Vista Sands Solar Project

Solar CPCN Application

Portage County, Wisconsin

PSC Docket No. 9820-CE-100

January 3, 2024

VISTA SANDS
SOLAR FARM

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1 Project Description and Overview

Vista Sands Solar LLC (Vista Sands Solar or Applicant), an affiliate of Doral Renewables LLC (Doral), submits this Application for a Certificate of Public Convenience and Necessity (CPCN) in accordance with Wis. Stat. § 196.491(3) and Wis. Admin. Code § PSC 111.53 to the Public Service Commission of Wisconsin (PSCW or Commission). The Application was prepared pursuant to the guidance provided by the PSCW's Application Filing Requirements (AFR) for Large (≥100 megawatt [MW]) Solar Energy Projects (Ver. Updated 2022) and consultations with the PSCW and Wisconsin Department of Natural Resources (WDNR).[1]

Vista Sands Solar is seeking two CPCNs, and all other approvals and authorizations required to construct, install, operate, and maintain the Vista Sands Solar Project (Project). The Project is comprised of: (1) a 1,310.4 MW alternating current (AC) solar farm; (2) a 300 MW Battery Energy Storage System (BESS); (3) an approximately four-to-five-mile 345 kilovolt (kV) transmission line and three 138 kV transmission lines totaling six to eight miles in length; and (4) five substations.[2] The Project is in the Village of Plover and Towns of Grant, Plover, and Buena Vista, Portage County, Wisconsin. The Project will utilize a single-axis tracker system and is anticipated to be placed in service as early as Q4 of 2028. The Project will be 1,182 MW_{AC} at the Point of Interconnection (POI) while the nameplate capacity will be 1,310.4 MW_{AC} in the field to account for losses en route to the POI. The Project will support the required 25 percent alternative area (Alternative Facility Area) pursuant to the AFR. The Proposed and Alternative Facility Areas comprise the Project Area.

Because the proposed 345 kV and 138 kV transmission lines are greater than one mile in length, a separate Transmission Line CPCN application has been filed.

The Project will be connected to the transmission grid via a new 345 kV generator tie line (gen-tie line) and switching station adjacent to the existing American Transmission Company (ATC) Rocky Run to Werner West 345 kV transmission line. The switching station will be constructed, owned, and operated by ATC.

See Figure 1 Project Overview Map for a general layout of all Proposed and Alternative Facility Areas, Project Substations, Proposed and Alternative Project Transmission Lines, and BESS.

1.1 General Project Location and Description of Project and Project Area

Provide the following information about the project:

1.1.1 Project Location – counties and towns in the project area.

The proposed Project is located in the Village of Plover and Towns of Grant, Plover, and Buena Vista in Portage County, Wisconsin. Table 1.1-1 identifies the location of the Proposed Facility

[1] Numbering in this application is consistent with numbering in the Filing Requirements.
[2] The relevant information for each of the generation and transmission CPCNs is provided in the relevant application for each portion of the Project. Where appropriate, and to facilitate review of both CPCN applications, certain information will be duplicated or referenced in both applications.

Area and Alternative Facility Area.

Table 1.1-1 Project Location

County	Proposed Facility Area		Alternative Facility Area	
	Township Name	Array Sections	Township Name	Array Sections
Portage	Town of Buena Vista	T22N, R8E S20, 28, 33	Town of Buena Vista	T22N, R8E S20, 21
	Town of Grant	T22N, R7E S11, 13, 14, 15, 16, 17, 21, 22, 28, 29	Town of Grant	T22N, R7E S1, 2, 3, 4, 5, 9, 11, 12, 13, 16, 17, 22, 23, 24, 25, 26, 27
	Town of Plover	T22N, R8E S8, 15, 18; T23N, R7E S35; T23N, R8E S28, 29, 32, 33	Town of Plover	T22N, R7E S1; T22N, R8E S4, 5, 6, 8, 9; T23N, R7E S35; T23N, R8E S32, 33
			Village of Plover	T23N, R8E S28, 33

1.1.2 Size of project area (in acres), area to be disturbed by construction activities (in acres), and size of solar arrays (in acres).

The size of the Project area to be potentially disturbed by construction activities is approximately 9,854 acres which includes the Proposed and Alternative Facility Areas, transmission lines, and ancillary facilities.

The Project Area includes 6,737 acres of land to support the Proposed Facility Area, which can produce 1,480.2 MW_{DC} (1,310.4 MW_{AC}) of power, and 3,012 acres of land to exceed the Commission's 25 percent standard for an alternative site, which can produce 537.7 MW_{DC} (468.0 MW_{AC}) of power. The Project substations, BESS and operations and maintenance (O&M) building are considered part of the Proposed Facility Area and total roughly 189 acres. The proposed sites and the evaluation process are described in detail in Section 1.5 below.

1.1.3 Size (rated capacity), in both DC and alternating current (AC) MWs, of the proposed project.

The full Project nameplate capacity of 1,310.4 MW_{AC} can be achieved with the single-axis tracking system proposed for the Project. The conceptual design of the proposed array will generate 1,480.2 MW_{DC} (1,310.4 MW_{AC}) and the alternative solar array will generate 537.7 MW_{DC} (468.0 MW_{AC}). Longi LR5-72KBD bifacial M10 wafer 545W cell modules were used for the conceptual design.

At the time of construction, several photovoltaic (PV) module offerings from different suppliers will be evaluated and a selection will be made based on a number of Project criteria, including cost. The technologies that may be considered include thin-film, polycrystalline silicon, and monocrystalline silicon (including bifacial PV modules), and the final supply of modules may contain a mix of several similar wattages. PV modules produced by a wide range of manufacturers are under consideration for the Project.

1.1.4 Number of panel sites proposed for the project and the number of alternative panel sites that have been identified. (See the discussion on page 1 regarding alternatives).

The Proposed Facility Area is designed for approximately 2,715,908 individual PV panels with a total DC generating capacity of 1,480.2 MW_{DC} which, for a designed 1.14 DC-to-AC ratio, is enough capacity to meet a nameplate generation of 1,310.4 MW_{AC} power.

The Alternative Facility Area is designed for approximately 986,648 individual PV panels with a total DC generating capacity of 537.7 MW_{DC}, for a designed 1.14 DC-to-AC ratio. This design incorporates enough capacity to meet a nameplate generation of 468.0 MW_{AC}, which exceeds 25 percent of the Proposed Facility Area's generating capacity.

1.1.5 Identify any new or modified electric transmission lines or other electric transmission facilities that might be needed. Discuss any recycling or repurposing options that can be employed to eliminate waste streams for solar electric generating site components, including any BESS systems.

Several new or modified electric transmission lines or facilities are proposed for this Project, including the gen-tie line, collector lines between collector substations, and main substations. These facilities are all internal to the Project. Details of these Project Transmission Lines are found in the associated Transmission Line CPCN application.

Vista Sands Solar holds queue position J2099, J2107, and J2185 in MISO's East ATC DPP-2021 Cycle 1 for the solar generation component of the Project. Communication has occurred primarily through the MISO study cycle parameters with the Project's feasibility report issued in April 2023 at the conclusion of Phase 1. In its application, Vista Sands Solar requested full Network Resource Interconnection Service for 1,182 MW capacity of the facility at the POI.

MISO interconnection studies are found in Appendix D.

Vista Sands Solar anticipates submitting a Surplus Interconnection request after the release of the DPP2 study which is currently scheduled for late Q1 2024. The Surplus Interconnection Request to MISO will study the impacts of the BESS to the solar generating portion of the Project. If no material impacts are identified, the surplus request will be granted a Large Generator Interconnection Agreement (LGIA) along with the solar generating facility. Vista Sands Solar expects to execute a Large Generator Interconnection Agreement (LGIA) with MISO for the Project in Q3 2024.

If material impacts are identified as a result of the Surplus Interconnection Request, Vista Sands will submit a new and separate application MISO application for the BESS. This would allow the

Project to fund any required network upgrades necessary to address reliability issues within the interconnection facilities.

1.1.6 Provide a general map showing the location of the project area, nearest communities, townships, and major roads. Include an inset map showing where the project is located in the state. Scale should be appropriate for showing communities within at least 10 miles of the project area boundary.

Figure 1.1.6 provided in Appendix A depicts the general Project location within the state of Wisconsin, and Figure 4.1.1 (Appendix A) shows the total Project area with an aerial photography basemap. Figure 4.1.2 (Appendix A) is a detailed mapbook of the proposed Project facilities.

1.2 Ownership

Identify the corporate entity or entities that would own and/or operate the plant.

The applicant is Vista Sands Solar LLC, which may own and operate the Project, or develop and sell the Project to a utility or an independent power producer. Vista Sands Solar is an affiliate of Doral Renewables LLC (Doral). Doral Renewables LLC (dba Doral LLC) is a U.S. company owned by Doral Renewables Energy Resources Group (TASE:DORL, "Doral Group"), a publicly traded Israeli renewable energy company; Migdal Group, Israel's largest insurance company and pension manager; and U.S. members. Doral LLC combines the advanced engineering, development, and operating experience of the international Doral Group, with a team of US-based energy developers, who have extensive experience throughout the United States. Doral LLC currently has approximately 10 gigawatts of projects under development across 20 states and eight electricity markets, and over 100,000 acres of land under control in the U.S.

1.3 Project Need/Purpose

Subsections 1.3.1 thru 1.3.5 of the AFR are not responded to because they only apply to utility-sponsored projects.

1.3.6 IPPs Only – Energy Agreements

1.3.6.1 Identify all Wisconsin utilities under contract for delivery of energy from the proposed project.

Vista Sands Solar has not yet finalized energy offtake for the Project. Vista Sands Solar will provide this information to the PSCW and WDNR once the relevant agreements, if any, are executed.

1.3.6.2 For each utility under contract or with which an agreement in principle for delivery of energy is in place provide the following, by utility:

1.3.6.2.1 Rated capacity under contract.

Vista Sands Solar does not currently have rated capacity under contract.

1.3.6.2.2 Annual energy to be delivered under contract or expected to be delivered, including expected capacity factor.

The Project does not currently have annual energy to be delivered under contract. Annual energy to be delivered from the Project is detailed in Section 2.1 of the Application.

1.4 Alternatives

Subsection 1.4.1 of the AFR is not responded to because it only applies to utility-sponsored projects.

1.4.3 Utilities (CPCN or CA) and IPPs (CPCN) – Project Area Selection

1.4.3.1 Alternative Project Areas. Describe the project area screening and selection process used to select the proposed project area. Provide the following:

1.4.3.1.1 List individual factors or site characteristics used in project area selection.

1.4.3.1.2 Explain in detail how brownfields were considered in the selection of sites to develop.

1.4.3.1.3 Explain how individual factors and project area characteristics were weighted for your analysis and why specific weights were chosen.

1.4.3.1.4 Provide a list of all project areas reviewed with weighted scores for each siting factor or characteristic used in the analysis.

1.4.3.2 Provide a narrative describing why the proposed project area was chosen

This section addresses the requirements of Section 1.4.3 of the AFR, including all subsections (i.e., 1.4.3.1.1 through 1.4.3.2).

Vista Sands Solar evaluated potential project sites and identified the Project Area after considering the following primary factors:

Transmission and injection capacity: The primary factor in site selection for utility-scale solar development is availability of existing electric infrastructure necessary to connect a project to the power grid.

Preferred injection points are found where the existing electrical infrastructure is robust, thereby minimizing the interconnection facility costs and network upgrades frequently attributed to new generating facilities. Projects where land is available near points of interconnection are also prioritized, as this minimizes the length of high voltage transmission generation tie lines and the number of structures that support them.

Vista Sands Solar submitted an interconnection request to Midcontinent Independent System Operator (MISO) DPP 2021 East ATC Cycle 1 in August 2021 to interconnect into the ATC Rocky Run to Werner West 345 kV transmission line and anticipates adequate transmission capacity to be available to support the Project.

Land availability and infrastructure: Large tracts of relatively flat undeveloped lands are typically utilized for utility-scale solar facilities. The Project Area is mostly agricultural land that has been

in production for decades. This also results in limited non-participating residential parcels throughout the Project Area. The topography within the Project Area is very flat and open which makes it conducive for solar development. The Vista Sands Solar site is mostly flat and should not experience shading from external objects (trees, farm buildings, etc.). Specific Global Horizontal Irradiance for Vista Sands Solar can be found in table 2.1-1 in Chapter 2.

Through private negotiations, Vista Sands Solar has secured agreements for the Project Study Area under consideration for the Proposed and Alternative Facility Areas. The area ultimately evaluated for the Project encompassed approximately 9,854 acres, all within proximity to the proposed point of interconnection with the Rocky Run to Werner West 345 kV transmission line.

Area infrastructure was reviewed for compatibility with large construction vehicles and delivery trucks and a summary of the findings is included in the Road Condition Report in Appendix T. The Project is located in an area where nearby roads and highways, such as I-39, CTH W, STH-54, and CTH F, are suitable for equipment and material delivery during construction.

Environmental considerations: A preliminary analysis followed by field surveys was completed to screen for environmental factors including, but not limited to, wetlands, waterways, endangered species, invasive species, critical habitat, floodplains, and cultural and historic resources. The Project Area has few environmental constraints, and the constraints identified will be avoided by the Project or permitted with the applicable state or federal authorities.

Community: Vista Sands Solar values working with communities that welcome solar projects and responsible economic development opportunities. Vista Sands Solar places great importance on community-supported projects and engages with local landowners, neighboring landowners, municipal leaders, and state legislators early in the development process. In order to be a good neighbor, it is important that any project is transparent and in frequent communication with the public from the time the project is initiated. Vista Sands Solar has been engaging the community and local municipalities and values their feedback and concerns.

Brownfields: No 9,854-acre brownfields exist within proximity of the POI, so brownfields were not considered in the siting of this Project.

1.5 Utilities (CPCN OR CA) and IPPs (CPCN) – Site Selection

1.5.1 List the individual factors or characteristics used to select the proposed and alternate panel sites (arrays).

Refer to Section 1.4.3.2 above for the individual factors or characteristics used to select the overall project site and for the development of the Project Boundary. Vista Sands Solar, along with its consultant, Stantec Consulting Services Inc. (Stantec), further evaluated the property for siting the Proposed and Alternative Facilities. This more detailed process also factored in the following:

Community feedback: Throughout the Project development process, feedback from the community has been solicited and received. This feedback, including concerns and preferences, has been considered in the preliminary design, factoring into proposed setbacks, potential locations of panels, and access roads. As the Project progresses, Vista Sands Solar may make

minor changes in the field to accommodate unforeseen circumstances; however, any changes shall take into account the basic premise of considerations that were used in designing the current Project layout.

Environmental considerations: Vista Sands Solar evaluated natural resources such as wetlands, waterways, endangered species, floodplains, and cultural resources as part of the Project development process. Vista Sands Solar designed the Project to avoid and minimize impacts to these resources to the extent practicable.

Setbacks and screening: Setbacks from public rights-of-way (ROWs), utilities, and sensitive community resources were established and mapped, consistent with industry standards. There are four cemeteries, five daycares/schools, seven healthcare facility buildings, and four churches located within a one-mile radius of the Project Area.

Unavailable or restricted land: Managed and public lands, conservancies, land under contracts such as Managed Farm Law (MFL), and Farmland Preservation Agreements were reviewed and considered for restrictions. There are no national or state parks and forests within 2 miles of the Project Area. There are 17 local parks outside of the Project Area, but within 2 miles. There are 12 Grassland Reserve Program Easements within 2 miles of the Project Area, but none within the Project Area. The Buena Vista Prairie Chicken Meadow, a State Natural Area, is located approximately 0.25 miles south of the Project. Three WDNR Managed Properties - Buena Vista Wildlife Area, Central Wisconsin Grassland Conservation Area, and Whiting Station - are adjacent to the south of the Project Area. The Project is within a Farmland Preservation Plan Area. There are many MFL contracts within 2 miles of the Project, with one contract within the Project Area. There is one snowmobile trail through the Project Area, and the Green Circle State Trail is approximately 0.65 mile to the northeast of the Project Area. In every instance, Vista Sands Solar has worked to eliminate or minimize the Project's impact on sensitive lands.

Airport locations: Airports, airstrips and runways were assessed to verify that sufficient distances exist from runways to Project facilities. Runway Leasing Inc Nr 2 in the Town of Plover is adjacent to the Project on the east side. A crop-dusting airstrip in the Town of Pine Grove is approximately two miles south-east of the Project. Stevens Point Municipal Airport in the City of Portage is approximately seven miles north of the Project. Alexander Field South Wood County in the Town of Grand Rapids is approximately seven miles to the west of the Project. Swan Field in the Town of Almond is approximately 7.5 miles to the south-east of the Project. Runway Leasing Inc Nr 1 and Plainfield Intl in the Town of Plainfield are 8 miles and 8.5 miles from the Project, respectively. Lake Ell Field in the Town of Amherst is approximately 10 miles to the east of the Project. The Project will not have an impact on flight operations in the Project Area.

Existing Renewable Energy Facilities: The Portage Solar Project is adjacent to the Vista Sands Solar project in the Towns of Grant and Plover, Portage County, Wisconsin. Vista Sands Solar and Portage Solar are being developed independently but have been in communication regarding general development issues.

Sound: Unmitigated noise modeling results indicate exceedances of the PSCW daytime 50 dBA noise limit at 32 receptors and nighttime 45 dBA noise limits at 135 receptors. The receptors with predicted exceedances of noise limits are in the vicinity of the BESS facility and Project Substation

1. The noise sources causing the exceedances were BESS battery containers, BESS inverters, and substation power transformers.

Based on the initial unmitigated noise modeling results, noise mitigation measures were assessed to identify the amount of noise mitigation needed to meet the PSCW noise limits. A combination of two types of noise mitigation approaches were identified as likely to be needed: (1) selection of quieter equipment or equipment with additional noise mitigation measures applied so that less noise is generated at the source, and (2) placement of noise barriers adjacent to the BESS facility equipment to reduce the amount of noise that propagates to adjacent residences.

With the implementation of the noise mitigation approaches, the maximum Project-generated noise level was estimated to be 45 dBA Leq during daytime and nighttime periods at the nearest residences. The noise assessment results demonstrate that, with the implementation of noise mitigation measures, the Project can be operated in compliance with the PSCW noise limits and that Project operational noise levels are not expected to exceed 50 dBA during daytime or 45 dBA during nighttime at a non-participating residence or occupied community building.

The full sound study report can be found in Appendix Q.

Constructability and collection: Construction considerations were factored into the design, including restrictions due to slopes and soils, irrigation ditches, construction efficiency, and equipment movement. Additionally, the ability to network the collection system between solar panel array sites was optimized to the extent possible.

The factors described in Sections 1.4.3.2 and 1.5.1 above were considered in an iterative process to arrive at a Project design that minimized impacts to the environment and surrounding landowners while maximizing the efficiency of the Project within the Proposed Facility Area. The Alternative Facility Area will be utilized should the permitting process so dictate, or if circumstances arise prior to construction that prohibit the use of part of the Proposed Facility Area or indicate that moving panels (subject to any additional necessary PSCW approval) otherwise provides for a better overall Project. Revisions to the panel layout design may require associated modifications to other Project components including collection line routes, access roads, and shifts in other panel locations.

1.5.2 Provide information on how site characteristics and the type/s of panels chosen factored into the selection of the final panel sites. Discuss any risks associated with supply chain disruption for the various panels under consideration and how such risks would be mitigated.

Project site characteristics were considered as described in Sections 1.4.2 and 1.5.1. The conceptual design for the Project includes Longi LR5-72KBD bifacial M10 wafer 545W cell modules; Sungrow SG3600UD inverters; and self-powered single-axis trackers provided by NEXTracker. For a 2028 in-service date, the Project is expected to use products with similar electrical and physical characteristics that are readily available in the market at the time of purchase. Additional modules evaluated in the conceptual design process are included in Section 1.1.3 above.

1.5.3 Setback distances

Vista Sands Solar designed the facilities to maintain minimum solar panel setbacks and boundary fence setbacks from residences, property lines, and other features. The Project does not require easements from non-participating landowners to accommodate the setbacks utilized. These setback distances meet or exceed all county, township, and village ordinances or rules.

1.5.3.1 Provide the minimum setbacks for both boundary fences and solar panels from:

- **residences**
- **property lines**
- **other buildings (e.g., animal barns, storage sheds)**
- **roads**
- **wetlands and waterways**
- **existing utility infrastructure (i.e., natural gas pipelines, electric distribution lines)**
- **any other features.**

See table 1.5-1 below.

Table 1.5-1 Design Setbacks

Type	Setback/ Constraint	Setback	Clarification
Structures	Inhabitable Structures - Building Edge (non-participating)	150 feet (from building footprint)	As measured to edge of fence. Does NOT apply to access roads.
Structures	Inhabitable Structures - Building Edge (participating)	150 feet (from building footprint)	As measured to edge of fence. Does NOT apply to access roads.
Structures	Inhabitable Structures - Building Edge with Waiver	Per waiver	
Structures	Noninhabitable Structures	20 feet (from building footprint)	As measured to edge of panel. Does NOT apply to access roads and fences
Structures	Height	35 feet maximum	Applies to principal structures (PV asset, O&M facility)

Type	Setback/ Constraint	Setback	Clarification
Property Lines	Side-yard	25 feet	Measured from side lot line; setbacks could be revised during permitting process. Does not apply to shared participating lot boundaries.
Property Lines	Rear-yard	25 feet	Measured from rear lot line; setbacks could be revised during permitting process. Does not apply to shared participating lot boundaries.
Property Lines	Front-yard	Varies depending on class of road In no case shall the distance of the setback be less than the following; Town Roads: 68 feet from centerline or 35 feet from ROW County Roads: 75 feet from centerline or 42 feet from ROW Federal, State Highways: 110 feet from centerline or 50' from ROW	Measured from front lot line; setbacks could be revised during permitting process. Does not apply to shared participating lot boundaries.
Roads	Class 1 Highways – State and Federal Highways	110 feet from the centerline of the highway or 50 feet from the right-of-way line, whichever is greater	As measured to PV generation asset. Does NOT apply to access roads and fences

Type	Setback/ Constraint	Setback	Clarification
	Class 2 Highways – County Roads	75 feet from the centerline of the highway or 42 feet from the right-of-way line, whichever is greater	
	Class 3 Highways – Town Roads	63 feet from the centerline of the highway or 30 feet from the right-of-way line, whichever is greater	
Roads – Vision Corners	Road Intersections	Vision clearance triangle shall be bounded by the highway, street, or railroad right-of-way lines which are located a distance back from the intersection of the right-of-way lines equal to twice the setback required on the intersecting highway or street	As measured to PV generation asset. Does NOT apply to access roads and fences
Environmental	Trees (shading)	20 feet to the south 80 feet to the north, east, and west	As measured to PV generation asset. Does NOT apply to access roads and fences. Trees may be trimmed to reduce or eliminate setback requirement
Environmental	Wetlands	50 feet from delineated wetland boundary to access roads	Does not include PV generation assets or fences.
Environmental	Waterways	75 feet from Ordinary High-Water Mark (OHWM)	Applies to structures, including solid or chain link fences.
Existing	Railroad Easement	25 feet	From ROW edge, to

Type	Setback/ Constraint	Setback	Clarification
Infrastructure			edge of PV asset. Does NOT apply to access roads or fencing
Existing Infrastructure	Overhead Communication Electric Utilities	5 feet	Edge of PV asset will be no closer than 5 feet from edge of utility line easement area
Existing Infrastructure	Pipelines	5 feet	Edge of PV asset will be no closer than 5 feet from edge of pipeline easement

1.5.3.2 Identify any sites where non-participating "good neighbor" agreements have been executed.

No "good neighbor" agreements have been executed for the Project to date.

1.5.3.3 Status of easement agreements:

1.5.3.3.1 Identify all project sites with easement agreements that have been signed.

Vista Sands Solar has 20 lease agreements or purchase options in place to construct the Proposed and Alternative Facility Areas. Reference Table 1.5-2 for parcel information.

1.5.3.3.2 Identify all sites where easement agreements have not been signed and provide a short description of the status of negotiations.

Table 1.5-2 provided below identifies all Project site land agreements that have been signed and those that are still in the process of negotiation.

Table 1.5-2 Status of Land Agreements

Primary Owner Name	Parcel ID	Type	Status	Sum of Acreage Rounded Under Agreement
J&P Okray, LLC Okray Enterprises, Inc. Okray Produce Company, Inc. OOOOF LLC Plover Farms, Inc.	030230829-01.01 030220808-09 030220808-10 030220808-12 030220808-11 018220702-14 030230829-04 030230829-03 030230829-13 030230829-14 0173230828-11.01 030230833-06.02 030230829-16 030230832-01 030230829-15 030230833-07.01 030230832-04 030230833-10.02 030230833-12 030230735-7 018220705-01.02 018220705-04 018220705-13 030230735-11 030230735-11.01 030230833-09 030220701-05 030220701-06 018220702-01.01 018220702-02 030220701-08 030220701-07 018220702-04.01 018220702-03 018220701-09.02 018220701-10.02 018220701-12	Lease	Participating	5,911.05

Primary Owner Name	Parcel ID	Type	Status	Sum of Acreage Rounded Under Agreement
	018220701-11 018220703-01 018220703-02 018220703-05 018220703-06 018220702-08 018220702-07 018220703-04 018220703-03 018220703-08 018220703-07 018220702-10.03 018220703-13 018220703-14 018220703-16 018220703-15 018220703-09 018220703-10 018220704-10 018220704-11 018220703-12 018220703-11 018220711-02 018220711-03 018220711-08 018220711-14 018220711-05 018220711-06.01 018220709-01 018220709-02 018220709-03 018220709-11 018220709-12.02 018220709-04 018220712-13.02 018220712-16.01 018220711-13 018220711-15			

Primary Owner Name	Parcel ID	Type	Status	Sum of Acreage Rounded Under Agreement
	018220712-15 018220712-12 018220712-11 018220713-02.01 018220713-05 018220711-16 018220709-12.01 018220716-05 018220716-06 018220716-08 018220716-07 018220714-08 018220714-07 018220715-08 018220715-07 018220715-10 018220716-13 018220716-14 018220716-16 018220716-15 018220716-12 018220716-09.01 018220715-12 018220715-11 018220722-05.02 018220722-06 018220722-08.02 018220722-07 018220721-01.01 018220721-02 018220721-05 018220721-06 018220724-13 018220724-14 018220724-09 018220724-10 018220724-16 018220724-15			

Primary Owner Name	Parcel ID	Type	Status	Sum of Acreage Rounded Under Agreement
	018220724-12 018220725-05 018220725-06 018220725-08 018220724-11 018220723-14 018220723-16 018220723-15 018220723-12 018220723-11 018220726-5 018220726-6 018220726-8 018220726-07 018220727-13 030230735-09 018220702-06 018220709-13 018220709-14 018220709-16 018220709-15 018220702-09 018220724-06 018220724-07 018220729-01 018220729-02 030230833-14 030230833-15 030220806-04 030220806-13 030220806-16 018220702-13 018220702-16 018220702-12 018220702-11.01 018220702-11.02 030220808-05 030220808-06			

Primary Owner Name	Parcel ID	Type	Status	Sum of Acreage Rounded Under Agreement
	030220808-08 030220808-07 018220711-06 018220702-15 018220717-01 018220717-01.01 018220717-02 018220717-03 018220717-04.03 018220717-04.04			
Robert P. Konopacky Jr.	018-22-0724-05	Lease	Participating	40.52
RPK Grant LLC	018-22-0713-12.02 018220713-15.02	Lease	Participating	227.27
Shortt Family Properties, LLC	030-22-0815-02 030-22-0815-04 030-22-0815-03	Lease	Participating	120
Prairie Star Ranch, Inc.	018-22-0722-10 018-22-0722-09 018-22-0722-14 018-22-0722-13 018-22-0722-03.02 018-22-0722-04.01 030-22-0818-11 018-22-0722-11	Lease	Participating	285.97
PSR Uplands, LLC	018-22-0724-03 018-22-0724-02 018-22-0724-04	Lease	Participating	120.3

Primary Owner Name	Parcel ID	Type	Status	Sum of Acreage Rounded Under Agreement
Jan Wolosek and Christine J. Wolosek	018-22-0722-01 018-22-0722-02 018-22-0722-03 018-22-0722-04 018-22-0722-05.01 018-22-0722-08.01 018-22-0717-15 018-22-0717-15.01	Lease	Participating	204.11
JMR Point, LLC	018-22-0713-07.01	Lease	Participating	114.64
Carl H. Novack and Carol A. Novack, as Trustees of the Carl H. Novack & Carol A. Novack Family Revocable Trust	018-22-0720-16.09 018-22-0728-02.01 018-22-0728-05.01 018-22-0723-13 018-22-0727-05 018-22-0721-11	Lease	Participating	155.15
Carl H. Novack and Carol A. Novack	018-22-0728-02.02	Lease	Participating	30.84
MS&S Enterprises Limited Partnership	030220805-11 030220805-12 030220805-15 030220805-16 030220805-10 030220805-09 030220805-14 030220805-13 030220805-03 030220805-04 030220805-02 030220805-01	Lease	Participating	634.64

Primary Owner Name	Parcel ID	Type	Status	Sum of Acreage Rounded Under Agreement
	030220808-03 030220808-02 030220808-04 030220808-01			
Blue Top Farms, Inc.	010220828-15 010220828-16 010220833-02.01 010220833-02.02 010220833-03 010220833-14 010220833-15	Lease	Participating	240
Garibaldi Ranch Limited Partnership	030-22-0809-14.01 030-22-0809-13 030-22-0809-15.01 030-22-0809-16 030-22-0804-08 030-22-0804-09 030-22-0804-12 030-22-0804-03 030-22-0804-04.01 030-22-0804-14 030-22-0804-13.01 030-22-0804-15 030-22-0804-16.01 030-22-0820-02 030-22-0820-03	Lease	Participating	974.8

Primary Owner Name	Parcel ID	Type	Status	Sum of Acreage Rounded Under Agreement
	030-22-0820-01 030-22-0820-04 030-22-0821-06 030-22-0821-07 030-22-0821-05 030-22-0821-08 030-22-0821-02 030-22-0821-03 030-22-0821-01 030-22-0821-04			
Mary A. Hamerski, as Trustee of the Mary A. Hamerski Survivor's Trust	030-23-0833-10.03 030-22-0804-11 030-23-0833-10.01 030-22-0804-10 030-23-0833-11 030-23-0832-16	Lease	Participating	150
Dennis Firkus Marital Trust	018-22-0704-09 018-22-0704-12 018-22-0704-13 018-22-0704-14 018-22-0704-15 018-22-0704-16 018-22-0715-15 018-22-0715-16	Lease	In negotiation	320.66
Bier Kase LLC	030-23-0725-11.04 030-23-0725-11.01	Transmission easement	Participating	53.9

Primary Owner Name	Parcel ID	Type	Status	Sum of Acreage Rounded Under Agreement
Craig A Newby and Laura L Newby	030-23-0735-02.06	Transmission easement	In negotiation	5.03
Dean D Kaetterhenry and Donna J Kaetterhenry	030-23-0735-02.07	Transmission easement	Participating	10.06
Dennis Firkus Marital Trust Barancyian Lands LLC Bernadette V Firkus	030-23-0735-08	Transmission easement	In negotiation	40.17
Eric P Shudarek and Jennifer A Shudarek	030-23-0830-04	Transmission easement	In negotiation	32.76
Income Bernard F Income Maria Prutz Trust	030-23-0829-07.01 030-23-0829-08.01	Transmission easement	In negotiation	35.19
Mary A Hamerski Survivors Trust	030-23-0829-07.02	Transmission easement	In negotiation	20.16
Jerome M Meshak	030-23-0735-02.04	Transmission easement	Participating	13.9
Mortenson Bros Farms Inc.	030-23-0736-05 030-23-0736-06 030-23-0735-01 030-23-0735-03	Transmission easement	Participating	160.22
Okray Produce Land LLC	030-23-0725-16 030-23-0830-11.01	Transmission easement	In negotiation	79.96
Colleen D Wolosek	030-23-0830-13 030-23-0830-14 030-23-0830-09	Transmission easement	In negotiation	136.56

Primary Owner Name	Parcel ID	Type	Status	Sum of Acreage Rounded Under Agreement
Worzella Sons Inc.	030-23-0725-15	Transmission easement	Participating	53.92
Gary R. Hess	030-23-0735-12	Transmission Easement	Participating	40
Lisa M Jensen	018220710-10 018220710-02	Transmission Easement	In negotiation	80.19
Marvin R Raasch	018220710-08 018220710-03 018220710-09	Transmission Easement	In negotiation	120.36
Paramount Land LLC	030220816-16 030220816-13 030220816-04 030220816-01.02 030220809-04 030220809-01	Collection Easement	In negotiation	240
Eagle Creek Midwest LLC	010220819-06 010220819-05 010220819-02 010220819-01	Collection Easement	In negotiation	162.44

Primary Owner Name	Parcel ID	Type	Status	Sum of Acreage Rounded Under Agreement
Wolosek Family Enterprises LLC	018220701-15 018220701-16 030220806-11 030220806-15	Collection Easement	In negotiation	174.4
Mortenson Bros Farms Inc	030230735-15	Transmission Easement	In negotiation	40
Weller Farms LLC	030220815-05.01	Transmission Easement	In negotiation	38
Potter & Son Inc	030220815-06.01	Transmission Easement	In negotiation	42
Door Revocable Trust	030220810-11	Transmission Easement	In negotiation	40

1.5.4 Identify whether setbacks are consistent with local zoning (county or municipality) or if there are variations from local zoning setbacks, describe why.

