempt local ordinances.[94] EERA opposed the removal of the reference to local

[93] Ex. PLU-9 at 6-7.
[94] Ex. PLU-9 at 7.

government, stating that the reference is standard permit language that applies to all solar projects permitted by the Commission.[95]

83. Requiring consideration of input from local units of government helps affected constituents have their voices heard through their elected leaders. Nothing in this permit language affects the legal relationship between the site permit and local zoning controls. EERA's proposed language for Section 4.3.8 (Aesthetics) of the Draft Site Permit is reasonable and in the public interest.

84. The modification to Section 4.3.8 (Aesthetics) of the Draft Site Permit to specify consideration of input pertaining to visual impacts from adjacent landowners when developing the visual screening plan is reasonable and should be adopted.

85. The inclusion of Special Condition 5.7 is reasonable, in the public interest, and should be adopted.

86. Down-lit security lighting will be installed at the gates to the facility as well as outside the O&M facility and project substation, and along the perimeter fence as necessary for safety and security. Lighting will be motion-activated and down lit to minimize impacts and effects. Shielded and downward facing lighting and LED lighting that minimizes blue hue will be used at the Project substation and O&M facility. Impacts to light-sensitive land uses are not anticipated given the rural project location coupled with minimal required lighting for operations.[96]

87. In total, aesthetic impacts from both construction and operation are anticipated to be minimal to moderate and able to be mitigated in part.[97]

3. Noise

88. Noise can be defined as any undesired sound. It is measured in units of decibels on a logarithmic scale. The A-weighted scale (dBA) is used to duplicate the sensitivity of the human ear. A three dBA change in sound is barely detectable to average human hearing, whereas a five dBA change is clearly noticeable. A 10 dBA change is perceived as a sound doubling in loudness. Noise perception is dependent on a number of factors, including wind speed, wind direction, humidity, and natural and built features between the noise source and the receptor.[98]

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[95] EERA Reply Comments at 8-9 (Jan. 8, 2025 (eDocket No. 20251-213669-01) (as an example, the EERA cited Site Permit for the Sherco 3 Solar Project, August 31, 2024, eDockets Number 20247-209139-01, Section 4.3.8 ("The Permittee shall consider input pertaining to visual impacts from landowners and the local unit of government having direct zoning authority over the area in which the Project is located. The Permittee shall use care to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the Project during construction and operation.").

[96] Ex. EERA-7 at 41; Ex. PLU-10 at 5.

[97] Ex EERA-7 at 10.

[98] Ex. EERA-7 at 42.

89. The MPCA has established standards for the regulation of noise levels. The most restrictive MPCA noise limits are 60-65 dBAs during the daytime and 50-55 dBA during the nighttime.[99]

90. In Minnesota, noise standards are based on noise area classifications (NAC) corresponding to the location of the listener, referred to as a receptor. NACs are assigned to areas based on the type of land use activity occurring at that location. Household units, designated camping and picnicking areas, resorts and group camps are assigned to NAC 1; recreational activities (except designated camping and picnicking areas) and parks are assigned to NAC 2; agricultural and related activities are assigned to NAC 3.[100]

91. Potential noise impacts from the Project are associated with construction noise and operational noise.[101]

92. Intermittent noise will be emitted by construction vehicles and equipment. The most significant source of construction noise is expected to be the pile driving equipment associated with installation of the foundations for the solar arrays. Federal Highway Administration Construction guidance was used to estimate the noise from power hammers to be approximately 90 dBA at 50 feet (the minimum setback from neighboring property lines).[102] Scaled to daytime noise level standards, this corresponds to NAC-1 compliant levels at 800 feet, and most residences are further than this from the Project area. The noise from construction activities would dissipate with distance and be audible at varying dBAs, depending on the locations of the equipment and receptor.[103]

93. Construction noise could exceed state noise standards at select times and locations but is not anticipated.[104] Exceedances would be short-term and confined to daytime hours. Even without an exceedance, noise impacts will occur. Rhythmic pounding of foundation posts would be disruptive even if the noise associated with that activity is within state standards. If Plummer Solar elects to install a helical pile based on conditions at the site, the installation would take longer but would be quieter.[105]

94. Other construction activities - for example, installation of solar panels - are anticipated to have minimal noise impacts. A forklift is typically used to place solar panels

[99] Minn. R. 7030.0040 (2023).
[100] Ex. EERA-7 at 42.
[101] Ex. EERA-7 at 43.
[102] Ex. PLU-3 at 39 (Application).
[103] Ex. EERA-7 at 43.
[104] Ex. PLU-9 at 2-3. The EA indicated that construction noise would likely exceed state noise standards at select times and locations. Ex. EERA-7 at 44. The Applicant pointed out that the noise standards are only violated if the maximum allowable noise standards are exceeded for more than 10 percent of any hour for more than 10 percent of any hour (L_{10}) and 50 percent of any hour (L_{50}). Ex. PLU-9 at 3-4 (citing Ex. PLU-3 at 39 (Application)). Thus, it is not anticipated that the standards will be exceeded.
[105] Ex. EERA-7 at 44.

on the racking system. Construction activities will be sequenced, that is, site grading may occur at one location while posting driving occurs at another location, at the same time.[106]

95. Noise levels during operation of the Project are anticipated to be negligible. The primary source of noise from the solar facility will be from inverters and transformers, although some minor noise may be generated from the short transmission line. Noise levels are expected to be intermittent throughout the day and lower during non-daylight hours. For residential areas, there is an expected maximum level of 44 dBA within 320 feet, the distance of the nearest home to an inverter, well below the daytime L_{50} dBA noise standard of 60 dBA and the nighttime standard of 50 dBA. Noise from routine maintenance activities is anticipated to be negligible to minimal. Noise from the electrical collection system is not expected to be perceptible.[107]

96. Sound control devices on vehicles and equipment (such as mufflers), conducting construction activities during daylight hours, and running vehicles and equipment only when necessary are common ways to mitigate noise impacts. The Applicant indicated that it may elect to erect temporary noise barriers adjacent to installations to reduce impacts.[108]

97. Section 4.3.7 of the Draft Site Permit is a standard condition that requires the permittee to comply with noise standards under law, and to limit construction and maintenance activities to daytime hours to the extent practicable. No additional mitigation is proposed.[109]

98. In total, noise impacts from construction are anticipated to be moderate to significant and unable to be mitigated fully. Noise impacts from operation are anticipated to be negligible to minimal and able to be mitigated.[110]

4. Cultural Values

99. Cultural values can be defined as shared community beliefs or attitudes that define what is collectively important to the group. These values provide a framework for individuals and community thought and action. Infrastructure projects believed inconsistent with these values can deteriorate community character. Those found consistent with these values can strengthen it. Projects often evoke varying reactions and can, at times, weaken community unity.[111]

100. Cultural values can be informed by ethnic heritage. Residents of Red Lake County derive primarily from Native American, French Canadian, and European ancestry. Cultural values are also informed by work and leisure pursuits (such as farming and

[106] Ex. EERA-7 at 44.
[107] Ex. EERA-7 at 44.
[108] Ex. EERA-7 at 44.
[109] Ex. EERA-7 at 44.
[110] Ex. EERA-7 at 10.
[111] Ex. EERA-7 at 44-45.

snowmobiling), as well as land use (such as agricultural cropland). Community events in the Project area are usually tied to seasonal or municipal events and national holidays.[112]

101. Development of the Project will change the character of the area, potentially changing residents' sense of place. There are tradeoffs for rural communities between renewable energy projects and retaining the rural character of an area. Construction and operation of the Project is not anticipated to impact or alter the work and leisure pursuits of residents in the Project area in such a way as to impact the underlying culture of the area.[113]

102. Individual and community-based renewable energy is becoming more valued across the nation. Utility scale renewable projects—generally located far from load centers in rural areas—are also valued, but, at times, opposed by residents. The highly visible, industrial look and feel of these projects can erode the rural feeling that is part of a resident's sense of place.[114]

103. There are no conditions included in the Draft Site Permit that directly address mitigation for impacts to cultural values. Section 4.3.24 addresses impacts to cultural properties. No additional mitigation is proposed.[115]

104. In total, impacts to cultural values from both construction and operation of the Project are anticipated to be minimal to moderate.[116]

5. Land Use and Zoning

105. Land use is the characterization of land based on what can be built on it and how the land is used. Zoning is a regulatory tool used by local governments (cities, counties, and some townships) to guide specific land uses within specific geographic areas. Land cover documents how much of a region is covered by forests, wetlands, impervious surfaces, agriculture, and other land and water types. Construction of solar generating facilities and transmission line will alter current and future land use and land cover.[117]

106. Land use impacts are anticipated to be long term-and localized. The impact intensity level is anticipated to be moderate due to the conversion of agricultural land to land used for energy generation.[118]

107. The proposed solar facility is consistent with local land used ordinances and comprehensive land use plans.[119]

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[112] Ex. EERA-7 at 45.
[113] Ex. EERA-7 at 44.
[114] Ex. EERA-7 at 45.
[115] Ex. EERA-7 at 45.
[116] Ex. EERA-7 at 10.
[117] Ex. EERA-7 at 45.
[118] Ex. EERA-7 at 45.
[119] Ex. EERA-7 at 12.

108. During the public hearing, the Red Lake County Environmental Services Officer asked several questions regarding the setbacks from the Project to various public roads, ditches, and nearby homes and businesses.[120] Red Lake County did not make any specific recommendations as to such setbacks, and the Applicant responded to these inquiries during the public hearing and in comments following the meeting.[121]

109. The Project fence is set back 35 feet from the west edge of the ROW of township road 230th Avenue SE. The width of road and county ditch easements are designed to accommodate maintenance activities including snow removal and dredging, respectively. For many public roads in the Project vicinity, existing fence lines are closer to public roads than the Applicant's fence setback distances.[122]

110. The Applicant has demonstrated that the setbacks included in the Application are reasonable, and the record does not include any evidence to the contrary.

111. Construction of the Project will change land use from agricultural to solar energy production for a minimum of 30 years. After the Project's useful life, the land control area could be restored to pre-Project conditions by implementing appropriate restoration measures. Impacts can be minimized by using best practices to protect land and water quality.[123]

112. The Project would convert approximately 884 acres of cultivated cropland to solar energy production. The Applicant intends to utilize best practices as feasible to reduce the impact on land use and water resources in congruence with the Red Lake County Comprehensive Local Water Management Plan. Although the Project is subject to oversight by the Commission, Plummer Solar will continue to coordinate with Red Lake County and Emardville Township on other potential permits for the Project.[124]

113. Red Lake County has a Comprehensive Local Water Management Plan created by the Red Lake County Soil & Water Conservation District, which focuses on water and related land resource issues within the entire county. The following are listed as priority concerns to address by protecting water resources: surface water quality and impaired waters; quantity of water moving through the county; ground water quality; erosion and sedimentation, recreational opportunities, and continuation of ongoing District activities. The Applicant has stated that it reviewed this plan and intends to follow best practices in protecting priority concerns for this plan as feasible.[125]

114. The Draft Site Permit addresses preservation and restoration of agricultural land in Sections 4.3.17, 4.3.18, 9.0, and 9.2.[126]

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[120] Plummer 6:00 p.m. Public Hearing Tr. at 26-28 (Nov. 20, 2024).
[121] Ex. PLU-10 at 6-7; Plummer 6:00 p.m. Public Hearing Tr. at 28 (Nov. 20, 2024).
[122] Ex. PLU-10 at 6-7.
[123] Ex. EERA-7 at 45.
[124] Ex. EERA-7 at 47.
[125] Ex. EERA-7 at 46.
[126] Ex. EERA-7 at 47.

