

Formal Natural Heritage Review - Cover Page

See next page for results of review. A draft watermark means the project details have not been finalized and the results are not official.

Project Name: Lake Wilson

Project Proposer: Westwood Professional Services

Project Type: Power, Solar **Project Type Activities:** Other

TRS: T106 R42 S10, T106 R42 S15, T106 R42 S16, T106 R42 S17, T106 R42 S18, T106 R42 S19, T106

R42 S20, T106 R42 S21, T106 R42 S22, T106 R42 S27, T106 R42 S28, T106 R42 S8 +

County(s): Murray

DNR Admin Region(s): South

Reason Requested: Federal Environmental Assessment/Environmental Impact Assessment

Project Description: Solar farm installation

Existing Land Uses: cultivated cropland

Landcover / Habitat Impacted: cultivated cropland

Waterbodies Affected:

Groundwater Resources Affected:

Previous Natural Heritage Review: No

Previous Habitat Assessments / Surveys: No

SUMMARY OF AUTOMATED RESULTS

Category	Results	Response By Category
Project Details	No Comments	No Further Review Required
Ecologically Significant Area	Comments	MBS Sites - Recommendations Local Conservation Value - Comment Potential RNC - Will Require Consultation Protected Wetlands: Calcareous Fens
State-Listed Endangered or Threatened Species	No Comments	No Further Review Required
State-Listed Species of Special Concern	Comments	Recommendations
Federally Listed Species	No Records	Visit IPaC For Federal Review



Minnesota Department of Natural Resources Division of Ecological & Water Resources 500 Lafayette Road, Box 25 St. Paul, MN 55155-4025

June 29, 2022

Project ID: MCE #2022-00440

Laura Nussbaum Westwood Professional Services, Inc 10170 Church Ranch Way Westminster, CO 80021

RE: Automated Natural Heritage Review of the proposed Lake Wilson See Cover Page for location and project details.

Dear Laura Nussbaum,

As requested, the above project has been reviewed for potential effects to rare features. Based on this review, the following rare features may be adversely affected by the proposed project:

Ecologically Significant Area

• The Minnesota Biological Survey (MBS) has identified one or more Sites of Biodiversity Significance within or adjacent to the project boundary. Sites of Biodiversity Significance have varying levels of native biodiversity and are ranked based on the relative significance of this biodiversity at a statewide level. Factors taken into account during the ranking process include the number of rare species documented within the site, the quality of the native plant communities in the site, the size of the site, and the context of the site within the landscape.

<u>High or Moderate MBS Site</u> - One or more MBS Sites of Biodiversity Significance ranked High or Moderate may be impacted by the proposed project. Sites ranked as High contain very good quality occurrences of the rarest species, high quality examples of the rare native plant communities, and/or important functional landscapes. Sites ranked as Moderate contain occurrences of rare species and/or moderately disturbed native plant communities, and/or landscapes that have a strong potential for recovery. The DNR recommends that the project be designed to avoid impacts to these ecologically significant areas. Actions to avoid or minimize disturbance include, but are not limited to, the following recommendations:

- Retain a buffer between proposed activities and the MBS Site,
- Minimize project footprint within the MBS Site,
- Operate wihin already-disturbed areas,
- Minimize vehicular disturbance within the MBS Site.
- · Do not park equipment or stockpile supplies within the MBS Site,

Lake Wilson MCE #: 2022-00440 Page 3 of 7

- Do not place spoil within the MBS Site,
- Inspect and clean equipment prior to operating within the MBS Site, and follow other recommendations to prevent the spread of invasive species,
- Conduct the work under frozen ground conditions,
- Use effective erosion prevention and sediment control measures,
- Revegetate disturbed soil with native seed mixes suitable to the local habitat as soon after construction as possible,
- Use only weed-free mulches, topsoils, and seed mixes.

Areas with Potential Local Conservation Value - The proposed project may impact one or more areas that have local conservation value. These areas are ranked as Below in the MBS Sites of Biodiversity Significance layer, and are retained in the layer as negative data. These areas do not meet the minimum biodiversity threshold for statewide significance but may have conservation value at the local level as habitat for native plants and animals, corridors for animal movements, buffers surrounding higher quality natural areas, or as areas with high potential for restoration of native habitat.

One or more DNR Native Plant Communities have been identified within or adjacent to the proposed project (for a list of all the native plant community types, please run a Conservation Planning Report; spatial data can be viewed on the Explore Page). DNR Native Plant Community types and subtypes are given a Conservation Status Rank that reflects the relative rarity and endangerment of the community type in Minnesota. Conservation Status Ranks range from S1 (critically imperiled) to S5 (secure, common, widespread, and abundant).

Rare Native Plant Communities - One or more rare native plant communities may be impacted by the proposed project. Native plant communities with a Conservation Status Rank of S1 to S3 are considered rare in the state, and the DNR recommends avoidance of these ecologically significant areas .In addition, please note that native plant communities with a conservation status rank of S1 to S3 may qualify as Rare Natural Communities under the Wetland Conservation Act (WCA). If the proposed project includes a wetland replacement plan under WCA, please contact your DNR Regional Ecologist for further evaluation. For technical guidance on Rare Natural Communities, please visit WCA Program Guidance and Information.

• One or more calcareous fens have been documented in the vicinity of the proposed project. A calcareous fen is a rare and distinctive peat-accumulating wetland that is legally protected in Minnesota. Many of the unique characteristics of calcareous fens result from the upwelling of groundwater through calcareous substrates. Because of this dependence on groundwater hydrology, calcareous fens can be affected by nearby activities or even those several miles away. Calcareous fens are fragile and may be impacted by stormwater runoff, any activity within the fen, or any activity that affects groundwater hydrology including groundwater pumping, contamination, or discharge). For more information regarding calcareous fens, please see the Calcareous Fen Fact Sheet. To minimize stormwater impacts, please refer to the Minnesota Pollution Control Agency's General Principles for Erosion Prevention and Sediment Control in the Minnesota Stormwater Manual. Please note that calcareous fens are "Special Waters" and a buffer zone may be required.

Depending on the distance to the calcareous fen(s), additional guidance may be provided below if you indicated that potential project activities include wetland impacts or groundwater impacts. If you did not correctly identify wetland or groundwater impacts as part of your project, this impact analysis may be incorrect.

State-Listed Endangered or Threatened Species

No state-listed endangered or threatened species have been documented in the vicinity of the

project.

State-Listed Species of Special Concern

Taxonomic Group	Common Name	Scientific Name	Water Regime		Federal Status
Vascular Plant	Red Three-awn	Aristida purpurea var. Iongiseta	terrestrial	Upland Prairie	

• The above table identifies state-listed species of special concern that have been documented in the vicinity of your project. If suitable habitat for any of these species occurs within your project footprint or activity impact area, the project may negatively impact those species. To avoid impacting state-listed species of special concern, the DNR recommends modifying the location of project activities to avoid suitable habitat or modifying the timing of project activities to avoid the presence of the species. Please visit the DNR Rare Species Guide for more information on the habitat use of these species and recommended measures to avoid or minimize impacts. For further assistance, please contact the appropriate DNR Regional Nongame Specialist or Regional Ecologist. Species-specific comments, if any, appear below.

Federally Listed Species

The Natural Heritage Information System does not contain any records for federally listed species within one mile of the proposed project. However, to ensure compliance with federal law, please conduct a federal regulatory review using the U.S. Fish and Wildlife Service's online <u>Information for Planning and Consultation (IPaC) tool</u>.

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area. If additional information becomes available regarding rare features in the vicinity of the project, further review may be necessary.

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location and the project description provided on the cover page. If project details change or construction has not occurred within one year, please resubmit the project for review.

The Natural Heritage Review does not constitute project approval by the Department of Natural Resources. Instead, it identifies issues regarding known occurrences of rare features and potential effects to these rare features. For information on the environmental review process or other natural resource concerns, you may contact your DNR Regional Environmental Assessment Ecologist.

Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources.

Lake Wilson MCE #: 2022-00440 Page 5 of 7

Sincerely,

Samantha Bump

Natural Heritage Review Specialist

Samantha Bump

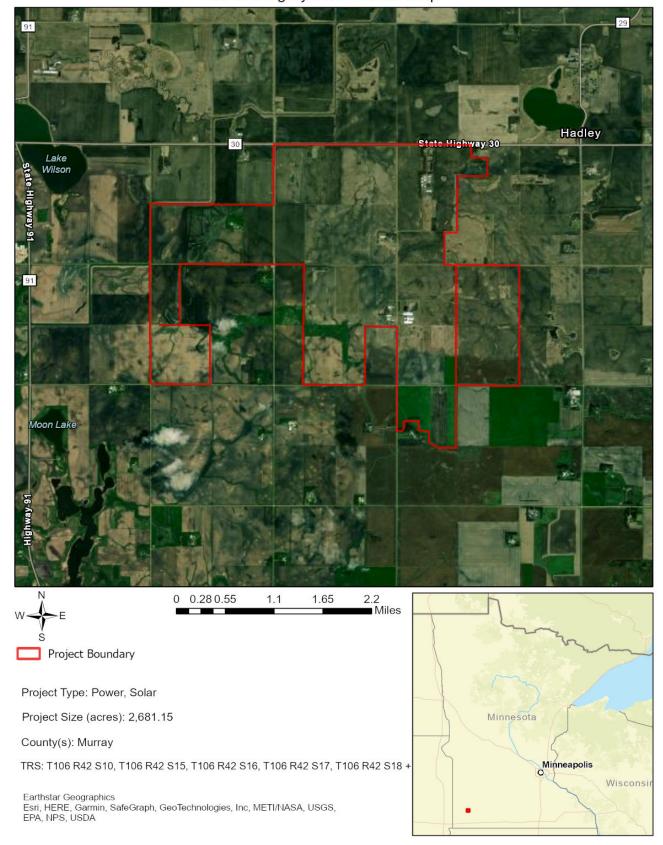
Samantha.Bump@state.mn.us

Links: USFWS Information for Planning and Consultation (IPaC) tool

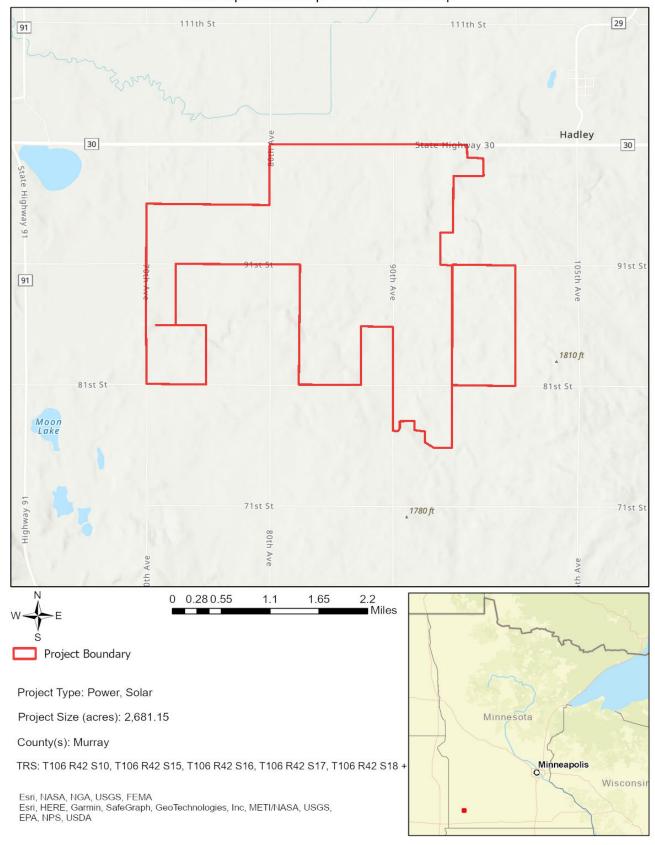
Information for Planning and Consultation (IPaC) tool