Setbacks are consistent with local zoning.

1.6 Utilities Only - Cost

Section 1.6 of the AFR is not responded to because it applies to utilities only.

1.7 IPPs Only - MISO and Project Life Span

1.7.1 MISO Market. Describe how, at the time of this filing, the proposed facility will be treated as an intermittent resource in the MISO market.

Vista Sands Solar holds queue position J2099, J2107, and J2185 in MISO's East ATC DPP-2021 Cycle 1 for the solar generation component of the Project. Communication has occurred primarily

through the MISO study cycle parameters with the Project's feasibility report issued in April 2023 at the conclusion of Phase 1. In its application, Vista Sands Solar requested full Network Resource Interconnection Service for 1,182 MW nameplate capacity of the facility.

Solar PV projects in MISO receive the class average of 50 percent capacity for their Initial Planning Year until they can demonstrate three years of operational history. Thereafter, their capacity value is determined based on a three-year historical average output of the resource for peak hours during the summer months.

The Project is currently being evaluated and has completed Phase 1. According to the most recently published milestone calendar from MISO, Phase 2 is currently projected to conclude in March 2024, and Phase 3 is projected to conclude in April 2024. Vista Sands Solar expects to execute a Large Generator Interconnection Agreement (LGIA) with MISO for the Project in Q3 2024.

The impact to the MISO grid with the integration of a BESS at Vista Sands Solar will be positive, as the storage system can act as an "electrical suspension" system for the grid, to smooth out abrupt ups and downs in solar production that can occur on partly cloudy days. Depending upon project design, the BESS can furnish other grid services such as frequency response, voltage support, and output scheduling to potentially shift some afternoon production to later in the day, if needed, to correspond with peak demands.

1.7.2 Provide an estimate of the expected life span for the power plant.

The design life for the Project is 30-35 years. Vista Sands Solar understands that the value of a solar project lies in its operation and anticipates a premium level of operation and maintenance service throughout its life. Based upon future needs of the marketplace, the community, and Vista Sands Solar, there may be an opportunity in the future to extend the Project's life beyond 35 years.

1.7.3 Describe how the facility will be decommissioned at the end of its life span. Describe expected decommissioning actions and timelines.

The Project is expected to operate for at least 30-35 years based on current forecasts for modern equipment. At the end of the Project's useful life, Vista Sands Solar will assess whether to cease operations and decommission the Project or to replace equipment to extend the life of the Project. In general, the majority of decommissioned equipment and materials will be resold or recycled. Materials that cannot be resold or recycled will be disposed of at approved facilities. The Project decommissioning plan is included in Appendix U.

Decommissioning activities will require approximately 12 months to complete. In general, decommissioning activities would include:

1. Reinforcing access roads, if needed, and prepare site for component removal.
2. Installing erosion control materials and other best management practices (BMPs) to protect sensitive resources and control erosion during decommissioning activities.
3. De-energizing solar arrays.
4. Dismantling and removing panels and above-ground wiring.

5. Removing tracking equipment and piles.
6. Removing inverter/transformer stations along with support system and foundation pads.
7. Removing above and below ground electrical cables and conduits (48 inches or less below the ground surface).
8. Removing BESS components.
9. Removing solar array and BESS perimeter fence.
10. Removing access roads, BESS yard, and grade site (as required).
11. Removing substation and associated overhead transmission tie-in line.
12. De-compacting subsoils as needed, restore, and revegetate disturbed land to pre-construction conditions to the extent practicable.
13. Removing of interior roads and underground cabling will be determined by the future landowner.

1.7.3.1 Provide an estimate of the cost of and source of funding for decommissioning. State whether financial security would be provided to cover decommissioning costs, including the amount and time it would be provided.

Vista Sands Solar anticipates negotiation and execution of a joint development agreement with Portage County, the Village of Plover, the Town of Grant, the Town of Plover, and the Town of Buena Vista that would require the Project to provide a decommissioning plan and potential financial assurance that such plan be completed. The amount of the financial assurance would be determined by a mutually agreed-upon engineer net of salvage value.

1.7.3.2 State how the start of decommissioning would be decided, including a description of what constitutes site abandonment.

Abandonment of a solar facility is typically defined as when a facility ceases to transfer energy on a continuous basis for 12 months. At the end of the Project's useful life, the modules, batteries, and associated components will be decommissioned and removed from the Project Area. Restoration will also occur within the Project Area as part of the decommissioning process.

All above-ground components will be removed and restoration within the Project Area will occur within 18 months after permanent cessation of the Project's operation.

1.7.3.3 State whether a participating landowner could be responsible for decommissioning costs in any situations.

Participating landowners will not be responsible for any decommissioning costs at any time during the construction, operation or decommissioning of the Project.

1.7.3.4 Discuss any recycling or repurposing options that can be employed to eliminate waste streams for solar electric generating site components, including any BESS systems.

Above ground solar infrastructure and BESS components are anticipated to have more resale value compared to cost of removal for the first 5-10 years. Currently, it is not profitable to salvage solar modules due to the cost of extracting components. However, Vista Sands Solar anticipates

that salvaging technology will be more advanced when the Project is decommissioned so that it is more economical and practical to extract and recycle the components. There will also be greater market incentives to recycle and repurpose components, which would support a higher salvage price. Vista Sands Solar is dedicated to exploring any recycling and repurposing options at time of decommissioning.

1.8 Utilities and IPPs - Required Permits and Approvals

1.8.1 Approvals and Permits. For each of the regulatory agencies listed below provide the following information:

- **Regulatory agency,**
- **The approvals/permits required,**
- **Application filing date,**
- **The status of each application,**
- **Agency contact name and telephone number.**

The expected permit and approval requirements listed above are included in Table 1.8-1 below. The regulatory agency and trigger for the permit requirement are also listed. Vista Sands Solar is in contact with Portage County, the Village of Plover, the Town of Grant, the Town of Plover, and the Town of Buena Vista and will update the list if additional requirements are identified. Required permits and approvals will be obtained before commencing construction activities.

1.8.1.1 Federal

1.8.1.1.1 Aviation Administration (FAA)

See Table 1.8.1 below.

1.8.1.1.2 U.S. Army Corps of Engineers

See Table 1.8.1 below.

1.8.1.1.3 U.S. Fish and Wildlife Service (USFWS)

See Table 1.8.1 below.

1.8.1.1.4 Other federal agencies not listed above

See Table 1.8.1 below.

1.8.1.2 State

1.8.1.2.1 WisDOT

See Table 1.8.1 below.

1.8.1.2.2 WDNR

See Table 1.8.1 below.

1.8.1.2.3 DATCP

See Table 1.8.1 below.

1.8.1.2.4 Other state agencies not listed above

See Table 1.8.1 below.

1.8.1.3 Local Permits – including county, town, city, and village

See Table 1.8.1 below.

Table 1.8-1 List of Potential Permits and Approvals

Agency	Interest or Permit	Contact	Application/ Notice Date	Status
Federal				
FAA	Federal Regulation Title 14 Part 77		Q4, 2023	Per Notice Criteria Tool, no notification required
U.S. Army Corps of Engineers (USACE)	Section 404 Wetland Permit		Anticipated Q1, 2025	
U.S. Fish and Wildlife Service (USFWS)	Federal Endangered Species Act (ESA) Coordination	Dawn S. Marsh (952) 252-0092		Coordination Ongoing
State				
PSC	CPCN for construction of large energy generation facility of 100MW or more		Q1, 2024	To be submitted Q1, 2024
WDNR	Wisconsin Pollutant Discharge Elimination System / Stormwater Runoff Permit (NR216)	Samantha Whitens (608) 301-6110	Anticipated Q1, 2025	
WDNR	General or Individual Permit for discharge of dredged or fill material into a wetland.	Geri Radermacher (262) 239-0994	Anticipated Q1, 2025	
WDNR	Wisconsin Endangered Species Law (s. 29.604, Wis. Stats.)	Stacy Rowe (608) 266-7012	Q2 2023	Coordination Completed
Wisconsin State Historical Society	Cultural Resources (historical and	Chip Brown (608) 264-6508	Q4, 2023	

Agency	Interest or Permit	Contact	Application/ Notice Date	Status
Historic Preservation Office	archaeological) under Section 106 of the National Historic Preservation Act			
Wisconsin Department of Transportation (WisDOT)	Heavy and oversized load permits	Bob Fasick (920) 492-0148	Anticipated Q2, 2025	
DATCP	Portage County Drainage District (ATCP 48.44 (related obstructing or altering district drains))	Richard Rashhke (715) 340-5656	Anticipated Q2, 2025	
Local (to the extent the requirement to get such permits is not otherwise preempted by the CPCN)				
Town of Grant	Driveway Access Permit Ordinance	Mary Rutz (715) 421-9200	Anticipated Q2, 2024	
Town of Plover	Building Permit	715-344-7684	Anticipated Q2, 2024	

1.8.2 Correspondence with Permitting Agencies. Provide copies of correspondence to and from state and federal agencies that relate to permit approval, compliance approval, or project planning and siting. Provide copies of any correspondence to or from local governments. This should continue after submittal of the application.

Copies of correspondence with applicable permitting agencies are provided in Appendix C. Vista Sands Solar will continue to correspond with permitting agencies throughout development, construction, and operations phases of the Project.

2 Technical Description – Project Area, Arrays, Panels, and Ancillary Facilities

2.1 Estimated Solar Resource and Projected Energy Production

Provide a complete solar resource and energy production assessment for the Project. This report should include, at a minimum:

2.1.1 Solar resource data used in analysis, including the name of any modeling program used to estimate such data.

The solar energy resource of the Project was estimated using the Clean Power Research SolarAnywhere dataset. SolarAnywhere irradiance estimates are derived from real-time and historical satellite images, through a series of algorithms developed at the State University of New York (SUNY) at Albany. Solar resource, temperature, and humidity data are derived from surface-based weather stations and numerical weather prediction model trial fields. Additional details about the algorithms, including numerous validation studies, can be found on the SUNY website.[3]

Data was procured from the 10x10km SolarAnywhere grid cell containing the centroid of the project (44.45N, -89.65W). SolarAnywhere data are provided by Clean Power Research both as an hourly time series dating back to 1998 and as an hourly typical meteorological year (TMY) file, which is used to simulate conditions during an average year. The TMY file was then used to simulate a typical full year of production with the photovoltaic systems software (PVSYST) analysis program. The PVSYST model output information is included in Appendix X.

2.1.2 Gross and net capacity factor (explain the method used to calculate the capacity factors and provide the data used).

The system consists of an installed DC power capacity of 1,480.17 MW. These values will be confirmed once the final layout and generation equipment are determined. The gross and net capacity factors for the Project are calculated to be 23.56 percent and 20.88 percent, respectively when comparing the nameplate rating to the energy forecasted from the PVSYST model.

Below is a summary of the available solar energy throughout the year.

Table 2.1-2 Global Horizontal Irradiance

Global Horizontal Irradiance (GHI) on PV Plane (kWh/m^2)												
Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Year**
52.8	76.6	118.8	140.5	164.4	174.2	192.8	153.6	117.3	77.6	48.6	42.6	1359.8

2.1.3 Estimated Energy Production of Project.

While the maximum output of the Project will be 1,182 MW_{AC} at the point of interconnection, its output may be less at any given time depending on the available energy from the sun and other factors. The software program PVSYST was used to simulate the energy conversion process using

[3] http://www.asrc.cestm.albany.edu/perez/directory/ResourceAssessment.html

model files from the PV module and inverter manufacturer, historical weather data as discussed in section 2.1.1, and the parameters that apply to the Project.

2.1.3.1 Estimated Production Losses. Separate production losses out for conversion from DC to AC and for distribution losses on the collector circuits between the inverter and the project substations.

Energy losses within the system include electrical losses in the AC and DC electrical collection system, energy conversion losses within the PV inverters, step-up transformers and various other equipment, as well as losses due to soiling of the PV modules themselves due to dust, debris and snow cover. Taking those factors into account, a reasonable estimate of energy losses of 277,552 MWh or 11.4 percent of the maximum output, which is consistent with industry-wide estimates.

2.1.3.2 Estimated Net Energy Production.

The estimated net annual energy production is approximately 2,161,552 megawatt-hours. Annual energy production output will depend on final design, site specific features, and annual variability in the solar resource.

2.2 Solar Panel Type and Characteristics

2.2.1 Identify the manufacturer and model of solar panel to be used. (If no Panel Purchase Agreement has been signed, applicants should identify the panel or panels being considered. It is acceptable to identify a range by providing information on the largest and smallest panel being considered, however, consult with Commission staff prior to preparing the application.)

Solar panel technology is continually making advancements in both manufacturing and efficiency and is subject to commodity pricing based on the current market demand and available stock. The final PV module selection therefore cannot be made until detailed engineering is completed and ordering of the PV modules is possible.

The current conceptual layout included in this application was developed utilizing the Longi LR5-72KBD bifacial M10 wafer 545W cell modules. The datasheets for these PV modules are provided in Appendix B.

Vista Sands Solar is currently also considering the following technologies:

- Waaree, ELITE SERIES BiN-08-560-580W, Bi-Facial, TOPCon
- Jinko, JKM579N-72HL4-BDV, Bi-Facial, TOPCon
- Trina, TSM-590NEG19RC.21, Bi-Facial, TOPCon

At the time of construction, several PV module offerings from different suppliers will be evaluated, and a selection will be made based on the most cost-effective option. The technologies that may be considered are thin-film, polycrystalline silicon, and monocrystalline silicon (including bifacial PV modules), and the final supply of modules may contain a mix of several similar wattages.

2.2.2 Panel Delivery Date - Indicate whether or not this date is firm. Discuss how supply chain risks could impact the project.

Panel deliveries are expected to occur as early as Q4 2025. Vista Sands Solar has built strategic relationships with panel manufacturers to ameliorate impacts related to supply chain volatility. Further, the Project schedule has accounted for equipment procurement lead times to achieve the target COD.

2.2.3 Total Number of Panels Required for Project.

The Proposed Facility Area is designed for approximately 2,715,908 panels with a generating capacity of 1480.17 MW_{DC}. Based on the module wattages under consideration and the PV tracker system selected, the final count could range from approximately 2,400,000 to 2,900,000 panels. The full Project nameplate capacity of 1310.4 MW_{AC} can be achieved with the single axis tracking systems for the site.

The Alternative Facility Area is designed for approximately 986,648 panels with a generating capacity of 537.7 MW_{DC}.

2.2.4 Technical Characteristics of Panels.

The PV modules currently proposed for the Project are mono-crystalline with 124 cells and will be a plate-glass module with an anodized aluminum frame with approximate dimensions of 1.1 meters by meters. The PV modules will be connected in series for up to 1500V operation and will be mounted on a tracker system in-line in portrait orientation on racking which tracks east to west to follow the sun throughout the day.

The datasheets for the currently proposed PV modules are provided in Appendix B and it is anticipated that should other PV modules from another manufacturer be selected the physical characteristics will be similar and follow relevant industry standards.

2.2.4.1 Panel physical dimensions.

The panel physical dimensions are 2256mm x 1133mm x 35mm.

2.2.4.2 Panel material/type.

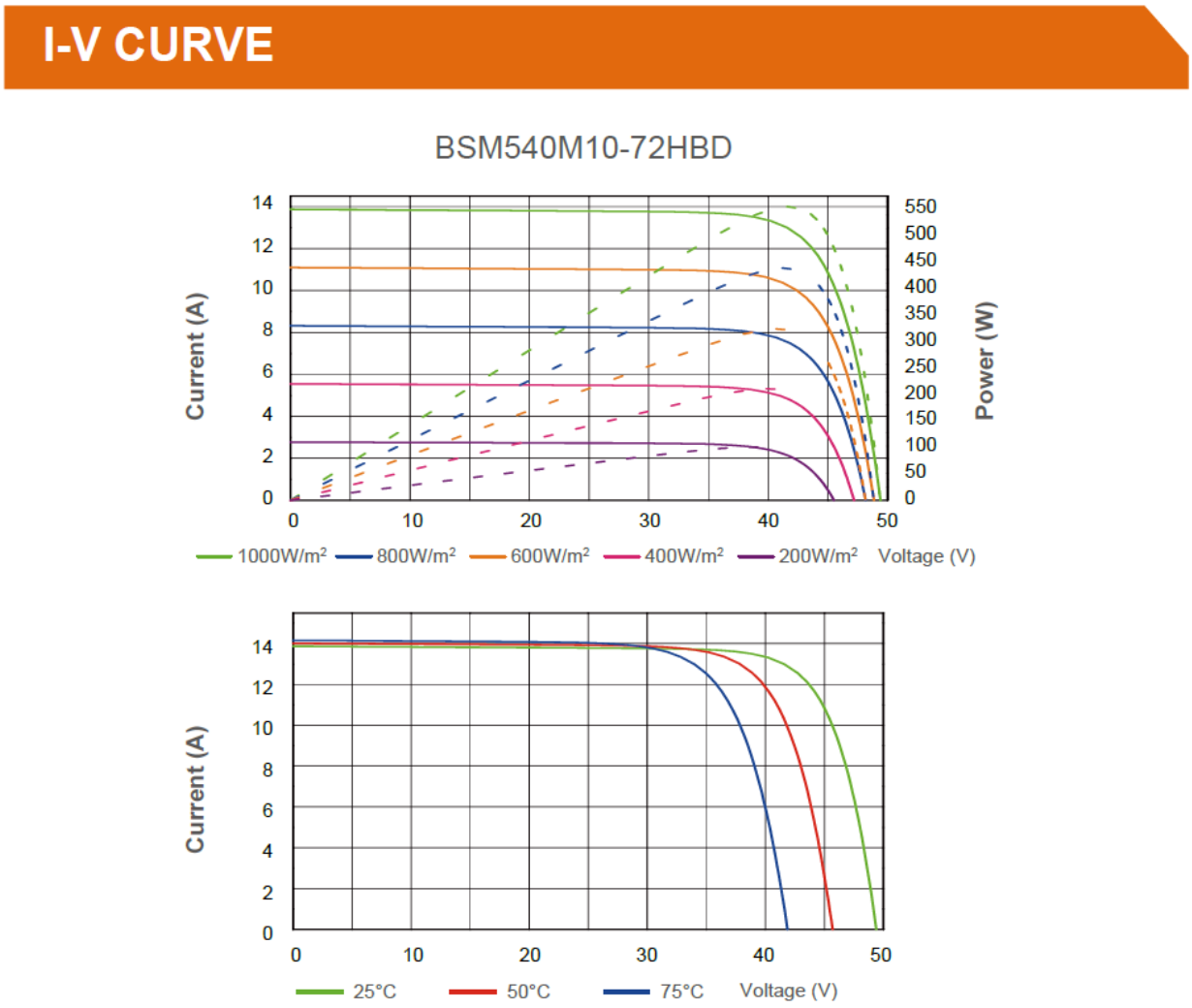
The panel material/type is aluminum alloy framed double glass monocrystalline.

2.2.4.3 Any surface treatment of panels.

The panels will be covered in heat-strengthened glass with anti-reflective coating.

2.2.4.4 Panel power curve (provide actual data – solar resource and rated output needed to create the curve).

The power curve for one of the representative proposed solar modules, the 545W Longi LR5-72HBD bifacial M10 wafer cell monocrystalline solar panels is below.



2.2.4.5 Panel tolerances for extreme weather events or physical damage.

Panels have no water-permeability and are high wear-resistant. They can be widely used in high-humid, windy and dusty areas.

2.2.5 Technical Characteristics of Inverters.

The final selection of the inverters will be made at a future date based on the current market offering. A manufacturer specification sheet of the inverter used for the basis of the preliminary Project design is provided in Appendix B.

2.2.6 Technical characteristics of any tracking systems, panel supports, and racking.

2.2.6.1 Type of material used for supports and racking.

The supports and racking will be constructed of galvanized steel.

2.2.6.2 Tracking system used.

The NEXTracker NX Horizon tracking system is proposed for this Project. If more suitable or technologically advanced tracker systems are developed post final order, Vista Sands Solar may choose to use a different unit.

2.2.6.3 Dimensions and number of sections required.

The proposed layout for this Project will require two different tracking configurations; three string trackers and two string trackers. The three string tracker dimensions are 304.89 feet x 7.47 feet and will require 31,224 tables for the proposed array and 5,393 for the alternative array. The two string tracker dimensions are 206.45 feet by 7.47 feet and will require 10,638 tables for the Proposed Facility Area and 3,017 for the Alternative Facility Area.

2.2.6.4 Typical distances between rows, access roads, and fences.

The post to post spacing is 19.17 feet and edge to edge spacing is 11.70 feet. Access roads are 20 feet wide with a minimum of 10 feet of clearance to the array or other equipment. Fences are set back a minimum of 20 feet to arrays or other equipment.

2.2.6.5 Highest and lowest points of panels during daily rotation.

The daily rotation of panels will have a high point of approximately nine feet and a low point of approximately two feet.

2.2.6.6 Operational actions in case of extreme weather events. Include descriptions of actions in response to high wind events, as well as snow or ice removal.

In the event of extreme weather, the panels shall return to the stow position or the optimal position as recommended by the manufacturer of the racking system used for the Project. Snow will slough off daily as the tracking system rotates the panels.

2.2.6.7 Panel tolerance for placements on slopes.

The panel tolerance for placement on slopes is 15 percent east to west and unlimited in the north to south direction.

2.2.7 Scale drawings of a typical panel row including inverter pad and transformer box.

Please refer to the drawing included in Appendix B for typical panel row.

2.2.8 Provide information on any perimeter fencing that would be used around the solar PV arrays. Describe any requirements on the fencing around the PV sites, including NEC or NECS requirements for specific project areas such as panel arrays or the project substation.

Array fencing will consist of an eight-foot-high wildlife-friendly with wood or metal fenceposts and direct-embed steel corner posts. Larger apertures in the fence weave will be located near the ground to allow for passage of small mammals and herptiles through the fence fabric. The

Project substations will be surrounded with 8-to-10-foot high chain link fence with 3 strands of barb-wire.

2.3 Other Project Facilities

2.3.1 Site Construction Area. Describe the site construction area. Include the number of, location, and dimensions for:

2.3.1.1 Solar arrays, proposed and alternative.

Two solar arrays were designed, a 1310.4 MW_{AC} proposed array and an alternative 468 MW_{AC} array. The designed generating capacity for the proposed and alternative arrays is higher than the proposed capacity of 1,182 MW_{AC} at the POI. This additional generation will be limited to 1,182 MW_{AC} at the POI, which accounts for AC losses in the collection system and requested interconnection levels. Drawings provided in Appendix B show the locations of both the proposed and alternative arrays.

2.3.1.2 Lay-down/staging areas.

There will be five laydown areas constructed for the Project.

Two laydown yards, 2.3 acres and 11.5 acres, will be constructed near Lake Road and 100th Street South in the southwestern portion of the Project. A 10.1-acre laydown yard will be constructed in the south/southwestern portion of the Project near Lake Road and County Road F. There will be a 13.0-acre laydown yard constructed near County Road FF and 110th Street S in the southwest part of the Project. A 2.7-acre laydown yard will be constructed near the O&M building near the north end of the Project.

Laydown areas consist entirely of agricultural land.

During construction, additional temporary laydown areas will be established within the Proposed Project Area. These laydown areas will be transient and will move as construction progresses. In the event laydown areas need to be sited outside of the Proposed Project Area, they will be established within the Alternative Project Area. The specific location of the temporary laydown areas within the Project Area will be established during the final engineering design and construction planning for the Project.

2.3.1.3 Parking Area.

Parking (temporary) for construction activities will be provided at the laydown areas. Permanent parking is planned for the O&M building. This parking area will be 85 feet x 50 feet (4,250 square feet [ft^2]) and will accommodate up to 9 vehicles. Drawings provided in Appendix B show the location of parking at the laydown area and the O&M building.

2.3.1.4 Provide a scale drawing showing the general construction setup for the solar array sites.

A drawing provided in Appendix B shows the Project's general construction setup.

2.3.2 Collector Circuits.

2.3.2.1 Total number of miles of collector circuits required – separated by circuit type (overhead vs. underground).

There are approximately 120 miles of collector circuit runs for the proposed array and 82 miles of collector circuit runs for the alternative array. There are approximately five miles of collector circuit runs for the BESS. The Project's collection is currently proposed to be underground. However, if it is determined during final engineering that the use of overhead collector circuits is advantageous, Vista Sands Solar will share this information with the Commission.

2.3.2.2 Specify the collector circuit voltage to be used.

The collector circuit voltage is 34.5 kV.

2.3.2.3 Transformer type, location, and physical size of transformer pad at each site.

See Section 2.4 Substations for transformer type, location, and physical size of transformer pad at each site.

2.3.2.4 Underground collector circuits.

2.3.2.4.1 Conductor to be used.

The collector conductors will be aluminum 1000kcmil.

2.3.2.4.2 Describe installation type and how lines would be laid (open-cut trench, vibratory plow, directional bore, etc.). Provide scale drawing of underground circuit.

There will be up to 17 collector circuits run in open-cut trenches with directional boring as required at road, creek, and wetland crossings. Drawings provided in Appendix B show the Project's collector circuit routing.

2.3.2.4.3 Depth and width of trench, and minimum depth of soil cover over circuits (if applicable).

The typical burial depth for collector circuits is 36 to 48 inches. The width of the trench is dependent upon the number of circuits. Typical trench widths are as follows:

- Single circuit – 8 feet wide
- Two or more circuits –8 feet wide per trench; 8 feet between circuits

2.3.2.5 Overhead collector circuits.

2.3.2.5.1 Size of pole to be used.

No overhead medium-voltage collection system is currently proposed for this Project.

2.3.2.5.2 Engineering drawing of structure to be used.

No overhead medium-voltage collection system is currently proposed for this Project.

2.3.3 Site Foundations. Describe the type of foundation or foundations to be used for each part of the project. If more than one type of foundation may be needed describe each and identify under what circumstances each foundation type would be used. Include the following:

2.3.3.1 Describe how the panel and inverter foundations would be installed (e.g. direct imbed, excavation for pouring of concrete footings, etc.).

The Project will use driven pier foundations and concrete foundations. The inverter/transformer skids will likely be installed on driven pier foundations but could be placed on concrete foundations if required by soil and geotechnical conditions. The main power transformer (MPT) will be installed on a concrete foundation.

2.3.3.2 Dimensions, surface area and depth required for each foundation.

Foundation dimensions will be determined in the detailed engineering phase; generally, the largest foundation will be the MPT foundation which will be approximately 50 feet by 30 feet. The piers will be from 5 feet to 10 feet deep.

2.3.3.3 Amount of soil excavated for each foundation type.

For driven pier foundations, no excavation is required. For the concrete foundations, soil excavation quantities will be determined in the detailed engineering phase.

2.3.3.4 Describe how excavated soils would be handled including disposal of excess soil.

Project construction is not anticipated to generate any excess soil. Should excess/excavated soil exist, it will be spread within the Project Area. The excavated soils will be graded back in after construction and will not be graded into any cropland, pasture, or wetland areas.