115. In total, impacts to land use and zoning from both construction and operation are anticipated to be negligible to minimal and able to be mitigated.[127]

6. Property Values

116. Impacts to property values can be measured in three ways: sale price, sales volume, and marketing time. These measures are influenced by a complex interaction of factors. Many of these factors are parcel specific, and can include condition, size, acreage, improvements, and neighborhood characteristics; the proximity to schools, parks, and other amenities; and the presence of existing infrastructure, for example, highways or transmission lines. In addition to property-specific factors, local and national market trends, as well as interest rates, can affect all three measures. The presence of a solar facility becomes one of many interacting factors that could affect a specific property's value.[128]

117. Because each landowner has a unique relationship and sense of value associated with their property a landowner's assessment of potential impacts to their property's value is often a deeply personal comparison of the property "before" and "after" a proposed project is constructed. The landowner's judgments, however, do not necessarily influence the market value of a property. Professional property appraisers assess a property's value by looking at the property "after" a project is constructed. Moreover, potential market participants are likely to see the property independent of the changes brought about by a project; therefore, they do not take the "before" and "after" into account the same way a current landowner might. Further, whether or not a project has an actual adverse effect on property values, landowners may experience fear and anxiety when perceiving the potential for negative impacts to their property's value.[129]

118. Electrical generating facilities can impact property values. Often, negative effects result from impacts that extend beyond the project location. Examples include emissions, noise, and visual impacts. Unlike fossil-fueled electric generating facilities, the Project would not generate emissions. Potential impacts from operational noise are not anticipated. Aesthetic impacts will occur, but because the project is relatively low in height – as compared to a wind turbine or a smokestack – impacts would be localized.[130]

119. Large solar facilities exist in Minnesota; however, limited sales information is available. EERA's review of the literature identified one peer-reviewed journal article that addressed impacts to property values based on proximity to utility-scale, PV solar facilities. The Lawrence Berkeley National Lab studied over 1,500 large-scale PV solar facilities in six states (including Minnesota) to determine whether home sale prices were influenced within 0.5 miles (from over 1.8 million home sale transactions). In summary,

[127] Ex. EERA-7 at 10.
[128] Ex. EERA-7 at 48,
[129] Ex. EERA-7 at 48.
[130] Ex. EERA-7 at 48.

the study found that effects on home sale prices depend on many factors that are not uniform across all solar developments or across all states.[131]

120. In Minnesota in particular, the study found that homes within one-half mile of large-scale PV solar facilities had a four percent reduction in home sale prices compared to homes two to four miles away. This finding was considered statistically significant. Additionally, only large-scale PV solar facilities developed on previously agricultural land, near homes in rural areas, and larger facilities (roughly 12 acres or more) were found to be linked to adverse home sale price impacts within one-half mile. The analysis did not include consideration of site features or site design, for example setbacks or landscaping features, which could play a role in nearby property valuation. Another limitation of the study was the lack of examination of the broader economic impacts or benefits to host communities from large-scale PV solar facilities, which might positively impact home sale prices.[132]

121. Other studies with smaller sample sizes did not find a consistent negative impact to the sales value of properties near large solar facilities. Chisago County Environmental Services and Zoning found that home sales exceeded assessed value near the 100 MW North Star solar facility at a rate comparable to the general real estate market in the area. Additionally, a study prepared by CohnReznick examined sale prices of properties near ten existing large solar facilities (including the North Star project) with comparable properties, and did not find a consistent negative impact to the sales value of properties near large solar facilities.[133]

122. Impacts to the value of specific properties within the Project vicinity are difficult to determine but could occur. Considerations such as setbacks, benefits to the community, economic impact, and vegetative screening could have an unpredictable range of influence over property value. Several, but not all, of the closest residents have some screening from the Project.[134]

123. Based on analysis of other utility-scale solar projects, minimal to moderate property value impacts could occur, but significant negative impacts to property values in the project vicinity are not anticipated. To the extent that negative impacts do occur they are expected to be within one-half mile of the solar facility and to decrease with distance from the Project and with time. Aesthetic impacts that might affect property values would be limited to residences and parcels in the project vicinity where the solar panels are easily visible.[135]

[131] Ex. EERA-7 at 48 (internal quotations omitted).
[132] Ex. EERA.7 at 48-49.
[133] Ex. EERA-7 at 49.
[134] Ex. EERA-7 at 49.
[135] Ex. EERA-7 at 49.

124. Impacts to property values can be mitigated by reducing aesthetic impacts and strains to future land use. Impacts can also be mitigated by the Applicant through individual agreements with neighboring landowners, such as a visual screening plan.[136]

125. In total, impacts to property values from both construction and operation are anticipated to be minimal to moderate and able to be mitigated in part.[137]

7. Tourism[138] and Recreation

126. In 2022, the leisure and hospitality industry in Red Lake County accounted for about $2,475,055 in gross sales, and 95 private sector jobs.[139]

127. Impacts to tourism and recreation can be direct or indirect. Direct impacts are impacts that directly impede the use of a recreational resource, for example, closing of a trail to facilitate project construction. Indirect impacts reduce the enjoyment of a recreational resources but do not prevent use, for example, aesthetic impacts visible from a scenic overlook.[140]

128. During construction, unavoidable short-term impacts will occur as construction equipment and vehicle traffic will create noise, dust, and visual impacts. These impacts will be intermittent and localized. There are no anticipated long-term impacts from the Project[141]

129. There are no wildlife management areas (WMAs), public water access sites, or state parks within one mile of the Project area. The nearest WMA is the Emardville WMA, located approximately two miles north of the Project. The Oriniak and Gervais WMAs are located approximately five miles from the Project. There are a few local parks, including Omar Sundrug Memorial Park approximately seven miles southeast in the City of Oklee, and Sportsman Park, Riverside Park, and Voyageur's View Campground located in the City of Red Lake Falls located approximately 12 miles west of the Project. There is also a private hunting company located approximately one mile south of the Project. There is one state snowmobile trail less than one mile west of the Project area, the Riverland snowmobile trail which follows Highway 59.[142]

130. Impacts to tourism and recreation are anticipated to be minimal and temporary. Due to construction, there will be short-term increases in traffic and noise that could potentially impact recreational activities in close proximity to the Project area, including visitors at the snowmobile trail and the private hunting company. However,

[136] Ex. EERA-7 at 49.
[137] Ex EERA-7 at 10.
[138] Tourism is also discussed section VIII.C.2 of this report.
[139] Ex. EERA-7 at 49 (internal citations omitted).
[140] Ex. EERA-7 at 50.
[141] Ex. EERA-7 at 49.
[142] Ex. EERA-7 at 50.

impacts will be temporary. No significant long-term impacts to recreational activities are anticipated.[143]

131. The Applicant has indicated that perimeter fencing will be installed in order to mitigate disruption to local animal populations, avoiding impacts to recreational activities associated with wildlife such as hunting and wildlife viewing.[144]

132. Because impacts to recreational activities are anticipated to be minimal and temporary, no additional mitigation measures are proposed.[145]

133. In total, impacts to tourism and recreation from construction are anticipated to be minimal to moderate and able to be mitigated in part. Impacts to tourism and recreation from operation are anticipated to be negligible to minimal and able to be mitigated.[146]

8. Transportation and Public Services

134. Public services are provided by a governmental entity or by a regulated private entity to provide for public health, safety, and welfare.[147]

135. Most residents in the surrounding area have private septic systems. The City of Plummer offers municipal water to its residents. Domestic wells are also common in the area.[148]

136. Plummer Solar does not anticipate impacts to water and wastewater systems, as there are no wells located within the Project area. A single domestic-sized water well will be required for the O&M facility, and because of this a well construction permit will be required from the Department of Health (MDH).[149]

137. During construction, workers and trucks delivering construction material and equipment will use the existing state, county, and township road system to access the Project. Traffic during construction is estimated to be approximately 20 to 100 pickup trucks, cars, and/or other types of employee vehicles onsite during the 12-to-18-month active construction period. Approximately 10 to 20 semitrucks per day will be used for delivery of facility components. Construction traffic will be perceptible to area residents, but because the average daily traffic on the area is well below design capacity, this increased traffic is not expected to affect traffic function. Slow-moving construction vehicles may also cause delays on smaller roads, similar to the impact of farm equipment during planting or harvest. These delays, however, should be minimal for the relatively short construction delivery period. The Applicant indicates that the power transformer may

[143] Ex. EERA-7 at 50.
[144] Ex. EERA-7 at 50; Ex. PLU-3 at 57 (Application).
[145] Ex. EERA-7 at 50.
[146] Ex EERA-7 at 10.
[147] Ex. EERA-7 at 50.
[148] Ex. EERA-7 at 51.
[149] Ex. EERA-7 at 57.

qualify as an overweight load. If required, Plummer Solar will obtain appropriate approvals for these loads prior to construction.[150]

138. With the exception of minor field access or driveway changes, no changes to the existing public roads are anticipated.[151]

139. The Applicant has stated it will work with the appropriate road authority regarding work within road ROW, including modifications or improvements to public roads. Additionally, Plummer Solar has stated that it will work with the appropriate road authorities to ensure that roads used by the Project during construction are repaired to at least pre-construction conditions, at the Applicant's expense.[152]

140. No impacts to roads are anticipated during the operation; negligible traffic increases would occur for maintenance.[153]

141. No impacts to railroads are anticipated as there are no railroads within the Project area.[154]

142. No long-term impacts to utilities will occur because of the Project. The Project will not impact existing transmission lines, although Plummer Solar indicates that there may be limited, temporary impacts to electrical service during interconnection. These impacts are expected to be short-term, and the Applicant indicates that coordination with local individuals and utilities impacted would take place prior to shutdowns.[155]

143. The Project crosses an existing pipeline corridor, running from the City of Plummer, crossing the site diagonally from the northwestern corner to the center of the southern boundary, and continuing south onwards. This is an active Enbridge-owned pipeline that transports crude oil. The Applicant indicates that electrical cabling will run alongside the pipeline ROW, crossing underneath the pipeline at one location in the southwest area of the Project.[156]

144. Plummer Solar used the Federal Aviation Administration's (FAA) Notice Criteria Tool to determine if further aeronautical study or FAA filing is needed. The tool generated a "no notice required" for all components of the Project, including solar panels, construction cranes up to 150 feet in height, electric transmission poles/towers up to 150 feet, or communications towers up to 150 feet. As a result, no further FAA studies or filings are necessary for the Project.[157]

[150] Ex. EERA-7 at 52; Ex. PLU-3 at 61 (Application).
[151] Ex. PLU-3 at 61 (Application); Ex. EERA-7 at 52.
[152] Ex. PLU-10 at 8; Ex. PLU-3 at 24, 61 (Application).
[153] Ex. EERA-7 at 52.
[154] Ex. EERA-7 at 52.
[155] Ex. EERA-7 at 52.
[156] Ex. EERA-7 at 52.
[157] Ex. EERA-7 at 52.

145. Potential impacts to the electrical grid, roads and railroads, and other utilities are anticipated to be short-term, intermittent, and localized during construction. Impacts to water (wells and septic systems) are not expected to occur. Overall, construction-related impacts are expected to be minimal, and are associated with possible traffic delays. During operation, negligible traffic increases would occur for maintenance. Impacts are unavoidable but can be minimized.[158]

146. Impacts to electrical infrastructure that cross the Project can be mitigated by appropriate coordination with the owners of the existing infrastructure and following industry best practices.[159]

147. Section 4.3.5 of the Draft Site Permit is a standard permit condition that requires the permittee to minimize disruptions to public utilities.[160]

148. Section 4.3.22 of the Draft Site Permit requires permittees to inform road authorities of roads that will be used during construction and acquire necessary permits and approvals for oversize and overweight loads. Permitted fencing and vegetative screening cannot interfere with road maintenance activities, and the least number of access roads shall be constructed.[161]

149. The Applicant has committed to working with the appropriate road authorities to ensure roads used by the Project during construction are repaired to at least pre-construction conditions, at Plummer Solar's expense.[162]

150. The Applicant should take extra measures during underground cable trenching and installation to ensure cabling is at a depth that avoids disturbance to the existing pipeline ROW.[163]

151. The direct current (DC) collector cables will either be entirely buried except riser portions (in an underground trench or plowed in place) or a hybrid of buried and aboveground cables. The AC collector system comprises underground cables that transmit power to the Project substation adjacent to the point of interconnection. The depth of cables is expected to be three feet and may be deeper for installation under existing utilities or other features requiring avoidance. Electrical collection technology is rapidly evolving and the final type of electrical system will be determined prior to construction based on site-specific geotechnical analysis, available technology, constructability, and availability of materials. Final engineering and procurement will determine the construction method for the electrical collection system. Underground cabling will be installed in accordance with the Agricultural Impact Mitigation Plan (AIMP).[164]

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[158] Ex. EERA-7 at 50.
[159] Ex. EERA-7 at 53.
[160] Ex. EERA-7 at 53.
[161] Ex. EERA-7 at 53.
[162] Ex. PLU-10 at 8.
[163] Ex. EERA-7 at 53.
[164] Ex. PLU-3 at 22 (Application).