DNR Regional Environmental Assessment Ecologist Contact Info https://www.dnr.state.mn.us/eco/ereview/erp_regioncontacts.html

Lake Wilson Aerial Imagery With Locator Map



Lake Wilson USA Topo Basemap With Locator Map



Matthew Vollbrecht

From: Kresko, Tom (DNR) <tom.kresko@state.mn.us>

Sent: Friday, July 29, 2022 10:30 AM

To: Matthew Vollbrecht

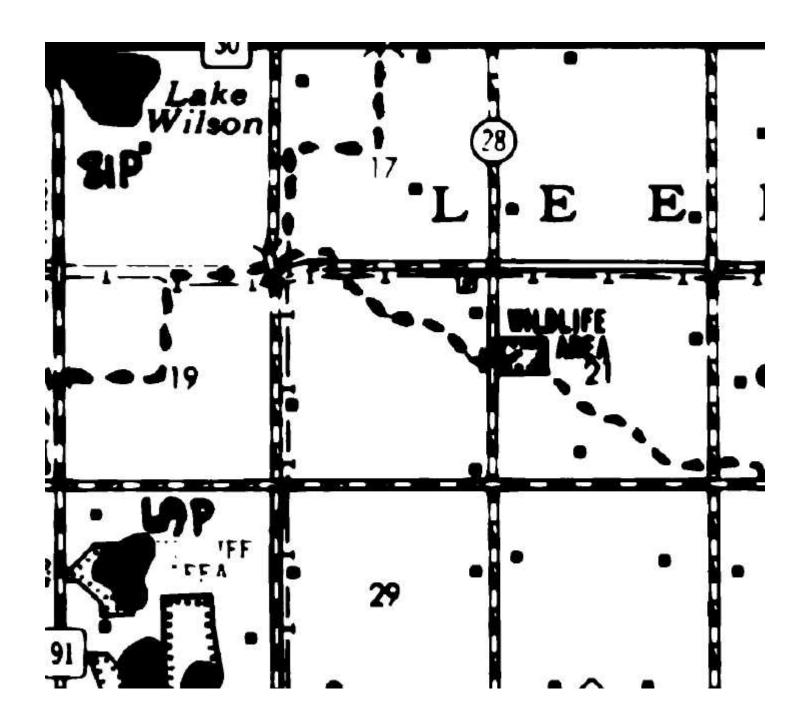
Subject: RE: Mapped PWI watercourse

Attachments: MURR1OF1.pdf; MURR_PWILIST_1987.PDF

Matt -

Not sure how this came to be "removed" by the DNR Commissioner, because it never was a public water stream on the original PWI map (below) and list (attached).

Am I looking at the correct location in Leeds Township?





~tjk

Tom Kresko Area Hydrologist | Ecological and Water Resources Division

Minnesota Department of Natural Resources 175 County Road 26 Windom, MN 56101 Phone: 507-832-6045

Email: tom.kresko@state.mn.us

mndnr.gov









From: Matthew Vollbrecht < Matthew. Vollbrecht@westwoodps.com>

Sent: Friday, July 29, 2022 8:14 AM

To: Kresko, Tom (DNR) <tom.kresko@state.mn.us>

Subject: RE: Mapped PWI watercourse

One of my staff was digging into it this morning and when they typed in the PLS (T106 R42W Sec 20) it shows that the Public watercourse has been removed per Commisioner's order. So it sounds like this feature is no longer classified as a PWI watercourse?

Our Office has moved! Please note our new address below.

Matthew Vollbrecht

Environmental Permitting Lead matthew.vollbrecht@westwoodps.com PWS #2115, CMWP #1101

direct (320) 229-2311 (320) 253-9495 (612) 280-4009 cell (320) 358-2001 fax

Westwood

1900 Medical Arts Ave, Suite 100 Sartell MN 56377

westwoodps.com (888) 937-5150

From: Kresko, Tom (DNR) <tom.kresko@state.mn.us>

Sent: Friday, July 29, 2022 8:12 AM

To: Matthew Vollbrecht < Matthew. Vollbrecht@westwoodps.com>

Subject: RE: Mapped PWI watercourse

Matt -

What you are describing is complicated by historal and recent activities.

Do you have a location for me to gather more information?

~tjk

Tom Kresko Area Hydrologist | Ecological and Water Resources Division

Minnesota Department of Natural Resources 175 County Road 26 Windom, MN 56101 Phone: 507-832-6045

Email: tom.kresko@state.mn.us

mndnr.gov









From: Matthew Vollbrecht < <u>Matthew.Vollbrecht@westwoodps.com</u>>

Sent: Friday, July 29, 2022 7:50 AM

To: Kresko, Tom (DNR) <tom.kresko@state.mn.us>

Subject: Mapped PWI watercourse

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Tom, my firm is wrapping up a wetland delineation on a site in Murray County and a question came up that I am hoping you can help with. We have an area that is mapped as a PWI watercourse but there is no channel, not defined bed or bank and no delineated wetland in the area. It is in between 2 cropped fields. Would this area still be regulated by the DNR as a Public Water?

Thanks, Matt

Our Office has moved! Please note our new address below.

Matthew Vollbrecht

Environmental Permitting Lead matthew.vollbrecht@westwoodps.com PWS #2115, CMWP #1101

 direct
 (320) 229-2311

 main
 (320) 253-9495

 cell
 (612) 280-4009

 fax
 (320) 358-2001



Conservation Planning Report: Lake Wilson

This document is intended for planning purposes only for the area of interest defined by the user. The report identifies ecologically significant areas documented within the defined area of interest plus any additional search distance indicated below. These ecologically significant areas can be viewed in the Explore Tab of the Minnesota Conservation Explorer. Please visit MN Geospatial Commons for downloadable GIS data.

This document does not meet the criteria for a Natural Heritage Review. If a Natural Heritage Review is needed, please define an Area of Interest in the Explore Tab and click on the Natural Heritage Review option.

This document does not include known occurrences of state-listed or federally listed species.

MBS Sites of Biodiversity Significance

Search distance = 330 feet

Minnesota Biological Survey (MBS) Sites of Biodiversity Significance are areas with varying levels of native biodiversity that may contain high quality native plant communities, rare plants, rare animals, and/or animal aggregations. A <u>Biodiversity Significance Rank</u> is assigned on the basis of the number of rare species, the quality of the native plant communities, size of the site, and context within the landscape. MBS Sites are ranked Outstanding, High, or Moderate. Areas ranked as Below were found to be disturbed and are retained in the layer as negative data. These areas do not meet the minimum biodiversity threshold for statewide significance but may have conservation value at the local level as habitat for native plants and animals, corridors for animal movements, buffers surrounding higher quality natural areas, or as areas with high potential for restoration of native habitat. The DNR recommends avoidance of MBS Sites of Biodiversity Significance ranked High or Outstanding.

Wetlands within MBS Sites of Outstanding or High Biodiversity Significance may be considered Rare Natural Communities under the Wetland Conservation Act. For technical guidance on Rare Natural Communities, please visit <u>WCA Program Guidance and Information</u>.

For more information please visit MBS Sites of Biodiversity Significance.

The following MBS Sites of Biodiversity Significance are within the search area:

MBS Site Name	Biodiversity Significance	Status
Carlson WMA	Moderate	final
Leeds 15	Moderate	final
Leeds 16	Below	final
Leeds 21 S	Moderate	final
Leeds 27	Moderate	final

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DNR Native Plant Communities

Search distance = 330 feet

A native plant community is a group of native plants that interact with each other and with their environment in ways not greatly altered by modern human activity or by introduced organisms. These groups of native plant species form recognizable units, such as oak savannas, pine forests, or marshes, that tend to repeat over space and time. Native plant communities are classified and described by considering vegetation, hydrology, landforms, soils, and natural disturbance regimes.

DNR Native Plant Community types and subtypes are given a Conservation Status Rank that reflects the relative rarity and endangerment of the community type in Minnesota. Conservation Status Ranks range from S1 (critically imperiled) to S5 (secure, common, widespread, and abundant). Native plant communities with a Conservation Status Rank of S1 through S3 are considered rare in the state. The DNR recommends avoidance of rare native plant communities.

DNR Native Plant Communities may be given a Condition Rank that reflects the degree of ecological integrity of a specific occurrence of a native plant community. The Condition Rank is based on species composition, vegetation structure, ecological processes and functions, level of human disturbance, presence of exotic species, and other factors. Condition Ranks range from A-rank (excellent ecological integrity) to D-rank (poor ecological integrity. A Condition Rank of NR means Not Ranked and a Condition Rank of MULTI mean multiple ranks are present because the record is a native plant community complex.

For more information please visit Minnesota's Native Plant Communities.

The following DNR Native Plant Communities are within the search area:

MBS Site Name	NPC Code		Conservation Status Rank	Number of Communities
Unnamed: 51085	PWL_CX	Prairie Wetland Complex	(S1, S2, S3)	3
Unnamed: 51085	UPs13d	Dry Hill Prairie (Southern)	S2	8
Unnamed: 51083	UPs23a	Mesic Prairie (Southern)	S2	2
Unnamed: 51083	WMs83	Southern Seepage Meadow/Carr	(S2, S3)	1

Calcareous Fens

Search distance = 5 miles

A calcareous fen is a rare and distinctive peat-accumulating wetland that is legally protected in Minnesota under the Wetland Conservation Act. Many of the unique characteristics of calcareous fens result from the upwelling of groundwater through calcareous substrates. Because of this dependence on groundwater hydrology, calcareous fens can be affected by nearby activities or even those several miles away. For more information regarding calcareous fens, please see the <u>Calcareous Fen Fact Sheet</u> or review the <u>List of Known Calcareous Fens</u>.