2.3.3.5 Materials to be used for the foundation. Include:

2.3.3.5.1 Approximate quantity and type of concrete required for typical foundation.

Subject to detailed engineering, foundations will be standard reinforced concrete with compressive strength less than 5,000 pounds per square inch. The volume of concrete required for each foundation will be dependent upon the final engineering design.

2.3.3.5.2 Materials required for reinforcement.

The concrete will be reinforced with steel rebar.

2.3.3.5.3 Description of the panel mounting system.

The panels will be mounted to a ground-mounted aluminum single-axis-tracker racking system. Approximately 41,862 trackers will be required for the Proposed Facility Area and 8,410 will be required for the Alternative Facility Area.

2.3.3.6 Provide technical drawings of each foundation type to be used showing foundation dimensions.

See Appendix B for a technical drawing of a typical main transformer foundation.

2.3.3.7 Describe how foundation or support installation would address the risk of frost heave on facilities.

Foundations or supports will be installed to a minimum depth of four feet below ground surface to minimize impacts from freezing and thawing conditions. Exact embedment depth for the driven piles on which the solar panels are mounted will be determined with final engineering. Generally, the piles are driven to a depth of 5 to 20 feet below ground surface dependent upon the soil stability.

2.3.4 Access Roads

2.3.4.1 Provide the total number and total miles required for access roads. Provide the amounts for both temporary access (used during construction only) and permanent access (for long-term facility operation and maintenance) roads. State if any temporary access roads would be converted into permanent access roads.

Existing public roadways will be used to access the Project. No external temporary roads or temporary widening of existing permanent roads during construction are planned at this time.

Permanent internal access roads within the Proposed Facility Area are expected to be approximately 32 miles in total length. Roughly 13 miles of permanent access roads are planned for the Alternative Facility Area. The internal access roads will be located within the secured fenced areas and will not be available for use by landowners. They will be designed to provide access to power conversion equipment within the panel arrays and to solar equipment, and to accommodate ongoing maintenance of the Project components. Roads will not be constructed within every aisle.

No temporary access roads constructed within the Project Area are anticipated at this time. If temporary access roads are required during construction, they will be built according to the specifications summarized in Section 2.3.4.2 below.

2.3.4.2 Describe materials to be used and methods for construction of temporary and permanent access roads, including road bed depth.

While not anticipated at this time, if they are eventually required, temporary access roads will be built utilizing wooden construction matting or aggregate. These roads will be used to a limited extent in areas with soil strength and stability limitations for construction vehicles. Where aggregate is used, a geo-fabric (or similar) material will be laid on the ground surface first to enable the easy and complete removal of aggregate once the construction is complete.

Permanent access roads will be constructed by first removing the topsoil and organic material. Then the subgrade is compacted and constructed according to civil design requirements. A layer of road base will then be added and compacted. Road aggregate or fill will be a local pit run

aggregate material that meets WisDOT specifications. Upon completion of detailed engineering, the aggregate specifications will be available for construction quality assurance. Permanent access roads will be maintained for the life of the Project.

During decommissioning at the end of the Project's life, the permanent access roads will be restored by removing the aggregate, de-compacting the soil if required, restoring the topsoil, and seeding to permanent perennial vegetation. A schematic showing a cross-section of a typical access road is provided in Appendix B. Decommissioning activities for the Project are discussed in further detail in Section 1.7.3.

2.3.4.3 Specify the required width of temporary and permanent access roads. Fully describe any differences between final road size and that required during construction.

Permanent access roads will be 20 feet wide. No temporary access roads are planned at this time.

2.3.4.4 Describe any site access control (e.g. fences or gates).

The site will have a perimeter fence with secured gates for site access. Only Vista Sands Solar personnel and local emergency personnel will have access to the Project.

2.3.4.5 Describe any setbacks from sensitive resources or storm water management considerations in road locations.

No permanent array access roads will be located within delineated wetlands. In general, permanent access roads are proposed a minimum of 50 feet from the delineated wetland boundaries. As stated above, access roads will be constructed with road base and WisDOT aggregate material. This material is permeable and will allow surface water to flow through the access road without compromising the integrity of the roadway.

2.3.5 General Construction Areas

2.3.5.1 Identify size, number, and location of laydown/staging areas outside of those found at the array sites and any other areas used for material storage.

Vista Sands Solar does not anticipate any alternate laydown area outside of those planned and shown in the detailed site design set located in Appendix B and described in section 2.3.1.2.

Vista Sands Solar will strip the topsoil from the laydown area prior to compacting or installing aggregate materials. The topsoil will be stockpiled and stored near the laydown/staging location. Vista Sands Solar will have temporary erosion control measures per the Erosion Control and Stormwater Management Plan (ECSWMP) that will be prepared for the Project during final design. Following construction, the laydown/staging areas will be restored to pre-construction conditions.

2.3.5.2 Identify size and location of construction parking areas.

The construction laydown yards will also serve as a construction parking area. The exact dimensions of the parking areas within the laydown yard will be determined during detailed

design.

2.3.5.3 Describe the expected use of these areas after project completion.

The laydown areas will be reclaimed and restored to pre-existing conditions.

Upon completion of Project construction, aggregate surfaces will be removed to a depth where clean aggregate without soil mixing can be retrieved. This aggregate will be applied throughout the site on access roads as a final top layer.

Once the aggregate is removed, the yard will use deep disking construction equipment to de-compact the subgrade. Once the subgrade has been appropriately de-compacted, the topsoil will be evenly spread over the yard.

If the subsequent use will be agricultural, standard agriculture equipment will be used to prepare the soil for a seed bed, and necessary steps taken to return crop yields to preconstruction levels.

2.3.5.4 Provide a list of all hazardous chemicals to be used on site during construction and operation (including liquid fuel).

Hazardous chemicals including fuel for vehicles, paints, and lubricants will be stored on site during the construction period. Gasoline and diesel fuel will be stored on site in secondary containment or in individual tanks. Refueling of the tanks will be contracted with a local fuel delivery service to be completed in the evening hours. Other hazardous chemicals on site will be stored in trailers located at the central laydown area. The expected hazardous chemicals include diesel fuel, gasoline fuel, oil, grease, spray paint, and galvanization paint.

2.3.5.5 Discuss spill containment and cleanup measures including the Spill Prevention, Control, and Countermeasures (SPCC) and risk-management planning for the chemicals proposed.

Vista Sands Solar will require that a spill prevention, control, and countermeasures plan (SPCC Plan) be provided by the contractor awarded the construction contract for the Project. The SPCC Plan will outline the procedures and preventive measures that will be followed throughout the construction period. Vista Sands Solar and its contractors will be required to comply with the SPCC plan. At a minimum the SPCC Plan will identify the following:

- Typical fuels, chemicals, lubricants, and paints to be used or stored in the Project Area;
- Methods and location of storage;
- Locations designated for lubrication and refueling (i.e., outside of sensitive resource areas);
- Preventive measures to be used to prevent spills;
- Mitigation methods to be employed, should a spill occur;
- Location of construction spill kits (gloves, booms, sorbents, barrier materials, etc.);
- Emergency notification procedures and forms; and
- Contact information for individuals requiring notification if a spill should occur.

The SPCC Plan will be kept on-site during construction and will meet all EPA requirements. The SPCC Plan, because of its specificity, will be written by the contractor prior to commercial construction.

2.3.6 Construction Site Lighting.

2.3.6.1 Describe the site lighting plan during project construction.

Lighting equipment used during construction will consist of temporary light plants. The light plants will be connected to a trailer and have generators to allow them to be transported around the construction site. The laydown area and parking area may have lights mounted to poles to support construction during non-daylight hours.

2.3.6.2 Provide copies of any local ordinances relating to lighting that could apply.

There are no lighting ordinances for the Towns of Plover, Grant and Buena Vista, or the Village of Plover. The Portage County ordinance for exterior lighting is included in the Portage County Code of Ordinances (Zoning Ordinances) provided in Appendix E.

2.4 Substation

If the project includes the construction of a substation or modifications to an existing substation, provide the following information:

2.4.1 A complete electrical description of required substation facilities including a list of transformers, busses, and any interconnection facilities required.

Vista Sands Solar is proposing to construct five separate Project Substations. Layout schematics for each substation can be found in Appendix B.

<u>Project Substation 1</u>

Project Substation 1 is located in the northeast area of the Project near the switchyard, BESS and POI. Project Substation 1 will contain one 345/199.2-138/79.67 kV Auto Transformer to receive the Project 138 kV A-1 Transmission Line delivering power from Project Collector Substation A located in the eastern paneled area. Project Substation #1 will contain two 34.5 / 345kV main power transformers to send and receive power to and from the BESS. Project Substation 1 will also receive power from the Project 345 kV 2-1 Transmission Line delivering power from Project Substation 2 located in the central and western paneled areas.

The Project Substation 1 design will be completed during detailed engineering for the Project. A footprint of approximately 933 feet by 650 feet has been allocated at this stage and will generally include items below within the substation:

- Main power transformer 34.5/345kV, 95/126/158 MVA;
- 34.5kV, 1200A circuit breaker;
- 34.5kV, 3000A air-insulated bus and supporting structures (includes air-insulated isolation switches and insulators for the transformer and the individual feeder circuit breakers, bus post insulators);
- 34.5kV metering and instrument transformers;

- 34.5kV surge arrester for each feeder;
- 100kVA station service transformer installation, which includes AC panels, station service transformer with fuses, equipment for a secondary source for AC power, conductors and support structure for all equipment;
- Auto transformer 345/199.2-138/79.67 kV 278/371/464 MVA;
- 138kV, 2000A circuit breaker;
- 138kV, 4-position ring bus and supporting structures (including air-insulated isolation switches for the auto transformer and circuit breaker in the ring bus configuration);
- 138kV surge arrestors;
- 138kV metering and instrument transformers;
- 138kV dead-end structure for incoming transmission line from Collector Substation A;
- 345kV, 3000A circuit breaker;
- 345kV, 6-position ring bus and supporting structures (including air-insulated isolation switches for the auto transformer, main power transformers and circuit breaker in the ring bus configuration);
- 345 kV surge arrestors;
- 345kV metering and instrument transformers;
- 345kV dead-end structure for outgoing transmission line to POI (Interconnect Switchyard);
- Protection and control building, which will include DC battery and charger, AC/DC panels, and relay/control/communication equipment;
- Internal access roads;
- Trench;
- Foundation of equipment and structure support;
- Security fence with vehicle gate, man gate, barbed wire. Fence to be grounded to the substation ground grid per National Electrical Safety Code ("NESC") requirements;
- Bare copper grounding grid (to be installed below grade) with high resistance gravel/rock installed above grade for protection against electrical shock;
- Power cables and control cables installed in a below grade concrete trench, polyvinyl conduit and manholes as required;
- Above grade conduit and cable tray utilized within control building;
- Lightning protection masts (as required);
- Yard lighting and receptacles to be used during maintenance and or during emergency; and
- Any required power factor control equipment (i.e., capacitor bank) with associated isolation equipment such as reactive power switching equipment and disconnect switches.

Project Substation 2

Project Substation 2 is located between the central and western areas of the Project. Project Substation 2 will contain two 345/199.2-138/79.67 kV auto transformers to receive the Project 138 kV B-2 Transmission Line delivering power from Project Collector Substation B located in the southern paneled area and the Project 138 kV C-2 Transmission Line from Project Collector

Substation C located in the western paneled area via a 6-position 138kV ring bus. Project Substation 2 will contain two 34.5 / 345kV main power transformers to step up power from the nearest paneled areas delivered via underground 34.5 MV cabling.

The Project Substation 2 design will be completed during detailed engineering for the Project. A footprint of approximately 933 feet by 650 feet has been allocated at this stage and will generally include items below within the substation:

- Main power transformer 34.5/138kV, 107/142/178 MVA;
- 34.5kV, 1200A air-insulated circuit breakers for the feeders to the solar plant;
- 34.5kV, 3000A air-insulated bus and supporting structures (includes air insulated isolation switches & insulators for the transformer and the individual feeder circuit breakers, bus post insulators);
- 34.5kV metering and instrument transformers;
- 34.5kV surge arrestor for each feeder;
- 100kVA station service transformer installation, which includes AC panels, station service transformer with fuses, equipment for a secondary source for AC power, conductors and support structure for all equipment;
- Auto transformer 345/199.2-138/79.67 kV 210/280/350 MVA;
- 138kV, 3000A circuit breaker;
- 138kV, 6-position ring bus and supporting structures (including air-insulated isolation switches for the auto transformer and circuit breaker in the ring bus configuration);
- 138kV surge arrestors,
- 138kV metering and instrument transformers;
- 138kV dead-end structure for incoming transmission line from Collector Substations B & C;
- 345kV, 2000A circuit breaker;
- 345kV, 5-position ring bus and supporting structures (including air-insulated isolation switches for the auto transformer, main power transformers and circuit breaker in the ring bus configuration);
- 345 kV surge arrestors;
- 345kV metering and instrument transformers;
- 345kV dead-end structure for outgoing transmission line to Substation 1;
- Protection and control building, which will include DC battery and charger, AC/DC panels, and relay/control/communication equipment;
- Internal access roads;
- Trench;
- Foundation of equipment and structure support;
- Security fence with vehicle gate, man gate, barbed wire. Fence to be grounded to the substation ground grid per NESC requirements;
- Bare copper grounding grid (to be installed below grade) with high resistance gravel/rock installed above grade for protection against electrical shock;
- Power cables and control cables installed in a below grade concrete trench, polyvinyl conduit and manholes as required;

- Above grade conduit and cable tray utilized within control building;
- Lightning protection masts (as required);
- Yard lighting and receptacles to be used during maintenance and or during emergency; and
- Any required power factor control equipment (i.e., capacitor bank) with associated isolation equipment such as reactive power switching equipment and disconnect switches.

Project Collector Substation A

Project Collector Substation A is located in the eastern area of the Project. Project Collector Substation A will contain four 34.5kV / 138kV main power transformers to step up power from the nearest paneled areas delivered via underground 34.5 MV cabling. Project Collector Substation A will deliver power to Project Substation 1 via the Project 138 kV A-1 Transmission Line.

The Project Collector Substation A design will be completed during detailed engineering for the Project. A footprint of approximately 500 feet by 300 feet has been allocated at this stage and will generally include items below within the substation:

- Main power transformer 34.5/138kV, 79/106/132 MVA and 60/80/100 MVA;
- 34.5kV, 1200A air-insulated circuit breakers for the feeders to the solar plant;
- 34.5kV, 3000A air-insulated bus and supporting structures (includes air-insulated isolation switches & insulators for the transformer and the individual feeder circuit breakers, bus post insulators);
- 34.5kV metering and instrument transformers;
- 100kVA station service transformer installation, which includes AC panels, station service transformer with fuses, equipment for a secondary source for AC power, conductors and support structure for all equipment;
- 138kV, 600A circuit breaker;
- 138kV, 600A & 1200A air-insulated gang operated disconnect switch;
- 138kV surge arrestors;
- 138kV bus and supporting structures;
- 138kV metering and instrument transformers;
- 138kV dead-end structure for outgoing transmission line to Substation 1;
- Protection and control building, which will include DC battery and charger; AC/DC panels, and relay/control/communication equipment;
- Internal access roads;
- Trench
- Foundation of equipment and structure support;
- Security fence with vehicle gate, man gate, barbed wire. Fence to be grounded to the substation ground grid per NESC requirements;
- Bare copper grounding grid (to be installed below grade) with high resistance gravel/rock installed above grade for protection against electrical shock;
- Power cables and control cables installed in a below grade concrete trench, polyvinyl

conduit and manholes as required;
- Above grade conduit and cable tray utilized within control building;
- Lightning protection masts (as required);
- Yard lighting and receptacles to be used during maintenance and or during emergency; and
- Any required power factor control equipment (i.e., capacitor bank) with associated isolation equipment such as reactive power switching equipment and disconnect switches.

Project Collector Substation B

Project Collector Substation B is located in the central area of the Project. Project Collector Substation B will contain two 34.5kV / 138kV main power transformers to step up power from the nearest paneled areas delivered via underground 34.5 MV cabling. Project Collector Substation B will deliver power to Project Substation 2 via the Project 138 kV B-2 Transmission Line.

The Project Collector Substation B design will be completed during detailed engineering for the Project. A footprint of approximately 500 feet by 300 feet has been allocated at this stage and will generally include items below within the substation:

- Main power transformer 34.5/138kV, 71/94/118 MVA;
- 34.5kV, 1200A air-insulated circuit breakers for the feeders to the solar plant;
- 34.5kV, 3000A air-insulated bus and supporting structures (includes air insulated isolation switches & insulators for the transformer and the individual feeder circuit breakers, bus post insulators);
- 34.5kV metering and instrument transformers;
- 100kVA station service transformer installation, which includes AC panels, station service transformer with fuses, equipment for a secondary source for AC power, conductors and support structure for all equipment;
- 138kV, 600A circuit breaker;
- 138kV, 6000A & 1200A air-insulated gang operated disconnect switch;
- 138kV surge arrestors;
- 138kV bus and supporting structures;
- 138kV metering and instrument transformers;
- 138kV dead-end structure for outgoing transmission line to Substation 2;
- Protection and control building, which will include DC battery and charger, AC/DC panels, and relay/control/communication equipment;
- Internal access roads;
- Trench;
- Foundation of equipment and structure support;
- Security fence with vehicle gate, man gate, barbed wire. Fence to be grounded to the substation ground grid per NationNESC requirements;
- Bare copper grounding grid (to be installed below grade) with high resistance gravel/rock installed above grade for protection against electrical shock;

- Power cables and control cables installed in a below grade concrete trench, polyvinyl conduit and manholes as required;
- Above grade conduit and cable tray utilized within control building;
- Lightning protection masts (as required);
- Yard lighting and receptacles to be used during maintenance and or during emergency; and
- Any required power factor control equipment (i.e., capacitor bank) with associated isolation equipment such as reactive power switching equipment and disconnect switches.

Project Collector Substation C

Project Collector Substation C is located in the western area of the Project. Project Collector Substation C will contain four 34.5kV / 138kV main power transformers to step up power from the nearest paneled areas delivered via underground 34.5 MV cabling. Project Collector Substation C will deliver power to Project Substation 2 via the Project 138kV C-2 Transmission Line.

The Project Collector Substation C design will be completed during detailed engineering for the Project. A footprint of approximately 500 feet by 300 feet has been allocated at this stage and will generally include items below within the substation:

- Main power transformer 34.5/138kV, 60/80/100 MVA;
- 34.5kV, 1200A air-insulated circuit breakers for the feeders to the solar plant;
- 34.5kV, 3000A air-insulated bus and supporting structures (includes air insulated isolation switches & insulators for the transformer and the individual feeder circuit breakers, bus post insulators);
- 34.5kV metering and instrument transformers;
- 100kVA station service transformer installation, which includes AC panels, station service transformer with fuses, equipment for a secondary source for AC power, conductors and support structure for all equipment;
- 138kV, 600A circuit breaker;
- 138kV, 600A & 1200A air-insulated gang operated disconnect switch;
- 138kV surge arrestors;
- 138kV bus and supporting structures;
- 138kV metering and instrument transformers;
- 138kV dead-end structure for outgoing transmission line to substation 2; Protection and control building, which will include DC battery and charger, AC/DC panels, and relay/control/communication equipment;
- Internal access roads;
- Trench;
- Foundation of equipment and structure support;
- Security fence with vehicle gate, man gate, barbed wire. Fence to be grounded to the substation ground grid per NESC requirements;
- Bare copper grounding grid (to be installed below grade) with high resistance gravel/rock

installed above grade for protection against electrical shock;
- Power cables and control cables installed in a below grade concrete trench, polyvinyl conduit and manholes as required;
- Above grade conduit and cable tray utilized within control building;
- Lightning protection masts (as required);
- Yard lighting and receptacles to be used during maintenance and or during emergency; and
- Any required power factor control equipment (i.e., capacitor bank) with associated isolation equipment such as reactive power switching equipment and disconnect switches.

2.4.2 Indicate the size (in acres) of the land purchase required for the new substation or substation expansion.

A schematic showing the approximate orientation of Project Substation 1 is provided in Appendix B. The substation will be about 13.9 acres in size and is included on two parcels under long term easement. The proposed BESS, switchyard and associated stormwater detention facilities will be co-located within the same approximately 40-acre parcels as Project Substation 1.

A schematic showing the approximate orientation of Project Substation 2 is provided in Appendix B. The substation will be about 13.9 acres in size and is included on one parcel that is under long term easement. The associated stormwater detention facilities will be co-located within the same approximately 40-acre parcels as Project Substation 2.

A schematic showing the approximate orientation of Collector Substation A is provided in Appendix B. The substation will be about 3.4 acres in size and is included on one parcel that is under long term easement. The associated stormwater detention facilities will be co-located within the same approximately 40-acre parcels as Collector Substation A.

A schematic showing the approximate orientation of Collector Substation B is provided in Appendix B. The substation will be about 3.4 acres in size and is included on one parcel that is under long term easement. The associated stormwater detention facilities will be co-located within the same approximately 40-acre parcels as Collector Substation B.

A schematic showing the approximate orientation of Collector Substation C is provided in Appendix B. The substation will be about 3.4 acres in size and is included on one parcel that is under long term easement. The associated stormwater detention facilities will be co-located within the same approximately 40-acre parcels as Collector Substation C.

2.4.3 Indicate the actual size of the substation or substation addition in square feet, the dimensions of the proposed substation facilities, and the orientation of the substation within the purchase parcel. This should include the size of any new driveways associated with the substation.

Project Substation 1 will have a footprint of approximately 933 feet by 650 feet. A physical layout showing the approximate orientation of the substation with major equipment on the property is provided in Appendix B.

Project Substation 2 will have a footprint of approximately 933 feet by 650 feet. A physical layout showing the approximate orientation of the substation with major equipment on the property is provided in Appendix B.

Project Collector Substation A will have a footprint of approximately 500 feet by 300 feet. A physical layout showing the approximate orientation of the substation with major equipment on the property is provided in Appendix B.

Project Collector Substation B will have a footprint of approximately 500 feet by 300 feet. A physical layout showing the approximate orientation of the substation with major equipment on the property is provided in Appendix B.

Project Collector Substation C will have a footprint of approximately 500 feet by 300 feet. A physical layout showing the approximate orientation of the substation with major equipment on the property is provided in Appendix B.

2.4.4 Identify current land ownership and whether applicant has control of property or whether or not an option to buy has been signed.

Parcels where Project Substations have been sited are all privately owned and under long-term lease options with Vista Sands Solar.

2.4.5 Describe substation construction procedures (in sequence as they would occur) including erosion control practices (see Section 3.1).

A typical construction sequence for each substation involves, in order, site grading work, below-grade installation foundations for the equipment and bus structures/supports; conduit, trenching, manholes and ground grid installation; above-grade physical construction of buswork, support structures, gravel/rocking, and installation of major electrical equipment; wiring and completion of all terminations; and testing, commissioning, and ultimately energization. A site-specific construction specification and schedule will be developed but is not yet available. All contractors will be required to follow the ECSWMP, as well as adhere to any site-specific environmental requirements including erosion and dust control.

2.4.6 Describe associated permanent stormwater management facilities that will be constructed, or expansion/modification of existing stormwater treatment facilities to comply with applicable post-construction performance standards in Wis. Admin. Code §§ NR 151.121 through 151.128. Identify the locations of the point(s) of collection and discharge.

Permanent stormwater ponds will be constructed to manage and treat stormwater associated with the new Project Substations. The stormwater ponds will be constructed to ensure water is properly routed to the stormwater ponds via overland sheet flow and/or vegetated swales. The stormwater ponds may have emergency overflow weirs designed to safely route excess flow from a 100-year-or-above storm event. This will be determined in the final design.

<u>Project Substation 1</u>

Project Substation 1 will have two associated stormwater ponds. An approximately 6.15-acre

stormwater pond will be constructed to the north of Project Substation 1. Stormwater will flow from Project Substation 1 into the south side of this stormwater pond. From there it will infiltrate into the ground or discharge to the east.

An approximately 4.11-acre stormwater pond will be constructed to the south of Project Substation 1. Stormwater will flow from Project Substation 1 into the north side of this stormwater pond. From there it will infiltrate into the ground or discharge back to the north.

Project Substation 2

An approximately 3.84-acre stormwater pond will be constructed to the north of Project Substation 2. Stormwater will flow from Project Substation 2 into the south side of this stormwater pond. From there it will infiltrate into the ground or discharge to the north.

Project Collector Substation A

An approximately 0.58-acre stormwater pond will be constructed to the west of Project Collector Substation A. Stormwater will flow from Project Collector Substation A into the east side of this stormwater pond. From there it will infiltrate into the ground or discharge to the south or west.

Project Collector Substation B

An approximately 0.88-acre stormwater pond will be constructed to the north of Project Collector Substation B. Stormwater will flow from Project Collector Substation B into the south side of this stormwater pond. From there it will infiltrate into the ground or discharge to the north.

Project Collector Substation C

An approximately 1.02-acre stormwater pond will be constructed to the north of Project Collector Substation C. Stormwater will flow from Project Collector Substation C into the south side of this stormwater pond. From there it will infiltrate into the ground or discharge to the north.

2.4.7 Describe any security requirements for the substation site and provide information on how these would be met.

Each of the five substations will be fenced according to the National Electrical Code and NESC. Fences will be properly grounded to avoid any hazards. Each substation will also have safety lighting and may have security cameras mounted at fence gates.

2.5 Transmission and Distribution Interconnection

2.5.1 Describe any transmission or distribution grid interconnection requirement.

This Project requires the construction of a 345-kV transmission gen-tie line.

2.5.2 Identify the length of the generator tie line.

The gen-tie line is approximately 1,600 feet long.

2.5.3 Provide details on the types of structures (underground/overhead, single-pole/H-frame, direct embed/concrete caisson, typical span length, etc.) and lines that would be constructed as part of any necessary generator tie line, including the height of the structures. If the installation will be underground, identify the installation method(s), such as directional bore, open-cut trench, plow, etc.

The proposed design includes the use of six vertically framed steel monopole structures strung with bundled 795 kcmil 26/7 Strands Drake ACSR conductor. Span lengths vary between 125 feet and 600 feet.

Structure	Above Ground Height	Description
S1-49	60.0 feet	Dead-end structure on concrete caisson foundation
S1-48	100 feet	In-line direct embed steel monopole
S1-47	100 feet	Dead-end structure on concrete caisson foundation
S1-46	100 feet	In-line direct embed steel monopole
S1-45	100 feet	Dead-end structure on concrete caisson foundation
S1-44	120 feet	Dead-end, line and buck structure on concrete caisson foundation at POI with existing 345 kV

2.5.4 Describe the transmission configuration (single-circuit, double-circuit, etc.).

The transmission gen-tie line will be a single-circuit 345 kV line.

2.5.5 Describe the right-of-way (ROW) area needed for the generator tie line and the status of any easements or other land agreements with property owners.

The 345 kV gen-tie line will require a ROW width of 150 feet. The gen-tie is located on participating Project parcels.

2.5.6 Describe all communications and agreements, official or otherwise, with the transmission or distribution owner. These can include definitive phase planning (DPP) studies and any signed generator interconnection agreements, or more informal meeting notes or letters.

Vista Sands Solar holds queue positions J2099, J2107, J2185 in MISO's East ATC DPP-2021 Cycle 1. Communication has occurred primarily through the MISO study cycle parameters with the Project's feasibility report issued in June 2023 at the conclusion of Phase 1. The publicly available reports are included in Appendix D. Prior to the issuance of DPP2 results, Vista Sands Solar also held a conference call with ATC, the area transmission owner, to review the schedule for construction of interconnection facilities and other high level procurement details.

Outside of the formal interconnection process, the Project owner also held extensive calls with ATC regarding the use of existing ROW to place infrastructure on shared poles, reducing the

number of new poles within the project area. Vista Sands Solar remains in close contact with ATC on the use of ATC poles and/or ROW.

2.5.7 For transmission interconnections, indicate the project's MISO generation interconnection queue number(s), as well as those of any associated energy storage project associated with the solar project, and provide copies of the latest draft or final MISO report for the project interconnect. During the PSC review process applicant must continue to supply the latest reports from MISO. Discuss how the project will be interconnected to the grid (MISO generator interconnection queue, surplus interconnection request, or similar).

Vista Sands Solar holds queue positions J2099, J2107, J2185 in MISO's East ATC DPP-2021 Cycle 1. DPP Phase 1 for this cycle was completed in June 2023. DPP Phase 2 is currently expected to conclude in March 2024 and DPP Phase 3 is expected to conclude at the end of April 2024. The LGIA is currently expected to be tendered for execution in August 2024. The Project will provide updated reports received during the CPCN review process.

Communication has occurred primarily through the MISO study cycle parameters with the Project's feasibility report issued in April 2023 at the conclusion of Phase 1. In its application, Vista Sands Solar requested full Network Resource Interconnection Service for 1,182 MW nameplate capacity of the facility.

2.5.8 Indicate how equipment access will occur, and if off-ROW access roads will be utilized. If off-ROW access roads will be utilized, provide the following:

No off-ROW access roads are proposed at this time. Access to the gen-tie line will be down the ROW from the switching station to the existing transmission line.

2.5.8.1 Provide the number of off-ROW access roads proposed, and an identifying name or number for each off-ROW access road.

No off-ROW access roads are proposed at this time.

2.5.8.2 For each proposed route, provide the dimensions (length, width, area) and construction method, including any modifications that would be needed to utilize the off-ROW access roads, such as road widening, road fill placement, tree clearing, etc.

No off-ROW access roads are proposed at this time.

2.5.8.3 Discuss the reasons for the necessity for off-ROW access roads (e.g. topography, rivers/wetlands, etc.). If protection of a natural resource is a reason, discuss how the resource would be protected during construction and operation of the proposed project.

No off-ROW access roads are proposed at this time.

2.5.8.4 Provide quantitative land cover information for off-ROW access roads similar

to the information provided in PSC Impact Tables.

No off-ROW access roads are proposed at this time.

2.5.8.5 If the off-ROW access roads would be modified post-construction, provide details.

No off-ROW access roads are proposed at this time.

2.5.9 Describe the type of construction machinery that would be used.

For construction of the gen-tie line, a wheeled or tracked hydraulic drill rig will be used to drill the hole for the pole placement and a wheeled or tracked crane will lift the poles into place. Other support equipment such as skid steers and forklifts will also be used.