9. Socioeconomics

152. Between 2010 and 2020, the population in Red Lake County decreased by 3.8 percent, compared to a growth of 7.6 percent for Minnesota as a whole. From 2010 to 2020, the population of the Emardville Township increased by 6.7 percent, however population of the City of Plummer decreased by 5.5 percent over the same time period. Red Lake County, Emardville Township, and the City of Plummer all have a lower minority population than the state as a whole. Red Lake County and the City of Plummer have lower median household incomes than the state, however Emardville township has a higher median household income compared to the state as a whole.[165]

153. In 2022, the sectors with the largest employment in Red Lake County were retail trade (11.3 percent), transportation and warehousing (9.0 percent), and public administration (8.4 percent). Red Lake County is part of the Minnesota Department of Economic Development Region 1, which is located in the Northwest Planning Region. Unemployment rates fluctuate with the economy, but the unemployment rate for Region 1 has typically been higher than Minnesota's unemployment rate. In 2023, Red Lake County had a slightly higher unemployment rate (3.8 percent) than the state average (2.7 percent). Red Lake County also had a lower labor force participation rate (65.1 percent) than Minnesota as a whole (68.7 percent).[166]

154. The Project will require approximately 150 to 200 jobs during the construction and installation phases, and up to three to four long-term personnel during the operations phase. Indirect economic benefits will occur from additional local spending on lodging, goods and services, and local sales tax.[167]

155. Construction of the Project is likely to result in increased expenditures for lodging, food and fuel, transportation, and general supplies at local businesses during construction. Construction of the Project will create local job opportunities for various trade professionals and will also generate and circulate income throughout the community by investing in local businesses, and generating tax revenue.[168]

156. Procurement of construction resources will give preference to local, union construction craft employees. The Applicant has also held meetings with several tribes to discuss potential employment and investment opportunities in the Project and will make every effort to utilize tribal members for contracting, subcontracting, and workforce, that can perform the scopes of services needed.[169]

157. If the project is constructed, approximately 796.9 acres will be removed from agricultural production that are currently used to produce corn, winter wheat, and soybeans. The removal of cultivated land is likely to result in an incremental decrease to agricultural-related businesses in the area, such as farm dealerships, seed dealers, and

[165] Ex. EERA-7 at 53.
[166] Ex. EERA-7 at 54 (internal citations omitted).
[167] Ex. EERA-7 at 56; Ex. PLU-3 at 54 (Application).
[168] Ex. EERA-7 at 55.
[169] Ex. EERA-7 at 55.

dealers of agricultural inputs such as fertilizer and pesticides. The extent of any decrease in sales is difficult to determine, but the removal of approximately 0.4 percent of the approximately 196,716 acres of farmland in Red Lake County is unlikely to have a significant impact. Adverse impacts associated with the loss of agricultural land and agricultural production will be mitigated through lease payments to landowners.[170]

158. Section 8.5 of the Draft Site Permit requires quarterly reports concerning efforts to hire Minnesota workers. Section 4.5.3 of the Draft Site Permit requires the permittee, as well as its construction contractors and subcontractors, to pay no less than the prevailing wage rate.[171]

159. Section 5.1 of the Draft Site Permit is a special condition, requiring the permittee to continue local tribal engagement in order to provide meaningful opportunities for tribal employment throughout the Project and to report tribal employment statistics with its labor statistics reporting.[172]

160. As the Applicant has already engaged with several Tribes in Minnesota to discuss the Project and potential employment and investment opportunities in the Project, and has committed to continue working with Tribes in an effort to provide meaningful opportunities for Tribal employment and economic opportunity through the Project,[173] and because most of the employment opportunities for the Project will be during the construction phase, the labor statistics reporting requirement in Section 5.1 of the Draft Site Permit should be limited to the construction phase.

161. Socioeconomic impacts are anticipated to be positive. No additional mitigation is proposed.[174]

10. Environmental Justice

162. Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The goal of this "fair treatment" is not to shift risks among populations, but to identify potential disproportionately high and adverse effects and identify alternatives that may mitigate these impacts.[175]

163. The Project will not create disproportionate or adverse impacts to low-income or minority populations because the percentage of low-income and minority residents in the Project area is not meaningfully greater than Red Lake County or the state of Minnesota. No additional mitigation is proposed.[176]

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[170] Ex. EERA-7 at 56 (internal citations omitted).
[171] Ex. EERA-7 at 56.
[172] Ex. EERA-7 at 56 and Appendix C.
[173] *See* Ex. PLU-3 at 29 and 91 (Application); Ex. EERA-7 at 55.
[174] Ex. EERA-7 at 56.
[175] Ex. EERA-7 at 56 (internal citations omitted).
[176] Ex. EERA-7 at 57.

B. Public Health and Safety

164. The Commission is required to consider the Project's effect on public health and safety.[177]

1. Electromagnetic Fields (EMF)

165. EMFs are invisible forces that result from the presence of electricity. They occur naturally and are caused by weather or the geomagnetic field. They are also caused by all electrical devices and found wherever people use electricity. EMFs are characterized and distinguished by their frequency, that is, the rate at which the field changes direction each second. Electrical lines in the United States have a frequency of 60 cycles per second or 60 hertz, which is extremely low frequency EMF (ELF-EMF). The strength of an electric field decreases rapidly as it travels from the conductor and is easily shielded or weakened by most objects and materials.[178]

166. There are no federal regulations regarding allowable electric or magnetic fields produced by transmission lines in the United States.[179] The Commission has imposed a maximum electric field limit of 8 kV per meter (kV/m).[180]

167. The primary sources of EMF from the generating facility will be from the solar arrays, buried electrical collection lines, and the transformers installed at each inverter. The EMF generated by solar arrays is at the level generally experienced near common household appliances. Measured magnetic fields at utility-scale PV projects drop to very low levels of 0.5 milligauss or less at distances of 150 feet from inverters. The nearest solar array is located approximately 320 feet from the nearest residence, the nearest inverter is located approximately 651 feet from the nearest residence, and the nearest 34.5 kV collector line is approximately 418 feet from the nearest residence. At this distance both electric and magnetic fields will dissipate to background levels.[181]

168. Potential impacts are anticipated to be negligible and are not expected to negatively affect human health. Impacts will be long-term and localized but can be minimized. The EA does not propose additional mitigation.[182]

2. Public Safety and Emergency Services

169. There are risks associated with the construction of the Project that are common to all construction projects. These include potential injury from incidents such as falls, equipment and vehicle use, and electrical accidents. Public risks involve electrocution. Electrocution risks could also result from unauthorized entry into the fenced area. There is the potential for land that has previously been impacted by hazardous substances to be encountered, and hazardous materials must be documented,

[177] Minn. R. 7850.4100(B).
[178] Ex. EERA-7 at 58.
[179] Ex. EERA-7 at 60.
[180] Ex. PLU-3 at 37 (Application) (internal citations omitted).
[181] Ex. EERA-7 at 61.
[182] Ex. EERA-7 at 61.

monitored, and disposed in coordination with the MPCA. Potential impacts are anticipated to be minimal. Impacts would be short- and long-term and can be minimized.[183]

170. Worker safety issues are primarily associated with construction. The Project will be designed and constructed in compliance with applicable electric codes. Electrical inspections will ensure proper installation of all components, and the Project will undergo routine inspection. Electrical work will be completed by trained technicians.[184]

171. Construction is bound by federal and state Occupational Safety and Health Administration (OSHA) requirements for worker safety, and must comply with local, state, and federal regulations regarding installation of the facilities and qualifications of workers. Established industry safety procedures will be followed during and after construction of the Project. [185]

172. Public safety concerns would be most associated with unauthorized entry to the Project. The Project will be fenced and locked to prevent unauthorized access, and signs will be posted to warn unauthorized persons not to enter fenced area due to the presence of electrical equipment.[186]

173. In the case that soils are encountered that contain historic residual crude oil, the Applicant will follow the Contaminated Sites Management Plan (CSMP). The CSMP plan includes identification, notification and documentation of the contamination, management of the contaminated materials (e.g., soil, water) through proper removal and disposal with continuous testing and monitoring of the area, and reporting to the MPCA for any observations and management activity that took place within the contaminated area.[187]

174. EERA proposed Special Condition 5.2 of the Draft Site Permit, which requires the permittee to follow its CSMP in the event that contaminated materials are discovered during construction or operation of the Project, and to notify and coordinate with the MPCA for proper removal and disposal of any contaminated materials and restoration of the land.[188] Plummer Solar did not object to this special condition, but noted that the current CSMP is intended for the construction phase rather than operations.[189] The Applicant has committed to updating its CSMP prior to construction to include a section addressing operations.[190]

175. Public Safety is addressed in Sections 4.3.30, 5.2, 8.12, 8.13, and 9.1 of the Draft Site Permit.[191]

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[183] Ex. EERA-7 at 61.
[184] Ex. EERA-7 at 62-63.
[185] Ex. EERA-7 at 63.
[186] Ex. EERA-7 at 62-63; Ex. PLU-3 at 35 (Application).
[187] Ex. EERA-7 at 63.
[188] Ex. EERA-7 at Appendix C, Section 5.2.
[189] Ex. PLU-3 at 35 (Application); Ex. PLU-9 at 8.
[190] Ex. PLU-9 at 8.
[191] Ex. EERA-7 at 63.

176. The EA does not propose any additional mitigation.[192]

C. Land-Based Economies

177. The Commission is required to consider the Project's effect on land-based economies, including agriculture, forestry, tourism, and mining.[193]

1. Agriculture

178. Agricultural use dominates the area of land control, with approximately 94.8 percent (755.3 acres) of the area used for cultivated row crops (corn, soybeans, and spring wheat are the dominant crops).[194]

179. In 2017, there were approximately 208,748 acres of farmland in Red Lake County, comprising approximately 76 percent of all land in the county. There are a total of 263 individual farms located in Red Lake County, with an average farm size of 794 acres. Cropland, which includes grains, oilseeds, dry beans, dry peas, vegetables, and hay, make up 89 percent of the farmland, with livestock and poultry making up the remaining 11 percent. The market value of agricultural production in Red Lake County in 2017 was approximately $65.6 million.[195]

180. Prime farmland is defined by Federal regulation at 7 C.F.R. 657.5(a)(1) as "land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses." Approximately 85 percent of the project area is designated as prime farmland if drained (679.5 acres), 1.5 percent is designated as prime farmland (11.8 acres) and 13 percent is designated as farmland of statewide importance (102.4 acres). With respect to prime farmland, the applicant indicates that no feasible or prudent alternatives to the project exist.[196]

181. The Project will result in up to 755 acres of farmland being removed from agricultural production for the life of the Project. This change in land use would take productive farmland out of production for the life of the Project, representing approximately 0.3 percent of existing agricultural land in Red Lake County.[197]

182. The land could be returned to agricultural uses after the Project is decommissioned and the site is restored, and possibly improved in quality.[198] At the end of the Project's useful life, the Applicant will restore the site to its pre-existing condition, or better, and to a use agreed to between Plummer Solar and the landowner.[199]

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[192] Ex. EERA-7 at 63.
[193] Minn. R. 7850.4100(C).
[194] Ex. EERA-7 at 64.
[195] Ex. EERA-7 at 64.
[196] Ex. EERA-7 at 64 (internal citations omitted).
[197] Ex. EERA-7 at 64.
[198] Ex. EERA-7 at 64; Ex. PLU-3 at 19 and 60 (Application).
[199] Ex. EERA-7, Appendix C at 21 (EA); Ex. PLU-3, Appendix I at 3 (Application).