The following Calcareous Fens are within the search area:

Fen Site Name	Fen ID	TRS
Moulton 11	46947	105N043W - 2

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DNR Old Growth Stands

Search distance = 330 feet

Old-growth forests are natural forests that have developed over a long period of time, generally at least 120 years, without experiencing severe, stand-replacing disturbances such as fires, windstorms, or logging. Old-growth forests are a unique, nearly vanished piece of Minnesota's history and ecology; less than 4% of Minnesota's old-growth forests remain. The DNR recommends avoidance of all DNR Old Growth Stands. The following DNR Old Growth Stands have been documented within the search area.

SEARCH RESULTS: No features were found within the search area.

MN Prairie Conservation Plan

Search distance = 330 feet

The Minnesota Prairie Conservation Plan, a twenty-five year strategy for accelerating prairie conservation in the state, identifies Core Areas, Corridors, and Corridor Complexes as areas to focus conservation efforts. The Plan's strategies include protection, enhancement, and restoration of grassland and wetland habitat. To meet the Plan's goals, approaches within Core Areas will need to include restoration and approaches within Corridors will need to include conservation of grassland habitat which can provide stepping stones between larger Core Areas.

SEARCH RESULTS: No features were found within the search area.

Important Bird Areas Search distance = 1 mile

Important Bird Areas, identified by Audubon Minnesota in partnership with the DNR, are part of an international conservation effort aimed at conserving globally important bird habitats. They are voluntary and non-regulatory, but the designation demonstrates the significant ecological value of the area.

The following Important Birds Areas are within the search area:

• Prairie Coteau Complex

Lakes of Biological Significance

Search distance = 330 feet

Lakes of Biological Significance are high quality lakes as determined by the aquatic plant, fish, bird, or amphibian communities present within the lake. To be included in this layer, a lake only needs to meet the criteria for one of these four community types. The lake is assigned a biological significance of Outstanding, High, or Moderate based on the community with the highest quality.

SEARCH RESULTS: No features were found within the search area.

USFWS Regulatory Layers

To ensure compliance with federal law, conduct a federal regulatory review using the U.S. Fish and Wildlife Service's (USFWS) online Information for Planning and Consultation (IPaC) tool. This report is not a substitution for a Section 7 review.

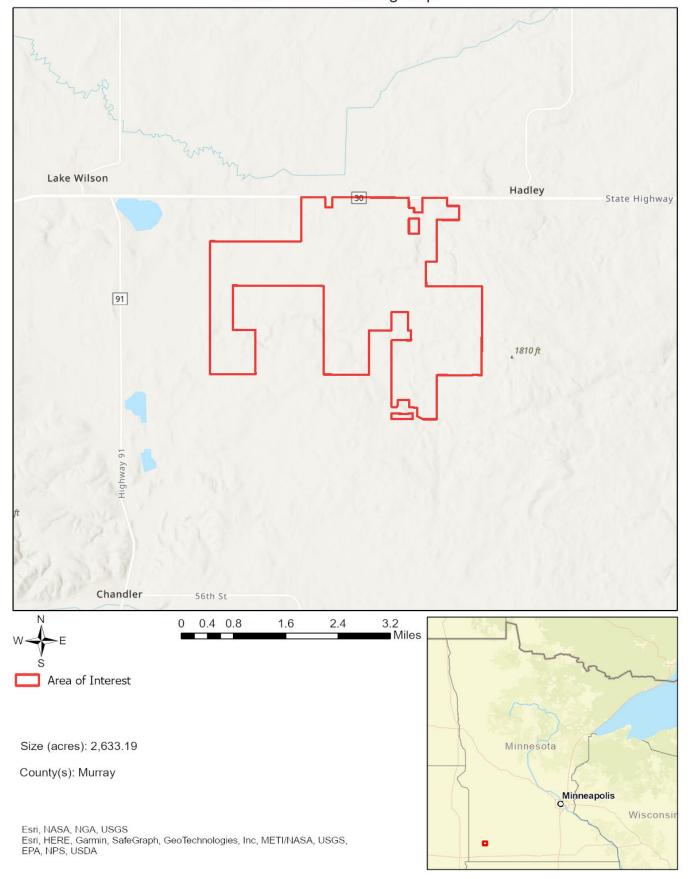
For informational purposes only, this tool currently checks the following USFWS Regulatory Layers:

Rusty Patched Bumblebee High Potential Zones: (search distance = 0; within area of interest only) The rusty patched bumble bee (Bombus affinis), federally listed as endangered, is likely to be present in suitable habitat within the high potential zones. From April through October this species uses underground nests in upland grasslands, shrublands, and forest edges, and forages where nectar and pollen are available. From October through April the species overwinters under tree litter in upland forests and woodlands. The rusty patched bumble bee may be impacted by a variety of land management activities including, but not limited to, prescribed fire, tree-removal, having, grazing, herbicide use, pesticide use, land-clearing, soil disturbance or compaction, or use of non-native bees. The USFWS RPBB guidance provides guidance on avoiding impacts to rusty patched bumble bee and a key for determining if actions are likely to affect the species; the determination key can be found in the appendix. Please visit the <u>USFWS Rusty Patched Bumble Bee Map</u> for the most current locations of High Potential Zones.

Page 3 of 5 8/1/2022 02:21:39 PM **SEARCH RESULTS**: No features were found within the search area.

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Lake Wilson Conservation Planning Map



Page 5 of 5 8/1/2022 02:21:39 PM

From: Boettcher, Joanne (DNR) < Joanne.Boettcher@state.mn.us>

Sent: Tuesday, August 23, 2022 4:15 PM

To: Phillips, Michelle

Cc: Olagbegi, Korede; Monterrosa, Monica; Aquilino, John; Matthew Vollbrecht; Warzecha,

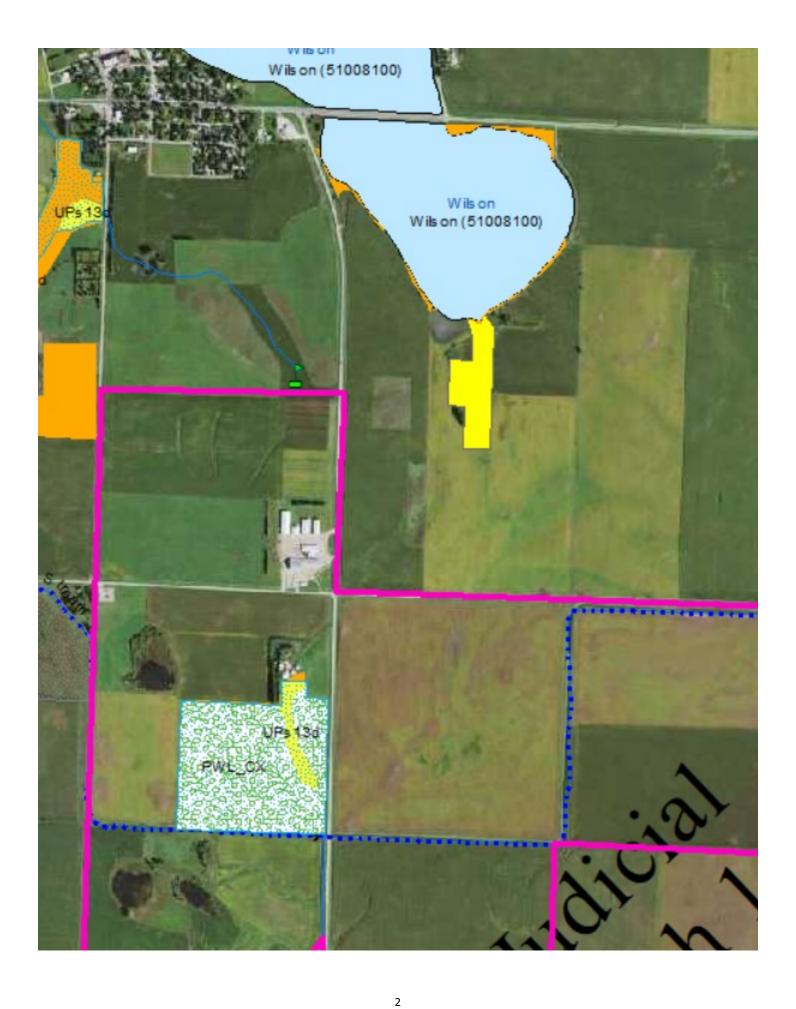
Cynthia (DNR)

Subject: [EXTERNAL] RE: Lake Wilson Solar - Second Review Request

Attachments: Lake Wilson Solar Project, Murray Co, MN - DNR Early Coordination Comments

Hi Michelle,

Thanks for updating us on your new boundary and sending that via shapefile! We don't have any big additional concerns. There is a small bit of potential prairie in the new parcel (orange, PUDL), which is covered in the previous review comments (attached). Please also note that NHIS reviews can be done through our new Minnesota Conservation Explorer website. Once the infrastructure/layout is finalized, that would be helpful to have via shapefile as well. Also, please feel free to send requests via email instead of letters. Thanks! Joanne



From: Phillips, Michelle <MPhillips@invenergy.com>

Sent: Thursday, August 18, 2022 2:42 PM

To: Warzecha, Cynthia (DNR) <cynthia.warzecha@state.mn.us>; Boettcher, Joanne (DNR)

<Joanne.Boettcher@state.mn.us>

Cc: Olagbegi, Korede < KOlagbegi@invenergy.com >; Monterrosa, Monica < MMonterrosa@invenergy.com >; Aquilino,

John <JAquilino@invenergy.com>; Matthew Vollbrecht <Matthew.Vollbrecht@westwoodps.com>

Subject: RE: Lake Wilson Solar - Second Review Request

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Hi Cynthia and Joanne,

Thank you for the email. My apologies for any confusion caused by our most recent letter regarding Lake Wilson Solar. We should have noted that the primary purpose of sending the letter was to advise of an updated project area and to request your review of the newly added land to the project area. Joanne requested that we send any project area updates to the DNR for further review in her November 2, 2021 email to Joe Sedarski. The updated project area excludes the western 1/3 of the original project area reviewed by the DNR, moving the project further away from some of the features identified in the DNR's November email. Please see the attached Exhibit, which illustrates the old project area previously included in correspondence to the DNR and the new project area we intend to utilize for project permitting. Two small parcels have been added, these parcels are identified on the attached Exhibit as "Added Parcel". We have also attached the new project area in shapefile format for your consideration.