2.5.10 Describe the construction disturbance zone, if different from the ROW.

No off-ROW access roads are proposed for this Project. All construction-related disturbance will be confined to the ROW.

2.5.11 Describe how spoil materials would be managed on and off-site.

Spoils from drilling holes for direct-embed structures will be utilized on site to the extent practicable. Excess soil not used for backfilling of the structure holes will be thin-spread within the ROW or within the arrays. No off-site soil disposal is anticipated.

2.5.12 Describe the dewatering method(s) that may be utilized during excavation activities, such as pit/trench dewatering or high capacity wells. Identify treatment methods that would be utilized to treat the discharge, and the discharge location.

If dewatering is required, all water will be pumped away from any existing wetlands or waterways and will be kept onsite. Water will be pumped to a well-vegetated upland area where it can be discharged without causing erosion. Discharge locations will be constructed with energy dissipators to prevent erosion or suspension of surficial soils. In rare events, discharge basins will be constructed with a combination of straw bales, filter fabric, and rock. Dewatering will comply with WDNR Technical Standards for dewatering.

2.5.13 Describe if the construction of a new substation or switchyard, or modifications to existing facilities would be needed for the transmission interconnection. If so, describe which company would own and operate the facilities, and which company would conduct any ground disturbing construction for the facilities.

The POI for this Project is the existing ATC Rocky Run to Werner West 345 kV transmission line. The Project will be connected to the grid via a new switching station and approximately 1,600-foot 345 kV gen-tie line to the existing ATC Rocky Run to Werner West 345 kV transmission line. The switching station and gen-tie line will be constructed, owned, and operated by ATC. A new switching station will be constructed, owned, and operated by ATC.

2.6 Operations and Maintenance Building

Vista Sands Solar will construct up to two one or two story 45-foot by 110-foot O&M buildings which will include offices, meeting space, common areas, a maintenance bay, a storage area, and Supervisory Control and Data Acquisition (SCADA), and mechanical rooms.

2.6.1 Describe the purpose and use of the proposed O&M building.

The purpose of the O&M building is to maintain an on-site facility for employee offices/ workstations, meeting spaces, spare parts, and equipment storage.

2.6.2 Number of full-time employees that would be working at the facility.

Vista Sands Solar anticipates that there will be approximately 10 - 16 full-time-equivalent (FTE) staff employed at the facility.

2.6.3 Provide the size (in acres) of the land purchase required for the facility.

The O&M buildings will be approximately 5,000 ft^2 in size and will require an area of approximately 200 feet by 200 feet (40,000 ft^2) for access around the building and vehicle parking. A total of about one acre is required for this area. These facilities will be located on a participating parcel in the northeastern corner of the Project Area.

2.6.4 Building and Building Footprint.

2.6.4.1 Provide a drawing or diagram of the O&M building with dimensions including square feet.

A drawing of the proposed O&M building is included in Appendix B.

2.6.4.2 Indicate the actual size of the building in square feet, and the size of any permanent driveways for the building to be constructed.

The proposed size of each O&M building will be roughly 5,000 ft^2. A permanent driveway approximately 600 feet long will be constructed to provide access to the O&M buildings.

2.6.4.3 Describe the type of building to be constructed (metal, frame, etc.).

The building will be a metal commercial-style building with offices, a conference room, garage space, and equipment storage.

2.6.5 Lighting and Security Plan for O&M Property.

2.6.5.1 Describe how the building property will be lit and how the lighting plan minimizes disturbance to nearby residences.

Fixtures used to light the Project Area will limit lighting of the night sky and will be directed away from adjacent properties and public ROWs to prevent light from trespassing or spilling onto those properties. Any lighting used on site will comply with all applicable rules and regulations.

2.6.5.2 Describe any security plans for the property (fences etc.).

The O&M building will be enclosed within the Project fence and access will be through a secured gate. Doors to the O&M buildings will be secured using computerized card readers.

2.6.6 Describe any other facilities needed, including:

2.6.6.1 Parking lots.

A parking lot with space for approximately 10 vehicles will be constructed next to the O&M building.

2.6.6.2 Sheds or storage buildings.

No sheds or additional storage buildings are planned for this Project. The O&M building will have sufficient space for permanent storage of equipment and materials. If necessary, on a temporary basis during construction or decommissioning, all storage containers outside the O&M building will comply with all applicable rules and regulations.

2.6.6.3 Supplies of water.

A potable water well will be constructed to provide water service to the O&M building.

2.6.6.4 Sewer requirements.

A septic system will be constructed to provide sanitary service to the O&M building.

2.6.7 Describe construction procedures (in the sequence as they would occur), including erosion control practices (see Section 3.1).

The location of the proposed O&M building is currently farmed. The area will be graded flat and perimeter erosion control Best Management Practices (BMPs) will be installed. Initial grading of any stormwater management swales and ponds/infiltration basins will then be completed. The concrete foundation and/or slab for the O&M building will then be installed along with utilities to the building. The O&M building structure will then be erected. Site construction of the O&M building will include final grading of stormwater features and paving of the parking area.

BMPs will include, but not be limited to, silt fence, straw waddles, hay bales, erosion matting, etc. Site infiltration basins and swales will be preliminarily graded during initial construction, and final graded once the O&M building is constructed. Stabilization of bare soils will be done through the use of a cover crop and specified seed mixture.

2.6.8 Describe associated permanent storm water management facilities that will be constructed, or expansion/modification of existing storm water treatment facilities, to comply with applicable post-construction performance standards in Wis. Admin. Code §§ NR 151.121 through 128. Identify the locations of the point(s) of collection and discharge.

A stormwater management pond is proposed to be located north of the proposed O&M buildings. The stormwater pond will be designed to reduce the peak run-off rates to less than

original (pre-development) levels and designed to meet regulatory requirements. This will prevent soil erosion and adverse impacts to neighboring properties.

2.7 Battery Storage

Vista Sands Solar is seeking approval to construct an approximately 300-MW (1,200 MWh) AC coupled BESS located within the Project substation property. The conceptual layout for the BESS and anticipated storage capacity is based on a storage system capable of a 4-hour discharge at 1,200 MWh.

2.7.1 State clearly if the project is seeking authorization to construct a BESS in the current solar electric generation facility docket. Provide all of the environmental impact information for the BESS if one is being proposed, identical to the environmental impact information provided with all other project facilities.

Vista Sands Solar is seeking approval to construct an approximately 300-MW BESS in this current solar electric generation facility docket 9820-CE-100. Environmental impact information for the BESS is provided with that for all other Project facilities.

2.7.2 Describe the location of the proposed BESS, including a map that shows its placement within the other project facilities. Discuss if the BESS will be centralized in one location or distributed throughout the project site and why either design choice was made or is being considered.

The BESS will encompass approximately 5.5 acres of land south of proposed Project Substation #1. This acreage includes BESS access roads and perimeter security fencing. The BESS design set is included in Appendix B.

2.7.3 Explain what criteria was used to decide whether to use a BESS and provide information on how its inclusion would affect the electrical design of the project and MISO interconnection process. Provide the MISO interconnection queue number(s) for any associated BESS project.

Cost modeling of various use-case scenarios were conducted to determine the optimum BESS size. The BESS will be interconnected into Project Substation 1 on a non-additive basis.

Vista Sands Solar anticipates submitting a Surplus Interconnection request after the release of the DPP2 study which is currently scheduled for late Q1 2024. The Surplus Interconnection Request to MISO will study the impacts of the BESS to the solar generating portion of the Project. If no material impacts are identified, the surplus request will be granted a Large Generator Interconnection Agreement (LGIA) along with the solar generating facility. Vista Sands Solar expects to execute a Large Generator Interconnection Agreement (LGIA) with MISO for the Project in Q3 2024.

If material impacts are identified as a result of the Surplus Interconnection Request, Vista Sands will submit a new and separate MISO application for the BESS. This would allow the Project to fund any required network upgrades necessary to address reliability issues within the interconnection facilities.

Inclusion of BESS in the Project has little effect on the rest of the system design. The solar arrays generate power and deliver that power to Project Substation 1 via a series of high-voltage transmission lines and underground MV cabling. Once power is delivered to Substation 1, it can either be delivered to the grid via the proposed switchyard for immediate consumption, or delivered to the BESS where it can be stored for later delivery to the grid when needed.

2.7.4 Identify the manufacturer and model of battery systems to be used. (It is acceptable to identify several potential units). Include technical specifications.

Battery storage systems are relatively new to Midwest utility scale solar facilities and the specifications of these systems are changing rapidly. Therefore, a common BESS unit, the Sungrow Power Titan, was used to develop the layout and design set of this Project. The Sungrow Power Titan specification sheets are included in Appendix B.

The specifications that were used for this design are as follows:

- Container based battery storage system with on-board HVAC and fire suppression systems
- Container dimensions: 20’ (L) x 8’ (W) x 9.5’ (H)
- Operating temperature -30°C to 50°C
- 300 MW storage
- 1,200 MWh at POI
- 60 BESS blocks at beginning of life
- 72 BESS blocks at end of life
- 12 total augmentation blocks
- Augmentation will occur at a rate of 3 blocks every 4 years

2.7.5 Provide information on how the BESS would be installed, any changes to project impacts through its inclusion, and ongoing operations and maintenance actions it would require.

BESS installations are similar to installations of other heavy substation equipment such as transformers and switchgear. Typical construction equipment such as excavators, bulldozers and cranes will be used to install the BESS. The BESS containers include battery racks and HVAC equipment with significant static loads. Therefore, the foundations will be constructed on steel reinforced concrete foundations or pads that can accommodate the heavy loads and will be designed based on regional soil conditions. BESS pad dimensions will be finalized once a battery storage manufacturer is chosen, and final engineering and design is completed. The battery enclosures are accompanied by a generator step-up transformer and a bi-directional inverter or Power Conversion System. Minimal construction impacts to the site are anticipated other than what would be typical for other substation equipment.

On-going maintenance of a BESS typically involves servicing of the moving equipment (HVAC systems, fans and filters) as well as monitoring battery performance and degradation. It is anticipated that the BESS will be augmented over the duration of the project life cycle (typically, every 4 years) where additional battery enclosures are added to replace degraded energy

capacity. Proper site shut-down procedures will be followed during these battery augmentation periods.

2.7.6 Discuss any safety requirements specific to the BESS both on site and for local first responders.

Battery energy storage systems require similar safety awareness to other substation and solar PV equipment, especially related to electrical safety associated with high voltage AC and DC hazards. Strict adherence to National Fire Protection Association (NFPA) standard NFPA-70E will be followed as related to electrical safety. BESS can also exhibit hazards like thermal events, off-gassing, and fires under adverse circumstances. All batteries will be certified by the manufacturer to comply with Underwriters Laboratories standard UL9540A at the cell, module and unit (rack) level such that a thermal event occurring in a cell will not migrate outside the rack to adjacent racks and equipment. In addition, hazards associated with battery off-gassing will be detected and exhausted from the enclosure to prevent explosion hazards. In some cases, a dry-type Siamese connection can be provided at a safe distance from the enclosure so that a fire hose can be connected to the enclosure to dispense a water deluge to cool a battery fire. Adherence to NFPA-855 shall be followed including facilitation of a Hazard Mitigation Analysis workshop by all stakeholders including the battery manufacturer, the battery integrator, the installer and the local fire department to determine how thermal and off-gassing events are detected, communicated to first responders, and mitigated.

2.7.7 Describe construction procedures (in the sequence as they would occur), including erosion control practices (see Section 3.1).

Prior to site grading, feeder cable runs from the Project substation and site grounding grid materials will be installed via excavated trenches. Groups of feeder cables may be installed inside cable tramways or other enclosed cable housing.

The BESS needs to be installed on a relatively flat surface. Therefore, site grading will be required, followed by the placement of sub-base and final base aggregate material. The BESS container foundations and pads will likely be excavated and installed prior to the placement of the final base aggregate. During the site grading process, stormwater retention basins will also be constructed to accommodate the additional impervious surface created by the BESS and Project substation. Appropriate stormwater BMPs will be installed during construction to prevent excessive erosion, sediment, and run-off (similar to solar farm grading practices). The stormwater detention basins will be stabilized with a cover crop, permanent seed mix, and either erosion control matting or blown and crimped straw.

The BESS containers will be brought to the site on flatbed semi-trailers. They will be placed on the concrete pads utilizing an overhead crane. The containers will be fastened to the concrete pads with anchor bolts and all HVAC and water supply lines will be installed.

2.7.8 Describe associated permanent storm water management facilities that will be constructed, or expansion/modification of existing storm water treatment facilities, to comply with applicable post-construction performance standards in Wis. Admin.

Code §§ NR 151.121 through 128. Identify the locations of the point(s) of collection and discharge.

In addition to the impervious surface created by the construction of Project Substation 1 and switchyard, the BESS will also include roughly five acres of impervious surface. This additional impervious surface will require the construction of one stormwater pond located west of the proposed BESS and south of Project Substation 1. This pond will be approximately 4.11 acres in size. Water from the impervious surfaces will flow to the ponds via swales and grading.

2.7.9 If applicable, describe any risk analysis the applicant conducted when siting the BESS and Collector Substation within a "potential impact radius" of any natural gas pipelines in the area. Provide a description of how any risks to facilities could be mitigated.

An existing natural gas pipeline is located approximately 1,400 feet to the east of the BESS location. The presence of this pipeline is one reason why the BESS was sited in the western portion of this quarter-section.

3 Construction Sequence and Workforce

3.1 Construction Sequence and Schedule

3.1.1 Provide the construction schedule for the proposed project, identifying any potential seasonal or regulatory constraints. Include a timeline showing construction activities from beginning of construction to in-service for all major components of the project, including any BESS system. Identify all critical path items.

The estimated construction schedule is provided in Table 3.1-1 below. The current schedule contemplates a schedule and in-service date for the entire Project. It is possible that post-CPCN engineering, off-take, and MISO interconnection decisions may support a phased construction and in-service date for one portion of the Project before another. Vista Sands Solar will promptly notify the PSCW if such changes in the construction and in-service schedule occur.

Table 3.1-1 Estimated Project Construction Schedule

Activity	Start	End
Start of Construction	March 2025	
Site Preparation (Erosion Control and Tracking Pads)	March 2025	April 2026
Vegetation Removal	March 2025	April 2026
Staging and Laydown Areas	March 2025	September 2025
Construct Project Substations	June 2026	June 2028
Access Roads and Inverter Pads	March 2025	October 2026
Drive Posts	June 2025	December 2027
Install Inverter Pads	October 2025	October 2027
Install Racks	September 2025	March 2028
Install Solar Modules and Inverters	December 2025	June 2028
Backfeed	June 2028	June 2028
Commissioning	June 2028	November 2028
In-Service Date		December 2028

3.1.2 Provide a description of the staging and construction sequence required for building of a typical solar array. Include the delivery of materials.

The following provides a description of the staging and construction sequence for the Project:

- Installation of tracking pads at construction entry and exit points, and the installation of erosion control and stormwater BMPs as outlined in the ECSWMP.
- Vegetation removal (crop removal) starting in areas where initial staging and laydown areas will be located. Vegetation removal will continue across the site, sequenced to

proceed in an organized and cost-efficient manner. Upland forest clearing will commence in a similar fashion.

- Vegetation removal, site grading and placement of sub-base and base material, foundations, pads and cable runs for Project substation and BESS.
- Installation of Project substation and BESS equipment.
- Grading and excavation of substation and BESS stormwater retention ponds. Final vegetative and erosion control stabilization of these ponds will occur immediately after completion.
- Development of staging and lay-down areas for receiving and storing construction materials and equipment. The laydown areas will also house trailers and parking for personnel and construction-related vehicles.
- Access-road installation to facilitate continued clearing operations and construction of the Project (limited grading is anticipated as roads will be constructed at grade when possible).
- Delivery of equipment, including piles, aluminum supports/mounting structures, tracking systems, and inverters. The Project will be constructed in blocks and multiple blocks will be constructed simultaneously over time. Deliveries will continue over time in advance of construction of the blocks.
- Solar-block construction in sequence, starting with driving pile foundations, then installing aluminum supports/mounting structures onto the piles.
- Delivery and installation of collection system equipment via trenching and directional drilling.
- Delivery and installation of solar PV modules.
- Stabilization and revegetation of disturbed areas in stages as construction of the solar blocks and collection trenches are completed.
- Material and equipment deliveries for installation of the step-up transformer substation.
- Gen-tie transmission line construction and connection to Project step-up transformer substation and ATC infrastructure.
- Interconnection inspections and testing and Project commissioning.
- Vacating staging and laydown areas prior to installation of piles and construction of the final solar blocks.
- Completion of final seed installation and revegetation activities at staging, laydown, and other disturbed areas consistent with revegetation and restoration plan.

3.1.3 Provide an estimate of time required to complete construction at a typical solar array.

The duration of construction for the Project is estimated in Section 3.1.1 to be at least 36 months. This timeline is in part dependent on winter weather conditions and the ability to work through the winter months. If the winter is mild, activities such as driving posts, installing racking, and installing inverter pads could be accelerated. In this case, the total construction period could last 15 months.

The construction timeline will be finalized after an engineering, procurement, and construction contractor is hired.

3.1.4 Provide a description of the staging and construction sequence for any other facilities to be constructed.

The sequence for staging and construction for all Project facilities is described above in 3.1.2.

3.1.5 If grading, land leveling or any other activity that would result in topography or vegetative or non-vegetative soil cover will occur provide the following information as fully as possible. If technical details are not available, discuss the goals and practices generally:

3.1.5.1 Indicate the maximum area (sq. ft. or acres) of disturbance that would occur at a given time.

Minimal grading is anticipated for this Project due to the relatively flat ground surface contours within the Project Area. If grading is required, it will commence generally in a north to south orientation. Multiple crews will be conducting grading within different areas of the Project at the same time. Once a given area is completed, the area will be temporarily seeded and grading crews will move on to the next area. Pile driving crews could move into an area within a few days following the completion of grading. Likewise, collector circuit trenching, racking, and tracker installation crews could also move into a particular area of the array within a few days of completion of a prior task. Given this fast-paced sequence, as much as 300 to 500 acres or more of the Project could be disturbed during the initial stages of the Project. Disturbed land will be stabilized at the end of the workday and prior to storms. Final disturbance numbers will not be known until final engineering design and construction sequencing are completed.

3.1.5.2 Describe erosion and sediment control practices (e.g. sedimentation basins) that by design will be employed to result in a discharge of no more than 5 tons per acre per year of the sediment load carried in runoff from initial construction to final grading.

Preliminary review of Project Area site characteristics including existing topography and soils, show that the existing gentle slopes will not be subject to severe soil erosion. The majority of the Project Area slopes from east to west with drainage being intercepted by Buena Vista Creek, agricultural ditches, and other streams in the area. The Project Area will be surrounded by silt fence which will filter low-velocity sheet flow coming from the work area. In locations where larger areas drain to the Project boundaries, the silt fence will be augmented by filter socks to allow settlement of sheet flow run-off. Erosion control blankets will be used in combination with the silt fence to protect sensitive areas (wetlands, etc.) by establishing a vegetative buffer to allow additional settlement. In locations where large drainage areas occur with steeper ground slopes (>5% pitch), sedimentation basins will be established to allow settlement of run-off with a higher silt content.

3.1.5.3 Describe any structural practices that will be used to divert flow away from exposed soils, store runoff or otherwise limit runoff and the discharge of sediment.

Although silt fence is proposed to be the primary sediment control practice, in accordance with WDNR Silt Fence Technical Standard 1056, silt fence will only be used for slope lengths less than 100 feet. In addition to silt fence, slope breakers (water bars) will be utilized to reduce runoff velocity and divert water off of the construction area. Temporary slope breakers may be constructed of soil or sandbags. While silt fence will only be used for slope lengths less than 100 feet, slope breakers may be installed on slopes greater than 5 percent at the following maximum spacing: 5 percent-15 percent 300-feet max, 15 percent-30 percent 200-feet max, >30 percent 100-feet max. The outfall of each temporary slope breaker will be directed to a stable, well-vegetated area. Slope breakers will be positioned so that the outfall does not discharge sediment into wetlands, waterbodies, or other sensitive environmental resource areas.

The Project ECSWMP will be prepared once the final design is complete and the final engineering process has begun. The Project ECSWMP will call out specific locations and types of temporary and permanent stormwater features to be constructed prior to and after the installation of the solar array. Applicable stormwater and erosion control permit applications will be submitted following final engineering design and prior to the start of construction.

3.1.5.4 Describe to what extent final grade will affect predevelopment drainage patterns.

The majority of the land included in the Project Boundary is currently in agricultural production. Soils in the area consist of a silt loam overlain by fine to medium sand, and topography is considered flat. Minimal pre-development drainage features are present within the Project Boundary. Based on discussions with participating parcel owners and available data, the majority of the Project Boundary is drained via underground drain tiles. The tiles outfall into Ditch #1, which is a tributary to Buena Vista Creek. This ditch is the main drainage feature for the area between the Project and the City of Plover. Additionally, no grading or disturbance will occur in any of the field verified wetlands or waterways within the Project Area.

Minimal grading is expected prior to the construction of the Project. Therefore, the effects of the preliminary and final site grading and installed solar facilities will be minimal.

Final grade will minimally affect pre-development drainage patterns. On-site infiltration post construction is anticipated to be comparable to pre-construction on-site infiltration. No overall drainage patterns will be changed, and peak stormwater run-off rates will be reduced in all portions of the Project Area except for substations and BESS areas.

In locations with large gravel surfaces (substations and BESS), stormwater detention ponds will be constructed to prevent an increase in peak stormwater run-off rates.

3.1.5.5 Describe how these preventative measures will be incorporated into the project:

- **Maintenance of existing vegetation, especially adjacent to surface waters**

whenever possible.

The majority of the Project Area is currently agricultural production. Therefore, vegetation within the Project Area consists of row crops during the growing season and bare or tilled ground in the winter months. Existing vegetation is sparse and entirely associated with field verified wetlands, waterways, fence lines, and areas outside the reach of irrigation pivots. To the extent practicable, existing herbaceous vegetation or vegetative buffers along waterways will be maintained during construction and operation of the Project. Farmed wetlands that are currently unvegetated will be seeded with a wetland seed mix and maintained through the life of the Project. Any trees located within the footprint of the substation and gen-tie line, field fence lines, and waste areas where the irrigation pivots cannot reach will be removed to ensure there is no interference (shading) with the solar facilities. Appropriate vegetative screening will be left in place around residences and other buildings.

- **Minimization of soil compaction and preservation of top-soil.**

Soil compaction from the movement of heavy construction equipment will be addressed through the use of plows or deep ripping equipment. Because the soil types within the Project Area consist of loamy sand and mucky loamy sand, compaction of soils during construction will be minimal. Prior to final seeding, areas will be tilled or disced to provide a suitable base for the seed mixture. Topsoil excavated during construction will be separated and either thin-spread within another area of the Project, or disposed of at an appropriate off-site disposal location.

- **Minimization of land-disturbing construction activity on slopes of 20 percent or more.**

There are no slopes of 20 percent or greater within the Project Boundary.

3.2 Workforce

3.2.1 Provide information on the workforce size and skills required for project construction and operation.

During construction, the work force will be primarily delivery drivers, laborers, equipment operators, and management personnel. The equipment operators will operate civil equipment, pile drivers, cranes, and material-handling equipment. Most of the personnel required to construct the Project will be laborers that install racking systems and place modules. Approximately 300 to 500 workers, at peak construction, are anticipated to be needed to construct the Project. Once construction is complete, the Project will require up to 16 full-time-equivalent personnel for O&M. The plant operator(s) will have specific training and expertise to run a solar facility, including the high-voltage substation.

Vista Sands Solar will implement a Construction Compliance Program (CCP) consisting of environmental training, regularly scheduled inspections, and tools such as permit matrices to ensure all applicable environmental laws and conditions are met. Under the CCP, the environmental lead will provide environmental training to all managers and the foreman prior to construction. Thereafter, the contractor will ensure any employee who works at the site is trained in accordance with the CCP. During construction, the environmental lead will conduct

weekly meetings at the site as well as regular inspections to ensure all environmental regulations and conditions are being implemented.

3.2.2 Estimate how much of the expected workforce would come from local sources.

The amount of labor that will be sourced locally is unknown at this time, and will be dependent upon the engineering, procurement, and construction contractor selected, as well as the labor market and availability at the time of construction.

3.3 Construction Equipment and Delivery Vehicles

Provide a description of the types of construction equipment needed to build the project and the types of delivery vehicles that would be used to deliver panels and equipment to array sites. For large equipment and vehicles include:

3.3.1 Types of construction equipment and delivery vehicles.

The Project will require different equipment types depending on the phase of construction. The first phase consisting of civil work and road building will require dozers, motor graders, and rollers. The pile-driving phase will utilize pile drivers. After pile driving, installation of racking and panels will be supported mainly by skid steers and telehandlers. For the substation, a large truck crane will be needed to set the MPT and other heavy equipment. Small cranes, bucket trucks, and forklifts will be used to place the equipment for other substation components. For the gen-tie line, a wheeled or tracked drill rig will be used to drill the hole for the pole placement and a wheeled or tracked crane will lift the poles into place. Other support equipment such as skid steers, all-terrain vehicles, and forklifts will also be used.

3.3.2 Gross vehicle weight (loaded and unloaded) for all vehicles using local roads.

Except for the MPT and possibly the BESS equipment, delivery trucks will consist of legal load (80,000 pounds or less) over-the-road flatbed and box trucks. The Project will receive an average of approximately 7 to 10 box trucks (modules) a day throughout the module delivery period and 2 to 5 flatbed trucks a day (inverters, piles, racking, misc.) during the pile-driving period. The main MPTs will weigh approximately 200,000 pounds and will be transported via rail to the nearest railyard and then using special multi-axle trucking and state road permits, as necessary, to the Project.

3.3.3 For vehicles used for delivery (diagrams or drawings of vehicles are acceptable). Include:

3.3.3.1 Overall vehicle length.

Except for the MPTs, vehicles used for delivery will be standard over-the-road semi-trucks.

3.3.3.2 Minimum ground clearance.

Standard over-the-road semis/delivery vehicles will be used for this Project. These vehicles will have standard ground clearances. Vehicles used inside the arrays will be suitable for the engineered internal access roads and will have sufficient ground clearance.

3.3.3.3 Maximum slope tolerance.

The routes to the Project are relatively flat. Slope tolerance is therefore not expected to be an issue.

3.3.4 Roads and Infrastructure. Estimate the potential impacts of construction and delivery vehicles on the local roads. Provide the following:

A Road Condition Report was completed for the Project in October 2023. Current desktop road-condition data and visual inspections were performed as part of that road study. The Road Condition Report is included in Appendix T.

3.3.4.1 Describe methods to be used to handle heavy or large loads on local roads.

The MPTs and possibly the BESS equipment are the only equipment that will require use of transportation vehicles other than standard over-the-road flatbed trailers and box trucks.

3.3.4.2 Probable routes for delivery of heavy and oversized equipment and materials.

The most suitable access route for vehicles arriving from the South and East will be via I-39 continuing to the site via CTH W and CTH F or Taft Ave, entering the Project Area from the south side.

The most suitable access route for vehicles arriving from North of the Project site will be via I-39 exiting at STH 54 which is a four- lane divided highway and continuing to the site via Coolidge Ave or CTH F, entering the Project Area from the north side.

The most suitable access route for vehicles arriving from West of the Project site will be via STH 54 which is a four-lane divided highway and continuing to the site via Coolidge Ave or CTH F, entering the Project Area from the north side.

3.3.4.3 Potential for road damage and any compensation for such damage.

If required, prior to the start of construction, all roads in the Project Area (as well as access routes from the Interstate highways, if necessary) will be video recorded using a high-frame rate, high-definition digital camera (Go-Pro or equal). This will set a baseline showing the condition of the roadways prior to the beginning of the Project and provide a “before” for comparison purposes. After construction is complete, the same roads will be re-televised in the “after” condition.

The greatest potential for roadway pavement damage will typically appear at the construction driveway access points due to the starting, stopping, and turning of semi-trucks and other heavy vehicles. Additionally, roadway edges are often the first part of an otherwise adequate roadway to show signs of failure. If roadway edges are damaged, the outside 3 to 4 feet of the roadway can be reconstructed cutting down the costs of full-road width pavement rehabilitation.

Bridges and culverts around the Project Area are reported to be structurally adequate for standard load vehicles. Since heavy vehicles are required for construction and transport of large equipment, culverts on the selected routes should be visually inspected prior to construction and after construction.

If any damage is caused by the construction of the Project, it will be repaired to as good as or better than initial conditions.

3.3.4.4 Probable locations where local roads would need to be modified, expanded, or reinforced in order to accommodate delivery of equipment.

It is likely that gravel and unimproved Town roads will need to be regularly maintained during the construction process. Alternatively, these roads could be improved prior to construction by the addition of an additional layer of gravel or asphalt surfacing.

3.3.4.5 Include an estimate of whether or not trees near or in road right-of-way (ROW) might need to be removed.

No clearing of trees near any Project roadways is anticipated.

3.3.4.6 Provide an estimate of likely locations where local electric distribution lines would need to be disconnected in order to allow passage of equipment and materials.

No disconnection of local electric distribution lines will be necessary to allow for delivery of equipment and materials.

3.3.4.6.1 Describe how residents would be notified before local power would be cut.

Since local electric distribution lines will not need to be disconnected to allow for delivery of equipment and materials, there will be no cessation of local power, and, therefore, no need to notify customers of the loss of power.

3.3.4.6.2 Estimate the typical duration of a power outage resulting from equipment or materials delivery.

No power outages will be required for the delivery of equipment and materials.

3.3.5 Construction Traffic. Describe any anticipated traffic congestion and how congestion would be managed, minimized or mitigated. Include:

Local deliveries of equipment and materials will likely use I-39, STH-54, CTH W, CTH F, Taft Avenue, and Coolidge Avenue. A total of approximately 20,000 truck deliveries are anticipated for construction support items. Local traffic congestion may occur from Monday to Friday, twice a day, coinciding with workers arriving or leaving the site.