183. Agricultural production would continue in the surrounding areas during construction and operation of the Project as the Project is not anticipated to preclude current or planned land use on adjacent parcels.[200]

184. Landowner revenue lost from removing land from agricultural production will be offset by the Applicant's purchase or lease of the land.[201]

185. Sections 4.3.9, 4.3.10, 4.3.11, 4.3.16, 4.3.17, 4.3.18, 4.3.20, 4.3.21, and 4.3.29 of the Draft Site Permit address agricultural mitigation and soil-related impacts.[202]

186. Best Management Practices (BMPs) will be implemented during construction in order to minimize and mitigate long-term impacts to agricultural lands. Some of those BMPs include project design that minimizes infrastructure to the degree practicable, preventing soil profile mixing, halting construction during wet weather conditions, ensuring proper site drainage and erosion control, and limiting the spread of noxious weeds and invasive species by cleaning construction equipment.[203]

2. Tourism[204]

187. Tourism in the Project area is largely related to recreational activities including hunting, wildlife viewing, and snowmobiling. Activities in the Project area are associated with, WMAs, snowmobile trails, and county and city parks.[205]

188. In total, impacts to tourism from construction are anticipated to be minimal to moderate and able to be mitigated in part. Impacts to tourism from operation are anticipated to be negligible to minimal and able to be mitigated.[206]

3. Mining and Forestry

189. The Project Site is located on primarily agricultural land, with minimal tree cover. There are no commercial forestry resources within the Project Site. Tree cover within the Project Site is primarily associated with shelterbelts or windbreaks. No commercial forestry resources would be affected by the Project.[207]

190. There are no gravel pits in the Project Site. The closest gravel pits are approximately two miles west and southwest of the Project Site. Because no mining resources are present within or adjacent to the Project Site, no impacts to mining resources or operations are anticipated from the Project.[208]

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[200] Ex. PLU-3 at 60, 62 (Application).
[201] Ex. PLU-3 at 62 (Application).
[202] Ex. EERA-7 at 65.
[203] Ex. EERA-7 at 65; Ex. PLU-3 at 62-63 (Application).
[204] Findings 126-133 are also relevant to this section.
[205] Ex. EERA-7 at 49-50.
[206] Ex EERA-7 at 10.
[207] Ex. PLU-3 at 63 (Application).
[208] Ex. PLU-3 at 64 (Application) (internal citations omitted).

D. Archaeological and Historic Resources

191. The Commission is required to consider the Project's effect on archaeological and historic resources.[209]

192. Archeological resources are locations where objects or other evidence of archaeological interest exist, and can include aboriginal mounds and earthworks, ancient burial grounds, prehistoric ruins, or historical remains. Historic resources are sites, buildings, structures, or other antiquities of state or national significance.[210]

193. Construction and operation of a project has the potential to impact resources that have importance to American Indian Tribes with ties to the region. Siting of large energy facilities in a manner that respects historic and cultural ties to the land requires coordination with tribes.[211]

194. The Applicant contacted the 11 federally recognized Tribal Nations in Minnesota, including Minnesota Tribal Nations' THPO and the Minnesota Indian Affairs Council for additional information or comment on the Project.[212]

195. Three tribes originally expressed interest in ongoing project updates, including the Red Lake Nation, the Leech Lake Band of Ojibwe, and the Fond du Lac Band of Lake Superior Chippewa.[213]

196. The Leech Lake Band of Ojibwe sent a letter to the Applicant stating that there are no known recorded sites of religious or cultural identified resources within the area.[214]

197. The Upper Sioux Community THPO submitted comments stating that the Project is located in an area where the Dakota lived, prayed, hunted, gathered, battled, and buried their relatives and indicating that if ground disturbance from the Project inadvertently uncovers any human remains, funerary objects or artifacts, then ongoing work must stop and the SHPO and the Upper Sioux Community THPO should be contacted as soon as possible.[215]

198. Plummer Solar conducted a Phase I survey and a Traditional/Tribal Cultural Resources Survey (TCRS or Survey) of the Project area in July and October of 2022, and May of 2023. The Survey examined records from the SHPO and Minnesota Office of the State Archeologist for an area within one mile of the area of land control. In addition, the

[209] Minn. R. 7850.4100(D).
[210] Ex. EERA-7 at 66 (internal citations omitted).
[211] Ex. EERA-7 at 66.
[212] Ex. EERA-7 at 66; Ex. PLU-3 at 96, Table 20 (Application).
[213] Ex. PLU-3 at 96, Table 20 (Application).
[214] Ex. PLU-7 at Attachment B.
[215] Upper Sioux Community THPO Comments (Dec. 3, 20204) (eDocket No. 202412-212649-01).

National Register of Historic Places database and National Historic Landmark list for Minnesota were consulted, along with a review of available historic maps.[216]

199. The literature review identified three previously documented archaeologic sites within the area of land control, as well as three additional archaeological sites and ten historic/architectural resources within one mile of the area of land control.[217]

200. The TCRS also identified numerous trees, plants, and wildlife traditionally used by tribes for food, medicine, arts, ceremony, and/or other materials present within the Project area. The results of the Phase I identified that no archeological sites within the area of land control are eligible for listing in the NRHP.[218]

201. SHPO concurred with this determination, stating "[t]herefore, we conclude that there are no properties listed in the National or State Registers of Historic Places and no known or suspected archaeological properties in the area that will be affected by this project."[219]

202. Prudent siting to avoid impacts to archaeological and historic resources is the preferred mitigation. Section 4.3.23 of the Draft Site Permit addresses archeological resources and requires the permittee to avoid impacts to archaeological and historic resources where possible and to mitigate impacts where avoidance is not possible. If previously unidentified archaeological sites are found during construction, the permit requires the permittee to stop construction and contact SHPO to determine how best to proceed. Ground disturbing activity will stop, and local law enforcement will be notified should human remains be discovered.[220]

203. EERA recommended modifying Section 4.3.23 of the Draft Site Permit to include the Upper Sioux Community THPO as a point of contact should any human remains or funerary objects be encountered.[221] This modification is reasonable, appropriate, and should be adopted to honor the Upper Sioux Community THPO's request.

204. Additionally, Section 5.3 of the Draft Site Permit requires preparation of an Unanticipated Discoveries Plan outlining steps to be taken if previously unrecorded cultural resources or human remains are encountered during construction. Plummer Solar indicated that before construction begins, an Unanticipated Discoveries Plan will be prepared and should any previously unknown cultural resources or human remains be encountered, work will stop, and the discovery will be examined by an archaeologist. If the discovery is determined to be a significant cultural resource, SHPO and the Minnesota Office of the State Archaeologist will be notified. With regard to a discovery of potential human remains, procedures would be followed to verify if the remains are human and

[216] Ex. EERA-7 at 67.
[217] Ex. EERA-7 at 67.
[218] Ex. PLU-3 at 65 (Application); Ex. EERA-7 at 67.
[219] Ex. PLU-7 (Letter from SHPO) (Jun. 29, 2024) (emphasis removed).
[220] Ex. EERA-7 at 67.
[221] EERA Reply Comments at 2 (Jan 8, 2025) (eDocket No. 20251-213669-01).

that the appropriate authorities become involved quickly and in accordance with local and state guidelines.[222]

E. Natural Environment

205. The Commission is required to consider the Project's effect on natural environment, including effects on air and water quality resources and flora and fauna.[223]

1. Air Quality

206. Air quality is a measure of how pollution-free the ambient air is and how healthy it is for humans, other animals, and plants. Emissions of air pollutants will occur during construction and operation of new infrastructure for the project. Overall air quality in Minnesota has improved over the last 20 years, but current levels of air pollution still contribute to health impacts.[224]

207. Minimal intermittent air emissions are expected during construction of the project. Air emissions associated with construction are highly dependent upon weather conditions and the specific activity occurring. For example, traveling to a construction site on a dry gravel road will result in more fugitive dust than traveling the same road when wet. Once operational, neither the generating facility nor the transmission line will generate criteria pollutants or carbon dioxide.[225]

208. Air emissions from project construction activities would likely primarily include carbon dioxide (CO2), nitrogen oxides (NOx) and other particulate matter. Motorized equipment will emit exhaust. This includes construction equipment and vehicles travelling to and from the project. Exhaust emissions, primarily from diesel equipment, would vary according to the phase of construction.[226]

209. All projects that involve movement of soil, or exposure of erodible surfaces, generate some type of fugitive dust emissions. The project will generate fugitive dust from travel on unpaved roads, grading, and excavation. Dust emissions would be greater during dry periods and in areas where fine-textured soils are subject to surface activity.[227]

210. Watering exposed surfaces, covering disturbed areas, and reducing speed limits on-site are all standard construction practices.[228]

211. The AIMP identifies construction BMPs related to soils and vegetation that will help to mitigate against fugitive dust emissions. Several sections of the draft plan indirectly mitigate impacts to air quality, including sections related to construction and

[222] Ex. EERA-7 at 67-68.
[223] Minn. R. 7850.4100(E).
[224] Ex. EERA-7 at 68.
[225] Ex. EERA-7 at 69.
[226] Ex. EERA-7 at 69
[227] Ex. EERA-7 at 69.
[228] Ex. EERA-7 at 70.

vegetation removal, soils, erosion and sediment control, and restoration of the site to pre-construction conditions.[229]

212. Emissions associated with maintenance are dependent upon weather conditions and the specific activity occurring. Vehicle exhaust will be emitted during maintenance visits to the generating facility. Over the life of the project, fugitive dust emissions will be reduced by the elimination of farming and establishment of perennial native plantings and other permanent vegetative cover. The project will have a positive effect on air quality by replacing electrical generation produced by burning fossil fuels, reducing associated greenhouse gas emissions.[230]

213. Exhaust emissions can be minimized by keeping vehicles and equipment in good working order, and not running equipment unless necessary. The Applicant will use BMPs during construction and operation of the Project to minimize dust and emissions.[231]

214. As a component of the construction stormwater permit that will be obtained for the Project, a National Pollutant Discharge Elimination System/State Disposal System construction stormwater permit and an associated Stormwater Pollution Prevention Plan (SWPPP) will be developed and implemented prior to construction in order to minimize the potential for fugitive dust emissions.[232]

215. Impacts on air quality from construction of the Project would be intermittent, localized, short-term, and minimal. Impacts are associated with fugitive dust and exhaust. Impacts can be mitigated. Fugitive dust and exhaust emissions that would occur as part of routine maintenance activities would be negligible. Impacts are unavoidable and do not affect a unique resource. Impacts can be minimized.[233]

2. Geology and Groundwater

216. Potential impacts to geology and groundwater can occur directly or indirectly. Impacts to geological resources are likely to be minimal, due to the presence of fractured bedrock and limited use of aquifers, and the absence of karst features.[234]

217. Geotechnical soil borings were completed in 2023 to inform the design, engineering, and construction techniques for the proposed project. According to Minnesota Well Index (MWI) records provided by MDH, shallow groundwater has been encountered at three feet below ground surface in two monitoring wells that are within a half mile of the project area. At the time of the soil borings, groundwater had been encountered in seven of the thirty-one borings ranging at depths from 10 to 18 feet below

[229] Ex. EERA-7 at 70 (internal citations omitted).
[230] Ex. EERA-7 at 69.
[231] Ex. EERA-7 at 70; Ex. PLU-3 at 68 (Application).
[232] Ex. EERA-7 at 70.
[233] Ex. EERA-7 at 68.
[234] Ex. EERA-7 at 71.

the surface, and in three at shallower depths ranging from 3.5 to 7.5 feet below the surface.[235]

218. Direct impacts to groundwater are generally associated with construction, for example, structure foundations that could penetrate shallow water tables or groundwater usage. Indirect impacts could occur through spills or leaks of petroleum fluids or other contaminants that contaminate surface waters which could ultimately contaminate groundwater. The disturbance of soil and vegetative cover could affect water quality in groundwater resources. Impacts to groundwater resources, including aquifers and the Clearwater River, are not anticipated as water supply needs will be limited and aquifers are not common in the area.[236]

219. Construction of the project is not likely to require subsurface blasting, and newly fractured bedrock causing groundwater flow is not anticipated. There are no active wells within the project area, and no sole source aquifers (SSA), MDH Wellhead Protection Areas (WHPA), Drinking Water Supply Management Areas (DWSMA), or Special Well and Boring Construction Areas. A domestic well is likely to be installed as a component of the O&M building. The construction of a solar project will create an increase in impervious and semi-impervious surfaces within the area of land control. This could lead to an increase of stormwater runoff, and in turn reduce groundwater recharge.[237]

220. The Project is not anticipated to require the use or storage of large quantities of hazardous materials that might otherwise have the potential to spill or leak into area groundwater. If the project facilities include oil storage of more than 1,320 gallons, a Spill Prevention, Control, and Countermeasure (SPCC) Plan may be required. This permit could potentially be required for the transformers within the project substation. Transformers would be contained per EPA requirements.[238]