We are currently finishing up field surveys for wetlands and native prairies on the new parcels and will be issuing reports on the findings shortly. These surveys were completed on the original project area in response to your comments but need to be updated for the additional parcels before we finalize the reports. When the reports are updated, we will send them to you for review. At this time, if you had any comments on the additional parcels added to the project area, we would greatly appreciate your insight.

Thank you,

Michelle Phillips | Senior Associate, Environmental Compliance & Strategy Invenergy | Houston,TX mphillips@invenergy.com | 251-327-7290

From: Warzecha, Cynthia (DNR) < cynthia.warzecha@state.mn.us>

Sent: Friday, August 5, 2022 10:58 AM

To: Monterrosa, Monica <mmonterrosa@invenergy.com>; matthew.vollbrecht@westwoods.com

Cc: Boettcher, Joanne (DNR) < <u>Joanne.Boettcher@state.mn.us</u>> **Subject:** [EXTERNAL] Lake Wilson Solar - Second Review Request

Hi Monica,

The DNR has received a second project review request for the Lake Wilson Solar Project. The original request (November 11, 2022) from Marc Crowl is nearly identical to the first review request. However, it does appear that the project boundary has changed. Please provide updated shapefiles so we can update our original early coordination comments.

Our agency's early coordination comments were provided again after the Vegetation Management Plan meeting on July 19, 2022 and are attached for your convenience.

Please note that Joanne Boettcher, the Regional Environmental Assessment Ecologist for DNR Region 4, will be your primary agency contact until Lake Wilson Solar submits its site permit application to the Public Utilities Commission. Please copy me on any correspondence.

Best regards,

Cynthia

Cynthia Warzecha

Energy Projects Planner

Minnesota Department of Natural Resources

500 Lafayette Road St. Paul, MN 55155 Phone: 651-259-5078

Email: cynthia.warzecha@state.mn.us









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Formal Natural Heritage Review - Cover Page

See next page for results of review. A draft watermark means the project details have not been finalized and the results are not official.

Project Name: Lake Wilson

Project Proposer: Westwood Professional Services

Project Type: Power, Solar

Project Type Activities: Tree Removal

TRS: T106 R42 S10, T106 R42 S15, T106 R42 S16, T106 R42 S17, T106 R42 S18, T106 R42 S19, T106

R42 S20, T106 R42 S21, T106 R42 S22, T106 R42 S27, T106 R42 S28, T106 R42 S29 +

County(s): Murray

DNR Admin Region(s): South

Reason Requested: Federal Environmental Assessment/Environmental Impact Assessment

Project Description: solar farm installation

Existing Land Uses: cultivated crops

Landcover / Habitat Impacted: cultivated crops

Waterbodies Affected:

Groundwater Resources Affected:

Previous Natural Heritage Review: Yes, ERDB#: Not Provided

Previous Habitat Assessments / Surveys: No

SUMMARY OF AUTOMATED RESULTS

Category	Results	Response By Category
Project Details	No Comments	No Further Review Required
Ecologically Significant Area	Comments	MBS Sites - Recommendations Local Conservation Value - Comment Potential RNC - Will Require Consultation Protected Wetlands: Calcareous Fens
State-Listed Endangered or Threatened Species	No Comments	No Further Review Required
State-Listed Species of Special Concern	Comments	Recommendations
Federally Listed Species	No Records	Visit IPaC For Federal Review



Minnesota Department of Natural Resources Division of Ecological & Water Resources 500 Lafayette Road, Box 25 St. Paul, MN 55155-4025

August 22, 2022

Project ID: MCE #2022-00556

Sarah Rosche Westwood Professional Services, Inc. 12701 Whitewater Drive, Suite 300 Minnetonka, MN 55343

RE: Automated Natural Heritage Review of the proposed Lake Wilson See Cover Page for location and project details.

Dear Sarah Rosche,

As requested, the above project has been reviewed for potential effects to rare features. Based on this review, the following rare features may be adversely affected by the proposed project:

Project Type and/or Project Type Activity Comments

• The Natural Heritage Information System (NHIS) tracks bat roost trees and hibernacula plus some acoustic data, but this information is not exhaustive. Even if there are no bat records listed below, all seven of Minnesota's bats, including the federally threatened northern long-eared bat (<u>Myotis septentrionalis</u>), can be found throughout Minnesota. Tree removal can negatively impact bats by destroying roosting habitat, especially during the pup rearing season when females are forming maternity roosting colonies and the pups cannot yet fly. To minimize these impacts, the DNR recommends that tree removal be avoided during the months of June and July.

Ecologically Significant Area

• The Minnesota Biological Survey (MBS) has identified one or more Sites of Biodiversity Significance within or adjacent to the project boundary. Sites of Biodiversity Significance have varying levels of native biodiversity and are ranked based on the relative significance of this biodiversity at a statewide level. Factors taken into account during the ranking process include the number of rare species documented within the site, the quality of the native plant communities in the site, the size of the site, and the context of the site within the landscape.

High or Moderate MBS Site - One or more MBS Sites of Biodiversity Significance ranked High or Moderate may be impacted by the proposed project. Sites ranked as High contain very good quality occurrences of the rarest species, high quality examples of the rare native plant communities, and/or important functional landscapes. Sites ranked as Moderate contain occurrences of rare species and/or moderately disturbed native plant communities, and/or landscapes that have a strong potential for recovery. The DNR recommends that the project be designed to avoid impacts to these

Lake Wilson MCE #: 2022-00556 Page 3 of 7

ecologically significant areas. Actions to avoid or minimize disturbance include, but are not limited to, the following recommendations:

- Retain a buffer between proposed activities and the MBS Site,
- · Minimize project footprint within the MBS Site,
- Operate wihin already-disturbed areas,
- Minimize vehicular disturbance within the MBS Site,
- Do not park equipment or stockpile supplies within the MBS Site,
- Do not place spoil within the MBS Site,
- Inspect and clean equipment prior to operating within the MBS Site, and follow other recommendations to prevent the spread of invasive species,
- Conduct the work under frozen ground conditions,
- Use effective erosion prevention and sediment control measures,
- Revegetate disturbed soil with native seed mixes suitable to the local habitat as soon after construction as possible,
- Use only weed-free mulches, topsoils, and seed mixes.

Areas with Potential Local Conservation Value - The proposed project may impact one or more areas that have local conservation value. These areas are ranked as Below in the MBS Sites of Biodiversity Significance layer, and are retained in the layer as negative data. These areas do not meet the minimum biodiversity threshold for statewide significance but may have conservation value at the local level as habitat for native plants and animals, corridors for animal movements, buffers surrounding higher quality natural areas, or as areas with high potential for restoration of native habitat.

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Rare Native Plant Communities - One or more rare native plant communities may be impacted by the proposed project. Native plant communities with a Conservation Status Rank of S1 to S3 are considered rare in the state, and the DNR recommends avoidance of these ecologically significant areas .In addition, please note that native plant communities with a conservation status rank of S1 to S3 may qualify as Rare Natural Communities under the Wetland Conservation Act (WCA). If the proposed project includes a wetland replacement plan under WCA, please contact your DNR Regional Ecologist for further evaluation. For technical guidance on Rare Natural Communities, please visit WCA Program Guidance and Information.

• One or more calcareous fens have been documented in the vicinity of the proposed project. A calcareous fen is a rare and distinctive peat-accumulating wetland that is legally protected in Minnesota. Many of the unique characteristics of calcareous fens result from the upwelling of groundwater through calcareous substrates. Because of this dependence on groundwater hydrology, calcareous fens can be affected by nearby activities or even those several miles away. Calcareous fens are fragile and may be impacted by stormwater runoff, any activity within the fen, or any activity that affects groundwater hydrology including groundwater pumping, contamination, or discharge). For more information regarding calcareous fens, please see the Calcareous Fen Fact Sheet. To minimize stormwater impacts, please refer to the Minnesota Pollution Control Agency's General

Lake Wilson MCE #: 2022-00556 Page 4 of 7

<u>Principles for Erosion Prevention and Sediment Control</u> in the Minnesota Stormwater Manual. Please note that calcareous fens are "Special Waters" and a <u>buffer zone</u> may be required.

Depending on the distance to the calcareous fen(s), additional guidance may be provided below if you indicated that potential project activities include wetland impacts or groundwater impacts. If you did not correctly identify wetland or groundwater impacts as part of your project, this impact analysis may be incorrect.

State-Listed Endangered or Threatened Species

No state-listed endangered or threatened species have been documented in the vicinity of the project.

State-Listed Species of Special Concern

Taxonomic Group	Common Name	Scientific Name	Water Regime		Federal Status
Vascular Plant	Red Three-awn	Aristida purpurea var. Iongiseta	terrestrial	Upland Prairie	

• The above table identifies state-listed species of special concern that have been documented in the vicinity of your project. If suitable habitat for any of these species occurs within your project footprint or activity impact area, the project may negatively impact those species. To avoid impacting state-listed species of special concern, the DNR recommends modifying the location of project activities to avoid suitable habitat or modifying the timing of project activities to avoid the presence of the species. Please visit the DNR Rare Species Guide for more information on the habitat use of these species and recommended measures to avoid or minimize impacts. For further assistance, please contact the appropriate DNR Regional Nongame Specialist or Regional Ecologist. Species-specific comments, if any, appear below.

Federally Listed Species

The Natural Heritage Information System does not contain any records for federally listed species within one mile of the proposed project. However, to ensure compliance with federal law, please conduct a federal regulatory review using the U.S. Fish and Wildlife Service's online <u>Information for Planning and Consultation (IPaC) tool</u>.

The Natural Heritage Information System (NHIS), a collection of databases that contains information about Minnesota's rare natural features, is maintained by the Division of Ecological and Water Resources, Department of Natural Resources. The NHIS is continually updated as new information becomes available, and is the most complete source of data on Minnesota's rare or otherwise significant species, native plant communities, and other natural features. However, the NHIS is not an exhaustive inventory and thus does not represent all of the occurrences of rare features within the state. Therefore, ecologically significant features for which we have no records may exist within the project area. If additional information becomes available regarding rare features in the vicinity of the project, further review may be necessary.

Lake Wilson MCE #: 2022-00556 Page 5 of 7

For environmental review purposes, the results of this Natural Heritage Review are valid for one year; the results are only valid for the project location and the project description provided on the cover page. If project details change or construction has not occurred within one year, please resubmit the project for review.

The Natural Heritage Review does not constitute project approval by the Department of Natural Resources. Instead, it identifies issues regarding known occurrences of rare features and potential effects to these rare features. For information on the environmental review process or other natural resource concerns, you may contact your <u>DNR Regional Environmental Assessment Ecologist</u>.

Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources.

Sincerely,

Samantha Bump

Natural Heritage Review Specialist Samantha.Bump@state.mn.us

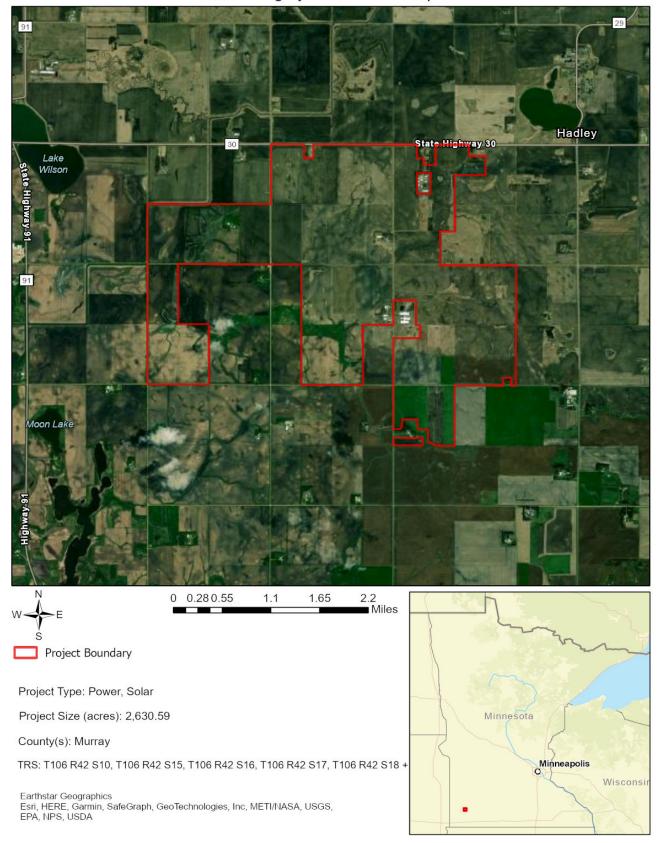
Samantha Bump

Links: USFWS Information for Planning and Consultation (IPaC) tool

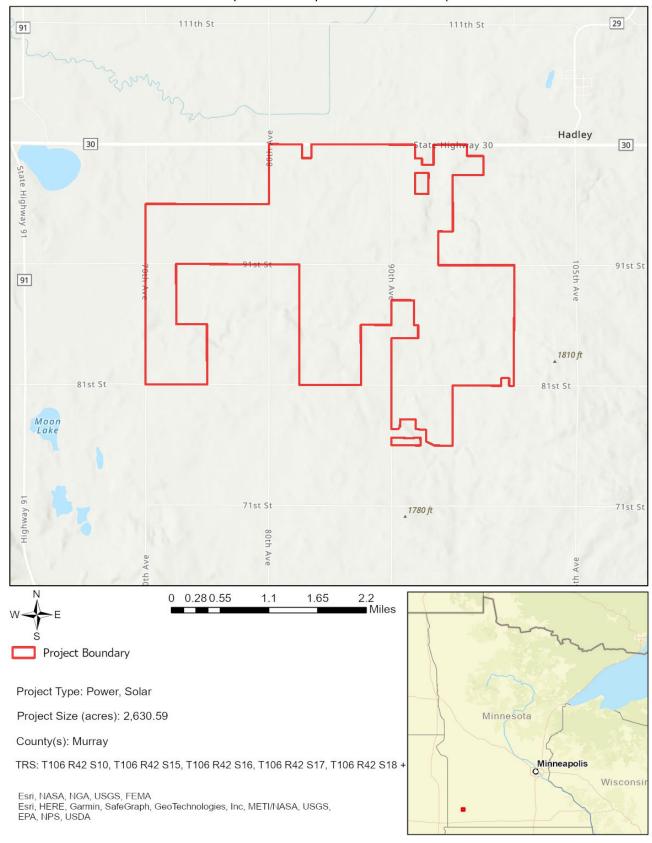
Information for Planning and Consultation (IPaC) tool

DNR Regional Environmental Assessment Ecologist Contact Info https://www.dnr.state.mn.us/eco/ereview/erp regioncontacts.html

Lake Wilson Aerial Imagery With Locator Map



Lake Wilson USA Topo Basemap With Locator Map





Formal Natural Heritage Review - Cover Page

See next page for results of review. A draft watermark means the project details have not been finalized and the results are not official.

Project Name: Lake Wilson

Project Proposer: Westwood Professional Services

Project Type: Power, Solar

Project Type Activities: Tree Removal; Waterbody, watercourse, streambed impacts (e.g., discharge, runoff, sedimentation, fill, excavation); Wetland impacts (e.g., discharge, runoff, sedimentation, fill,

excavation)

TRS: T106 R42 S10, T106 R42 S15, T106 R42 S16, T106 R42 S17, T106 R42 S18, T106 R42 S19, T106

R42 S20, T106 R42 S21, T106 R42 S22, T106 R42 S27, T106 R42 S28, T106 R42 S29 +

County(s): Murray

DNR Admin Region(s): South

Reason Requested: Federal Environmental Assessment/Environmental Impact Assessment

Project Description: solar farm installation

Existing Land Uses: cultivated crops

Landcover / Habitat Impacted: cultivated crops

Waterbodies Affected:

Groundwater Resources Affected:

Previous Natural Heritage Review: Yes, ERDB#: Not Provided

Previous Habitat Assessments / Surveys: No

SUMMARY OF AUTOMATED RESULTS

Category	Results	Response By Category
Project Details	No Comments	No Further Review Required
Ecologically Significant Area	Comments	MBS Sites - Recommendations Local Conservation Value - Comment Potential RNC - Will Require Consultation Protected Wetlands: Calcareous Fens
State-Listed Endangered or Threatened Species	No Comments	No Further Review Required
State-Listed Species of Special Concern	Comments	Recommendations
Federally Listed Species	No Records	Visit IPaC For Federal Review



Minnesota Department of Natural Resources Division of Ecological & Water Resources 500 Lafayette Road, Box 25 St. Paul, MN 55155-4025

October 10, 2022

Project ID: MCE #2022-00694

Sarah Rosche Westwood Professional Services, Inc. 12701 Whitewater Drive, Suite 300 Minnetonka, MN 55343

RE: Automated Natural Heritage Review of the proposed Lake Wilson See Cover Page for location and project details.

Dear Sarah Rosche,

As requested, the above project has been reviewed for potential effects to rare features. Based on this review, the following rare features may be adversely affected by the proposed project:

Project Type and/or Project Type Activity Comments

• The Natural Heritage Information System (NHIS) tracks bat roost trees and hibernacula plus some acoustic data, but this information is not exhaustive. Even if there are no bat records listed below, all seven of Minnesota's bats, including the federally threatened northern long-eared bat (<u>Myotis septentrionalis</u>), can be found throughout Minnesota. Tree removal can negatively impact bats by destroying roosting habitat, especially during the pup rearing season when females are forming maternity roosting colonies and the pups cannot yet fly. To minimize these impacts, the DNR recommends that tree removal be avoided during the months of June and July.

Ecologically Significant Area

• The Minnesota Biological Survey (MBS) has identified one or more Sites of Biodiversity Significance within or adjacent to the project boundary. Sites of Biodiversity Significance have varying levels of native biodiversity and are ranked based on the relative significance of this biodiversity at a statewide level. Factors taken into account during the ranking process include the number of rare species documented within the site, the quality of the native plant communities in the site, the size of the site, and the context of the site within the landscape.

High or Moderate MBS Site - One or more MBS Sites of Biodiversity Significance ranked High or Moderate may be impacted by the proposed project. Sites ranked as High contain very good quality occurrences of the rarest species, high quality examples of the rare native plant communities, and/or important functional landscapes. Sites ranked as Moderate contain occurrences of rare species and/or moderately disturbed native plant communities, and/or landscapes that have a strong potential for recovery. The DNR recommends that the project be designed to avoid impacts to these

Lake Wilson MCE #: 2022-00694 Page 3 of 7

ecologically significant areas. Actions to avoid or minimize disturbance include, but are not limited to, the following recommendations:

- Retain a buffer between proposed activities and the MBS Site,
- · Minimize project footprint within the MBS Site,
- Operate wihin already-disturbed areas,
- Minimize vehicular disturbance within the MBS Site,
- Do not park equipment or stockpile supplies within the MBS Site,
- Do not place spoil within the MBS Site,
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Lake Wilson MCE #: 2022-00694 Page 4 of 7

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Lake Wilson MCE #: 2022-00694 Page 5 of 7

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Thank you for consulting us on this matter, and for your interest in preserving Minnesota's rare natural resources.