- Mobilization/demobilization of construction equipment including excavators, bulldozers, graders, water trucks, concrete pumps, cranes, forklifts, trailers, plows, trenchers, etc. – 750 total trucks during the construction phase – 50 to 75 weeks.
- Removing various trees and brush across the Project Area. Approximately 10 trucks moving tree removal equipment onto the site, 30 truckloads of lumber removed from the site and another 10 truckloads of waste and scrap materials.
- Delivery of road aggregate with dump trucks – 4000 total trucks during a 20 to 30-week internal road construction period.

- Delivery of ready-mixed concrete with traditional ready-mix trucks – 1400 truck deliveries during the approximate 25 to 30-week foundation construction period. The majority of the concrete trucks will be for foundations associated with the substations and O&M building.
- Delivery of skid mounted inverters including transformers on low-boy semis – 485 trucks during the 40-week electrical construction period.
- Delivery of electrical conductor and fiber optic spools and other equipment and supplies on lowboy semis – 350 trucks during the 40 to 50-week electrical construction period.
- Delivery of containerized BESS units and power conversion systems on semis – 400 trucks, plus concrete trucks for the pads – 640 concrete trucks including rebar during the 20-week BESS construction period.
- Soundwall for the BESS area will be delivered on 60 semi-trucks for the panels and columns during the 20-week BESS construction period.
- Delivery of solar panels and tracker parts on semis – 9,350 delivery trucks and 2,200 dunnage removal trucks during the 40 to 50-week electrical construction period.
- Delivery of Miscellaneous Items (fencing, landscaping, meteorological station, culverts, tools and consumables, office trailers, etc.) – 400 trucks over the entire construction phase.

These various delivery trucks are expected to be legal-load flatbed and box trucks.

The MPTs will likely require a special delivery vehicle, and due to its weight (estimated at 200,000 pounds) may require state road permits for its delivery. The delivery of the MPTs utilizing a specialized multi-wheel trailer may require police traffic control along local roadways. This traffic control will only be required during the delivery of the MPTs.

Local routes to the Project will have construction signage notifying deliveries and workers to reduce traffic. Signage will be posted to inform the public of the additional construction traffic.

3.3.5.1 List of roads most likely to be affected by construction and materials delivery.

Table 3.3.5.1: Affected Roads

Affected Roads
I-39
STH-54
CTH W
CTH F
Taft Avenue
Coolidge Avenue

3.3.5.2 Duration of typical traffic disturbance and the time of day disturbances are most likely to occur.

A traffic increase will likely occur twice a day during the work week (Monday through Friday) when construction workers are traveling to and from the Project. This increase will consist of the personal vehicles owned by the workers. Deliveries of equipment will also be traveling to the Project during the work week; material deliveries will generally be scheduled throughout the day versus during hours when residents are driving to and from work.

4 Project Maps, Aerial Imagery, Photo Simulations, and GIS Data

Orthorectified imagery created using Geographic Information System (GIS) is required – reduced size photos are not adequate. All spatial data submitted must be compatible with the most current version of ESRI ArcGIS.

Provide the sets of static maps listed below in Section 4.1. The extent of the aerial imagery must be inclusive enough to show the landscape context within which the proposed facilities would be placed. Typically, this requires extending the map extent to at least two miles beyond any project boundary. Also, provide only the GIS data described in Section 4.2.

Provide the maps in both hard copy and digital versions. Refer to Application Formats in the Introduction.

4.1 Project Area Maps

Required maps listed below are included in Appendix A, unless otherwise noted.

4.1.1 General Project Area Map

4.1.2 Detailed Project Area Map

4.1.3 Topographic Maps

4.1.4 Substation

4.1.4.1 Provide a map showing the features listed in the AFR

4.1.4.2 Provide an engineering diagram/s of the substation and substation equipment including any turning structures and interconnection facilities.

The substation engineering diagrams are found in Appendix B.

4.1.5 O&M Building

4.1.5.1 Provide a map showing the O&M building, parking area, roads, other impervious ground surfaces (e.g. gravel, aggregate, asphalt, concrete, etc.), permanent storm water management areas, and any other facilities. Include, as a background, a recent aerial image of the property.

4.1.5.2 Provide an engineering drawing of the O&M Building.

The O&M building engineering diagram is found in Appendix B.

4.1.6 Battery Storage

4.1.6.1 Provide an engineered drawing of the battery storage area, fencing, impervious ground surfaces, access roads, and permanent stormwater management areas.

The BESS engineering diagram is found in Appendix B.

4.1.7 Natural Resources and Land Use/Ownership Maps

4.1.7.1 Wetland and waterway maps. See section 8.3 for the map sets to provide.

4.1.7.2 Land ownership maps, minimum scale 1:10,000 (map extent to one mile from the project boundary)

4.1.7.3 Public lands

4.1.7.4 Land cover

4.1.7.5 Flood Insurance Rate maps (FIRM) (within the project boundary)

4.1.7.6 Soil survey maps (within the project boundary)

4.1.7.7 Bedrock maps (within the project boundary)

4.1.8 Community Maps

4.1.8.1 Zoning maps

4.1.8.2 Sensitive sites

4.1.8.3 Airports

4.1.9 Communication Infrastructure

4.1.9.1 Identify radio, television, microwave towers, and any NEXRAD or Doppler weather radar installations on a map and show the results of the line of sight analysis. Include communications and NEXRAD/Doppler installations within a one-mile radius of the project area.

4.2 GIS data

Provide GIS data with attributes as listed and described below. GIS attribute table information should be clearly labeled to identify fields and feature names.

Appendix F (submitted via the Commission's SFTP server) contains the following GIS-related items as part of the application, including all requires GIS data in Section 4.2 of the Solar AFR:

- GIS shapefiles containing all the data used to produce all maps in the application.
- A spreadsheet listing all GIS data files, a file description, the source of the data, and the date when the data was collected or published.
- Map files in Esri ArcGIS *.mxd format for all GIS maps in the application.

4.3 Photo Simulations

Existing aesthetic conditions of the Project Area and its vicinity were documented with photographs taken November 2021, December 2022, and March 2023. A subset of photographs collected during the site visit served as the baseline images for the creation of visual simulations. The simulations show rendered views that include the proposed solar facility components and arrays as proposed in engineering and plan documents.

Prior to commencing the photo simulation tasks for the Project, Vista Sands Solar consulted with Commission staff to determine the suitability of potential Key Observation Points (KOPs). Twelve KOPs were selected and used to create visual simulations of what the Project may look like once constructed:

- KOP 1 – View southwest of Project Substation 1 and BESS from the West end of Maple Drive.
    - KOP 1a depicts Proposed panel arrays and with the Proposed Project 345 kV 2-1 Transmission Line and the Proposed Project 138 kV A-1 Transmission Line.
    - KOP 1b depicts Alternative panel arrays and with the Proposed Project 345 kV 2-1 Transmission Line and the Proposed Project 138 kV A-1 Transmission Line.
    - KOP 1c depicts Proposed panel arrays and the Alternative Project 345 kV Transmission Line. Note that if this Alterative is constructed, Project 138 kV A-1 Transmission Line will not be necessary.
    - KOP 1d depict Alternative panel areas with the Alternative Project 345 kV Transmission Line. Note that if this Alterative is constructed, Project 138 kV A-1 Transmission Line will not be necessary.
- KOP 2 – View southwest from Forest Drive of Alternative panel arrays.
    - KOP 2a depicts Proposed Project 138 kV A-1 Transmission Line and Alternative panel array.
    - KOP 2b depicts Alternative Project 138 kV A-1 Transmission Line and Alternative panel array.
    - KOP 2c depicts Alternative Project 345 kV 2-1 Transmission Line and Alternative panel array. Note that if this Alterative Project Transmission line is constructed, Project 138 kV A-1 Transmission Line will not be necessary.
- KOP 3 – View south from Marsh Road of Alternative panel arrays.
- KOP 4 – View northwest from Birch Street.
    - KOP 4a depicts Proposed Project 345 kV 2-1 Transmission Line leaving Project Substation 2 enroute to Project Substation 1.
    - KOP 4b depicts Alternative Project 345 kV 2-1 Transmission Line leaving Project Substation 2 enroute to Project Substation 1.
- KOP 5 – View northeast from Prairie Drive of Proposed panel arrays.
- KOP 6 – View southwest from County Road F of Proposed panel arrays and Project 138 kV C-2 Transmission Line.
- KOP 7 – View southeast from 130th Street of Alternative panel arrays, Project 138 kV B-2 Transmission Line and Project Collector Substation B.
- KOP 8 – View southeast from Lake Road of Alternative panel arrays.
- KOP 9 – View south from STH 54 of Proposed Project 345 kV 2-1 Transmission Line where it will be double-circuited with existing ATC 115 kV Transmission Line.
- KOP 10 – View northwest from Birch Street of Proposed panel arrays, Project Substation 2, Project 138 kV B-2 Transmission Line and Proposed Project 345 kV 2-1 Transmission Line.
- KOP 11 – View southwest from Angle Road of Proposed panel arrays, Project Collector Substation C and Proposed Project 138 kV C-2 Transmission Line.

- KOP 12 – View southeast from Meehan Drive of Proposed Project 345 kV 2-1 Transmission Line where it will be double-circuited with existing ATC 115 kV Transmission Line.

A summary depicting the existing and simulated conditions is provided in Appendix G. It contains baseline photographs and visual simulations for the listed KOPs.

5 Natural and Community Resources, Description and Potential Impacts

5.1 Site Geology

5.1.1 Describe the geology of the project area.

Portage County lies within the Eastern Ridges and Lowlands of the Central Lowland Physiographic Province of the United States. Characteristic features of the Central Lowland province are flat lands with geomorphic remnants of glaciation. Portage County itself is typically divided into three areas having similar geologic and hydrologic conditions: the sand-plain province, the drift province and the drift crystalline province. The Project boundary is located in the Central Sand Plain of Wisconsin within the Sand Plain Province of Portage County. The Portage County landscape is a large, flat expanse of lacustrine and outwash sand, distinctive from any other part of the state in its origin as an extremely large glacial lake. The sand was deposited in Glacial Lake Wisconsin, along with outwash sand derived from glaciers to the north.

Bedrock within the Project Boundary is underlain by late Cambrian sandstone that contains strata of dolomite and shale. Precambrian igneous (granite) and metamorphic (gneiss) rocks lie beneath the sandstone and are exposed in a few locations along the Wisconsin River. Depth to bedrock in most of the Project Study Area is between 50 and 100 feet below the ground surface. USDA NRCS Soil Survey Geographic Database (SSURGO) mapping indicates that depth to a restrictive layer for most of the Project Study Area is greater than six meters (20 feet).

The Project Area is located in southwestern Portage County. Soils in this portion of the county are classified as Richford-Rosholt-Billet association which are formed mainly on outwash sand and gravel. Slopes are nearly level to gently sloping and the soil ranges from very poorly drained to excessively drained. The majority of land cover and land use within the Project Study Area is row crops.

5.1.2 Geotechnical report on soil conditions.

A desktop geotechnical review of publicly available resources, including the Wisconsin Geological and Natural History Survey (WGNHS) mapping, the WDNR Well Construction Information System, and the USDA NRCS SSURGO was performed for the Project. Detailed geotechnical investigations will occur during the final engineering process.

5.1.2.1 Provide a summary of conclusions from any geotechnical report or evaluation of soils in the project area including (subjects in bullets below):

The following subsections discuss the existing soil classifications and potential limitations, which include soil bearing capacity and soil settlement potential, potential for frost heave, compaction prone soils, hydric soils, drainage classification, potential for corrosion to steel, depth to water table, and depth to bedrock.

- **Results of soil borings including a review of soil bearing capacity and soil settlement potential.**

Vista Sands Solar reviewed the WDNR Well Construction Information System and USDA NRCS SSURGO for information regarding depth to water table and depth to bedrock in the vicinity of the Project Area. Within 0.25 mile of the Project Area, 394 wells were identified. Well logs for

several of the wells located within or near the Project Area found depth to water table ranging from 4 to 14 feet below ground surface. USDA NRCS SSURGO mapping indicates depth to water table throughout the Project Area ranges from zero and greater than 20 feet below ground surface. The WGNHS mapping shows that depth to bedrock within the Project Area ranges from 5 to greater than 100 feet below ground surface (see Figure 4.1.7.7 in Appendix A).

Vista Sands Solar expects that the soils at the Project site will be suitable for standard driven pile foundations required to support the module racking and inverters. Concrete foundations within the Project substation will likely be on drilled piers and/or large slab foundations, similar to the main power transformer slab. Pile foundations for the racking pose little risk, as less suitable soils can generally be overcome through longer, heavier pile sections. A final geotechnical study will be completed prior to construction, which will confirm the pile requirements and appropriate foundation designs.

Foundation design depths and steel pile cross sections are based on the snow, wind, and loading of the module and racking weights. Foundation cross sections and depths will be designed by a Wisconsin licensed structural engineer. Frost depths will be taken into consideration when determining the design. Typical foundation designs are based on a minimum 30-year useful life, which includes both corrosion and foundation displacement (frost heave) potential.

- **Results of soil borings and test pits for Site Evaluation for Stormwater Infiltration (Wisconsin Technical Standard 1002).**

The desktop geotechnical investigation performed for the Project did not include an analysis for soil infiltration or permeability testing. However, based on the soil type encountered during the wetland delineation, the soils consist of sand loam and fine to medium grade sand. These soil types are highly permeable and will provide excellent stormwater infiltration. The final site stormwater plan will review available soil infiltration data and account for these properties in the development of stormwater detention and treatment.

- **Depths to seasonal high groundwater.**

As described above, well logs for several of the wells located within or near the Project Area found depth to water table ranging from four to 14 feet below ground surface. USDA NRCS SSURGO mapping indicates that the water table is at or near the ground surface for a total of 4,018 acres (41.22 percent) of the Project Area. If perched water or collected rainwater is encountered within excavations for foundations, it will be removed with sump pumps to facilitate proper backfilling or concrete placement. Any dewatering activities will follow WDNR BMPs.

- **Results of any infiltration rate measurements, such as for permanent storm water infiltration basins or other practices.**

As stated above, soil infiltration rates were not analyzed as part of the desktop geotechnical investigation. The final site stormwater plan will review available soil infiltration data and account for these properties in the development of stormwater detention and treatment.

- **Identify any soil conditions related to site geology that might create circumstances requiring special methods or management during construction.**

Frost Action

Approximately 1,132 acres (11.6 percent) of the soils within the Project Area are rated as having high frost action potential, per the SSURGO database. However, estimating potential frost heave is difficult. The amount of possible heave is dependent on depth of frost penetration, extent of frost-susceptible soils allowing for the creation of ice lenses, and availability of water (either groundwater or from surface infiltration) for ice formation. Because of the variability in these three requirements, frost heaving is difficult to predict, sporadic in occurrence, and highly variable in the amount of heave.

Frost heave is often an ongoing process, with the pile or structure settling back a little less than the amount heaved such that eventually it is displaced by the repetitive frost heave cycles. Frost heave of exterior slabs can be addressed by replacing the frost susceptible soils with non-frost susceptible soils or insulation. Alternatively, the equipment pads can be supported on frost depth foundations with a structural slab. General site grades will be set to direct surface drainage away from structures to limit the potential for saturation of the subgrade and any subsequent heaving. Field-testing will be conducted to more accurately evaluate solar panel support design to prevent heave from ground freezing.

Erosion Hazard

Erosion prone soils were identified by querying the SSURGO database for soils that have a rating of “very severe” or “severe”. None of the soils within the Project Area are classified as very severe or severe erosion hazard. A total of 9,747.90 acres (99.99 percent) have a rating of “slight” erosion hazard. Under existing conditions, much of the Project Area consists of active agriculture under row crop production. Areas with limited vegetation due to past farming operations or disruption of vegetation due to civil construction activities will be seeded and stabilized in a timely manner. Prior to construction, Vista Sands Solar will obtain a Water Resource Application for Project Permits (WRAPP) from the WDNR in accordance with Wis. Admin. Code Ch. NR 216. The application will include a site-specific Erosion Control and Storm Water Management Plan (ECSWMP). The plan will include technical drawings and descriptions of the BMPs that will be followed in compliance with WDNR technical standards. Erosion control and vegetation management practices that will be conducted during construction and operation of the Project are summarized in the Vegetation Management Plan in Appendix I.

Compaction

Compaction prone soils were identified by querying the SSURGO database for soils that have a rating of “high” or “medium.” None of the soils within the Project Area are classified as having a high potential for compaction. A total of 9,747.9 acres (99.99 percent) have a rating of low for compaction.

Impacts on soil resources are expected to be minimized based on several factors including the implementation of the restoration procedures, soil compaction mitigation, and revegetation practices described in the Vegetation Management Plan in Appendix I. Prior to construction, areas that do not have more than 70 percent existing vegetative cover may be planted with both a cover crop and a long-term seed mix simultaneously. Before seeding, areas may be tilled to reduce compaction and better prepare the seed bed. In lieu of deep tillage, specific vegetative

species may be added to the seed mix that are capable of alleviating compaction.

Corrosion of Steel

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel. A total of 8,212 acres (84 percent) are classified as having a high risk of corrosion of steel. Corrosion testing will be performed prior to construction to identify whether corrosion protection of buried structures such as steel piles is required at this site.

5.1.2.2 Depth to bedrock

- **Identify any sites where panel supports or foundation construction must be modified because of the presence of bedrock.**
- **Describe construction methods and foundation issues associated with situations where bedrock formations are near the surface.**

As stated in Section 5.1.2.1, WGNHS mapping shows that depth to bedrock within the Project Area ranges from 5 to greater than 100 feet below ground surface. Vista Sands Solar expects that conditions within the Project Area will be suitable for standard driven pile foundations required to support the module racking and inverters and for concrete foundations within the Project substation. A final geotechnical study will be completed prior to construction, which will confirm the pile requirements and appropriate foundation designs. If geotechnical investigations determine that shallow bedrock is present at depths that may be encountered during construction, subgrade design and construction methods will be modified as appropriate.

- **Discuss the likelihood or potential that construction on bedrock formations may negatively impact private wells within two miles of solar array sites.**

There is a low likelihood that construction on bedrock formations will negatively impact private wells within two miles of the Project area. If bedrock formations are encountered during the final subsurface exploration and geotechnical engineering evaluation, measures will be implemented to guard against the introduction of contaminants into groundwater due to accidental release of construction related chemicals, fuels, or hydraulic fluid during construction. Spill-related impacts from construction are primarily associated with equipment refueling and equipment maintenance. To avoid spill-related impacts, the construction contractor will be required to prepare a Spill Prevention, Control and Countermeasures (SPCC) Plan and/or a stormwater pollution prevention plan (SWPPP), as required, that outlines measures that will be implemented to prevent accidental releases of fuels and other hazardous substances and describes response, containment, and cleanup procedures. By implementing the protective measures set forth in these plans, long-term contamination due to construction and operation activities is not anticipated.

5.2 Topography

5.2.1 Describe the general topography of the project area.

The surface topography of the Project Area is very flat across most of its extent, ranging from elevations approximately 1,029 feet above mean sea level (msl) to 1,084 feet msl. Topography is slightly more pronounced in and around the various drainage ditches throughout the Project

Area. There are also some slight topographic lows in some of the wetland areas, and some topographic variation in larger wooded areas. However, the remainder of the Project is very flat with only micro depressions and small undulations in the land surface. Project Area slope, outside micro-topographic anomalies associated with drainage ditches and roadways, is less than three percent.

5.2.2 Describe expected changes to site topography due to grading activities.

The topography of the Project will not be substantially changed by construction activities including installation of the foundations for the tracking systems and trenching for the collection system. Other than grading requirements for the substation/step-up transformer and other localized areas within the solar arrays, significant grading is not anticipated. Panel arrays will be designed and constructed to conform to the existing topography to avoid the need for significant grading. However, some localized grading will be necessary to meet racking tolerances. Access roads will be constructed as close to existing grade as possible, maintaining preconstruction hydrologic flow patterns.

Upon completion of construction activities, the areas temporarily impacted due to construction activities will be returned to their pre-construction topography.

5.3 General Project Area Land Cover

The Project is located in a predominately agricultural rural landscape. The agricultural areas' crops consisted of potato, corn, and soybeans. Non-agricultural upland within the Project Area consists primarily of untilled edges and corners of active agricultural fields, forest, and roadside. Figure 4.1.6.4 in Appendix A provides an overview of the land cover existing within the Project Boundary. Table 5.3-1 below provides a summary of the land cover within the Project Study Area.

5.3.1 Identify and describe the landscape within the general project area, including a list of dominant plants in the land cover categories listed in this section. Land cover may be based on GIS data, recent aerial imagery, and/or on-site evaluation not greater than two years old.

The vegetative communities within the Project Area were evaluated by a combination of aerial photographic review and field visits during 2022 and 2023. A summary of the vegetative communities within the Project Area is included below.

Table 5.3-1 Total Land Cover

Acres of Land Cover Categories within Project Study Area			
Land Cover Classification		**Acres**	**Percent of Total**
Agriculture	Cropland	7907.9	81.1
	Specialty Crops	2.9	0.0
Developed Land	Residential	3.6	0.0
	Developed/Urban	88.7	0.9
Non-Agricultural Upland	Grassland	823.3	8.4
	Upland Woodland	567.2	5.8
Wetlands/Waterbodies	Forested Wetland	163.5	1.7

Acres of Land Cover Categories within Project Study Area			
	Non-Forested Wetland	124.8	1.3
	Open Water	66.7	0.7
Project Study Area Total		**9748.7**	

5.3.1.1 Agricultural

- Cropland
- Specialty crops

The dominant vegetative community within the Project Area is comprised of actively cropped agricultural land. Crops within the agricultural areas consisted of potatoes, corn, soybeans, oats, millet and rye. Other agricultural field species were common dandelion (*Taraxacum officinale*), smooth brome (*Bromus inermis*), lamb's quarters (*Chenopodium album*), fall panicgrass grass (*Panicum dichotomiflorum*), hoary alyssum (*Berteroa incana*), velvetleaf (*Verbascum thapsus*), yellow foxtail *(Setaria pumila*), field pennycress (*Thlaspi arvense*), pinkweed (*Persicaria pensylvanica*), annual ragweed (*Ambrosia artesmisiifolia*), redroot amaranth (*Ambrosia retroflexus*), Timothy grass (*Phleum pratense*), Shepheard's purse (*Capsella bursa-pastoris*), and hairy crabgrass (*Digitaria sanguinalis*).

There are three pine plantation specialty agricultural fields in the Project Area; an approximately 1.5-acre field in the southwest, and two fields each approximately 0.7 acre at the north edge of the Project Area. The pine plantations consist of white pine (*Pinus strobus*), red pine (*Pinus resinosa*) and/or Scots pine (*Pinus sylvestris*).

5.3.1.2 Non-Agricultural upland

- Grassland
- Upland Woodland

Non-agricultural upland within the Project Area consists primarily of the untilled edges and corners of agricultural fields, forest, and roadside ditch.

The grassland communities observed within the Project were either old fields, degraded natural grasslands or active/fallow pasture. The old field communities were often mowed and primarily consisted of rabbits-foot clover (*Trifolium arvense*), white clover (*Trifolium pratense*), yellow foxtail, smooth brome, spotted knapweed (*Centaurea stoebe*), Kentucky bluegrass (*Poa pratensis*), common yarrow (*Achillea millefolium*), Canada goldenrod (*Solidago canadensis*), common dandelion, wild strawberry (*Fragaria virginiana*), field pennycress, Canada thistle (*Cirsium arvense*) and Canadian horseweed (*Conyza canadensis*).

Natural grassland communities were comprised of a mix of cool-season and warm-season grasses, such as Kentucky blue grass, little blue stem (*Schizachyrium scoparium*), and smooth brome, as well as Canada goldenrod, common milkweed (*Asclepias syriaca*), common yarrow, black raspberry (*Rubus allegheniensis*), common St. John's wort (*Hypericum perforatum*), beebalm (*Monarda fistulosa*), and scattered American hazelnut shrubs (*Corylus americana*). The grasslands were frequently degraded by invasive spotted knapweed.

Pasturelands consisted of non-native cool-season grasses and forbs typical of pastures, including Kentucky bluegrass, Timothy grass (*Phleum pratense*), clovers (*Trifolium sp.*), annual ragweed (*Ambrosia artemisiimilfolia*), daisy fleabane (*Erigeron annuus*), and Canadian horseweed.

The upland woodland communities included mesic forest and dry mesic forest.

The mesic and dry-mesic forests were dominated by red oak (*Quercus rubra*), white oak (*Quercus alba*), black cherry (*Prunus serotina*), jack pine (*Pinus banksiana*), white pine (*Pinus strobus*), and occasionally quaking aspen (*Populus tremuloides*) or red maple *(Acer rubrum*) in the canopy. The understory was comprised of American hazelnut (*Corylus americana*), prickly ash (*Zanthoxylum americanum*), black raspberry or red raspberry (*Rubus idaeus*) shrubs over Pennsylvania sedge (Carex pennsylvanica), bracken fern (*Pteridium Aquilinum*), interrupted fern (*Osmunda claytoniana*), Canada bluejoint (*Calamagrostis canadensis*), partridge berry (*Mitchella repens*), sweet fern (*Comptonia peregrina*) and/ or poverty oat grass (*Danthonia spictata*) in the ground layer. Invasive honeysuckle (*Lonicera sp.*) and common buckthorn (*Rhamnus cathartica*) shrubs were also occasionally observed in the woodlands.

5.3.1.3 Wetlands (Eggers and Reed classification type)

A total of 144 wetlands were identified within the Project Area. The wetlands delineated within the Project Area are further summarized in the Wetland Delineation Report and displayed on Figure 4 in Appendix H. A summary of the wetland communities is also included in WDNR Tables 1 and 2 in Appendix W.

The delineated wetlands located with the Project Area consist of wet meadow, farmed, seasonally flooded basin, shallow marsh, shallow open water, sedge meadow, shrub-carr and hardwood swamp wetlands. A summary of the wetland communities surveyed within the Project Area is presented below.

<u>Wet Meadow</u>

The wet meadow communities were typically located within wet ditches or the outer margins of agricultural fields. Many of these wetlands are degraded by drainage attempts, mowing, grazing or other land conversion and typically supported low plant diversity, and were most often dominated by reed canary grass (*Phalaris arundinacea*). Other common plant species observed within the wet meadow wetlands include fall panic grass (*Panicum dichotomiflorum*), redtop (*Agrostis gigantea*), stinging nettle (*Urtica dioca*), wool grass (*Scirpus cyperinus*), giant goldenrod (*Solidago gigantea*), panicled aster (*Symphyotrichum lanceolatum*), Pennsylvania smartweed (*Persicaria pensylvannica*), tussock sedge (*Carex stricta*), and yellow foxtail (*Setaria pumila*).

<u>Farmed Wetland</u>

Farmed wetland communities were the most prevalent community type and were disturbed due to agricultural practices including vegetation removal (harvest), plowing, planting, excavation, sand fill, drainage via constructed ditches, and altered hydrology due to irrigation systems. As a result of these disturbances, and abnormally dry conditions during the survey period, some of the farmed wetlands were dominated by non-hydrophytic agricultural weeds or lacked vegetative cover altogether. Where vegetation was present, typical dominant species included stressed crops, barnyard grass (*Echinochloa crus-galli*), fall panic grass, bog yellowcress (*Rorippa*

palustris), lamb's quarters (*Chenopodium album*), narrow-leaved cattail (*Typha angustifolia*), blunt spikerush (*Eleocharis obtusa*), field pennycress (*Thlaspi arvense*), and shepherd's purse (*Capsella bursa-pastoris*).

Seasonally Flooded Basin

Two small seasonally flooded basins were documented within the Project Area and correlate with WWI-mapped Excavated Ponds. Both wetlands are located within a pasture and the topsoil was observed to have been historically removed. These communities were inundated at the time of the investigation and dominated by redtop grass and annuals, including barnyard grass, slender false fox-glove (*Agalinis tenuifolia*), spotted lady's thumb (*Persicaria maculosa*), and blunt spike-rush.

Shallow Marsh

Two wetlands (064.0-W1, 081.0-W2) and portions of wetlands 053.0-W1, 055.0-W1 and 1043-W1 were identified as shallow marsh communities. These communities were either associated with field-delineated waterways, located within excavated ditches along the edges of agricultural fields and roadways, or associated with open water features. The shallow marsh communities were typically degraded by surrounding land use and dominated by reed canary grass, white panicled aster (*Symphyotrichum lanceolatum*), narrow-leaved cattail, soft rush (*Juncus effusus*) and scattered sandbar willow (*Salix interior*).

Shallow Open Water

Shallow open water communities occurred as isolated features or were associated with larger wetland complexes. These communities were often degraded by surrounding land use and/ or historically excavated. Aquatic vegetation such as Illinois pondweed *(Potamogeton illinoensis*, OBL), duckweeds (*Lemna spp*., OBL) and algae typically dominated the central portions, and reed canary grass, narrow-leaved cattail, common lake sedge (*Carex lacustris*, OBL), marsh pepper weed (*Persicaria hydropipier*, OBL), soft-stem bulrush (*Schoenoplectus tabernaemontani*, OBL) and various sedges (*Carex spp.*, FACW-OBL) around the perimeter.

Sedge Meadow

Sedge meadow communities were observed in wetland 1021-W3 and a small portion of wetland 129.0-W1. Wetland 1021-W3 is an isolated depression dominated by yellow lake sedge (*Carex utriculata*) located between a farm field access and woodland. The sedge meadow in 129-W1 is located under a cleared transmission line corridor along the east side of 110th Street South. No sample points were collected in the sedge meadow portion of 129-W1; however, the area was observed to be dominated by tussock sedge (*Carex stricta*) and is contiguous with the hardwood swamp component of the wetland.

Shrub-Carr

Few shrub-carr communities were identified in the Project Area and were typically part of larger complexes and usually were associated with waterways or drainageways. Dominant species common in the shrub layer are sandbar willow and tree saplings, including black ash (*Fraxinus*

nigra), red maple (*Acer rubrum*), American elm (*Ulmus americana*). Herb layer dominants include jewelweed (*Impatiens capensis*), various sedges and reed canary grass.