221. The variables from the Applicant's geotechnical study will be used to engineer the solar array foundation system. Typically, the foundation is a steel pile, which is driven into the ground with a hydraulically powered high-frequency hammer mounted on a tracked carrier. The piles are installed at pre-defined locations throughout the array area to an embedment depth of approximately 9 feet to 19 feet below ground surface, depending on soil properties and other factors. Concrete foundations are not expected to be used for the solar array as driven piers or helical piles, based on site-specific conditions, will be used for the racking systems' foundations.[239]

222. The electrical collection system, DC and AC collection systems, is anticipated to be installed belowground. The panels deliver DC power to the inverters

[235] Ex. EERA-7 at 71.
[236] Ex. EERA-7 at 72.
[237] Ex. EERA-7 at 72.
[238] Ex. EERA-7 at 72; Ex. PLU-3 at 73 (Application).
[239] Ex. EERA-7 at 72; Ex. PLU-3 at 22, 72 (Application).

through below-ground DC cabling that will be installed in trenches at a depth of at least three feet below grade.[240]

223. Stormwater management is important to ensure that structure foundations maintain their integrity and that rainwater and surface runoff drain away from the project structures and roads in a way that does not adversely affect existing drainage systems, roads, or nearby properties. Appropriate permanent stormwater management measures, including minimizing the area of impervious surfaces at the site to reduce the volume and velocity of the stormwater runoff and the establishment of multiple stormwater ponds, will address drainage from the newly established impervious areas. Solar panels will be mounted above the ground with a low-maintenance perennial seed mix underneath, allowing water to filter into vegetation and soil prior to discharging.[241]

224. The Applicant plans to install a well to supply water to the O&M building. Any new wells require notification to MDH and would be constructed by a well borer licensed by MDH. If any previously unmapped wells are discovered, Plummer Solar should cap and abandon the well in place in accordance with MDH requirements.[242]

225. Because the Project will disturb more than one acre, the Applicant must obtain a Construction Stormwater Permit (CSW Permit) from the MPCA. The CSW Permit will identify BMPs for erosion prevention and sediment control. As part of the CSW Permit, Plummer Solar will also develop an SWPPP that describes construction activity, temporary and permanent erosion and sediment controls, BMPs, and permanent stormwater management that will be implemented during construction and through the life of the project. Implementation of the protocols outlined in the SWPPP will minimize the potential for soil erosion and detail stormwater management methods during construction and operation of the facility. Section 4.3.11 of Draft Site Permit requires the permittee to obtain an MPCA CSW Permit and implement the BMPs within for erosion prevention and sediment control. Impacts to groundwater can also be minimized by mitigating impacts to soils and surface waters as discussed in Sections 4.7.3 and 4.7.4.[243]

226. A National Pollutant Discharge Elimination System (NPDES) permit application to discharge stormwater from construction facilities will also be acquired by the Applicant from the MPCA. BMPs will be used during construction and operation of the Project to protect topsoil and adjacent resources and to minimize soil erosion, whether the erosion is caused by water or wind. Practices may include containment of excavated material, protection of exposed soil, stabilization of restored material, and treating stockpiles to control fugitive dust.[244]

227. Any dewatering required during construction will be discharged to the surrounding upland vegetation, thereby allowing it to infiltrate back into the ground to minimize potential impacts. If dewatering of more than 10,000 gallons per day or

[240] Ex. EERA-7 at 72.
[241] Ex. EERA-7 at 72-73.
[242] Ex. EERA-7 at 73.
[243] Ex. EERA-7 at 73.
[244] Ex. EERA-7 at 73; Ex. PLU-3 at 78 (Application).

1,000,000 gallons per year, a Water Appropriations Permit from DNR is required. The Applicant will obtain a Water Appropriation Permit if required.[245]

228. In total, impacts to geology and domestic water supplies are not expected. Localized impacts to groundwater resources, should they occur, would be intermittent, but have the potential to occur over the long-term. Indirect impacts from surface waters might occur during construction. Impacts can be mitigated through use of BMPs for stormwater management.[246]

3. Soils

229. The soils deposited in the area are made up of nearly level, deep, poorly drained, predominately hydric loamy soils. Top soils in the land control area, including the Project Site, range from zero – 12 inches, have moderate to low susceptibility to sheet and rill erosion by water, and mostly have low susceptibility to wind erosion. The soils within the site may be susceptible to compaction or rutting during wet conditions due to the hydric texture of the soil. Most of the soils within the solar facility Project Site and land control area are designated prime farmland if drained (84 percent), and the rest is designated prime farmland of state importance (13 percent) and prime farmland (3 percent).[247]

230. Construction of the solar facility will disturb approximately 855 acres within the land control area, and 796.6 acres of that will be used for the solar facility Project Site. As with any ground disturbance, there is potential for soil compaction and erosion. Heavy rainfall events during construction or prior to establishment of permanent vegetation, increase the risk that significant sedimentation and erosion could occur.[248]

231. Impacts to soils will occur during construction and decommissioning of the Project. The impact intensity level is expected to be minimal. Potential impacts will both positive and negative, and short- and long-term. Isolated moderate to significant negative impacts associated with high rainfall events could occur. Because the soil at the solar facility will be covered with native perennial vegetation for the life of the Project, soil health is likely to improve.[249]

232. Sections 4.3.9, 4.3.11, 4.3.16, 4.3.17, and 4.3.18 of the Draft Site Permit address erosion prevention and sediment control practices.[250]

4. Surface Water and Floodplains

233. Solar farm projects have the potential to impact surface water resources and floodplains. These projects could directly impact water resources and floodplains if these features cannot be avoided through project design. Projects also have the potential

[245] Ex. EERA-7 at 73; Ex. PLU-9 at 4.
[246] Ex. EERA-7 at 70.
[247] Ex. EERA-7 at 73-74.
[248] Ex. EERA-7 at 74.
[249] Ex. EERA-7 at 73.
[250] Ex. EERA-7, at 75 and Appendix C at 6, 8-9.

to adversely impact surface waters though construction activities which move, remove, or otherwise handle vegetative cover and soils. Changes in vegetative cover and soils can change runoff and water flow patterns.[251]

234. The Project is in the Clearwater River watershed of the Red River of the North Basin. This watershed characteristically has a poorly defined floodplain and low gradient that can leave the basin subject to frequent flooding, potentially impacting urban and rural infrastructure and agricultural production. There are no lakes, rivers, or streams that cross the Project Site. There is a ditch, County Ditch number 57, which flows north through the Project Site. The nearest Public Waters Inventory (PWI) body of water is the Clearwater River, located approximately 1.4 miles north and northwest at its nearest point. The surface waters within the Project Site are limited to ditches, including three additional ditches outside the Project Site. There are no waters listed by the MPCA as impaired waters within the Project Site. The Clearwater River, within approximately 1.4 miles north and northwest of the Project, is listed as an impaired water, with aquatic consumption/aquatic life as the affected designated use and mercury in fish tissue/turbidity as the pollutant/stressor.[252]

235. Floodplains are flat, or nearly flat, land adjacent to a river or stream that experiences occasional or periodic flooding. It includes the floodway, which consists of the stream channel and adjacent areas that carry flood flows, and the flood fringe, which includes areas covered by the flood, but which do not experience a strong current. Floodplains prevent flood damage by detaining debris, sediment, water, and ice. The Federal Emergency Management Agency (FEMA) delineates floodplains and determines flood risks in areas susceptible to flooding. The base flood that FEMA uses, known as the 100-year flood, has a one percent chance of occurring during each year.[253]

236. A FEMA flood insurance study for Red Lake County was completed in March 2021, and County Ditch 57 was identified as a Zone A floodplain; however, a regulatory floodway was not established. Other than the ditch, there are no Zone A floodplains within the land control area.[254]

237. The Applicant requested information from Red Lake County and landowners regarding drain tiles. A drain tile was identified to be present within the areas east of 230th Ave SE. Plummer Solar states that the existing drain tiles appear to adequately drain and discharge water from the Project Site, primarily into the county-managed ditches. No other records of drain tiles have been found in this area.[255]

238. The Clearwater River Watershed is an area that historically can be impacted by issues such as wind erosion and flooding, which can cause damage to infrastructure and wildlife habitat. The watershed falls within the Red Lake Watershed District, where many projects have been completed within this district to improve or protect water quality

[251] Ex. EERA-7 at 75.
[252] Ex. EERA-7 at 76; Ex. PLU-3 at 76 (Application).
[253] Ex. EERA-7 at 75.
[254] Ex. EERA-7 at 76.
[255] Ex. EERA-7 at 77.

for several years. The Project is designed to avoid direct impacts to surface waters by avoiding placement of project components such as access roads, solar arrays, inverters, or transmission structures in surface waters. Construction of the project creates a potential for indirect impacts if sediment or fugitive dust created by excavation, grading, vegetation removal, and construction traffic reaching nearby surface waters. Overall, and due to the establishment of perennial vegetation at the solar facility, the Project is expected to have a long-term positive impact on water quality.[256]

239. The impact intensity level is anticipated to be minimal. Direct impacts to surface waters are not expected. Indirect impacts to surface waters might occur. These impacts will be short-term, of a small size, and localized. Impacts can be mitigated.[257]

240. Standard construction management practices, including, but not limited to containment of excavated soils, protection of exposed soils, stabilization of restored soils, and controlling fugitive dust, would minimize the potential for eroded soils to reach surface waters. BMPs to minimize the impact on surface waters will be utilized as a part of the SWPPP, including but not limited to sediment control, revegetation plans, and management of exposed soils to prevent sediment from entering waterbodies.[258] Plummer Solar plans to maintain drainage system integrity during construction, including rerouting, reinforcement, or other methods outlined in the AIMP filed with the Application.[259]

241. Sections 4.3.11 and 4.3.16 of the Draft Site Permit address practices to address potential impacts to surface waters.[260]

5. Wetlands

242. Wetlands are areas with hydric (wetland) soils, hydrophilic (water-loving) vegetation, and wetland hydrology (inundated or saturated during much of the growing season). Wetland types include marshes, swamps, bogs, and fens. Wetlands vary widely due to differences in soils, topography, climate, hydrology, water chemistry, vegetation, and other factors.[261]

243. Wetlands are important to the health of waterways and communities that are downstream. Wetlands can be one source of hydrology in downstream watercourses and water bodies, detain floodwaters, recharge groundwater supplies, remove pollution, and provide fish and wildlife habitat. Wetland health also has economic impacts because of their key role in fishing, hunting, agriculture, and recreation. These large infrastructure projects could temporarily or permanently impact wetlands if these features cannot be avoided through project design. During construction, temporary disturbance of soils and

[256] Ex. EERA-7 at 77 (internal citations omitted).
[257] Ex. EERA-7 at 75.
[258] Ex. PLU-3 at 77 (Application); Ex. EERA-7 at 77.
[259] Ex. EERA-7 at 77.
[260] Ex. EERA-7 at 77-78.
[261] Ex. EERA-7 at 78 (internal citations omitted),

vegetative cover could cause sediment to reach wetlands which could in turn affect wetland functionality.[262]

244. The Applicant assessed the potential for wetlands within the solar farm footprint through a formal wetland delineation in June and July of 2022. Additional wetland analysis, including wetland mapping and identification, was conducted for the EA using desktop reviews of available resource (i.e., National Wetlands Inventory (NWI) data, DNR, PWI, etc).[263] The wetland mapping identified approximately 62.51 acres of wetlands within the Project Site. There are no PWI features mapped within or adjacent to the land control area.[264]

245. Wetlands were further identified to determine type and acreage using NWI data. Wetland types include Freshwater Emergent Wetlands (Seasonally Flooded/Saturated), and Freshwater Forested/Shrub wetlands (Hardwood and Shrub).[265]

246. Plummer Solar contracted with Barr Engineering and completed an onsite wetland delineation in June and July of 2022 across an evaluation area of approximately 1,129 acres. Out of the wetlands delineated, 10.7 acres are within the Project Site. Correspondence with U.S. Army Corps of Engineers (USACE) and Red Lake County Soil and Water Conservation District (SWCD) occurred too, with respect to wetland delineation, before the Application was submitted. USACE concurred with the delineation.[266]

247. The EA used the National Wetland Inventory for Minnesota (NWI-MN) to allow for comparison of wetland type between the Solar Facility Units. This comparison includes portions of wetlands that have been delineated for the Project. The NWI-MN is a publicly available GIS database that provides information on the location and characteristics of wetlands in Minnesota. The inventory is a 2008 update of the USFWS National Wetlands Inventory that was completed for Minnesota in the 1980s. Wetlands listed on the NWI-MN may be inconsistent with local wetland conditions; however, the NWI-MN provides an accurate and readily available database of wetland resources within the land control area that can be used to identify wetlands at the solar facility.[267]

248. The NWI-MN mapping identified approximately 62.51 acres Freshwater Emergent, Freshwater Forested/Shrub, and Riverine wetland. Most of this is a Riverine wetland that exists within a ditch between two blocks of solar arrays. Outside of this ditch, small pockets of Freshwater Emergent and Freshwater Forested/Shrub wetlands are found sparingly throughout the land control area. The Applicant's wetland delineation identified approximately 10.7 acres of wetland within the Project Site.[268]

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[262] Ex. EERA-7 at 78.
[263] Ex. EERA-7 at 78.
[264] Ex. PLU-3 at 76 (Application); Ex. EERA-7 at 78.
[265] Ex. EERA-7 at 78.
[266] Ex. PLU-9 at 3-4 and Ex. PLU-3 at Appendix D (Application).
[267] Ex. EERA-7 at 78-79.
[268] Ex. PLU-9 at 3-4 and Ex. EERA-7 at 79.