Sincerely,

Samantha Bump

Natural Heritage Review Specialist Samantha.Bump@state.mn.us

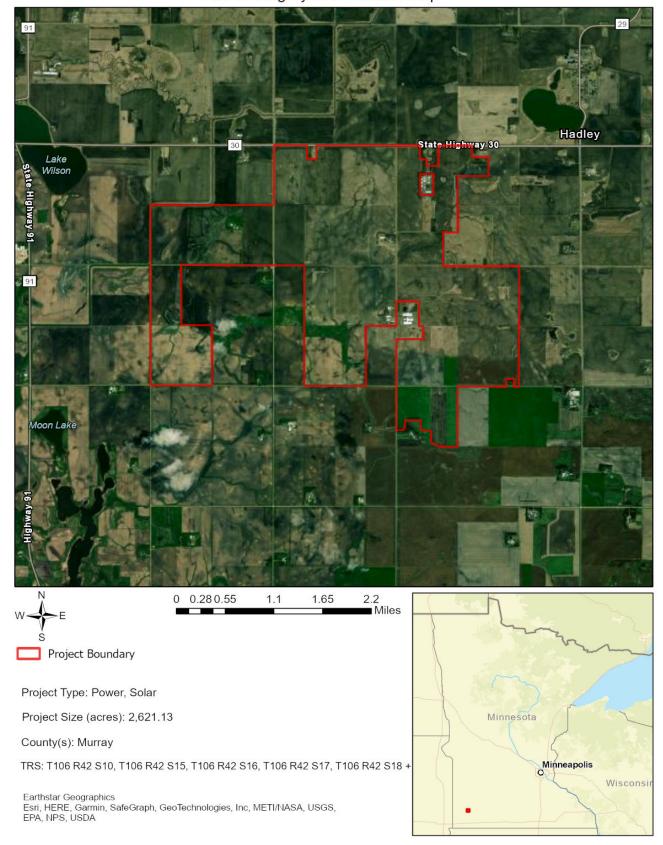
Samantha Bump

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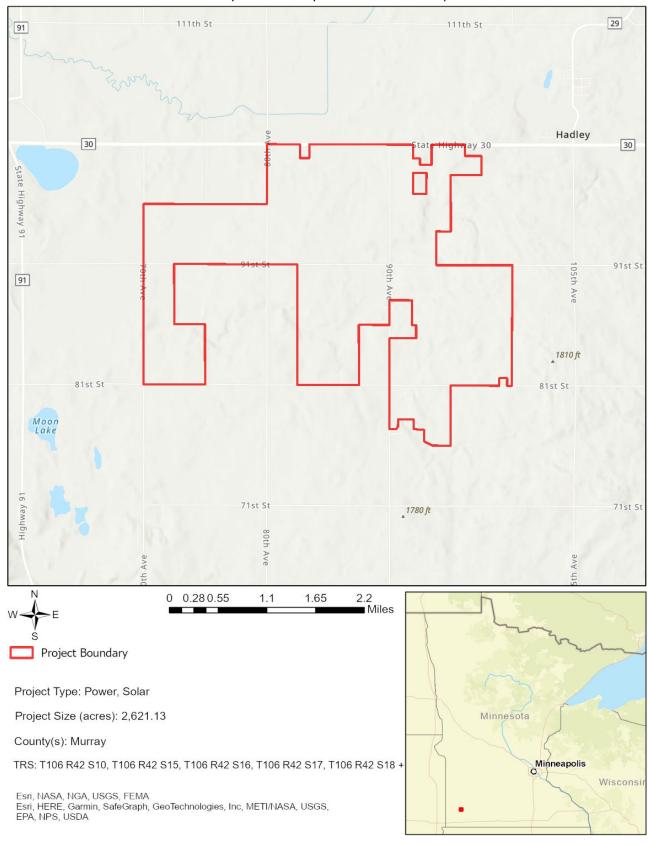
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Lake Wilson Aerial Imagery With Locator Map



Lake Wilson USA Topo Basemap With Locator Map



From: Phillips, Michelle

Sent: Thursday, January 12, 2023 1:01 PM

To: Warzecha, Cynthia (DNR)

Cc:Boettcher, Joanne (MPCA); Gieseke, Tim (DNR); Giampoli, Andrea; Olagbegi, KoredeSubject:RE: Lake Wilson Solar Final Reports and Preliminary Development Area Shapefiles

Hi Cynthia,

Thank you for making us aware of this change. We appreciate the update.

Michelle Phillips | Senior Associate, Environmental Compliance & Strategy Invenergy | Houston,TX mphillips@invenergy.com | C 251-327-7290 | @InvenergyLLC

From: Warzecha, Cynthia (DNR) < cynthia.warzecha@state.mn.us>

Sent: Thursday, January 12, 2023 8:41 AM

To: Phillips, Michelle <MPhillips@invenergy.com>

Cc: Boettcher, Joanne (MPCA) <joanne.boettcher@state.mn.us>; Gieseke, Tim (DNR) <tim.gieseke@state.mn.us>

Subject: [EXTERNAL] RE: Lake Wilson Solar Final Reports and Preliminary Development Area Shapefiles

Hi Michelle,

Please note that Joanne Boettcher is no longer with the DNR – she has taken a position with the Minnesota Pollution Control Agency. My understanding is that her previous Regional Environmental Assessment Ecologist position is in the process of being filled.

I have copied her supervisor on this message for his awareness.

Best regards,

Cynthia

Cynthia Warzecha

Energy Projects Planner

Minnesota Department of Natural Resources

500 Lafayette Road St. Paul, MN 55155 Phone: 651-259-5078

Email: cynthia.warzecha@state.mn.us









From: Phillips, Michelle < MPhillips@invenergy.com>

Sent: Wednesday, January 11, 2023 4:35 PM

To: Boettcher, Joanne (MPCA) < <u>joanne.boettcher@state.mn.us</u>>

Cc: Warzecha, Cynthia (DNR) < cynthia.warzecha@state.mn.us; Giampoli, Andrea < AGiampoli@invenergy.com; Olagbegi, Korede < KOlagbegi@invenergy.com; Monterrosa, Monica < Monterrosa@invenergy.com; Matthew

Vollbrecht < Matthew. Vollbrecht@westwoodps.com >

Subject: Lake Wilson Solar Final Reports and Preliminary Development Area Shapefiles

This message may be from an external email source.

Do not select links or open attachments unless verified. Report all suspicious emails to Minnesota IT Services Security Operations Center.

Hi Joanne,

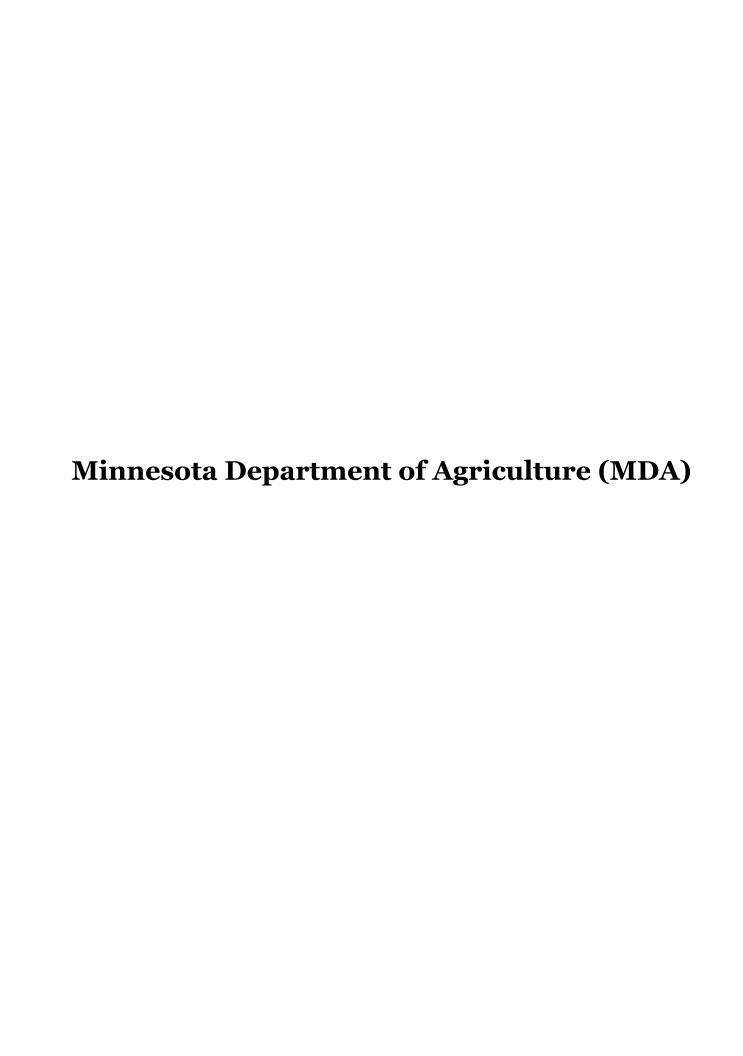
Thank you for MN Department of Natural Resources' continued coordination on the proposed Lake Wilson Solar project in Murray County, Minnesota. To follow up on your request, I have included a link below to the final Native Prairie Assessment Report reflecting our review and assessment of potential native prairie in the project area. This assessment was completed in response to comments you provided to us regarding the potential for native prairie in and near the project area. We were able to confirm there is no native prairie within the project area. Since there is no native prairie in the Project area, there is no need to develop a Native Prairie Protection Plan. I have also included the preliminary development area in shapefile format. We will submit the final Vegetation and Soil Management Plan (VSMP) through the Energy Environmental Review & Analysis unit. The Native Prairie Assessment Report and VSMP are also being filed as appendices to our final site permit application. In November 2022, we shared the Wetland Delineation report with the LGU, Murray Soil and Water Conservation District and requested their review and approval of the delineated wetland boundaries. We appreciate your coordination and engagement on this project.

0012861.01 Lake Wilson Solar

Thank you,

Michelle Phillips | Senior Associate, Environmental Compliance & Strategy Invenergy | Houston,TX mphillips@invenergy.com | C 251-327-7290 | @InvenergyLLC

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Meeting Minutes

Meeting Date: September 17, 2021

Project Number: R0012861.01

Project Name: Lake Wilson Solar Project, Murray County, MN

Meeting Location: Online via Teams

Meeting Topic: Introduce Project and the Project Team to the Minnesota Department of Agriculture

(MDA)

The purpose of the meeting was to introduce the Lake Wilson Solar Project (a proposed 150 megawatt (MW) solar generation and 50 MW storage energy facility) planned for construction and operation in Murray County, MN, and the Project team to MDA staff. Invenergy, Inc. is leading development of the Project with the Project entity (Lake Wilson Solar Energy LLC). Invenergy staff made a brief PowerPoint presentation which covered a summary of the Project and Invenergy experience in developing and constructing solar energy generation/storage and other renewable energy projects.

Attendees:	Company Name:	Contact Info (email/phone)
Stephan Roos Bob Patton (Energy/Environment Supervisor)	Minnesota Department of Agriculture (Ag Marketing and Development)	stephan.roos@state.mn.us; 651-201-6631 Bob.Patton@state.mn.us; 651-201-6226
Aidan O'Conner Mark Crowl Robert Young Brad Plunkett James Hartsig	Lake Wilson Solar Energy LLC (Invenergy)	aoconnor@invenergy.com MCrowl@invenergy.com RYoung@invenergy.com JHartsig@invenergy.com BPlunkett@invenergy.com JHartsig@invenergy.com
Jeremy Duehr, Esq.	Fredrikson & Byron, P.A.	JDuehr@fredlaw.com; 612-492-7413
Joe Sedarski Jake Schaffer	Westwood Professional Services, Inc.	Joe.Sedarski@westwoodps.com; 952- 207-7631 Jake.Schaffer@westwoodps.com; 952- 906-7456