Hardwood Swamp

Hardwood swamp communities were associated with other wetland community types in a complex, and/or were associated with waterways, smaller tributaries, or drainageways. Other hardwood swamp communities were isolated wetlands and were not observed to have a hydrologic connection to other features. Common canopy dominants observed in the hardwood swamp communities include black ash, quaking aspen (*Populus tremuloides*), green ash (*Fraxinus pennsylvanica),* silver maple (*Acer saccharinum*), giant goldenrod (*Solidago gigantea*), Canada bluejoint (*Calmagrostis canadensis*), reed canary grass, sensitive fern (*Onoclea sensibilis*), American manna grass (*Glyceria grandis*), various sedges and skunk cabbage (*Symplocarpus foetidus).*

Floodplain Forest

Floodplain forest communities were associated with Buena Vista Creek and Fourmile Creek. Wetland 133.0-W5, on the south side of Buena Vista Creek, was inaccessible to field crews and therefore the wetland boundary and community type was approximated based aerial imagery, NRCS soil and WWI mapping. Wetland AD-W19 was aerially delineated via desktop review on a segment of Fourmile Creek just east of a field-delineated segment of the waterway. The floodplain forest communities were often dominated by black ash and green ash in the overstory, with speckled alder (*Alnus incana*) and nannyberry (*Viburnum lentago*) in the shrub layer, and Canada bluejoint, sensitive fern, American manna grass, various sedges and skunk cabbage in the herbaceous stratum.

5.3.1.4 Developed land

- Residential
- Developed/Urban

Developed land within the Project includes residential and commercial/industrial. Maintained gravel, paved, or lawn areas surrounding buildings are considered developed and are included in the residential developed land category. Roadways are included in the developed/urban category.

5.4 Land Cover Impacted by Proposed Project Facilities

Complete the PSC Solar Impact Table (comprised of 2 tabs) provided with these AFRs. Provide the tables in Microsoft Excel format and PDF. The PSC Solar Impact Table (comprised of 2 tabs) has instructions on completion and the type of information needed located in footnotes. Generally, the applicant should provide information on impacts by facility type on Tab 1 and by proposed and alternative fenced array areas with unique identifiers (e.g. number) for each fenced array area in Tab 2. Provide the estimated power capacity (MW) for each fenced array area. Provide land cover impacts for each solar panel fenced array area.

Land Cover Impacts are summarized in PSC Solar Tables 1 and 2 in Appendix W. Impacts have

been calculated using GIS software utilizing the previously described land cover digitized dataset and polygons representing the footprints of Project facilities.

5.5 Invasive Species

5.5.1 Describe locations where invasive species, forest pests, or diseases have been observed in the project area (e.g., invasive plants, oak wilt, etc.). State if invasive species surveys have occurred or would be conducted. If invasive species surveys have been conducted, provide documentation showing where surveys occurred and locations of invasive species found, indicating which species.

The Project Study Area was evaluated for the presence of invasive species during field investigations in 2022 and 2023. The most dominant invasive plants found during the field investigations were reed canary grass, spotted knapweed (*Centaurea stoebe*), and bush honeysuckle (*Lonicera tatarica*).

5.5.2 Describe mitigation actions during construction that would be used to prevent the introduction or spread of invasive species, forest pests, or diseases.

Applicable BMPs from the Wisconsin Council on Forestry guidance document entitled "Invasive Species Best Management Practices for Transportation and Utility Rights-of-Way" will be used during construction and transportation of materials to prevent the introduction or spread of invasive species.

Invasive species management for the Project may consist of spot cutting, mowing, and/or herbicide treatments. Vegetation management will be conducted to prepare the Project Area for permanent seed installation.

Construction equipment that may come in contact with field-verified invasive species areas will be cleaned before arriving and prior to leaving the Project. Cleaning of construction equipment may consist of brushing, power washing, and/or steam cleaning.

5.5.3 Describe planned ongoing invasive species monitoring and management for the project during operations.

Invasive and weed species management will be conducted as needed to reduce the spread of invasive species from existing populations, improve establishment and success of the permanent seed mixes, and reduce vegetation impacts to the PV panels and solar facility infrastructure. Flowering non-native species that are not considered invasive and do not have heights that would interfere with the Project operations will not be actively managed.

Vegetation cutting shall be appropriately timed to assist with control of invasive species (e.g., mow annual and biennial species during flowering but prior to seed production) and to remove vegetation to assist with site seedbed preparation.

Herbicide treatments are recommended for management of perennial invasive and noxious species, as mowing alone is not typically sufficient for adequate control. Ongoing management of invasive and noxious species is required for compliance with the State of Wisconsin Noxious Weeds law (Wis. Stat. section 66.0407) and the Wisconsin Administrative Code ch. NR 40 Invasive Species Rule. Herbicides are also used to remove undesirable vegetation to prepare for

permanent seed installation. Additional information regarding invasive species management is provided in the Vegetation Management Plan included in Appendix I.

5.6 Vegetation Management and Site Restoration

5.6.1 Provide a vegetation removal plan that discusses the types and locations where vegetation would be removed (e.g. herbaceous, agricultural crop clearing, shrub/forest clearing, etc.), the timing of vegetation removal, and the equipment to be used.

The Project's Vegetation Management Plan is included in Appendix I. Additional details about vegetation removal, timing, and equipment can be found in the Vegetation Management Plan.

5.6.2 Provide a detailed revegetation and site restoration plan that discusses the following items. If site specific details are not finalized at the time of application, describe the concepts to be used and a methodology for discussing impacts with PSC and WDNR staff:

5.6.2.1 Types of revegetation proposed for impacted areas.

Proposed temporary and permanent seed mixes are provided in Section 4.0 of the Vegetation Management Plan included in Appendix I.

5.6.2.2 Provide seed mixes, or example seed mixes if not known at time of application, and if seed mixes would be pollinator friendly.

Proposed seed mixes are provided in Appendix A of the Vegetation Management Plan located in Appendix I of this application. All seed mixes included in the Project Vegetation Management Plan are pollinator friendly.

5.6.2.3 Vegetation monitoring and management protocols for subsequent years after construction.

Details regarding monitoring and maintenance are included in Section 6.0 of the Project's Vegetation Management Plan included in Appendix I.

5.6.2.4 Invasive species management.

Invasive species management details are included in Section 6.0 of the Project's Vegetation Management Plan included in Appendix I.

5.7 Wildlife

Wildlife habitat found within the Project Area was identified based on desktop habitat review, field investigations and observations, and state and federal information on threatened and endangered species.

5.7.1 Describe existing wildlife resources and estimate expected impacts to plant and animal habitats and populations.

The Project Study Area consists of mostly active agricultural land that provide suitable habitat for a variety of common Wisconsin wildlife and plant species. Typical mammals found in these habitats in central Wisconsin include white-tailed deer (*Odocoileus virginianus*), coyote (*Canis*

latrans), common raccoon (*Procyon lotor*), red fox (*Vulpes vulpes*), eastern gray squirrel (*Sciurus carolinensis*), groundhog (*Marmota monax*), opossum (*Didelphimorphia*), rabbits (*Sylvilagus floridanus*), and deer mice (*Peromyscus maniculatus*), among others. Wildlife may utilize agricultural land and adjacent forested habitats to forage, shelter, and to move through the surrounding landscape.

Numerous bird species may also be found in the Project Area and their presence varies depending on time of year. Typical breeding bird species likely to occur within the Project Area include red-tailed hawk (*Buteo jamaicensis*), horned lark (*Eremophila alpestris*), tree swallow (*Tachycineta bicolor*), American robin (*Turdus migratorius*), gray catbird (*Dumetella carolinensis*), common yellowthroat (*Geothlypis trichas*), song sparrow (*Melospiza melodia*), and red-winged blackbird (*Agelaius phoeniceus*).

The Project is anticipated to have minimal adverse impact on wildlife species and their preferred habitats since the majority of the Project Area consists of active agriculture. No significant wildlife habitat is expected to be lost as a result of Project construction. After construction is complete, Vista Sands Solar will revegetate the Project with a mix of native and non-native perennial grasses and sedges. Pollinator-friendly seed mixes will be incorporated in select open spaces between solar production areas and the perimeter fence. It is anticipated that revegetation of the Project with a permanent cover of vegetation will maintain suitable habitat for a variety of wildlife species including pollinating insects, nesting birds, and small mammals.

Array fencing will consist of an eight-foot-high wildlife-friendly with wood or metal fenceposts and direct-embed steel corner posts. Larger apertures in the fence weave will be located near the ground to allow for passage of small mammals and herptiles through the fence fabric. The Project substations be surrounded with 8-to-10-foot high chain link fence with 3 strands of barb-wire, as required by applicable electrical safety codes. A schematic of the proposed Project fencing is found in Appendix B.

Based on the lack of existing available habitat and list of species likely to occur within the Project Area, Vista Sands Solar does not anticipate any adverse impacts to plant and animal populations.

5.7.2 Wildlife pre-construction surveys. (See Habitat Surveys and Biological Assessments in the Introduction)

Surveys for suitable habitat for three butterfly species (one Endangered butterfly species; one Federally Listed butterfly species; one Special Concern species) were conducted in June, 2022.

Suitable habitat was identified within the Project Area for one Endangered butterfly species and one Federally Listed butterfly species, therefore host plant surveys were conducted in June, 2022.

A combination of bird transect, point count, and broadcast call surveys for rare birds (four Threatened bird species; one Endangered bird species; two Special Concern bird species) were conducted in May-June, 2022.

Suitable habitat surveys for one Threatened and one Special Concern turtle species were conducted in 2021 and 2022 as part of the wetland delineation field work.

Results of the surveys were submitted to WDNR as part of the Certified Endangered Resources

(ER) Review.

5.7.2.1 Provide a summary of pre-application consultation meetings held with WDNR and/or USFWS for the purposes of determining whether or not any pre-construction wildlife studies would be required for the project.

See section 5.8 and the ER Review in Appendix L for additional information regarding agency consultations and pre-construction studies required for endangered resources wildlife.

No additional pre-construction wildlife studies were required.

5.7.2.2 If, after consultation with WDNR or USFWS, wildlife pre-construction studies are required, provide the following:

- **A copy of the approved survey methodologies for any studies including the species of interest, dates of surveys, and a schedule for releasing data and reports to the PSC and WDNR.**
- **Copies of all data collected for all pre-construction studies (data should be provided using a format acceptable to WDNR and PSC staff).**
- **Final report/s or analyses prepared using the data collected.**

Endangered resource wildlife pre-construction studies information is provided in Appendix L.

5.7.2.3 Provide any monitoring and response protocol for wildlife accessing the solar arrays.

Vista Sands Solar is proposing to install an eight-foot-high deer exclusion fence around all array areas and eight-foot-high chain link fence with 3 strand barbed wire around ancillary facilities (substation, BESS and O&M Building) to prevent Project access by large wildlife species such as deer. The wide mesh in the deer exclusion fencing will allow wildlife such as reptiles, amphibians and small mammals to cross the Project fence line unimpeded. Maintenance crews will monitor the array area for wildlife as they are completing their routine O&M tasks. If a large wild animal does become trapped within the array areas, Vista Sands Solar will coordinate with local and state authorities, if necessary, to assist with the safe removal of wildlife.

5.8 Endangered Resources

Endangered resources include any state or federally listed species (e.g. threatened, endangered), special concern species, and/or natural communities. Location specific information for endangered resources is considered sensitive and should be filed confidentially on ERF with a public redacted version also provided. As the location is defined by the project area, all species names should be redacted or generalized to taxa group wherever referenced throughout all application materials. In addition, any required/recommended actions or no impact justification should also be redacted wherever referenced throughout all application materials.

5.8.1 Provide a copy of the completed ER screening and all supporting materials for all project areas, including all applicable components such as off-ROW access routes,

staging areas, new substations, and expansion of existing substations.

An initial ER Review with a preliminary Project boundary was completed by Vista Sands Solar's consultant on April 25, 2023. The WDNR ER Review response (ERR Log# 23-336) was received on May 10, 2023. The review showed that seven species were listed for "Actions that need to be taken to comply with state and/or Federal endangered species laws," including four birds, two terrestrial invertebrates, one herptile, and the Karner Blue Butterfly Federal High Potential Range. The WDNR response indicated that suitable habitat may be present for these species within the Project Study Area and required implementing avoidance and minimization measures to avoid take of the species. Two birds, one terrestrial invertebrate, four plants, one mammal, one herptile and one community were listed for "Actions recommended to help conserve Wisconsin's Endangered Resources." The WDNR response indicated that that suitable habitat may be present for these species or communities within the Project Study Area and recommended implementing avoidance and minimization measures to avoid take of the species.

A secondary ER with the final Project boundary was submitted on December 8, 2023 with the final Project Area boundary. Results of the renewed ER Review were received December 14, 2023.

On November 3, 2023, Vista Sands Solar's consultant requested an Official Species List report for the Project from the USFWS. Vista Sands Solar then received a response (Consistency Letter) from USFWS online IPaC review system on November 30, 2023 stating: "Based on your IPaC submission and a standing analysis, your project is not reasonably certain to cause incidental take of the northern long-eared bat. Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat."

The Official Species List included the following federally listed species that may occur in the vicinity of or may be affected by the Project:

- The gray wolf (*Canis lupus*) is listed as Endangered in Wisconsin. The Gray Wolf, being a keystone predator, is an integral component of the ecosystems to which it typically belongs. The wide range of habitats in which wolves can thrive reflects their adaptability as a species, and includes temperate forests, mountains, tundra, taiga, and grasslands. The Project is located within the known range of the gray wolf in Wisconsin. However, according to the USFWS official species list, the Project Study Area is not located within designated critical habitat for the gray wolf. Based on the minimal suitable habitat within the Project Area, the Project is not expected to affect the gray wolf.
- The NLEB (*Myotis septentrionalis*) is federally listed as Endangered in Wisconsin and NLEB suitable habitat may exist within the Project Study Area. To complete consultation specifically for the northern long-eared bat, per guidance from the USFWS, Vista Sands Solar's consultant utilized the IPaC online assisted determination key (d-key) to generate a Consistency Letter.
- The tricolored bat (*Perimyotis subflavus*) is a "candidate" species within the iPac species database. For this Project, specific mitigation measures are not likely to be required.

- The whooping crane (*Grus americana*) are considered part of a nonessential, experimental population in the eastern U.S. (including Wisconsin) and per the USFWS are only protected on Federal Lands. Federal Lands do not exist within the Project Area.
- The salamander mussel (*Simpsonaias ambigua*) is a "candidate" species within the iPac species database. For this Project, specific mitigation measures are not likely to be required.
- The Karner blue butterfly (*Lycaeides melissa samuelis*) occurs in pine barrens and oak savannas on sandy soils containing wild lupine (Lupinus perennis), the only known host plant of Karner blue butterfly larvae. The Project Study Area is located within the known range of the Karner blue butterfly in Wisconsin. According to the USFWS official species list, the Project Study Area is located within proposed critical habitat for the Karner blue butterfly. Although Vista Sands Solar anticipates no impacts based on the current land uses (agricultural land with significant disturbance throughout the Project footprint) wild lupine surveys were be conducted in the spring of 2021 per the USFWS Habitat Conservation Plan. Both wild lupine and Karner blue butterfly survey results will be submitted to the USFWS for follow up correspondence. Additional surveys may need to be completed for additional areas added.
- The monarch butterfly (*Danaus plexippus*) is a "candidate" species within the iPac species database. For this Project, specific mitigation measures are not likely to be required.
- The Fassett's locoweed (*Oxytropis campestris var. chartacea*) occurs on sandy shorelines of land-locked seepage lakes and appears to be dependent upon periodic fluctuations in lake levels and maintenance of the shoreline habitat. The Project Study Area is located within the known range of the Fassett's locoweed in Wisconsin. However, according to the USFWS official species list, the Project Study Area is not located within designated critical habitat for the Fassett's locoweed. Based on the lack of suitable habitat within the Project Study Area, the Project is not expected to affect the Fassett's locoweed.

5.8.2 Submit results from habitat assessments and biological surveys for the proposed project, if completed or if required to be completed per the ER screening. If surveys or assessments are required to be completed prior to construction but have not yet been completed, state when these surveys will be completed. Results from additional surveys conducted during the review of the application, prior to the start of construction, and/or post-construction must be submitted as they are completed.

The majority of the Project Study Area is currently in agricultural production. The fence lines and waste areas between fields are severely degraded and provide little habitat for wildlife.

The WDNR Certified ER review response indicated that suitable habitat may still be present for protected species within the Project Area and required implementing avoidance and minimization measures to avoid take of the species.

In order to gain a better understanding of the potential presence of rare species within the Project Area, Vista Sands Solar performed avian surveys and lepidoptera host plant surveys during the 2022 field season. No suitable habitat was identified for any of the lepidoptera species

noted in the Endangered Resources Review. Greater Prairie Chickens were the only avian species of concern found within the Project Area. Those observations occurred in agricultural fields. The results of these surveys are included in Appendix L Endangered Resources Review.

Vista Sands Solar will work with the WDNR following the submittal of the CPCN application to determine the timing of specific surveys in spring 2024 or 2025 and the need to complete other surveys prior to the receipt of the CPCN order.

At this time, Vista Sands Solar anticipates that compliance with endangered resource law during and after construction will consist of time of year restrictions, avoidance and or mitigation measures (exclusion fencing).

5.8.3 For all project facilities and areas impacted by construction, discuss potential impacts to rare species as identified in the completed ER screening and/or field assessments.

The conversion of land within the Project Area from intensive agriculture to solar production will provide a net benefit to the rare species identified within the Endangered Resources Review. Further, as described in Section 5.8.4, Vista Sands Solar met with WDNR on numerous occasions in 2023 to create a list of agreed upon conservation measures incorporated into the Project design and operation that will both minimize adverse effects of the Project and increase suitable habitat for the species identified in the Endangered Resources Review.

At this time, Vista Sands Solar anticipates that compliance with endangered resource law during and after construction will consist of time of year restrictions, avoidance and or mitigation measures (exclusion fencing).

5.8.3.1 For any required follow-up actions that must be taken to comply with endangered species law, discuss how each required action would affect the proposed project, and how the required action would be complied with.

Vista Sands Solar anticipates that compliance with required follow-up actions that must be taken to comply with endangered species law before, during and after construction will consist of a combination of surveys, habitat assessments, time of year restrictions, avoidance and or mitigation measures (exclusion fencing).

5.8.3.2 For any recommended follow-up actions to help conserve Wisconsin's rare species and natural communities, discuss if and how any recommended actions would be incorporated into the proposed project.

Vista Sands Solar anticipates that compliance with recommended follow-up actions that must be taken to comply with endangered species law before, during and after construction will consist of a combination of surveys, habitat assessments, time of year restrictions, avoidance and or mitigation measures (exclusion fencing). Recommended follow-up actions will be implemented where consistent with final Project design.

5.8.3.3 If any recommended follow-up actions are not planned to be incorporated into project construction or operation, state the reasons why.

At this time, Vista Sands Solar has not determined if any recommended follow-up actions will not

be incorporated into Project construction or operation.

5.8.4 Provide communications with WDNR and U.S. Fish and Wildlife Service, as applicable.

Vista Sands Solar initiated Endangered Resources discussions with WDNR at the Project pre-application meeting February 27, 2023 and an Endangered Resources Review was submitted to WDNR in April of 2023. During the pre-application meeting, Vista Sands Solar and WDNR agreed to continue discussions focused on design considerations to mitigate adverse effects to the Greater Prairie Chicken and other rare wildlife species of the nearby Buena Vista Grassland. These discussions were termed the Vista Sands Greater Prairie Chicken Working Group (Working Group).

The first Working Group meeting took place at the Buena Vista Wildlife Area on May 11, 2023 and included a field trip to look at different Greater Prairie Chicken habitats and a more in-depth discussion of the Project.

The second Working Group meeting occurred virtually on June 6, 2023. In this meeting, Vista Sands Solar and WDNR agreed to craft a Memorandum of Understanding (MOU) outlining GRPC conservation measures to be implemented by the Project and highlighting research opportunities with the goal of completing the MOU prior to CPCN application.

The third Working Group meeting occurred virtually on June 26, 2023. In this meeting, Vista Sands Solar and WDNR established preliminary topics that would be covered in the MOU. These topics include mowing, grazing, bird diverters, new mitigation areas, laydown yards, research funding and a Project-specific Incidental Take Authorization.

On July 28, 2023, Vista Sands Solar sent the first draft of the MOU to WDNR for WDNR and its counsel to review. This draft MOU did not contain the specific provisions but included the legal context and framework of the MOU.

The fourth Working Group meeting occurred virtually September 25, 2023. The Working Group was joined by Dr. Jason Riddle, Professor of Wildlife Ecology and Management from University of Wisconsin – Stevens Point. The intent of the meeting was to explore costs and issues related to Doral supporting a graduate research assistantship to study GRPC and other wildlife interactions with Vista Sands Solar Farm. Topics included costs, timelines, summer field crew costs and timelines, longitudinal studies, additional funding sources, taxa, and funning funnel.

On November 3, 2023, Vista Sands Solar sent the second draft of the MOU to WDNR. This draft included updated framework language with a requested change from WDNR and the proposed conservation measure agreed upon by Vista Sands Solar and WDNR. WDNR has reviewed the draft MOU and has presented additional questions on the same to Vista Sands Solar. It is anticipated that the MOU language will ultimately be mutually agreed upon, and the MOU executed prior to the conclusion of the CPCN proceeding. Vista Sands Solar will provide updates, as appropriate, in its testimony and exhibits in the proceeding.

Communications between WDNR and Vista Sands Solar and Working Group meeting minutes are included in Appendix L Endangered Resources Review.

5.9 Public Lands and Recreation

List all public properties within the project area and in a separate list all public properties within two miles of the project area boundary.

To assess the Project Area for the presence of public lands, recreational sites, and other special-use areas, Vista Sands Solar reviewed USGS Protected Areas Database of the U.S., USGS topographic maps, aerial photographs, available USFWS and WDNR agency databases, Portage County website, and general internet land information searches (i.e., Google Earth, Google Maps).

A GIS file of public lands within two miles of the Project Area is included with Appendix F. A map showing federal, state, county, and local properties within two miles of the Project Area is included as Figure 4.1.7.3 in Appendix A.

5.9.1 State properties, including but not limited to:

No state properties are located within the Project Area.

Two categories of state-owned or managed properties are within two miles of the Project Area (See Figure 4.1.7.3 in Appendix A).

- Buena Vista Prairie Chicken Meadow, a State Natural Area, is located approximately 0.3 mile south of the Project Area.
- Three WDNR managed properties are located within two miles of the Project Area: Buena Vista Wildlife Area; Central Wisconsin Grassland Conservation Area; and Whiting Station.
    - The Buena Vista Wildlife Area is located adjacent to southern borders of the Project Area.
    - The Central Wisconsin Grassland Conservation Area is located to the south of the Project, bordering the southern-most edge of the Project Area.
    - Whiting Station is located approximately 1.4 miles to the east of the northern portion of the Project Area.

5.9.1.1 Wildlife Areas

The Buena Vista Wildlife Area, a WDNR managed property referenced above, is located within two miles of the Project Area. The Buena Vista Wildlife Area is located adjacent to southern borders of the Project Area. This property is owned and managed by the WDNR.

5.9.1.2 Fisheries Areas

No state-owned or managed fisheries areas are located within the Project Area or within two miles.

5.9.1.3 State Parks and Forests

No state parks or forests are located within the Project Area or within two miles.

5.9.2 Federal properties, including but not limited to:

No Federal properties are located within the Project Area. One category of Federal properties, Grassland Reserve Program (GRP) properties, is within two miles of the Project Area (See Figure 4.1.7.3 in Appendix A). The nearest Grassland Reserve Program property is adjacent to a portion of the southern Project Area.

5.9.2.1 Wildlife Refuges

No Federal Wildlife Refuges are located within the Project Area or within two miles.

5.9.2.2 Parks

No Federal Parks are located within the Project Area or within two miles.

5.9.2.3 Scenic Riverways

No Federal Scenic Riverways are located within the Project Area or within two miles.

5.9.3 County Parks

No county parks are located within the Project Area or within two miles.

Two county parks, South Wood County Park and Belecke Park, 17 municipal parks, and 1 privately owned park owned by Neenah Paper Company are located within two miles of the Project Area.

5.9.4 Recreation Trails

One recreation trail, a Portage County Snowmobile Trail, is located within the Project Area. The trail runs east-west through the northern part of the Project Area. Approximately 8 miles of the trail is located within the Project Area. Another approximately 16 miles of the trail is located within two miles of the Project Area.

One additional recreational trail is located within two miles of the Project Area. The Green Circle State Trail is located approximately 1.6 miles to the north-east of the Project Area, and approximately 0.7 mile of the trail is within two miles of the Project Area.

5.9.5 Identify the owner/manager of each recreation resource.

The GRP parcels are owned by Dane County Conservation League.

The county parks are owned by Wood County and Portage County.

The municipal parks are owned by Village of Plover.

The privately owned park is owned by Neenah Paper Company.

The snowmobile trail is located on private property and managed by the local snowmobile club.

The Green Circle State Trail is located on privately owned property, Village of Plover property, and within road rights-of-way.

5.9.6 Provide any communications with these owners/managers.

See section 5.8.4 for information about the draft MOU developed by Vista Sands Solar and WDNR outlining GRPC conservation measures to be implemented by the Project and highlighting research opportunities with the goal of completing the MOU prior to CPCN application.

No state, federal, county owned, or other special use areas are located within the Project Area. Therefore, no additional communications with landowner/managers has occurred.

Vista Sands Solar plans to coordinate with all interested parties concerning public lands and recreation as the Project is further designed.

5.9.7 Discuss how short and long-term impacts to these resources would be avoided and/or minimized.

No state, federal, county owned, or other special use areas are located within the Project Area. The project will likely not be visible from most of the properties located within two miles of the Project due to distance, topography, and tree cover; therefore, no short or long-term impacts are anticipated.

The Buena Vista Wildlife Area and The Central Wisconsin forest Conservation Area are adjacent to the Project Area around Array Areas 12, 20, 21, 38, 41, 44, and 53. These array areas are sited within active agricultural fields. See section 5.8.4 for information about the draft MOU developed by Vista Sands Solar and WDNR outlining GRPC conservation measures to be implemented by the Project and highlighting research opportunities with the goal of completing the MOU prior to CPCN application.

As necessary and appropriate, Vista Sands Solar will continue to work directly with representatives of the WDNR and Buena Vista Wildlife Area to address any impact concerns.

Vista Sands Solar will work with the Portage County Snowmobile Club to determine the best course of action for re-routing the snowmobile trail once the Project is constructed.

5.9.8 Describe any measures that would be taken to mitigate or minimize impacts to aesthetics and tourism in the areas surrounding the project.

The entire Project Area is located within a rural agricultural setting. Vista Sands Solar does not anticipate any impact to local tourism as a result of the Project. Aesthetics will be mitigated through the use of minimally invasive fencing of similar construction to other fences in the area. Additionally, Vista Sands Solar will work with adjacent landowners on vegetive buffers and screening, as appropriate, following completion of the Project.

5.10 Contaminated Sites

List all contaminated sites and solid waste sites within the project area, and in a separate list, all contaminated sites and solid waste sites within two miles of the project area boundary.

5.10.1 Using the Wisconsin Remediation and Redevelopment Database (WRRD), http://WDNR.wi.gov/topic/Brownfields/WRRD.html, identify any contaminated sites (open and closed) within the project area and within 2 miles of the project area.

According to a records search conducted on November 10, 2023, there are no contaminated sites (open and closed) within the Project Area, and 71 open/closed contaminated sites within a 2-mile radius of the Project. Information on these sites was obtained from the Wisconsin Remediation and Redevelopment Database (WRRD).

5.10.2 Using the Historic Registry of Waste Disposal Sites, http://WDNR.wi.gov/topic/Landfills/registry.html, identify any Environmental Repair and Solid Waste disposal sites within the project area and within 2 miles of the project area.

According to a records search on November 10, 2023, no disposal sites within the Project Area were identified. Six disposal sites within 2 miles of the Project Area were identified on the Historic Registry of Waste Disposal Site.

5.10.3 If contaminated materials are known to exist on-site, list and describe: The type of contaminant(s) known to exist on-site. The location of the contaminant(s). The media in which the contaminant is located within (i.e., soil, water, etc.). The estimated concentration of the contaminant(s). The estimated volumes of the contaminant(s).

No contaminants are known to exist within the Project Area.

5.10.4 If contaminated materials are newly discovered on-site, specify:

- **The procedure for screening materials.**
- **The location where materials be [sic] tested.**
- **The protocols that would be followed.**
- **Whether construction work would be impacted.**

Contractors will be trained to identify potential contaminated materials. Vista Sands Solar will notify a firm experienced in the analysis and treatment of such materials if contaminated soils or materials are encountered during construction. The suspected materials will be tested, treated, and disposed of according to the proper protocol for the situation encountered and the corresponding statutory requirements. The WDNR will be contacted as required under state statutes.

5.11 Floodplain

5.11.1 Identify any work occurring in floodplains or flood-prone areas (e.g. agricultural field ponding).

The Project is not located within a floodplain or flood-prone area. The nearest mapped floodplain is associated with the Wisconsin River, located within the Town of Plover, approximately 0.5-mile northwest of the Project Area.

5.11.2 Discuss if impacts to the floodplain have been evaluated, and how impacts to the floodplain will be avoided or minimized.

The Project is not located within a floodplain or flood-prone area and therefore will not create any impacts to nearby mapped floodplains.

5.11.3 Provide information on any discussions that have occurred with the application floodplain zoning authority, and how the project will comply with local floodplain ordinance(s). This requirement is not intended to preclude or otherwise modify Wis.

Stat. 196.491(3)(i).

The Project is not located within a floodplain or flood-prone area; therefore, no discussion with the floodplain zoning authorities has occurred.

5.12 Local Zoning and Safety

5.12.1 thru 5.12.5

Responses to subsections 5.12.1 through 5.12.5 of the AFR are not included as they apply only to utilities.

5.12.6 Provide a list of potential local issues normally associated with zoning, road use and safety, or other condition uses.

The Project Area within the Towns of Plover and Buena Vista is in the following Portage County zoning classes: A1 Exclusively Agricultural; A2 Agricultural Transition; A3 Low Density Agricultural zoning; small portions of C4 Highway Commercial; and a small portion of CON Conservancy zoning.

The Project Area within the Town of Grant is in the following Town of Grant zoning classes: A-1 Exclusive Agricultural / Farmland Preservation Overlay District; A-2 Transitional Agricultural; A-3 General Agricultural.

Vista Sands Solar is coordinating with Portage County, the Towns of Plover, Buena Vista, and Grant, and the Village of Plover in an attempt to establish joint development agreements (JDA) or other informal arrangements that will address any of the local governments' concerns regarding the Project.