249. Although wetlands have been identified within the Project area, the preliminary site layout for the solar facility avoids locating solar arrays and associated facilities in wetlands. However, the preliminary site layout includes approximately 0.07 acres of roads sited within wetlands. There may be potential for permanent impacts to wetlands that occur due to the installation of the electrical collection lines and access roads.[269]

250. The Project Site layout has been designed to minimize impacts to delineated wetlands. If wetland impacts are required for the final layout, coordination with the appropriate agency, such as the USACE under Section 404 and 401 of the Federal Clean Water Act (CWA) and the Red Lake County SWCD under the Minnesota Wetland Conservation Act (WCA), would occur prior to construction. If unavoidable wetland impacts take place, impacts will be replaced in accordance with Section 404 of the Federal CWA and the Minnesota WCA.[270]

251. Section 4.3.13 of the Draft Site Permit generally prohibits placement of the solar energy generating system or associated facilities in public waters and public waters wetlands. The permit condition does allow for electric collector or feeder lines to cross or be placed in public waters or public waters wetlands subject to permits and approvals by the DNR, the USACE, and local units of government as implementers of the WCA.[271]

6. Vegetation

252. The solar facility is located in the Lake Agassiz, Aspen Parklands Section (223Na) subsection of the Tallgrass Aspen Parklands Province. This subsection is a part of an extensive lake plain created by Glacial Lake Agassiz. The area was historically extensive forested peatlands to the east and tallgrass prairie mixed with stands of quaking aspen to the west. Pre-European settlement vegetation consisted of a combination of aspen savanna, tallgrass prairie, wet prairie, and dry gravel prairie (on gravelly beach ridges). Floodplain forests of silver maple, elm, cottonwood, and ash occurred along rivers and streams. Fire was the most common natural disturbance before settlement and has allowed woodlands to develop from what was previously oak openings or brush prairies. Little of the natural vegetation from pre-European settlement is present today, as the current land-use in the project area is predominately agricultural.[272]

253. The solar facility will convert row crop farmland to perennial vegetation for the life of the Project. Potential impacts of the solar facility can be mitigated through development of a VMP.[273]

254. Construction of the solar facility will eliminate vegetative cover and create impermeable surfaces at access roads and inverter skids. Removal of vegetative cover exposes soils and could result in soil erosion. Temporary or permanent removal of

[269] Ex. EERA-7 at 80; Ex. PLU-3 at 77 (Application).
[270] Ex. PLU-3 at 77 (Application); Ex. PLU-9 at 3-4; Ex. EERA-7 at 80.
[271] Ex. EERA-7 at 80.
[272] Ex. EERA-7 at 80 (internal citations omitted).
[273] Ex. EERA-7 at 80.

vegetation also has the potential to affect wildlife habitat. Agricultural land within the solar facility would be converted to perennial, low growing vegetative cover, resulting in a net increase in vegetative cover for the life of the project. Under the arrays, a low growing grass and clover mix will primarily be used in combination with a native shortgrass prairie mix used in areas that will not shade the panels. Native prairie seed mixes that include both native grasses and wildflowers will be used at the solar facility in the corridor areas. In wetland and stormwater management units, native seed mixes that contain plants well suited for soils frequently becoming saturated will be used. Once established, vegetation would be maintained using best practice guidance from Minnesota's Board of Water and Soil Resources (BWSR) to meet the Habitat Friendly Solar standards.[274]

255. Sections 4.3.15, 4.3.17, and 4.3.18 of the Draft Site Permit require the permittee to develop both a VMP and an AIMP and minimize tree removal. Section 4.3.16 of the Draft Site Permit requires the Applicant to develop the VMP in coordination with the Department of Commerce using best management practices established by the DNR and BWSR.[275]

7. Wildlife and Habitat

256. Potential impacts to non-avian wildlife and their habitats and birds may be positive or negative and are species dependent. Long-term, minimal positive impacts to small mammals, insects, snakes, etc., would occur. Impacts to large wildlife species, for example, deer, will be negligible. Significant negative impacts could occur to individuals during construction and operation of the Project. Once restored, the land control area will provide native habitat for the life of the Project. The Project does not contribute to significant habitat loss or degradation or create new habitat edge effects. The introduction of PV panels and fencing creates the potential for bird collisions and funneling wildlife towards roads in certain areas. Potential impacts can be mitigated in part through design and BMPs. The impact intensity level is expected to be minimal.[276]

257. The largest impact to wildlife associated with solar facilities is fencing. The substation will be fenced compliant with the National Electric Safety Code (NESC) requirements and is expected to be a six-foot-high chain link fence topped with three strands of barbed wire. A lockable gate will be installed with the Project substation site fencing. The perimeter will be fenced by permanent security fencing, an eight-foot-high chain link fence topped with three strands of high-tensile wire. Although deer can jump many fences, they can become tangled in both smooth and barbed-wire fences, especially if the wires are loose or installed too closely together. Predators can use fences to corner and kill prey species.[277]

[274] Ex. EERA-7 at 80-81; Ex. PLU-3 at 78 and Appendix H.
[275] Ex. EERA-7 at 81-82 and Appendix C at 8.
[276] Ex. EERA-7 at 82.
[277] Ex. EERA-7 at 17, 83; Ex. PLU-9 at 1-2.

258. EERA and DNR proposed several special conditions to be included in the Draft Site Permit, and the Applicant did not object to those conditions.[278]

259. Sections 4.3.16, 4.3.32, and 8.14 of the Draft Site Permit address the measures that will minimize impacts to wildlife. Section 4.3.32 of the Draft Site Permit requires the Applicant to coordinate with the Department of Commerce and DNR on the final fence plan.[279]

8. Climate Change

260. Climate change refers to any significant change in measures of climate lasting for an extended period. Greenhouse gases (GHG) are gaseous emissions that trap heat in the atmosphere and contribute to climate change. These emissions occur from natural processes and human activities. The most common GHGs emitted from human activities include carbon dioxide, methane, and nitrous oxide. A change in climate can have a wide range of impacts on living species, as well as infrastructure, and may create compounding weather-related events. An increase of extreme weather events, such as flooding, storms, and heat waves, is expected to accompany a warming climate.[280]

261. The Project will help to shift energy production in Minnesota and the upper Midwest toward carbon-free sources. Construction emissions will have a short-term negligible increase in GHG that contribute to climate change. Overall, the Project will generate energy that can be used to displace energy otherwise generated by carbon-fueled sources. The total GHG emissions produced by construction and operation of the Project will be minimal when compared to the reduction in GHG emissions long-term. The Project's design incorporates design elements that minimize impacts from the increase in extreme weather events such as increase flooding, storms, and heat wave events that are expected to accompany a warming climate.[281]

F. Rare and Unique Resources

262. The Commission is required to consider the Project's effect on natural rare and unique natural resources.[282]

263. Construction and operation of solar facilities may adversely impact rare and unique resources through the taking or displacement of individual plants or animals, invasive species introduction, and habitat loss. Conversely, in some cases solar sites can be managed to provide habitat. For example, the introduction of native vegetation into a

[278] EERA Reply Comments at 2-3 (Jan. 8, 2025) (20251-213669-01); DNR Comments at 1-3; Ex. PLU-11 at 4-6.
[279] Ex. EERA-7 at 84 and Appendix C at 13.
[280] Ex. EERA-7 at 88.
[281] Ex. EERA-7 at 87-88.
[282] Minn. R. 7850.4100(F).

landscape otherwise dominated by cultivated row crops could create habitat for pollinators, such as the rusty patched bumble bee.[283]

264. There are no Minnesota Biological Survey (MBS) sites of moderate, high, or outstanding biodiversity significance within the Project area. There is the Northern Terrace Forest located approximately 1.4 miles north of the Project, which DNR characterizes as an MBS site of moderate biodiversity significance and containing non-prairie native plan communities. Several rare species exist within the Project area, including the Northern Long Eared Bat (NLEB), the Monarch Butterfly (Danuaus Plexippus), Bald Eagles and Golden Eagles, the Short-eared Owl, and the Marbled Godwit.[284]

265. The impact intensity level is anticipated to be minimal. Impacts could be both short and long term and could be positive (e.g., through introduction of habitat), or negative (e.g., by removing trees during migratory season). Impacts can be mitigated. [285] Techniques for minimizing impacts to wildlife and vegetation also minimize impacts to rare species. Avoiding identified areas of species occurrence or preferred habitat is the preferred mitigation measure.[286]

266. Sections 5.4 and 5.6 of the Draft Site Permit contain special conditions related to the NLEB and the Bald Eagle that require the permittee to comply with USFWS guidance, coordinate with DNR, and file documentation.[287]

267. Section 5.5 of the Draft Site Permit relates to the short-eared owl and marbled godwit.[288] The Applicant did not object to a special condition to protect the short-eared owl and marbled godwit, but noted that to avoid impacts, the typical practice would be to avoid potentially suitable habitat for specified species during nesting season, not during the migratory season.[289] Plummer Solar committed to do either of the following regarding the State-Listed Species of Special Concern: (1) activities that may disturb nesting birds will be conducted outside of the species' nesting season (April 15 – July 15), or (2) surveys will be conducted to verify that no nesting activity is present during the nesting season.[290] In its hearing comments, EERA clarified its recommendation regarding Special Condition 5.5 (Short-eared Owl and Marbled Godwit) and stated that the proposed special condition is intended to avoid impacts during the nesting season (not the migratory season), consistent with the Applicant's comments.[291] Plummer Solar stated it has no objection to the special condition as revised.[292]

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[283] Ex. EERA-7 at 84.
[284] Ex. EERA-7 at 86-87.
[285] Ex. EERA-7 at 84.
[286] Ex. EERA-7 at 87.
[287] Ex. EERA-7 at 87.
[288] Ex. EERA-7 at 87.
[289] Ex. PLU-9 at 8-9.
[290] Ex. PLU-3 at 82 (Application); Ex. PLU-9 at 9.
[291] EERA Hearing Comments at 6 (Dec. 6, 2024) (eDocket No. 202412-212770-01).
[292] Ex. PLU 10 at 4-5.

268. The proposed edit to Section 5.5 of the Draft Site Permit to reflect that the provisions apply to nesting, and not migratory, season are reasonable and should be adopted.