Meeting Notes

	g Notes		
Item:	Discussion:		
1	Introductions of Project team (Invenergy staff, Fredrickson & Byron, Westwood) and MDA contacts.		
2	Invenergy and Overall Invenergy Experience –		
	World's Leading Privately Held Sustainable Energy Company with a foundation in wind energy (109 projects; 17,276 megawatts), solar energy (48 projects; 5,832 megawatts), storage (18 projects; 486 megawatts, 1,611 megawatt hours), and natural gas (12 projects; 5,661 megawatts).		
	Invenergy has two projects in Minnesota, totaling 407 megawatts. The Freeborn Wind Project and a Natural Gas Project power 69,000 homes and employ 6 full-time staff in the State. Invenergy projects in MN invest \$1.3 million annually in local taxes and provide \$516 million in annual landowner payments.		
	Battery Storage & Invenergy Battery Storage Experience —		
	Invenergy provided recent examples of Wisconsin Solar + Storage Projects experiences in regards to permitting and construction.		
3	Battery Energy Storage System overview explained via an analogy to a tank storing water. The Battery Energy Storage System will be used for surplus interconnection, enabling solar PV projects to fully utilize available transmission capacity by pairing solar with Battery Storage. This allows for greater control and value by making it easier for utilities and large energy users to manage intermittent resources while maintaining energy reliability, also reducing minute-to-minute variations in output, controlling ramp rates, and allowing generation to be predictable in hourly blocks.		
4	 Murray County, MN 150 MW Solar + 50 MW Battery Single-axis tracking system First lease signed in 2014 Over 3,000 acres leased Originally introduced project to EERA + PUC in 2017 MISO queue position in DPP-2017 cycle with soon to-be executed GIA and DPP-2018 position is post-DPP2 Target 2024 COD Invenergy provided an explanation of further site specific environmental studies conducted, further in depth on the VMP (e.g., developing specific goals and objectives for VMP, soil samples being collected and analyzed by the University of Minnesota Extension Office, etc.) and AIMP. 		
5	Project Timeline & Schedule –		

Item:	Discussion:		
	• 2016-2022 Development		
	2023-2024 ConstructionOperation beginning in 2024		
	• Operation beginning in 2024		
	Q&A Session:		
6	Bob asked for clarification of "dots" on the Site Summary Map – Mark explained these were initial preliminary interconnection and proposed battery storage facility sites (and that the layout is still being refined).		
7	Stephan commented on the AIMP – several AIMP's conducted/approved by the MDA by now have worked out the bugs; useful examples are available and should be considered for the Lake Wilson Solar Project AIMP. Still working on clarification with MDA & other MN agencies in terms of construction and the "how" facility will be constructed with regards to soil conservation, mitigation, drainage, drain tiles, etc. The MDA recommends focusing the AIMP on management of drainage infrastructure (surface & sub-surface), notably for grading activities potential impacts on site drainage characteristics. Recent conversations between MDA and other MN agencies are trying to find the best place to put information on the "how the facility will be constructed" (in the SPA application, AIMP, CN, etc.). Jeremy stated there is a fair amount of uncertainty/inconsistency and lack of consensus amongst MN agencies on the required information to be included in AIMP. (SEE ACTION ITEM BELOW)		
	Stephan – Commented he was glad to see Lake Wilson Solar Project team get after this stuff early in the process. Guidance is available for preparing the VMP; he recommended reaching out to DOC-EERA staff for current thoughts on what they'd like to see in the VMP. Jeremy responded that previous agency conversations and collaboration between Jamie MacAlister and other DOC-EERA staff regarding VMP contents.		
	Stephan – Asked if Lake Wilson intended to do a pollinator friendly planting mix James responds yes, whole suite of seed mixes, and including identifying areas that would benefit most from pollinator seed mixes.		
8	Bob – Commented that Lake Wilson really wants to get going on prime farmland assessment early and would like to hear about our prime farmland impacting the site selection process. Mark responded about congestion in the region for prime farmland and how site selection was undertaken many years ago. An assessment of site selection criteria will be included as a part of the SPA. Bob stated that they really would like the "story" behind it all in the assessment discussion.		
	Bob – Further commented that projects tend to go awry during construction when it comes to implementation of VMP and AIMP; Lake Wilson really needs to plan for controls and the procedure for handing over those plans from the Project developer to the contractor. He doesn't want to see all the good things noted in these plans fall apart when it comes time to construct the Project. He asked how Invenergy is going to ensure plans get accomplished in the field (during construction) and how it will adjust when encountering unexpected challenges. Mark responded that Invenergy plans to construct this Project (with a contractor) and that Invenergy will apply lessons learned in their recent Wisconsin solar portfolio projects (and apply those to		

Item:	Discussion:
	this MN project). Jeremy added there will be continuity between Invenergy's proposer/developer role with construction contractor that will help address some of the continuity questions.
	Stephan – Commented that there is always the opportunity to impact prime farmland in MN for these types of solar energy generation/storage projects as long as you justify it and build a reasonable case for the AIMP using the guidance to ensure a smooth approval process. He indicated Invenergy should be ready for changes and be adaptable.

Action Items

Item:	Person:	Comments:
1	Jeremy/Joe/James & MDA	AIMP implications in Item 7 above may require further conversations between the Lake Wilson team and the MDA.
2	James/Jeremy/Joe	A draft AIMP will be prepared and submitted to Stephan/Bob for MDA review/comments prior to finalizing the SPA.

From: Olagbegi, Korede

Sent: Tuesday, February 7, 2023 5:16 PM

To: Roos, Stephan (MDA)

Subject: RE: Lake Wilson Solar - Agricultural Impact Mitigation Plan (AIMP) **Attachments:** Lake Wilson Ag Impact Mitigation Plan_Site Permit Submittal.pdf

Hi Steve,

Thanks for your comments on the AIMP for Lake Wilson. The document has been revised accordingly and is attached here for review. As with the VSMP, it will be available upon our official site permit application filing this week, and we can address any additional comments or questions during the permitting process.

Thank you,

Korede Olagbegi | Associate, Renewable Development Invenergy | One South Wacker Drive, Suite 1800, Chicago, IL 60606 kolagbegi@invenergy.com | W: 708-377-9803 | C: 757-597-6211

From: Roos, Stephan (MDA) <stephan.roos@state.mn.us>

Sent: Saturday, January 14, 2023 10:20 AM

To: Olagbegi, Korede < KOlagbegi@invenergy.com>

Cc: MacAlister, Jamie (COMM) <jamie.macalister@state.mn.us>; Warzecha, Cynthia (DNR)

<cynthia.warzecha@state.mn.us>; Shaw, Dan B (BWSR) <dan.shaw@state.mn.us>; Benage, Megan (DNR)

<megan.benage@state.mn.us>; Smith, Todd (MPCA) <todd.smith@state.mn.us>; Collins, Melissa (DNR)

<Melissa.Collins@state.mn.us>; Miltich, Louise (COMM) <louise.miltich@state.mn.us>
Subject: [EXTERNAL] RE: Lake Wilson Solar - Agricultural Impact Mitigation Plan (AIMP)

Hi Korede,

Overall, the plan is very well done, however, you missed the section on Agricultural/Environmental Monitor, which is usually the first topic in this section. All projects under PUC oversight that impact agricultural land can be required to provide an independent, third party monitor that reports directly to MDA as well as other state agencies, in particular, projects that involve construction and disturbance of site soils. these construction activities include, but are not limited to, grading, trenching, foundation construction, drainage tile repair and relocation, etc. I have included a copy of another AIMP prepared by your consultant that includes appropriate and acceptable language covering this topic area.

I did check the Lake Wilson VMP to see if Agricultural/Environmental Monitor was covered but didn't find a reference to the topic there. The role of third party monitoring is equally important to the vegetation management planning team to help assure us that permanent vegetation establishment is successful.

As I mentioned at the top of this message, your consultants have otherwise produced a very good plan. My other comments in the draft AIMP are minor in nature. Once this section on Agricultural/Environmental Monitor is added I will gladly approve the plan.

Thanks, Steve From: Olagbegi, Korede < KOlagbegi@invenergy.com>

Sent: Thursday, December 29, 2022 3:48 PM

To: Roos, Stephan (MDA) < stephan.roos@state.mn.us>

Cc: bob.patton@state.mn.us; Monterrosa, Monica < MMonterrosa@invenergy.com >; Agrimonti, Lisa

<<u>LAgrimonti@fredlaw.com</u>>; Jeremy Duehr <<u>JDuehr@fredlaw.com</u>>

Subject: RE: Lake Wilson Solar - Agricultural Impact Mitigation Plan (AIMP)

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Re-sending to make a correction to Bob's email address.

Thanks,

Korede Olagbegi | Associate, Renewable Development **Invenergy** | One South Wacker Drive, Suite 1800, Chicago, IL 60606 <u>kolagbegi@invenergy.com</u> | W: 708-377-9803 | C: 757-597-6211

From: Olagbegi, Korede

Sent: Thursday, December 29, 2022 3:38 PM

To: Roos, Stephan (MDA) <stephan.roos@state.mn.us>

Cc: 'bob.patton@state.mn.us' <bob.patton@state.mn.us>; Monterrosa, Monica <MMonterrosa@invenergy.com>;

Agrimonti, Lisa <LAgrimonti@fredlaw.com>; Jeremy Duehr <JDuehr@fredlaw.com>

Subject: Lake Wilson Solar - Agricultural Impact Mitigation Plan (AIMP)

Good Afternoon,

My name is Korede Olagbegi and I have been the new lead developer on the Lake Wilson Solar Project. I know it has been some time coming with Invenergy first meeting with you and Bob about the Project back in 2017, and subsequent emails and letter communication about the Project over the years, as well as meeting with my colleagues in September 2021 for a Project re-introduction.

Thank you for your input and comments regarding the Project through its continued development. Lake Wilson Solar Energy LLC submitted a draft Site Permit Application (SPA) to DOC-EERA a few weeks ago, towards the end of November, and currently anticipates filing for the final Site Permit Application with DOC-EERA in mid-January. We wanted to provide for your review, a courtesy copy of the Agricultural Impact Mitigation Plan we submitted with the draft SPA in November.

Thank you,

Korede

Korede Olagbegi | Associate, Renewable Development Invenergy | One South Wacker Drive, Suite 1800, Chicago, IL 60606 kolagbegi@invenergy.com | W: 708-377-9803 | C: 757-597-6211

Minnesota Public Utilities Commission (PUC) Department of Commerce (DOC) Vegetation Manegement Plan Working Group

Meeting Minutes

Meeting Date: September 14, 2021

Project Number: R0012861.01

Project Name: Lake Wilson Solar Project, Murray County, MN

Meeting Location: Online via Teams

Meeting Topic: Introduce Project and the Project Team to Minnesota Public Utilities Commission (PUC) and Department of Commerce (DOC) Energy Environmental Review & Analysis (EERA)

Staff

The purpose of the meeting was to introduce the Lake Wilson Solar Project (a proposed 150 megawatt (MW) solar generation and 50 MW storage energy facility) planned for construction and operation in Murray County, MN, and the Project team to PUC and DOC staff. Invenergy, Inc. is leading development of the Project with the Project entity (Lake Wilson Solar Energy LLC). Invenergy staff made a brief PowerPoint presentation which covered a summary of the Project and Invenergy experience in developing and constructing solar energy generation/storage and other renewable energy projects.