5.12.6.1 Provide copies of all correspondence to and from local government pertaining to issues of zoning, safety, or local road use safety plans.

Communications with Portage County, the Town of Plover, the Town of Grant, the Town of Buena Vista, and the Village of Plover regarding the JDAs and the consistency of the Project with local land use plans are ongoing. Details about outreach to local municipalities is outlined in Section 7.2 below.

5.12.6.2 Provide a discussion of how local concerns will be accommodated.

Vista Sands Solar has met and coordinated with the Town of Plover, the Town of Buena Vista, the Town of Grant, the Village of Plover, and Portage County representatives as well as with the larger community to discuss local issues. Vista Sands Solar will continue to work proactively with the towns, county, and local communities to identify and address issues and concerns should they arise. The Project's goal is to utilize JDAs with the local government units to address concerns. Draft JDAs were sent to all municipalities where facilities are planned and Vista Sands Solar understands that the drafts are under review by the communities. Vista Sands Solar hopes to have the JDAs executed prior the PSCW making a determination on the CPCN application, and will provide the JDA to the PSCW shortly after execution.

5.12.7 Describe any impacts the proposed project would have on existing infrastructure including electric distribution lines and gas pipelines.

No impacts are anticipated to existing electric distribution lines. There is a gas transmission pipeline running generally north-south on the east side of the Project Area. Vista Sands Solar will coordinate with Flint Hills Resources, the pipeline operator, during the next design phase to avoid adversely affecting pipeline operations.

5.13 Land Use Plans

Provide information from all land-use plans adopted by local governments that pertain to the project area, extending out two miles from the Project Area. Only submit those pages relevant to the project siting or operation. Do not submit multi-page ordinances, land use plans, etc. unless the entire document would be helpful for context. Include a list of website addresses to the source documents. Include not only general land-use plans, but also other relevant planning documents such as:

5.13.1 County Recreation Plans

5.13.2 Farmland Preservation Plans

5.13.3 Highway Development Plans

5.13.4 Sewer Service Area Plans

Land use plans, zoning ordinances, and relevant planning documents are listed in Table 5.13-1 and provided in Appendix E.

Table 5.13-1 Land Use Plans and Ordinances

Government	Plan or Ordinance
Town of Grant	Town of Grant Adopted Comprehensive Plan (adopted from Portage County Comprehensive Plan)
	Town of Grant Zoning Ordinance
Town of Plover	Town of Plover Adopted Comprehensive Plan (adopted from Portage County Comprehensive Plan)
Town of Buena Vista	Town of Buena Vista Comprehensive Plan
Village of Plover	Village of Plover Zoning Code
	Village of Plover Comprehensive Plan
Portage County	Portage County Zoning Ordinance
	Portage County Comprehensive Plan

5.14 Archaeological and Historical Resources

Vista Sands Solar commissioned Stantec to conduct an initial cultural resources database review, create an archaeological site probability model, and conduct field investigations to identify any cultural resources present within the Project Boundary. The results of the cultural resources database review indicated that eight archaeological surveys have been conducted with the Project. Ten previously identified archaeological sites are located within the Project, and an additional 16 previously identified sites are located within 1-mile of the Project. There are no

recorded cemeteries or burial sites within the Project and an additional six cemeteries and burial sites are within 1-mile of the Project. Three cataloged historic structures are located within the Project and an additional 14 cataloged historic structures are located within 1-mile of the Project.

Archaeological site-location modeling was used to identify areas of high potential for archaeological sites. Stantec identified the area of high archaeological site potential through review of the Wisconsin Historic Preservation Database online archaeological site files and historical maps mainly postdating the Civil War. High potential for prehistoric Native American sites was found to be within 450 feet of sources of water. Further, site locations were restricted to areas with less than 15 percent slope and on soil types that were not subject to frequent flooding.

Stantec archaeologists conducted a pedestrian survey of 259 acres of high prehistoric Native American and Historic period Euro-American archaeological site potential. Fourteen previously unidentified archaeological sites were identified in the survey of the Project archaeological site high probability area. These sites date between the Archaic and the Historic period. An additional five archaeological sites and the remains of one demolished historical structure were reidentified within the Project archaeological site high probability areas.

Based on the identification and re-identification of several archaeological sites along Buena Vista Creek and its tributaries, Stantec archaeologists recommended that these parcels be excluded from the Proposed Array Areas pending further archaeological study. Following this recommendation, the Project layout was modified so that the parcels containing newly identified sites A-1. A-2, B-1, B-2, C-2, E-1, E-2, F-1, and reidentified sites PT-0061, PT-0068, PT-0069, PT-0070, PT-0071, PT-0072, PT-0073, PT-0105, PT-0271, and PT-0272 were moved from Proposed to Alternative PV Solar Array Areas. Five newly identified sites continue to be located within the Proposed PV Solar Array Area (H-1, I-1, P-1, S-1, U-1). All five of these sites date to the Historic Euro-American period and consist of the former locations of farmstead residences containing common 19th-20th century artifacts that would not be likely to produce information important to the history of the region.

In conclusion, the cultural resources investigations determined that there will likely be no adverse effects associated with the siting and construction of the Project on cultural resources listed in or eligible for either the National Register of Historic Places or the Wisconsin State Register of Historic Places. The Cultural Resource Due Diligence Report is included in Appendix J.

5.14.1 Provide maps or GIS files and a description of all archaeological sites, historic buildings and districts, and human burial sites within the project's area of potential effect (APE). For archaeological and historic sites, the APE is comprised of the physical project area where any ground disturbing activity may occur (e.g. digging, heavy equipment movement, etc.) For historic buildings and districts, the APE consist of the distance that the project may be visible from the outside of the project area. Maps of archaeological and burial sites must be submitted confidentially.

Mapping of archaeological, historic buildings and districts, and human burial sites are included in the Cultural Resources Due Diligence report included in Appendix J.

5.14.2 For archaeological sites and historic buildings or districts within the APE, determine

the boundaries, historic significance, and integrity of each resource. Additional field surveys may be required to make these determinations. In some cases, such as landowner not granting land access, field surveys may instead be performed following the approval of a project.

Vista Sands Solar's consultant (Stantec) completed field surveys within archaeological site high-probability (determined from site probability modeling completed in October 2021 and February 2023) areas within the Project during the weeks of May and October 2023. Fourteen previously unidentified archaeological sites were identified in the survey of the Project archaeological site high probability area. These sites date between the Archaic and the Historic period. An additional five archaeological sites and the remains of one demolished historical structure were reidentified within the Project archaeological site high probability areas.

Based on the identification and re-identification of several archaeological sites along Buena Vista Creek and its tributaries, Stantec archaeologists recommended that these parcels be excluded from the Proposed Array Areas pending further archaeological study. Following this recommendation, the Project layout was modified so that the parcels containing newly identified sites A-1. A-2, B-1, B-2, C-2, E-1, E-2, F-1, and reidentified sites PT-0061, PT-0068, PT-0069, PT-0070, PT-0071, PT-0072, PT-0073, PT-0105, PT-0271, and PT-0272 were moved from Proposed to Alternative PV Solar Array Areas. Five newly identified sites continue to be located within the Proposed PV Solar Array Area (H-1, I-1, P-1, S-1, U-1). All five of these sites date to the Historic Euro-American period and consist of the former locations of farmstead residences containing common 19th-20th century artifacts that would not be likely to produce information important to the history of the region. The Cultural Resource Due Diligence Report is included in Appendix J.

5.14.3 Identify the potential project effects on each resource.

Based on the identification and re-identification of several archaeological sites along Buena Vista Creek and its tributaries, Stantec archaeologists recommended that these parcels be excluded from the Proposed Array Areas pending further archaeological study. Following this recommendation, the Project layout was modified so that the parcels containing newly identified sites A-1. A-2, B-1, B-2, C-2, E-1, E-2, F-1, and reidentified sites PT-0061, PT-0068, PT-0069, PT-0070, PT-0071, PT-0072, PT-0073, PT-0105, PT-0271, and PT-0272 were moved from Proposed to Alternative PV Solar Array Areas. Five newly identified sites continue to be located within the Proposed PV Solar Array Area (H-1, I-1, P-1, S-1, U-1). All five of these sites date to the Historic Euro-American period and consist of the former locations of farmstead residences containing common 19th-20th century artifacts that would not be likely to produce information important to the history of the region. The Cultural Resource Due Diligence Report is included in Appendix J.

5.14.4 Describe modifications to the project that would reduce, eliminate, avoid, or otherwise mitigate effects on the resources. Examples of modifications include changes to construction locations, modified construction practices (e.g. use of low-pressure tires, matting, etc.), placement of protective barriers and warning signage, and construction monitoring.

Based on the identification and re-identification of several archaeological sites along Buena Vista Creek and its tributaries, Stantec archaeologists recommended that these parcels be excluded from the Proposed Array Areas pending further archaeological study. Following this recommendation, the Project layout was modified so that the parcels containing newly identified sites A-1. A-2, B-1, B-2, C-2, E-1, E-2, F-1, and reidentified sites PT-0061, PT-0068, PT-0069, PT-0070, PT-0071, PT-0072, PT-0073, PT-0105, PT-0271, and PT-0272 were moved from Proposed to Alternative PV Solar Array Areas. Based on these results, Stantec does not recommend further archaeological investigations within the Vista Sands Solar Project Area if the sites along Buena Vista Creek and its tributaries are avoided. If design plans change so that the Alternative PV Solar Array Area parcels are included in the Proposed PV Solar Array Area, additional investigations may be necessary to avoid disturbance of archaeological sites considered potentially eligible for listing in the NRHP as an archaeological site district. The Cultural Resource Due Diligence Report is included in Appendix J.

5.14.5 For any human burial sites within the APE, contact WHS to determine whether a Burial Disturbance Authorization/Permit is required.

Based on the cultural resources review results provided in Appendix J, no known cemeteries or burial sites are present within the Project Area of Potential Effects (APE) for direct effects. Six cemeteries or burial sites are located within the indirect APE. All six of these cemeteries/burial sites are located greater than 0.25-miles from the Project Area and no direct or indirect effects are anticipated to these sites due to the construction of the Project.

5.14.6 Provide an unanticipated archaeological discoveries plan. The plan should outline procedures to be followed in the event of an unanticipated discovery of archaeological resources or human remains during construction activities for the project.

An unanticipated archaeological discoveries plan is included in conjunction with the Cultural Resource Due Diligence Report included in Appendix J.

5.14.7 Notify Wisconsin Tribal Historic Preservation Officers of any Native American human burial sites and significant prehistoric archaeological sites within the APE. Provide copies of all correspondence.

Based on the cultural resources review results provided in Appendix J, no known native American burial sites or significant prehistoric archaeological sites are present within the Project APE for direct effects or the Project APE for indirect effects.

5.15 Agricultural Impacts

5.15.1 State whether a DATCP Agricultural Impact Statement (AIS) would be required. If the project would affect any properties used for agricultural purposes, submit on of the following, either 1. a completed Agricultural Impact Notice (see DATCP website and search "Agricultural Impact Notice" for appropriate form or contact DATCP) or 2. A release letter from DATCP state that an AIS will not be written for this proposed project.

The DATCP AIS is not required since Vista Sands Solar is not a public utility and will not be utilizing eminent domain.

5.15.2 Identify current agricultural practices in the project area.

The primary land use in the area is agricultural crop production (potatoes, corn, soybean, oats, millet and rye).

5.15.3 Identify the location of agricultural drainage tiles, irrigation systems, erosion control and water management practices and facilities in the project area that could be impacted by construction activities or the location of the proposed facilities.

Portage County does not have a comprehensive file detailing drainage tile systems within the proposed Project Boundary. Despite the lack of formal drainage tile documentation, Vista Sands Solar has engaged in and will continue discussions with agricultural landowners supporting the Project to determine, to the extent practicable, where drainage tiles exist.

Vista Sands Solar will coordinate with the participating landowners and will contract with a professional drainage tile company to locate, to the extent practicable, all drainage tiles on the Project once a CPCN is issued and final Project designs are underway. Vista Sands Solar will attempt to refine the Project layout, if necessary, to avoid impacts to the existing drainage system, although some impacts may be unavoidable.

To the extent possible, major tile channels will be completely avoided. If impacts to a major tile line are unavoidable, the tile line will be rerouted post-construction. In the event that tile is damaged, cut, or removed as a result of trenching, it will be repaired or replaced depending on structural conditions. Vista Sands Solar will make efforts to complete permanent tile repairs within a reasonable timeframe, taking into account weather and soil conditions.

Vista Sands Solar will work with participating landowners and adjacent landowners to determine locations of existing irrigation systems (wells, irrigation pivots and electrical conduits) within the Project Area. Vista Sands Solar will work with participating landowners to identify whether the wells and irrigation systems within or along the perimeter of the Project Area will remain in place or be abandoned.

5.15.4 Identify any farming operations such as herd management, specialty crop production, field and building access, organic farming, etc. that could be impacted by the construction of the project.

No impacts to herd management, field and building access, organic farming, etc. are anticipated for this Project. The approximately 2.9 acres of pine plantation (commercial Christmas tree production) is the only specialty crop farming operation within the Project Area. Those areas may be converted to solar production areas if the Alternative Area is utilized for final construction. No organic farms are located within the Project Area or within one mile of the Project Area.

GIS information regarding confined animal facilities was gathered from state and county databases as well as field collected data. A Wisconsin animal feeding operation with 1,000 animal units or more is defined by the State as a large Concentrated Animal Feeding Operation (CAFO). No WDNR-designated large CAFOs are located within the Project Area or within 0.5 miles of the

Project Area. Field surveys were conducted to identify potential confined animal operations with an estimated commercial value greater than $1,000 within one-half mile of the Project. Field surveys found no commercial confined animal buildings within the Project Area and 20 within 0.5 mile of the Project Area. Field surveys found two small non-commercial confined animal buildings within the Project Area and 9 within 0.5 mile of the Project Area. GIS database information on confined animal operations is included in Appendix F.

5.15.5 Identify the amount (in acres) of designated prime farmland that would be removed from agricultural use during the operational life of the solar project.

The Project will not affect any farmland that is designated as prime farmland by NRCS.

5.15.6 Describe how damage to agricultural facilities and interference with farming operations would be minimized during construction.

No damage to agricultural facilities or interference with farming operations are anticipated during construction of the solar facilities. Minimal interference between Project construction equipment and farm equipment travelling on town, village and state roadways may occur, but is not anticipated to be an issue. The Project is being constructed on lands that are primarily comprised of agricultural land that were planted for the purpose of crop production. Approved and signed landowner agreements are in place for all solar facilities within the perimeter fence, therefore, farming activities will be halted prior to and during construction. The lands that are converted to solar production areas will be suitable for a return to agricultural farming activities at the end of the Project lifespan (assumed to be 20-35 years).

5.15.7 Describe how damage to agricultural facilities would be identified and repaired.

No damage to agricultural facilities is anticipated for this Project.

5.15.8 Identify any farmland affected by the project that is part of an Agricultural Enterprise Area.

The Project will not affect any farmland that is part of an Agricultural Enterprise Area.

5.15.9 Identify any parcels of land in the project area that are part of a Drainage District, and identify the Drainage District if applicable. The County Drainage Board will need to be notified before undertaking any action, including any change in land use that will alter the flow of water into or from a district drain, increase the amount of soil erosion, or the movement of sediment solids to a district drain or affect the operation of the drainage district, or the costs incurred by the Drainage District. This applies to parcels of land that receive water from, or discharge water to a Drainage District, regardless of whether the land is included in the Drainage District. The following items apply when any part of a project is located within a Drainage District.

Portions of the Proposed and Alternative arrays are within the Portage County Drainage District. Those areas include Proposed Arrays 3, 4, 11, 12, 13, 17, 20, 21, 23, 24, 31, 37, 38, 42, 43, 44, 45, 49, 50, 51, 59, 60 and Alternative Arrays 3, 20, 24, 25, 31, 32, 39, 41, 46, 48, 53.

Vista Sands Solar introduced the Project to a Portage County Drainage District Commissioner in October 2023 and will continue to coordinate with the District throughout the final design process.

5.15.9.1 Describe any permits needed from a Drainage District Board for construction and operation of the proposed project, and the status of any permits.

During final Project design, Vista Sands Solar will determine if permits are required.

5.15.9.2 Identify if and where any culverts would be installed in areas of the Drainage District.

No culverts will be installed within the Project fenced area, but culverts may be installed within roadside ditches for access to fenced areas. Roadside ditch culverts may be located within the Drainage District.

5.15.9.3 Provide any correspondence with State Drainage Engineer regarding the project.

The State Drainage Engineer will be consulted as needed during final design development.

5.15.10 Identify any lands within the project boundary that are enrolled in agricultural conservation or agricultural tax incentive programs, such as farmland preservation programs and permanent agricultural or conservation easements.

5.15.11 Describe the process for returning land to agricultural use after decommissioning, including any subsequent years of monitoring.

None of the Project parcels are known to be currently enrolled in CRP. A portion of the Project is part of Wisconsin's MFL program, and it will be removed from that as is allowed by MFL program guidelines.

Following decommissioning activities, the sub-grade material and topsoil from affected areas will be de-compacted and restored to a density and depth consistent with the surrounding areas. If the subsequent use for the Project site will involve agriculture, a deep till of the Project Area will be undertaken. The affected areas will be inspected, thoroughly cleaned, and all construction-related debris removed. Disturbed areas will be reseeded to promote re-vegetation of the area, unless the area is to be immediately redeveloped or farmed. In all areas restoration shall include, as reasonably required, leveling, terracing, mulching, and other necessary steps to prevent soil erosion, to ensure establishment of suitable grasses and forbs, and to control noxious weeds and pests.

5.15.12 Discuss induced voltage issues as they relate to the project arrays, collector circuits, and generator tie line. Provide the following information:

5.15.12.1 Identify the location of confined animal dairy operations within one-half mile of any proposed transmission or distribution centerline or other project facilities.

No confined animal dairy operations are located within 0.5 mile of the Project Area.

5.15.12.2 Identify the location of agricultural buildings located within 300 feet of

any proposed transmission or distribution centerline or other project facilities.

No WDNR-designated large CAFOs are located within the Project Area or within 0.5 miles of the Project Area.

Field surveys were conducted to identify potential confined animal operations with an estimated commercial value greater than $1,000 within 0.5 mile of the Project. Field surveys found no commercial confined animal buildings within the Project Area and 20 within 0.5 mile of the Project Area. Field surveys found two small non-commercial confined animal buildings within the Project Area and 9 within 0.5 mile of the Project Area.

There were 11 agricultural related buildings that were not used for animal confinement within the Project Area and 183 buildings within 0.5 mile of the Project Area.

A figure depicting field-identified confined animal buildings and other agricultural related buildings is included in Appendix A.

5.15.12.3 Discuss induced voltage issues related to the project and its transmission or distribution line routes.

Vista Sands Solar does not anticipate issues regarding induced (stray) voltage as a result of the Project. Induced voltage issues are generally caused by improperly grounded and/or isolated electrical circuits found in older buildings, factories, or barns. Grounding for Vista Sands Solar's PV arrays will be designed and certified by a licensed electrical engineer according to current applicable electric code requirements.

5.15.12.4 Discuss any plans to conduct stray voltage testing pre and post construction.

Vista Sands Solar does not anticipate conducting pre and post construction stray voltage testing because no CAFO or commercial confined livestock operations exist within 0.5 mile of the Project.

5.16 Airports and Landing Strips

5.16.1 Airport, Landing Strips, and Helipads

5.16.1.1 Identify all public and private airports, landing strips, and helipads within 10 miles of the project facilities (both for solar arrays and the nearest generator tie line structure).

A total of 8 airports/landing strips are located within 10 miles of the Project.

Runway Leasing Inc Nr 2 in the Town of Plover is adjacent to the Project on the east side. A crop-dusting airstrip in the Town of Pine Grove is approximately 2 miles south-east of the Project. Stevens Point Municipal Airport in the City of Portage is approximately 7 miles north of the Project. Alexander Field South Wood County in the Town of Grand Rapids is approximately 7 miles to the west of the Project. Swan Field in the Town of Almond is approximately 7.5 miles to the south-east of the Project. Runway Leasing Inc Nr 1 and Plainfield Intl in the Town of Plainfield are 8 miles and 8.5 miles from the Project. Lake Ell Field in the Town of Amherst is approximately 10 miles to the east of the Project.

5.16.1.2 Describe each of the airports, landing strips, and helipads with a description of

the runways/landing zone and type of use.

The Runway Leasing Inc Nr 2 airport is private and has one asphalt runway that is 2,600 feet long.

The cropdusting airstrip in the Town of Pine Grove is a private turf runway and is approximately 2,200 feet long.

The Stevens Point Municipal Airport has two concrete runways. The primary runway is approximately 6,028 feet in length and oriented southwest-northeast, while the secondary runway is approximately 3,640 feet in length and oriented northwest-southeast. Both are public use for light general aviation.

The Alexander Field Wood County Airport contains three runways; two are constructed of asphalt, and one is a turf runway. The asphalt runway lengths are 5,500 feet and 3,640 feet and the turf runway is 2,100 feet.

Swan Field Airport is private and has one turf runway that is 1,900 feet long.

Runway Leasing Inc Nr 1 airport is private and has one asphalt runway that is 2,400 feet long.

Plainfield International Airport is a private airport. It has one turf runway that is 1,070 feet long.

Lake Ell Field Airport is a private airport with two turf runways. One runway is 1,000 feet long and the other is 2,000 feet long.

5.16.1.3 Describe any potential for impacts to aircraft safety and potential facility intrusion into navigable airspace.

Due to the height of proposed facilities and distance to the airports, no impacts to navigable airspace are expected.

5.16.1.4 Describe any mitigation measures pertaining to public airport impacts.

Due to the height of the proposed facilities and distance to the airport, mitigation measures are not expected to be necessary.

5.16.2 Commercial Aviation

5.16.2.1 Identify all commercial air services operating within the project boundaries (i.e. aerial applications for agricultural purposes, state programs for control of forest diseases and pests (i.e., spongy moth [Lymantria dispar] control).

According to DATCP's Interactive Map of the Spongy Moth (formerly known as Gypsy Moth) Aerial Spray Program, no areas in Portage County are being treated with aerial applications.

No other commercial air services are known to operate with the Project Area.

Reabe Spraying Services airport houses crop dusting and aerial application equipment used in the Plover area. Reabe Spraying Services uses Runway Leasing Inc Nr 2 in the Town of Plover is adjacent to the Project on the east side. Agricair Flying Service utilizes the cropdusting airstrip approximately 2 miles south-east of the Project Area.

5.16.2.2 Describe any potential impact to commercial aviation operations.

No commercial air services are known to operate with the Project Area.

5.16.2.3 Describe any mitigation measures pertaining to commercial aviation.

No commercial air services are known to operate with the Project Area.

5.16.3 Agency Consultation

5.16.3.1 Identify any potential construction limitations and permit issues.

Due to the lack of proximity of the airports identified in Section 5.16.1.1 to the Project Area, no limitations on construction equipment or construction activity are expected. Based on the results of the FAA Notice Criteria Tool query, no coordination with the FAA is expected.

5.16.3.2 Provide a summary of the status of any FAA determinations with details on mitigation actions or how any unresolved problems with aircraft safety are being addressed (including generator tie line structures).

Vista Sands Solar reviewed whether notification and consultation to the FAA would be required, using the FAA "Notice Criteria Tool." As a result of the query, the Project was found to not be within notice criteria proximity to FAA licensed facilities.

5.16.3.3 Provide a list of any structures requiring WisDOT high structure permits, and the status of any such permits.

No structures will be constructed over 500 feet in height or within one mile of a public airport or spaceport for the Project. Therefore, no WisDOT high structure permits are required for the Project.

5.17 Communications Towers

For the following sections, include in the assessment all facilities that make up the solar arrays as well as any structures that are part of a necessary generator tie line for the project.

Solar facilities are not likely to cause disruptions to line-of-sight and broadcast communications. The height of the Project facilities should not obstruct microwave beam paths, degrade broadcast communications, or interfere with cell phone communications or radio broadcasts. Although unlikely, if any resident or business were able to show impacts to line-of-sight or broadcast communications due to the Project, such impacts will be mitigated to the extent practicable.

GIS data from the Federal Communications Commission (FCC) was used to determine the number of communication towers within one mile of the Project Boundary.

5.17.1 Provide an analysis or supportive data to predict whether or not any aspect of the proposed project would interfere with:

5.17.1.1 Cell phone communications

The FCC website was queried for registered cellular and antenna structures (towers) within one mile of the Project Boundary. No towers are located within the Project Area or within one mile of the Project Area; therefore, cellular services should not be impacted.

In addition, there are also eleven microwave service towers located within one mile of the Project. These towers are licensed to State of Wisconsin, Portage County Sheriff's Office, and T-Mobile License LLC.

5.17.1.2 Radio broadcasts

The exclusion distance for AM broadcast stations varies as a function of the antenna type and broadcast frequency. For directional antennas, the exclusion distance is calculated by taking the lesser of 10 wavelengths or 1.9 miles (3 kilometers [km]). For non-directional antennas, the exclusion distance is simply equal to 1 wavelength. Potential problems with AM broadcast coverage are only anticipated when AM broadcast stations are located within their respective exclusion distance limit from an object that may potentially cause interference. Most facilities do not typically cause interference with FM broadcast stations.

The FCC website was reviewed for AM and FM radio stations within one mile of the Project Area. No stations were identified by this search. As there were no AM or FM stations found within one mile of the Project, the Project should not impact the coverage of local AM or FM stations.

5.17.1.3 Internet (WiFi)

Vista Sands Solar does not anticipate that the Project will impact WiFi or internet services for nearby residences and is not aware of evidence suggesting utility-scale solar interferes with internet service.

5.17.1.4 Television

Multipath interference to a television receiver occurs when television signals are scattered by reflecting off an object. Modern digital television (TV) receivers have undergone significant improvements to mitigate the effects of signal scattering. When used in combination with a directional antenna, it becomes even less likely that such signal scattering will cause interference to digital TV reception.

The FCC website was reviewed for any TV stations within one mile of the Project; no stations were identified by this search.

5.17.1.5 Doppler radar network

A Doppler radar is a specialized radar that uses the Doppler effect to produce velocity data about objects at a distance. It does this by bouncing a microwave signal off a desired target and analyzing how the object's motion has altered the frequency of the returned signal. This variation gives direct and highly accurate measurements of the radial component of a target's velocity relative to the radar. Doppler radars are used in applications such as aviation, sounding satellites, and weather. Tall structures such as trees or buildings within the sight line of the sending position may result in radar interference. Because radar towers are elevated to avoid interference from topography (minimum height of Next Generation Weather Radar, or NEXRAD, towers is 32.8 feet [10 meters] in height, for example), it is not anticipated that there would be any impact to radar services due to the development of the Project.

No doppler radar network towers are located within one mile of the Project.

5.17.2 Describe mitigation measures should interference occur during project operation for any of the communications infrastructure listed above.

The facilities developed for the Project are consistent with the height of existing development in the Project Area and are not anticipated to impact any communications infrastructure. If, after

the Project is placed in-service, Vista Sands Solar determines that the Project is causing interference with any of the foregoing communications infrastructure, it will implement mitigation measures to provide the same level of coverage prior to the installation of the Project.

5.18 Electric and Magnetic Fields (EMF)

Provide an estimate of the magnetic profile created by any necessary electric transmission facilities (generator tie line). Estimates should be made using the following criteria:

- **Show the predominant generator tie line configurations proposed for the project (H-frame, single-pole delta, double-circuit, etc.).**
- **Show any existing lines that would be affected by the proposed generator tie-line and a post-construction diagram that incorporates the new existing lines.**
- **Assume all panels are working and project is producing at maximum capacity.**
- **Show EMF profile at 0 ft., 25 ft., 50 ft., and 100 ft. from the centerline of each circuit type modeled.**

An EMF study for the underground collector system, underground BESS feeder lines, overhead Project transmission lines and overhead Project gen-tie line was completed for this Project. Modeling was conducted for the underground collector circuits and BESS feeder circuits EMF study using CYMCAP 8.1 software and the overhead gen-tie line EMF study using Bonneville Power Administration Corona and Field Effects software. Where required, general underground cable orientations and typical overhead pole configurations were assumed to smoothly perform the calculations.

Electric field intensity was not calculated for the underground cable scenarios in the analysis because it is canceled out due to the shielding by the metallic screen on the underground cables.

Model and software results for the underground collection system indicated the maximum magnetic field strength at the centerline of the cable trench with 1 underground cable was at 14.23 milli-Gauss (mG). The maximum magnetic field strength model output for this Project was present in a scenario that included three parallel underground cables (14.91 mG). The maximum electric and magnetic field strength near of any Project transmission lines or gen-tie centerline was 606.76 mG magnetic field and 8.12 kV/m electric field, both modeled at the gen-tie line. The Vista Sands Solar EMF report that includes EMF profile data at various distances for the underground collection system, underground BESS feeder lines, overhead Project transmission lines and overhead Project gen-tie line is included in Appendix P.

5.19 Noise

Pre- and post-construction noise studies are required for all electric generation projects. Noise measurement studies must be approved by PSC staff.

5.19.1 Provide existing (ambient) noise measurements and projected noise impacts from the project using the PSC's Noise Measurement Protocol. The PSC Noise Measurement Protocol can be found on the PSC website at: https://psc.wi.gov/SiteAssets/ConventionalNoiseProtocol.pdf.

Vista Sands Solar completed a pre-construction ambient sound survey (ambient sound survey) and predictive sound modeling analysis in compliance with the PSCW requirements and guidance (PSC Noise Measurement Protocol). The ambient sound survey included measurements at eight monitoring sites located throughout the Project Area to determine the existing acoustical environment. The study is provided in Appendix Q.

Predictive operation sound modeling was also completed at proposed locations, as per the PSC Noise Measurement Protocol, for the 494 solar inverter stations, 288 BESS battery containers, 72 BESS inverters, and 17 power transformers in the five Project Substations. The maximum sound impact from the operating Project at a non-participating residence or noise sensitive area (NSA) during the daytime or nighttime with equipment in full operation with sound mitigation was modeled to be 45 A-weighted decibels (dBA).