G. Local Economy

269. The Commission is required to consider the application of design options that maximize energy efficiencies, mitigate adverse environmental effects[293], and could accommodate expansion of transmission or generating capacity.[294]

270. The Applicant is only required to analyze alternative sites if it rejected alternative sites.[295]

271. Plummer Solar analyzed other areas in Minnesota where the Project could have been sited to be compliant with the Prime Farmland Exclusion Rule. As these areas were determined to not be feasible or prudent for siting the Project and were not carried forward as Project alternatives, the Applicant was not required to analyze them.[296]

H. Use or Paralleling of Existing ROW, Survey Lines, Natural Division Lines, and Agricultural Field Boundaries

272. The Commission is required to consider use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries.[297]

273. The Applicant is responsible for all land acquisition, and the Project will be located entirely on land under lease or owned by the Applicant and its affiliates or public ROW.[298]

I. Use of Existing Large Electric Power Generating Plant Sites

274. The Commission is required to consider use of existing large electric power generating plant sites.[299]

275. The Project is not being constructed at an existing LEPGP site.[300]

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[293] The extent that the Project's design mitigates adverse environmental effects is discussed in section VIII.E of this report.
[294] Minn. R. 7850.4100(G).
[295] Minn. R. 7860.3100.
[296] Ex. PLU-3 at 20 (Application).
[297] Minn. R. 7850.4100(H).
[298] Ex. PLU-3 at 11 (Application).
[299] Minn. R. 7850.4100(I).
[300] Ex. EERA-7 at 13.

J. Public Service and Infrastructure

276. The Commission is required to consider use of existing transportation, pipeline, and electrical transmission systems or rights-of-way.[301]

277. The Project will connect to an existing Otter Tail Power Company 115 kV transmission line immediately adjacent to the Protect site, via a short (<1,500 foot) aboveground 115 kV transmission line. The length of the transmission line depends on the location of the utility switching station which has not yet been finalized.[302]

278. The Applicant filed a Generator Interconnection Agreement (GIA) application with MISO identified as J2885 for 130 MW. Plummer Solar entered the interconnection request into the MISO Definitive Planning Phase (DPP) study process in 2022. The Applicant expects to sign a GIA in January 2025.[303]

K. Electrical System Reliability

279. The Commission is required to consider electrical system reliability.[304]

280. Enbridge will have remote access to operating data to monitor performance and reliability of the Project.[305]

281. Adding up to 130 MW of renewable power capacity will enhance electrical system reliability.

L. Costs of Constructing, Operating, and Maintaining the Facility

282. The Commission is required to consider costs of constructing, operating, and maintaining the facility which are dependent on design.[306]

283. The estimated cost to construct the Project is approximately $184 to $267 million.[307]

M. Adverse Human and Natural Environmental Effects Which Cannot be Avoided

284. The Commission is required to consider adverse human and natural environmental effects which cannot be avoided.[308]

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[301] Minn. R. 7850.4100(J).
[302] Ex. PLU-3 at 10 (Application).
[303] Ex. PLU-3 at 14 (Application). The January 2025 estimate was as of the filing of the Application in April 2024.
[304] Minn. R. 7850.4100(K).
[305] Ex. PLU-3 at 31 (Application).
[306] Minn. R. 7850.4100(L).
[307] Ex. EERA-7 at 23.
[308] Minn. R. 7850.4100(M).

285. Resource impacts are unavoidable when an impact cannot be avoided even with mitigation strategies.[309]

286. Unavoidable adverse effects associated with construction of the Project (in some instances a specific phase of construction) would last through construction and include: fugitive dust, noise disturbance to nearby residents and recreationalists, visual disturbance to nearby residents and recreationalists, soil compaction and erosion, vegetative clearing (including trees/shelter belts), disturbance and temporary displacement of wildlife as well as direct impacts to wildlife inadvertently struck or crushed, minor amounts of marginal habitat loss, possible traffic delays, and minor GHG emissions from construction equipment and workers commuting.[310]

287. Unavoidable adverse impacts associated with the operation would last as long as the life of the Project, and include: visual impacts of the Project, cultural impacts due to a change in the sense of place for local residents, loss of land for agricultural purposes, injury or death of birds that collide with PV panels, and injury or death of birds and mammals from fencing.[311]

N. Irreversible and Irretrievable Commitments of Resources

288. The Commission is required to consider irreversible and irretrievable commitments of resources.[312]

289. Resource commitments are irreversible when it is impossible or very difficult to redirect that resource to a different future use; an irretrievable commitment of resources means the resource is not recoverable for later use by future generations.[313]

290. Irreversible and irretrievable resource commitments are primarily related to Project construction, including the use of water, aggregate, hydrocarbons, steel, concrete, wood, and other consumable resources. Some, like fossil fuel use, are irretrievable. Others, like water use, are irreversible. Still others might be recyclable in part, for example, the raw materials used to construct PV panels would be an irretrievable commitment of resources, excluding those materials that may be recycled at the end of the panels' useful life. The commitment of labor and fiscal resources to develop, construct, and operate the Project is considered irretrievable.[314]

IX. Site Permit Conditions

291. The Draft Site Permit, as revised by EERA and Plummer Solar, includes a number of proposed permit conditions, many of which have been discussed above. The

[309] Ex. EERA-7 at 91.
[310] Ex. EERA-7 at 91.
[311] Ex. EERA-7 at 91.
[312] Minn. R. 7850.4100(N).
[313] Ex. EERA-7 at 91.
[314] Ex. EERA-7 at 91-92.

conditions apply to Project ownership, site preparation, construction, cleanup, restoration, decommissioning, transfer of permit, and other aspects of the Project.

292. Many of the conditions contained in the Draft Site Permit, as revised by EERA and Plummer Solar, were established as part of the site permit proceedings of other solar projects permitted by the Commission. Comments received by the Commission have been considered in development of the permit conditions for this Project.

293. The EA and Draft Site Permit prepared by EERA included various recommendations and potential site permit conditions related to the Project, to which the Applicant responded in its written comments during the public hearing comment period.[315]

294. The record in this matter supports the inclusion of the following conditions in the Site Permit:

295. EERA's proposed modifications to Section 4.3.8 should be adopted such that Section 4.3.8 will read:

> **4.3.8 Aesthetics**
>
> The Permittee shall consider input pertaining to visual impacts from adjacent landowners when developing the Visual Screening Plan required in Section 5.5 and the local unit of government having direct zoning authority over the area in which the Project is located. The Permittee shall use care to preserve the natural landscape, minimize tree removal and prevent any unnecessary destruction of the natural surroundings in the vicinity of the Project during construction and operation.[316]

296. The Applicant's proposed new Section 5.7 should be adopted as follows:

> **5.7 Visual Screening Plan**
>
> The Permittee shall develop a site-specific Visual Screening Plan. The Visual Screening Plan shall be designed and managed to mitigate visual impacts to adjacent residences.
>
> The Visual Screening Plan shall at a minimum include:
>
> (a) objectives for screening of adjacent residences; and
>
> (b) a description of the types of trees and shrub species to be used, the location of plantings, and plans for installation, establishment, and maintenance.

[315] Ex. PLU-9.
[316] This modification is discussed in Findings 82 to 84.

The location of trees and shrubs included in the Visual Screening Plan that are located within the Permittee's site control shall be included in the Site Plan filed under Section 8.3.

At least 14 days prior to the pre-construction meeting, the Permittee shall file:

(a) the Visual Screening Plan;

(b) documentation of coordination between landowners adjacent to the site boundary; and

(c) an affidavit of its distribution of the Visual Screening Plan to landowners adjacent to the site boundary.[317]

297. The Applicant's proposed modification to Section 5.5 of the Draft Site Permit should be adopted as follows:

5.5 Short-eared Owl and Marbled Godwit

The Permittee shall, to the extent practicable, avoid impacts to prairie, wetlands, grasslands, shrub swamp, peatlands, and other suitable short-eared owl and marbled godwit habitat during the April through July ~~migratory~~ nesting season. If impacts are likely to occur during the ~~migratory~~ nesting season, the Permittee shall conduct surveys to verify that no nesting activity is present and confer with the Minnesota Department of Natural Resources regarding mitigation measures.[318]

298. The Applicant recommended modifying Section 4.3.17 of the Draft Site Permit to clarify that identification of a third-party monitor does not need to be contained within the VMP. Plummer Solar will still be obligated to identify a third-party monitor and provide the information to the Commission.[319] The proposed changes to Section 4.3.17 are reasonable and should be adopted as follows:

4.3.17 Vegetation Management Plan

The Permittee shall develop a vegetation management plan (VMP in coordination with the Department of Commerce, and the Vegetation Management Working Group (VMWG, using best management practices established by the DNR and BWSR. The Permittee shall file the VMP and documentation of the coordination efforts between the Permittee and the coordinating agencies with the Commission at least 14 days prior to the pre-construction meeting. The Permittee shall also identify a third-party (e.g.,

[317] Ex. PLU-9 at 6-7.
[318] Ex. PLU-10 at 4-5. This modification is discussed in Findings 269 and 270.
[319] Ex. PLU-9 at 8.

consultant, contractor, site manager, etc.) contracted for restoration, monitoring, and long-term vegetation management of the site and file contact information with the Commission at least 14 days prior to the pre-construction meeting.

Landowner-specific vegetation requests resulting from individual consultation between the Company and a landowner need not be included in the VMP. The Permittee shall provide all landowners within the Designated Site copies of the VMP. The Permittee shall file with the Commission an affidavit of its distribution of the VMP to landowners at least 14 days prior to the pre-construction meeting.

The VMP must include the following:

(a) management objectives addressing short term (year 0-5, seeding and establishment) and long term (year 5 through the life of the Project) goals;

(b) a description of planned restoration and vegetation management activities, including how the site will be prepared, timing of activities, how seeding will occur (e.g., broadcast, drilling, etc.), and the types of seed mixes to be used;

(c) a description of how the site will be monitored and evaluated to meet management goals;

(d) a description of the management tools used to maintain vegetation (e.g., mowing, spot spraying, hand removal, fire, grazing, etc.), including the timing and frequency of maintenance activities;

~~(e) identification of the third-party (e.g., consultant, contractor, site manager, etc.) contracted for restoration, monitoring, and long-term vegetation management of the site;~~

(f) identification of on-site noxious weeds and invasive species (native and non-native) and the monitoring and management practices to be utilized; and

(~~g~~f) a marked-up copy of the Site Plan showing how the site will be revegetated and that identifies the corresponding seed mixes.

Best management practices should be followed concerning seed mixes, seeding rates, and cover crops.[320]

[320] Ex. PLU-10 at 3-4.

299. EERA's proposed modification to Section 4.3.23 of the Draft Site Permit should be adopted as follows:

> **4.3.23 Archaeological and Historic Resources**
>
> The Permittee shall make every effort to avoid impacts to archaeological and historic resources when constructing the Project. In the event that a resource is encountered, the Permittee shall consult with the State Historic Preservation Office (SHPO) and the State Archaeologist. Where feasible, avoidance of the resource is required. Where not feasible, mitigation must include an effort to minimize Project impacts on the resource consistent with SHPO and State Archaeologist requirements.
>
> Prior to construction, the Permittee shall train workers about the need to avoid cultural properties, how to identify cultural properties, and procedures to follow if undocumented cultural properties, including gravesites, are found during construction. If human remains are encountered during construction, the Permittee shall immediately halt construction and promptly notify local law enforcement and the State Archaeologist and the Upper Sioux Community THPO. The Permittee shall not resume construction at such location until authorized by local law enforcement or the State Archaeologist. The Permittee shall keep records of compliance with this section and provide them upon the request of Department of Commerce staff or Commission staff.[321]

300. The record supports the inclusion of the following special conditions recommended by DNR, and agreed to by Plummer Solar, related to facility lighting, dust control, and wildlife-friendly erosion control:

> **Facility Lighting**
>
> The Permittee must use shielded and downward facing lighting and LED lighting that minimizes blue hue at the project substation and operations and maintenance facility. Downward facing lighting must be clearly visible on the site plan submitted for the project.
>
> **Dust Control**
>
> The Permittee shall utilize non-chloride products for onsite dust control during construction.
>
> **Wildlife-Friendly Erosion Control**

[321] This modification is discussed in Findings 204 and 205.