Attendees:	Company Name:	Contact Info (email/phone)
Bret Eknes (Supervisor) Cezar Panait (Project Manager) Charley Bruce Andrew Levi	PUC	bret.eknes@state.mn.us; 651-201-2236 cezar.panait@state.mn.us; 651-201-2207 charley.bruce@state.mn.us; 651-201-2251 andrew.levi@state.mn.us; 651-539-1840
Louise Miltich (Supervisor) David Birkholz (Senior Project Manager)	DOC - EERA	louise.miltich@state.mn.us; 651-539-1853 david.birkholz@state.mn.us; 651-539- 1838
Aidan O'Conner Andrea Giampoli Mark Crowl Robert Young Daniel Litchfield James Hartsig Brad Plunkett	Lake Wilson Solar Energy LLC (Invenergy)	aoconnor@invenergy.com AGiampoli@invenergy.com; MCrowl@invenergy.com; RYoung@invenergy.com; DLitchfield@invenergy.com; JHartsig@invenergy.com; BPlunkett@invenergy.com
Jeremy Duehr, Esq.	Fredrikson & Byron, P.A.	JDuehr@fredlaw.com; 612-492-7413
Joe Sedarski Jake Schaffer	Westwood Professional Services, Inc.	Joe.Sedarski@westwoodps.com; 952- 207-7631 Jake.Schaffer@westwoodps.com; 952- 906-7456

Meeting Notes

Item:	Discussion:		
1	Introductions of Project team (Invenergy staff, Fredrikson & Byron, Westwood) to PUC and DOC - EERA contacts.		
	Invenergy and Overall Invenergy Experience –		
	World's Leading Privately Held Sustainable Energy Company with a foundation in wind energy (109 projects; 17,276 megawatts), solar energy (48 projects; 5,832 megawatts), storage (18 projects; 486 megawatts, 1,611 megawatt hours), and natural gas (12 projects; 5,661 megawatts).		
2	Invenergy has two projects in Minnesota, totaling 407 megawatts. The Freeborn Wind Project and a Natural Gas Project power 69,000 homes and employ 6 full-time staff in the State. Invenergy projects in MN invest \$1.3 million annually in local taxes and provide \$516 million in annual landowner payments.		
	Tentative connection to grid in central area (purple dot), battery storage at orange dot in NW region, questions answered during the call.		
	Lake Wilson Solar Project Overview –		
3	 Murray County, MN 150 MW Solar + 50 MW Battery Single-axis tracking system First lease signed in 2014 Over 3,000 acres leased Originally introduced project to EERA + PUC in 2017 MISO queue position in DPP-2017 cycle with soon to-be executed GIA and DPP-2018 position is post-DPP2 Target 2024 COD Project Timeline & Schedule - 		
	 2016-2022 Development/Permitting 2023-2024 Construction Commercial Operation Date in 2024 		
4	Battery Storage & Invenergy Battery Storage Experience – Invenergy provided recent examples of Wisconsin solar + battery storage projects (permitting and construction) and will use applicable experience with this Project. Battery Energy Storage System overview explained via an analogy to a tank storing water. The Battery Energy Storage System will be used for surplus interconnection, enabling solar PV projects to fully utilize available transmission capacity by pairing solar with battery storage. This allows for greater control and value by making it easier for utilities and large energy users to manage intermittent resources while maintaining energy reliability, also reducing minute-to-minute variations in output, controlling ramp rates, and allowing generation to be predictable in hourly blocks.		

Item:	Discussion:	
5	Invenergy provided an explanation of further site specific environmental studies conducted, further in depth on the Vegetation Management Plan (VMP) (e.g., developing specific goals and objectives for VMP, soil samples being collected and analyzed by the University of Minnesota Extension Office, etc.) and Agricultural Impact Mitigation Plan (AIMP).	
6	Louise M asked what level of tribal engagement has been conducted thus far – Joe S. responded that plan was to hold these introductory agency meetings prior to sending out informational & request for comments letters to tribes (and other state, county and local agencies). Further coordination via email or phone calls with tribes would also be completed as needed.	
	Louise requested that the Project team contact Mary Otto (Tribal Liaison) to confirm current list of tribes and tribal contact information regarding outreach efforts. (SEE ACTION ITEM BELOW)	
	Battery Storage Discussion/Questions:	
	Cezar asked about battery capacity associated with the Project; 4 hours to 250 MWh of energy before needing recharge? Aidan responded yes & explained the Project capacity.	
	Cezar also asked for operational BESS information from Invenergy solar projects in Wisconsin. Mark responded that those projects are still under construction and not yet available (not in operation yet). Aidan later states Invenergy has operational BESS projects in Illinois, Mexico, and other areas.	
	Cezar questioned how the BESS operate – Aidan responded that Invenergy is still in early stages of planning for use case of the BESS, considering multiple options including ancillary services and pairing with solar to be more in line with energy grid.	
7	Cezar asked if the Project has a Power Purchase Agreement or offtaker in place. Aidan responded there is no off-take currently in place at this time and that Invenergy is still exploring options.	
	Cezar asked if the Project could be generating 170 MW of power into MISO grid. Dan responded yes, but still capped at 150 MW of dispatched energy; however, with the other 20 MW storage position we could get to 170 MW total. Combination of solar and BESS is a positive way of supplying both capacity and generation to the grid.	
	Dan then discussed the Grand Ridge BESS project – Invenergy made a recent presentation and has additional BESS information available. For this proposed Project, Invenergy may not be using exactly the same system, but will send representative information/data to MN agencies. (SEE ACTION ITEM BELOW)	
	Cezar asked if the proposed BESS will occupy 7-8 acres and what is the spacing. Dan said 7-8 acres would be what is needed for the proposed battery storage area (though design is pending and ongoing) and went into deeper discussion about spacing of batteries, safety/security, fire control, and monitoring by Invenergy team (24/7 from remote Chicago location). There will also be on-site safety mechanisms.	

Item:	Discussion:	
	Cezar asked if the Project will use lithium-ion technology. Dan responded yes, specifically lithium iron phosphate technology that Invenergy is looking at deploying in future.	
	Bret/Andrew asked what happens to the batteries in 30 years? Dan responded they are currently recyclable and we will have a Decommissioning Plan in place for the Project to address this as well. There is a growing recycling supply chain which is related to Electric Vehicles (and how they will be recycled in 5-10 years); the Lake Wilson Solar Project BESS proposed service life 20-years. Cezar asked about replacement for operation/management of Project over 20 years? Dan responded they should last for that time based off one-time discharge. Grand Ridge replaced batteries after 5 years due to a much tougher duty-cycle (use) for that project. It may be possible to augment batteries depending on the off-taker's need for constant power. May be able to also add in small amount of batteries (but should not be anything significant).	
	Other Q&A Session:	
	Bret asked about transmission line needs for the Project. Mark responded that design is still under consideration; whether it is overhead or underground cabling, overall it is likely the Project will have a transmission line component to this Project. Dan added that the final transmission connection details are still being worked out for voltage/connection to the grid at the point of interconnect.	
	Cezar asked when the Site Permit (and Route Permit) applications will be filed. Aidan stated the goal is to submit by end of 2021 (though it may change to Q1 2022).	
	Louise indicated that Andrew would need a few weeks to review an initial pre-filed draft Site Permit (and Route Permit) application, likely beginning of December. Joe responded that the Project permitting schedule includes a draft to the DOC prior to final submittal with the PUC.	
8	Louise said the DOC is looking for the decommissioning plan a bit earlier in the permitting process (prior to submittal likely to use as a reference for the Site Permit application). Joe indicated the decommissioning plan is part of the work Westwood is assisting Invenergy with for the Project and it will be prepared for the permit process.	
	Louise stated she was happy to see Invenergy folks involved on the solar project vegetation management call sponsored by the DOC a few weeks ago. She said agency staff are starting to understand that applicants have a difficult time in identifying objectives for this plan. She said that the DOC - EERA has no secret correct answer for what the objectives should be, though the DOC wants to see realistic and pragmatic objectives that can be achieved by the applicant. She said the Project team can work with her prior to submittal for assistance defining objectives of Project vegetation management plan, as needed. She also appreciated Invenergy's overview of the BESS information presented.	
	Louise commented on the size determination form (it's an empty exercise at this point), but she would still like the Project Team prepare and file one. Jeremy responded that we are aware of this and working on it.	

Item:	Discussion:	
	Bret said the State does not regulate BESS as a large generating plant (and would not be part of	
	the Site Permit for the Project); it may be a learning opportunity for the State throughout this	
	process.	

Action Items

Item:	Person:	Comments:	
1	Louise – Joe – Invenergy Team	Louise requested the Project Team contact Mary Otto (Tribal Liaison) for confirmation of tribal contacts who will actually respond to inquiries. Joe emailed Mary on September 22, 2021, and Mary responded on September 27-28, 2021, with updates and further suggestions on outreach.	
2	PUC/DOC-EERA – Invenergy	The PUC/DOC will likely want to see the proposed use for BESS associated with the Project and whether that be ancillary support or other uses/operation included in the Site Permit application. Additional questions will likely follow for BESS plans. Invenergy will send additional battery storage information to the PUC/DOC-EERA staff prior to submitting the Site Permit application.	

From: MacAlister, Jamie (COMM) < jamie.macalister@state.mn.us>

Sent: Monday, June 6, 2022 10:52 AM

To: Hartsig, James <JHartsig@invenergy.com>; Levi, Andrew (COMM) <andrew.levi@state.mn.us>

Subject: [EXTERNAL] RE: Lake Wilson Vegetation Management Plan Review

James,

Let me look at schedules and send your team dates/times that would work. Since it's been awhile since we reviewed that plan, we also need to reacquaint ourselves with our comments and the site.

What is your timeframe? When do you plan on starting construction?

I'll be in touch soon.

JM

Jamie MacAlister

Environmental Review Manager
651-539-1775
mn.gov/commerce
Minnesota Department of Commerce
85 7th Place East, Suite 280 | Saint Paul, MN 55101



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From: Hartsig, James < JHartsig@invenergy.com>

Sent: Monday, June 06, 2022 10:34 AM

To: Levi, Andrew (COMM) <andrew.levi@state.mn.us>; MacAlister, Jamie (COMM) <jamie.macalister@state.mn.us>

Subject: RE: Lake Wilson Vegetation Management Plan Review

Good to know, Andrew. Thanks for the insight.

Jamie, we have updated our Vegetation and Soil Management Plan to include the comments and edits that you and your team made in our initial draft. We would like to discuss those, as well as some other concepts, with your team at your convenience.