The Permittee shall use only “bio-netting” or “natural netting” types of erosion control materials and mulch products without synthetic (plastic) fiber additives.[322]

301. The record also supports the inclusion of Special Permit Conditions 5.1 (as amended to limit the documentation of tribal employment data to the construction phase of the project), 5.2, 5.3, 5.4, and 5.6 as follows:

5.1 Tribal Engagement for Employment and Economic Opportunity

The Permittee shall continue engagement with local Native American tribes in order to provide meaningful opportunities for tribal employment and economic opportunity throughout the project. The Permittee shall document tribal employment for the project in its labor statistics reporting required under Section 8.5 of this permit during the construction phase of the project.[323]

5.2 Contaminated Sites Management Plan

The Permittee shall follow its Contaminated Sites Management Plan in the event that contaminated materials are discovered during construction or operation of the project. The permittee will notify and coordinate with Minnesota Pollution Control Agency for proper removal and disposal of any contaminated materials and restoration of the land.[324]

5.3 Unanticipated Discoveries Plan

The Permittee shall develop an Unanticipated Discoveries Plan (UDP) to be used in the event previously unrecorded archeological or historic properties, or human remains, are encountered during construction, or if unanticipated effects to previously identified archaeological or historic properties occur during construction. The UDP shall describe how previously unrecorded cultural resources or human remains found during construction shall be protected and examined. The Permittee shall file the UDP with the Commission at least 14 days prior to the pre-construction meeting.[325]

[322] Ex. PLU-10 at 5-6 (Plummer Solar Public Hearing Comments).
[323] EERA Hearing Comments at 5 (Dec. 6, 2024) (eDocket No. 202412-212770-01); Ex. PLU-9 at 8. The modification to this condition is discussed in Findings 160 and 161.
[324] EERA Hearing Comments at 5 (Dec. 6, 2024) (eDocket No. 202412-212770-01); Ex. PLU-9 at 8.
[325] EERA Hearing Comments at 6 (Dec. 6, 2024) (eDocket No. 202412-212770-01); Ex. PLU-10 at 8.

5.4 Northern Long-Eared Bat

The Permittee shall comply with U.S. Fish and Wildlife Service guidance and requirements in effect regarding Northern Long-eared Bats, including tree clearing restrictions if applicable.[326]

5.5 Bald Eagle

If, in consultation with the U.S. Fish and Wildlife Service, a bald eagle nest must be removed for construction of the project, the Permittee shall file with the Commission the documentation authorizing any such nest removal at least 14 days prior to the pre-construction meeting.[327]

X. Notice

302. The Applicant is required to provide certain notice to the public and local governments before and during an application for a site permit process.[328]

303. The Applicant provided the required notice to public and local governments in satisfaction of Minnesota statutory and rule requirements.[329]

304. EERA and the Commission provided required notices in satisfaction of Minnesota statutory and rule requirements.[330]

XI. Completeness of EA

305. The EA process is the appropriate review process for LEPGPs. The Commission is required to determine the completeness of the EA. An EA is complete if it and the record address the issues and alternatives identified in the Scoping Decision.[331]

306. Plummer Solar proposed clarifications to numerous sections of the EA and those clarifications are supported by the record.[332]

307. The evidence in the record demonstrates that the EA is complete because the EA and the record created at the public hearing and during the subsequent comment period address the issues and alternatives raised in the Scoping Decision.[333]

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[326] EERA Hearing Comments at 6 (Dec. 6, 2024) (eDocket No. 202412-212770-01).
[327] EERA Hearing Comments at 6 (Dec. 6, 2024) (eDocket No. 202412-212770-01).
[328] Minn. Stat. § 216E.03, subd. 4; Minn. R. 7850.2100, subps. 2 and 4.
[329] Exs. PLU-1; PLU-2; PLU-5 and PLU-8.
[330] Exs. PUC-1; PUC-3; PUC-5; EERA-2; EERA-6; EERA-9; EERA-10; EERA-11.
[331] Minn. R. 4410.4400, subp. 3; Minn. R. 7850.3900, subp. 2.
[332] Ex. PLU-9.
[333] Ex. EERA-9.

308. Any Conclusion of Law more properly considered to be a Finding of Fact is incorporated herein.

Based on these Findings of Fact, the Administrative Law Judge makes the following:

CONCLUSIONS OF LAW

1. The Commission and the Administrative Law Judge have jurisdiction over the application for a site permit for the up to 130 MW proposed Project pursuant to Minn. Stat. §§ 216E.02 and 216E.03.

2. The Commission accepted the Application as substantially complete on May 7, 2024.[334]

3. The Applicant has substantially complied with the procedural requirements of Minn. Stat. §§ 216E.001 - .18 and Minn. R. 7850.1000 - .5600.

4. The Commission has substantially complied with all procedural requirements imposed by Minn. Stat. §§ 216E.001 - .18 and Minn. R. 7850.1000 - .5600.

5. The EERA has conducted an appropriate environmental analysis of the Project for purposes of the Site Permit proceeding pursuant to Minn. R. 7850.3700.

6. Public hearings were conducted virtually and in a community near the Project. Proper notice of the public hearings was provided, and members of the public had the opportunity to speak at the hearing and to submit written comments.

7. The EA and the record created at the public hearings address the issues identified in the Scoping Decision.

8. The Commission has the authority under Minn. Stat. § 216E.03, subd. 10(a), to place conditions in a LEPGP site permit.

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

10. It is reasonable to amend the Draft Site Permit as described in the Findings of Fact, including the amendments to Sections 4.3.8, 4.3.17, 4.3.23, 5.1, 5.5, 5.7, and the proposed provisions addressing facility lighting, dust control, and wildlife-friendly erosion control.

11. The Project, with the permit conditions revised as set forth above in Conclusion 10, satisfies the site permit criteria for an LEPGP stated in Minn. Stat. § 216E.03 and meets all other applicable legal requirements.

---

[334] Ex. PUC-2 at 1.

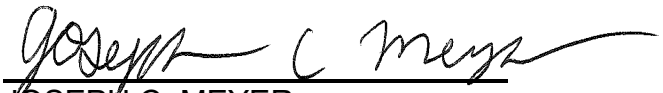
12. The Project, with the permit conditions discussed above, does not present a potential for significant adverse environmental effects pursuant to the Minnesota Environmental Rights Act and the Minnesota Environmental Policy Act.

13. Any Finding of Fact more properly considered to be a Conclusion of Law is incorporated herein.

RECOMMENDATION

Based upon these Conclusions, the Administrative Law Judge recommends that the Commission issue a Site Permit to Plummer Solar to construct and operate the Project and associated facilities in Red Lake County, Minnesota and that the permit include the draft permit conditions amended as set forth in the Findings and Conclusions above.

Dated: February 4, 2025



JOSEPH C. MEYER
Administrative Law Judge

NOTICE

Notice is hereby given that exceptions to this Report, if any, by any party adversely affected must be filed under the time frames established in the Commission's rules of practice and procedure, Minn. R. 7829.1275, .2700 (2023), unless otherwise directed by the Commission. Exceptions should be specific and stated and numbered separately. Oral argument before a majority of the Commission will be permitted pursuant to Minn. R. 7829.2700, subp. 3. The Commission will make the final determination of the matter after the expiration of the period for filing exceptions, or after oral argument, if an oral argument is held.

The Commission may, at its own discretion, accept, modify, or reject the Administrative Law Judge's recommendations. The recommendations of the Administrative Law Judge have no legal effect unless expressly adopted by the Commission as its final order.

MINNESOTA
OFFICE OF
ADMINISTRATIVE
HEARINGS

PO Box 64620
Saint Paul, MN 55164-0620
mn.gov/oah

PH (651) 361-7900

February 4, 2025

See Attached Service List

Re: ***In the Matter of the Application of Enbridge Solar (Plummer), LLC for a Site Permit for the up to 130 MW Plummer Solar Project in Red Lake County, MN***
OAH 28-2500-40093
MPUC IP-7103/GS-22-451

To All Persons on the Attached Service List:

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

If you have any questions, please contact me at (651) 361-7970, cara.hunter@state.mn.us, or via facsimile at (651) 539-0310.

Sincerely,

Cara Hunter

CARA HUNTER
Legal Assistant

Enclosure
cc: Docket Coordinator

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
PO BOX 64620
600 NORTH ROBERT STREET
ST. PAUL, MINNESOTA 55164

CERTIFICATE OF SERVICE

In the Matter of the Application of Enbridge Solar (Plummer), LLC for a Site Permit for the up to 130 MW Plummer Solar Project in Red Lake County, MN	OAH Docket No.: 28-2500-40093

On February 4, 2025, a true and correct copy of the **FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION** was served by eService, and United States mail, (in the manner indicated on the attached service list) to the following individuals:

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43	Kevin	Pranis	kpranis@liunagroc.com	Laborers' District Council of MN and ND		81 E Little Canada Road St. Paul MN, 55117 United States	Electronic Service		No	22-451Official CC Service List
44	Larry	Rebman	larryemls@hotmail.com	EMLS, Inc		PO Box 122 Appleton MN, 56208 United States	Electronic Service		No	22-451Official CC Service List
45	Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	1400 BRM Tower 445 Minnesota St St. Paul MN, 55101-2131 United States	Electronic Service		Yes	22-451Official CC Service List
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54	Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix And Associates		7400 Lyndale Ave S Ste 190 Richfield MN, 55423 United States	Electronic Service		Yes	22-451Official CC Service List
55	Tom	Slukich	tom@nationalconductor.com	National Conductor Constructors		18119 Hwy 371 North Brainderd MN, 56401 United States	Electronic Service		No	22-451Official CC Service List
56	Adam	Sokolski	adam.sokolski@edf-re.com	EDF Renewable Energy		10 Second Street NE Ste 400 Minneapolis MN, 55410 United States	Electronic Service		No	22-451Official CC Service List
57	Brent	Stavig	brentstavig@gmail.com			8961 490th St. Rush City MN, 55069 United States	Electronic Service		No	22-451Official CC Service List
58	Mark	Strohfus	mstrohfus@grenergy.com	Great River Energy		12300 Elm Creek Boulevard Maple Grove MN, 55369-4718 United States	Electronic Service		No	22-451Official CC Service List
59	Carl	Strohm	cjsmg@sbcglobal.net	SBC Global		105 East Edgewood Ave Indianapolis IN, 46227 United States	Electronic Service		No	22-451Official CC Service List
60	Adam	Sullivan	adam.sullivan@enbridge.com	Enbridge Energy Limited Partnership		26 East Superior Street Suite 309 Duluth MN, 55802 United States	Electronic Service		No	22-451Official CC Service List
61	Tom	Swafford	tswafford@umsi.us	Utility Mapping Services, Inc		3947 E Calvary Rd Suite 103 Duluth MN, 55803 United States	Electronic Service		No	22-451Official CC Service List
62	Eric	Swanson	eswanson@winthrop.com	Winthrop & Weinstine		225 S 6th St Ste 3500 Capella Tower Minneapolis MN, 55402-	Electronic Service		No	22-451Official CC Service List

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
						4629 United States				
63	Todd	Tadych	ttadych@atcllc.com	American Transmission Company LLC		5303 Fen Oak Dr Madison WI, 53718 United States	Electronic Service		No	22-451Official CC Service List
64	Jayme	Trusty	execdir@swrdc.org	SWRDC		2401 Broadway Ave #1 Slayton MN, 56172 United States	Electronic Service		No	22-451Official CC Service List
65	Jen	Tyler	tyler.jennifer@epa.gov	US Environmental Protection Agency		Environmental Planning & Evaluation Unit 77 W Jackson Blvd. Mailstop B-19J Chicago IL, 60604-3590 United States	Electronic Service		No	22-451Official CC Service List
66	Caren	Warner	caren.warner@state.mn.us		Department of Commerce	85 7th Place East Suite 280 St. Paul MN, 55101-2198 United States	Electronic Service		No	22-451Official CC Service List
67	Cynthia	Warzecha	cynthia.warzecha@state.mn.us	Minnesota Department of Natural Resources		500 Lafayette Road Box 25 St. Paul MN, 55155-4040 United States	Electronic Service		No	22-451Official CC Service List
68	Elizabeth	Wefel	eawefel@flaherty-hood.com	Missouri River Energy Services		525 Park St Ste 470 Saint Paul MN, 55103 United States	Electronic Service		No	22-451Official CC Service List
69	Alan	Whipple	sa.property@state.mn.us		Minnesota Department Of Revenue	Property Tax Division 600 N. Robert Street St. Paul MN, 55146-3340 United States	Electronic Service		No	22-451Official CC Service List
70	Deanna	White	mncwa@cleanwater.org	Clean Water Action & Water Fund of MN		330 S 2nd Ave Ste 420 Minneapolis MN, 55401 United States	Electronic Service		No	22-451Official CC Service List
71	Jonathan	Wolfgram	jonathan.wolfgram@state.mn.us		Office of Pipeline Safety	445 Minnesota St Ste 147 Woodbury MN, 55125 United States	Electronic Service		No	22-451Official CC Service List