The results of the sound measurements demonstrate that the Project meets all regulatory requirements and will be operated in a manner that sound, due to its operation, does not exceed 50 dBA (daytime) or 45 dBA (nighttime) at a non-participating residence or occupied community building.

A post-construction sound analysis and report will be completed following construction of the Project and commencement of operations. The purpose of the analysis will be to verify the findings and conclusions of this report.

5.19.2 Provide copies of any local noise ordinance.

No regulations directly applicable to noise from a solar facility were identified in local ordinances. Portage County has a public nuisance ordinance that restricts unreasonably loud or disturbing noises.

5.19.3 Provide equipment manufacturer's description of noise attenuating methods and materials used in the construction of proposed facilities.

The noise analysis includes 494 inverter stations within both the Proposed and Alternative solar arrays. Sungrow SG3600UD-MV solar array inverter stations are expected to be used for the Project. Each solar array inverter station would include one inverter and a medium voltage transformer.

The five Project substations are each expected to have multiple step-up power transformers with various sizes and power capacities, as detailed below:

- Substation 1: one 345/138 kV transformer with capacity of 464 megavolt amperes (MVA), two 345/34.5 kV transformers with capacity of 158 MVA
- Substation 2: two 345/138 kV transformers with capacity of 350 MVA, two 345/34.5 kV transformers with capacity of 178 MVA
- Collector Substation A: two 138/34.5 kV transformers with capacity of 132 MVA, two 138/34.5 kV transformers with capacity of 100 MVA
- Collector Substation B: two 138/34.5 kV transformers with capacity of 118 MVA
- Collector Substation C: four 138/34.5 kV transformers with capacity of 100 MVA

For each type of substation transformer, the audible sound level (i.e., NEMA noise rating) was calculated based on the NEMA TR-1[4] and IEEE C57.12.00[5] standards for the forced-air cooling (ONAF) condition with fans operating. Methods from the Edison Electric Institute Electric Power Plant Environmental Noise Guide[6] were then used to estimate the overall and octave band unmitigated sound power levels of each type of transformer, as shown in Table 7.1. All transformers were assumed to be fully operational for the assessment to conservatively estimate the highest potential noise levels.

The Project BESS facility was assumed to include 288 battery containers and 72 power conversion systems. The project expects to use Sungrow PowerTitan 2.0 battery containers and Sungrow MVS5000-LV-US power conversion systems. Manufacturer noise testing data was not available for these two newer units; therefore, the noise analysis utilized manufacturer noise data for the Sungrow ST2752UX-US battery containers and Sungrow SC5000UD-MV PCS as proxies for the newer equipment models. The octave band sound power level of the Sungrow SC5000UD-MV PCS was provided in the manufacturer noise testing report. The octave band sound power level of the Sungrow ST2752UX-US battery container was estimated based on sound pressure level data provided in the manufacturer noise testing report.

The sound power levels used for the assessment are shown in Table 7.1 of the Project sound study which is located in Appendix Q.

5.19.4 Describe how noise complaints would be handled.

Vista Sands Solar will work to maintain equipment and conduct repairs in a timely manner to avoid excessive sound. If Vista Sands Solar receives a sound complaint from a local resident, the complaint will be investigated and mitigated to resolve the complaint, if appropriate.

5.19.5 Discuss any mitigation measures that would be used to address noise complaints during the operation of the project.

As determined by the Sound Analysis conducted for the Project, sound resulting from the operation of the solar facility is anticipated to have minimal impact on nearby residences.

Based on the initial unmitigated noise modeling results, noise mitigation measures were assessed to identify the amount of noise mitigation needed to meet the PSCW noise limits. A combination of two types of noise mitigation approaches were identified as likely to be needed: (1) selection of quieter equipment or equipment with additional noise mitigation measures applied so that less noise is generated at the source, and (2) placement of noise barriers adjacent to the BESS facility equipment to reduce the amount of noise that propagates to adjacent residences. Table 8.2 of the Project sound study in Appendix Q lists the noise mitigation assumptions that were incorporated into the next version of the noise model to estimate mitigated noise levels.

Selection of BESS battery container and PCS equipment to meet the mitigated noise emission levels shown above can be achieved through evaluation of multiple vendors during equipment

[4] National Electrical Manufacturers Association (NEMA) Standards Publication TR 1-2013 (R2019). Transformers, Step Voltage Regulators and Reactors.
[5] Institute of Electrical and Electronics Engineers (IEEE) Standards Publication C57.12.00-2015. IEEE Standard for General Requirements for Liquid-Immersed Distribution, Power, and Regulating Transformers.
[6] Edison Electric Institute. Electric Power Plant Environmental Noise Guide. Volume 1 2nd Edition.

selection, procuring equipment with manufacturer noise control measures (also called sound attenuation kits) incorporated, and/or procuring third party on-equipment noise control measures (e.g., acoustical silencer or enclosure).

A 6 or 12 dBA reduction in transformer noise emission levels at Substation 1 can be achieved by specifying transformers with a NEMA minus 6 dBA or NEMA minus 12 dBA noise rating, respectively.

The noise mitigation measures described above are based on assessment of the preliminary Project layout and equipment selection details provided by Vista Sands Solar. Noise mitigation requirements will be reassessed at the final design and equipment selection stage after confirming equipment noise emission levels and finalizing the site layout.

5.20 Solar Panel Glint or Glare

5.20.1 Provide an analysis showing the potential for glint or glare from a typical project solar panel, as well as from the project as a whole. Include the following:

- **The analysis should list the basic assumptions used and the methodology/software used for creating the glint or glare analysis.**
- **The analysis should evaluate impacts to aircraft and air traffic controllers from any impacted airports.**
- **The analysis should also examine the risk of glint or glare to local residents and road users in the project area.**
- **The analysis software may indicate that proposed array areas are large enough to impact the accuracy of glare results. If this warning is encountered in the modeling, the applicant should break the affected array areas into smaller sub-arrays and perform the glare analysis using these smaller sub-arrays.**
- **The analysis software may model different amounts of glare at observation points with different elevations. For any stationary observation points that could have human occupancy at higher elevations (e.g. a second story of a residence), the applicant should model multiple elevations for those stationary observation points.**
- **The analysis software may model different amounts of glare depending on the assumed heights of the solar panels. The applicant should model panel elevations for at least two different solar panel heights to establish a range of potential glare results.**
- **The analysis software may model different amounts of glare depending on the assume rest angle of the solar panels. The applicant should model at least two resting angle configurations, including one configuration with a resting angle set at between zero and five degrees.**

The web-based ForgeSolar program was used to analyze glare potential in one-minute increments throughout the year. The ForgeSolar program visually depicts glare effects using the following classification scheme on a series of project area maps (no color indicates no glare predicted):

- GREEN: Low potential for temporary after-image.
- YELLOW: Potential for temporary after-image.
- RED: Potential for permanent eye damage.

Based on the solar array parameters provided and the current site design, glare is not predicted for 30 of the 32 approach paths to airports included in this analysis. A minimal amount of green glare is predicted for pilots approaching runway 21 at the Stevens Point Municipal Airport. A significant amount of green glare is predicted for crop duster pilots approaching the Runway Leasing Inc. Nr 2 airstrip in an eastbound direction. Most of this glare is derived from Block 4, which is adjacent to the airstrip to the west. However, "green" glare is not considered problematic for pilots, and crop duster planes rarely fly in predictable or typical patterns and may avoid the far end of the standard approach path. The full glare report can be found in Appendix O.

5.20.2 In the event of an inquiry or complaint by a resident in or near the project area, describe what modeling or other analysis would be used to evaluate the possibility of unreasonable panel glint or glare at the residence.

In the event of a complaint about glare by a resident within or outside of the Project boundary, ForgeSolar modeling will likely be used to assess the extent and time of day of glare at the point of concern.

Glare is not predicted for drivers along 38 of the 46 road segments, or for trains travelling along the railroad tracks, analyzed adjacent to the Project area. Of the six road segments predicted to receive glare, 100th Street, 105th Street, and North 120th Street are predicted to receive extended periods of yellow glare from Blocks 15, 16 and 17, respectively. Glare along these road segments may adversely impact drivers. Route 54, westbound, is predicted to receive both green and yellow glare but for only short durations of up to 17 minutes per day from November through January. Cleveland Avenue, Townline Road, and Maple Street are predicted to receive only green glare.

Glare is not predicted for 303 of the 309 residences included in this analysis. Of the six residences predicted to receive glare, all glare is predicted to be derived from blocks 9 and 15. Observation Points (OPs) 1 and 4 in Block 9 are predicted to receive both green and yellow glare for extended periods in the fall and winter, at up to 230 and 200 minutes per day of glare, respectively. OPs 11, 12 and 13 in Block 15 are all predicted to receive more than 100 minutes per day of primarily green glare per day.

5.20.3 Describe mitigation options available to reduce unreasonable panel glint or glare.

As the PV panels will be mounted to single-axis tracking systems, the surface of the panels will be in line with the position of the sun, thereby reducing the potential for steep, glancing angles (i.e., chance for glare) compared to fixed-axis systems. Additional options for minimizing the impacts include antireflective coating on panel surfaces, fencing, and vegetation.

6 Local Government Impacts

6.1 Local Joint Development and Other Agreements

6.1.1 Provide a summary of major agreement items agreed upon in any Joint Development Agreements ("JDA") or other type of agreement including:

6.1.1.1 All services to be provided by the city, town, and/or county during construction and when the plant is in operation (e.g. water, fire, EMS, police, security measures, and traffic control).

Although the Project is under the PSCW's jurisdiction, Vista Sands Solar is working to partner with the Town of Grant, Town of Plover, Town of Buena Vista, Village of Plover and Portage County to execute a JDA regarding Vista Sands Solar's formal commitments to the local community. Vista Sands Solar will provide that JDA to the PSCW after at least one of the communities executes the same.

Vista Sands Solar does not anticipate significant impacts to local public services or traffic. During construction activities, Vista Sands Solar anticipates minimal disruptions to the free flow of traffic on the roads that will be employed for Project access. The majority of focused construction traffic will be temporary in duration, and post-construction traffic disruptions should be rare.

Vista Sands Solar anticipates that local municipalities would provide fire and emergency medical services to the Project should these be required. Vista Sands Solar anticipates the Portage County Sheriff Department will police the roadways in the Project's vicinity.

The Project solar arrays, substations, BESS and O&M building will be surrounded by security fences. Vista Sands Solar anticipates that the Project substations will have a security camera system. Further, Vista Sands Solar anticipates installing motion activated lights at the O&M building. Vista Sands Solar will design Project security lighting to minimize adverse impact on the community.

6.1.1.2 Specifically, address community and facility readiness for incidents such as fires.

Vista Sands Solar will include training and coordination with local emergency responders in its emergency-response plan that will be finalized and submitted as part of the post-CPCN pre-construction preparation for the Project. Safety protocols and contact information for Vista Sands Solar's facility operations team will be provided to all local first responders.

The Project is not anticipated to create additional demands on police, fire, or other emergency responders. Solar energy systems and their components do not present unusual safety hazards. When requested or scheduled, periodic meetings will be held with first responders to ensure their familiarity with site facilities.

6.1.2 Provide a copy of all agreements with local communities (e.g., JDA, road use).

Vista Sands Solar is currently negotiating a JDA with local communities. However, no agreements have been finalized with local communities at this time.

6.2 Infrastructure and Service Improvements

No additional infrastructure or upgrades to existing facilities are expected to be required to construct the Project. Cumulative benefits to the budgets of local governments will be significant due to yearly Shared Revenue Utility Payments. Additional benefits include the significant local spending associated with the Project and increased local jobs during construction and operation.

6.2.1 Identify any local government infrastructure and facility improvements required (e.g. sewer, water lines, railroad, police, and fire).

Vista Sands Solar is not aware of any infrastructure or upgrades to existing facilities that will be needed for the construction or operation of the Project. If improvements are necessary, such as the repair/improvement to specific roads used in hauling materials during construction, they will be done at Vista Sands Solar's expense.

Vista Sands Solar anticipates that no changes to existing roads along haul routes will be required. If such changes are needed for accommodating turning radii, Vista Sands Solar will adhere to all local construction standards.

A Road Condition Report was completed by Vista Sands Solar in November 2023 and is included as Appendix T. The Road Condition Report reviewed existing desktop road condition data prior to completing visual field inspections. This report will assist Vista Sands Solar, Portage County, the Village of Plover, and the Towns of Grant, Buena Vista, and Plover in assessing any potential damage to county, town, or other roads. Should any damage occur as a result of the Project, it will be repaired by Vista Sands Solar to the original condition or better.

Vista Sands Solar may assist Portage County, the Village of Plover, and the Towns of Grant, Buena Vista, and Plover in conducting additional pre- and post-construction inspections of haul roads utilized during construction.

6.2.2 Describe the effects of the proposed Project on city, village, town and/or county budgets for these items.

Local government budgets will be positively impacted by hosting the Project. Wisconsin's Shared Revenue Utility Aid Program provides for payments to be distributed annually to the communities hosting an electric generator. Vista Sands Solar's proposed 1,310.4-MW Project would be eligible for two components of the Shared Revenue Utility Aid Program: the MW-based payment and the Incentive payment.

6.2.3 For each site provide an estimate of any revenue to the local community (i.e. city, village, town, county) resulting from the Project in terms of taxes, shared revenue, or payments in lieu of taxes.

The Project will generate approximately $6,552,000 in annual payments through the above-referenced Shared Revenue Utility Aid Program. The 1,310.4-MW Project would generate Shared Revenue Utility Payments to the Town of Grant, Town of Plover, Town of Buena Vista and Portage County totaling approximately $197,000,000 over the assumed 30-year life based on current law.

The Project is estimated to annually contribute approximately $1,856,400 to the Town of Grant, $842,400 to the Town of Plover, $140,400 to the Town of Buena Vista, and $3,712,800 to Portage County. The Utility Payment breakdown for the Towns and County is summarized below in Table

6.2.3-1. No payments are currently anticipated for the Village of Plover because it is not hosting any Proposed arrays (it has Alternative array sites). Actual amounts will be determined with final design based on MW placement of the array. Estimates in the table below assume Proposed array generation of approximately 64.8 MW_{AC} located in the Town of Buena Vista, 388.8 MW_{AC} located in the Town of Plover, and 856.8 MW_{AC} located in the Town of Grant, as currently designed.

Table 6.2.3-1 Estimate of Annual Revenue For 1310.4-MW Project

	Town of Grant	Town of Plover	Town of Buena Vista	Portage County
MW-based payment	$571,200	$259,200	$43,200	$1,747,200
Incentive Payment	$1,285,200	$583,200	$97,200	$1,965,600
Total	$1,856,400	$842,400	$140,000	$3,712,800

6.2.4 Describe any other benefits to the community (e.g. employment, reduced production costs, goodwill gestures).

Approximately 300-500 construction workers will be employed to build the Project. In addition to construction labor, the Project will require skilled electricians, operations staff, and maintenance workers. When possible, these jobs will be sourced from surrounding communities.

Other benefits include significant revenues to area landowners who participate in the Project (including land leasers, sellers and easement grantors), and a potential increase in local employment opportunities to support the Project. Food service, lodging, fuel, sanitation, gravel, asphalt, and other service providers commonly experience a post-construction uptick in their businesses.

Vista Sands Solar is negotiating JDAs with the local communities. Further, Vista Sands Solar plans to enter into a Pledge Agreement with local school districts that will provide annual payments to the school districts once the project is constructed for up to 20 years. Vista Sands Solar has executed a Pledge Agreement with Stevens Point Area Public Schools District and has begun outreach to the Wisconsin Rapids Public Schools regarding the Pledge Agreement.

Further, Vista Sands Solar has proposed to support two graduate research assistantships at the University of Wisconsin – Stevens Point to study the relationship between wildlife and solar generating facilities. This has been proposed in the MOU between Vista Sands Solar and WDNR referenced in Section 5.8.3.

6.2.5 Provide information on the direct, indirect, and induced state and local economic impacts during and after construction

Direct impacts during the construction period are the changes that occur in the onsite construction industries directly caused by the Project's construction (i.e., spending on construction labor and services). Onsite construction-related services include installation labor, engineering, design, and other professional services. Direct impacts during operating years refer to the final demand changes that occur in the onsite spending for the solar operations and maintenance workers.

The initial spending on the construction and operation of the solar PV installation will create a second layer of impacts, referred to as "supply chain impacts" or "indirect impacts." Indirect impacts during the construction period consist of changes in inter-industry purchases resulting from the direct final demand changes and include construction spending on materials and PV equipment, as well as other purchases of goods and offsite services. Utility-scale solar PV indirect impacts include PV modules, invertors, tracking systems, cabling, and foundations. Induced impacts during construction refer to the changes that occur in household spending as household income increases or decreases as a result of the direct and indirect effects of final demand changes. This includes local spending by employees working directly or indirectly on the Project that receive their paychecks and then spend money in the community and the additional local jobs and economic activity that are supported by the purchases of these goods and services.

Vista Sands Solar conducted an economic analysis of the Project using the IMPLAN (IMpact analysis for PLANning). IMPLAN software and parameters are based on government data collected at federal, state, and local levels. IMPLAN is a leading provider of economic development software that is widely used by economists and economic development professionals.

The results from the IMPLAN model show significant earnings impacts from the Project, which are categorized by construction impacts and operations impacts. The estimated Total Earnings Impact and Total Output Impact from the Project are summarized below in Tables 6.2.5-1 and 6.2.5-2. The full Economic Impact and Land Use Analysis is found in Appendix Z.

Table 6.2.5-1: Total Earnings Impact from the Vista Sands Solar Project

	Portage County	State of Wisconsin
Construction		
Project Development and Onsite Earnings Impacts	$40,434,000	$160,536,000
Module and Supply Chain Impacts	$2,221,223	$8,641,690
Induced Impacts	$6,933,636	$47,865,676
New Local Earnings during Construction	$49,588,859	$217,043,366
Operation (Annual)		
Onsite Labor Impacts	$1,089,200	$3,564,000
Local Revenue and Supply Chain Impacts	$1,475,878	$2,820,232
Induced Impacts	$2,521,971	$5,504,640
New Local Long-Term Earnings	$5,087,049	$11,888,872

Table 6.2.5-2: Total Output Impact from Vista Sands Solar Project

	Portage County	State of Wisconsin
Construction		
Project Development and Onsite Jobs Impacts on Output	$50,829,963	$219,468,817

	Portage County	State of Wisconsin
Module and Supply Chain Impacts	$4,688,732	$20,361,636
Induced Impacts	$23,328,889	$147,659,084
New Local Output during Construction	$78,847,584	$387,489,537
Operation (Annual)		
Onsite Labor Impacts	$9,190,050	$30,071,006
Local Revenue and Supply Chain Impacts	$5,707,022	$10,469,236
Induced Impacts	$8,459,424	$17,040,217
New Local Long-Term Output	$23,356,496	$57,580,459

6.2.6 Describe how natural gas pipelines in the project area would be impacted during construction and operation of the project, whether the project would have any risk of damaging pipelines, any special safety measures that would be utilized to construct near or under pipelines, and any changes that may be required for local first responders to address emergencies involving the pipelines due to the project.

There is a gas transmission pipeline running generally north-south on the east side of the Project Area. Vista Sands Solar will coordinate with Flint Hills Resources, the pipeline operator, during the next design phase to avoid adversely affecting pipeline operations. A setback was set in place so PV assets would not be located within 5 feet of the pipeline ROW. No Project fences cross the pipeline ROW so the pipeline operator will be able to access the pipeline ROW without entering Project fencelines.

The precise location of the pipeline will be identified during the ALTA survey and Vista Sands Solar will coordinate with Flint Hills Resources during the final design phase regarding overall Project design and specific protocols for boring underneath the pipeline with the underground medium-voltage collector cabling. The pipeline location will be marked in the field and no ground disturbance will occur in the pipeline ROW without coordination with Flint Hills Resources.

6.2.7 Describe reasonable safety measures that would be taken to meet the pipeline operator's documented policies around their natural gas pipelines.

See Section 6.2.6 above.

6.2.8 Describe plans to work with the pipeline operators to develop a plan to construct and maintain facilities in a manner that does not interfere with the pipeline operators' ability to access their pipelines and rights-of-way.

No Project fences cross the pipeline ROW so the pipeline operator will be able to access the pipeline ROW without entering Project fence lines. Vista Sands Solar will provide Flint Hills Resources a copy of the Vista Sands Solar Emergency Response Plan and a map of the Project location in relation to the existing pipeline.

7 Landowners Affected and Public Outreach

7.1 Mailing Lists

Provide a separate alphabetized list (names and addresses) in Microsoft Excel for each of the groups described below:

7.1.1 Property owners and residents within the project boundary and a separate list of property owners and residents from the project boundary out to a distance of one mile. It is strongly recommended that applicants consult with PSC staff in order to ensure that the format and coverage are appropriate considering the project type, surrounding land use, etc.

A list of property owners within the Project Area and within a 1.0-mile buffer is submitted electronically in Appendix R Mailing List.

7.1.2 Public property, such as schools or other government land.

A list of public properties within 1.0-mile of the Project Area is submitted electronically in Appendix R Mailing List.

7.1.3 Clerks and chief officers of cities, villages, townships, and counties affected by the proposed project; and the contact for the Regional Planning Commission relevant to the project area. Also include on this list the main public library in each county the proposed facilities would occupy.

The communities listed in the table below have lands within the Project Area or have certain rights of extraterritorial jurisdiction within the Project Area. A list of town and village clerks and public libraries in the vicinity of the Project are included in Appendix R.

Table 7.1-1 Clerks of Municipalities Directly Affected

Municipality	Clerk Name	Phone Number
Portage County	Maria Davis	(715) 346-1351
Town of Buena Vista	Van Nelson	(608) 583-2406
Town of Grant	Stefanie Schlapa	(715) 213-7370
Town of Plover	Patricia Weller	(715) 344-7684
Village of Plover	Tammy Wojtalewicz	(715) 345-5250

Relevant Public Libraries:

Portage County Public Library
Plover Branch
2151 Roosevelt Dr
Plover, WI
(715) 341-4007

McMillan Memorial Library
490 East Grand Ave.
Wisconsin Rapids, WI 54494

(715) 422-5136

7.1.4 Local media for the project area, at least one print and one broadcast.

Print Media: Stevens Point News
2619 Post Road
Stevens Point, WI 54481

Broadcast Media: WSAW TV
1114 Grand Avenue
Wausau, WI 54403

7.1.5 Tribal government representatives for Native American Tribes that hold off-reservation treaty rights in Ceded Territory. This only applies to projects within the following counties: Douglas, Bayfield, Ashland, Iron, Vilas, Forest, Florence, Marinette, Oconto, Menominee, Shawano, Langlade, Oneida, Price, Sawyer, Washburn, Burnett, Polk, Barron, Rusk, Taylor, Lincoln, Marathon, Portage, Wood, Clark, Chippewa, Eau Claire, Dunn, and St. Croix County.

- **The following Tribes hold off-reservation treaty rights in Ceded Territory:**
- **Bad River Band of Lake Superior Chippewa Indians**
- **Lac Courte Oreilles Band of Lake Superior Chippewa Indians**
- **Lac du Flambeau Band of Lake Superior Chippewa Indians**
- **Red Cliff Band of Lake Superior Chippewa Indians**
- **St. Croix Chippewa Indians of Wisconsin**
- **Sokaogon Chippewa Community (Mole Lake Band of Lake Superior Chippewa Indians)**

Tribe	Contact Information
Bad River Band of Lake Superior Chippewa Indians	72686 Maple Street Ashland, WI 54806 (715) 682-7111
Lac Courte Oreilles Band of Lake Superior Chippewa Indians	(715) 634-8934
Lac du Flambeau Band of Lake Superior Chippewa Indians	P.O. Box 67 Lac du Flambeau, WI 54538 (715) 588-3303
Red Cliff Band of Lake Superior Chippewa Indians	88455 Pike Road Red Cliff, WI 54814 (715) 779-3700
St. Croix Chippewa Indians of Wisconsin	24663 Angeline Ave Webster, WI 54893 (715) 349-2195

Tribe	Contact Information
Sokaogon Chippewa Community (Mole Lake Band of Lake Superior Chippewa Indians)	3051 Sand Lake Road Crandon, WI 54520 (715) 478-7500

7.2 Public Outreach and Communication

7.2.1 List and describe all attempts made to communicate with and provide information to the public. Describe efforts to date and any planned public information activities.

Vista Sands Solar and Doral Renewables continue to engage with the community and members of the public in the Project area. Since the Project's inception, Vista Sands Solar has regularly provided information to members of the public, engaged members of the local news media, and supported key community and business leaders in the area.

Local Residents

Vista Sands Solar has engaged with local residents and members of the greater Portage County community in a consistent and regular manner. Vista Sands Solar mailed several unique informational pieces throughout 2023 to several thousand recipients, launched social media sites providing more information to the public, maintained communications with those inquiring about the Project on the Vista Sands Solar website, and met with local community organization and leaders to provide more information.

Vista Sands Solar has regularly engaged with prospective landowners, their tenants, and nearby residents to determine local interest in the Project to secure land and to identify potential concerns that can be addressed during the development stage of the Project.

On September 11, 2023, Vista Sands Solar hosted an open house for members of the public to ask questions and learn more about the Project. Through subject matter experts Vista Sands Solar provided information on the tentative project layout, battery storage, construction impacts, the application process with the Public Service Commission of Wisconsin, financial community impacts, and wildlife and environmental impacts. The open house was advertised in a mailer and on municipal websites.

Landowner Meetings Placeholder

Doral personnel are in regular contact with all landowners through in-person meetings, telephone, and email communications. These regular updates include project information such as planned layout, timeline for construction, and status of permitting.

Digital

Vista Sands Solar maintains a detailed website with information about the project, answers to frequently asked questions, and a contact form where members of the public can ask questions and receive a response from Vista Sands Solar. Several members of the public have submitted questions and feedback on the website and received responses.

Vista Sands Solar maintains a Facebook page, regularly posting publicly accessible information about the Project. In addition, Vista Sands Solar ran several Facebook ads in the community to provide information about the Project, renewable energy, and Wisconsin's energy sources.

Vista Sands Solar has also provided information to the Townships closest to the Project for sharing through municipal websites.

Engagement with Local Community Organizations

Vista Sands Solar regularly met with community organizations and donated to several community causes.

Portage County United Way
February 28, 2023
Met with representatives from the Portage County United Way to discuss their work in the community.

Plover-Whiting Lions Club
February 28, 2023
Met with members and shared information about the Project.

Boys and Girls Club of Portage County
April 7, 2023
Met with representatives from the Boys and Girls Club of Portage County to discuss their work in the community.

Bowling Networking Event with Ignite Young Professionals
April 25, 2023
Attended a networking event hosted by the Ignite Young Professionals group of Portage County to engage with community members and share information about the Project.

WI Potato and Vegetable Growers Association
January 19, 2022
Representatives from Vista Sands Solar met with representatives from the Wisconsin Potato and Vegetable Association at its board meeting. The Vista Sands Solar team shared information about the Project and answered community questions.

Dane County Conservation League
April 6, 2022
Met Dane County Conservation League representatives to address concerns about local wildlife, including prairie chickens. Answered questions about the Project and provided information about solar.

Midwest Food Products Association (MWFPA) Board of Directors
September 23, 2022
Gave a presentation at the September board meeting of the MWFPA. Introduced the Project and went over different items which may be of interest to the board, which included representatives from businesses in Portage County. Answered questions and heard feedback from board members.

University of Wisconsin Stevens Point
December 5, 2023
Staffed the University job and career fair to discuss the Project and future careers in renewable energy.

Local School Districts

Vista Sands Solar has executed a Pledge Agreement with Stevens Point Area Public Schools District and has begun outreach to the Wisconsin Rapids Public Schools regarding the Pledge Agreement.

Local Units of Government

Vista Sands Solar has met with local town and county elected officials and staff to advise them of Project activities, understand potential permitting requirements and concerns, and/or introduced the concept of a joint development agreement.

Portage County Chair Al Haga and Vice Chair Larry Raikowski
March 17, 2022
Met with Portage County Board Chair Al Haga and Vice Chair Larry Raikowski to discuss the Project and answer questions.

Sharon Schwab, Town of Grant Chair & Jim Garbe, Town of Plover Chair
March 17, 2022
Met with Town of Grant Chair Sharon Schwab and Town of Plover Chair Jim Garbe to discuss the Project and answer questions.

Portage County Executive
May 24, 2022
Met with Portage County Executive John Pavelski to give an overview of the Project and answer any questions about the Project.

Portage County Board of Supervisors
June 21, 2022
Presented to the Portage County Board of Supervisors to share preliminary information about the Project and answered questions.

Town of Grant Board Meeting
January 19, 2023
Presented to the Town of Grant Board at a town meeting. Provided information about the Project and answered questions.

Jim Garbe, Town of Plover Chair
March 1, 2023
Met with Town of Plover Chair Jim Garbe to review preliminary maps and provide information about the Project.

Sharon Schwab, Town of Grant Chair
April 6, 2023
Met with Town of Grant Chair Sharon Schwab to review preliminary maps and provide information about the Project.

Plover hearing
April 6, 2023
Representatives from Vista Sands Solar attended a public hearing where the Town of Plover held a public meeting to discuss changes to their comprehensive plan. Representatives of Doral were on hand to provide information on the location of the project and answer questions from the public on the development, construction, and operation of the project.

Town of Grant Meeting
July 19, 2023
Attended Town of Grant Meeting where a solar section of the comprehensive plan was discussed.

Village of Plover Meeting
September 12, 2023
Met with Adam DeKleyn, Community Development Manager for the Village of Plover to discuss proposed project layout and potential impact on village expansion.

Village of Plover meeting
April 26, 2023
Met with Village of Plover staff to discuss the portions of the Project closest to the Village. Discussion included location and orientation of the substation and not placing panels too close to areas intended for Village expansion.

Town of Grant meeting
September 13, 2023
Attending meeting of Planning Commission to answer questions from members on the Project layout and other details to support an effort to modify their comprehensive plan, as it relates to solar energy development.

Town of Grant meeting
November 3, 2023
Attending meeting of Planning Commission to answer questions from members on the Project layout and other details to support an effort to modify their comprehensive plan, as it relates to solar energy development.

Town of Grant Meeting
December 6, 2023
Attending meeting of Planning Commission to answer questions from members on the Project layout and other details to support an effort to modify their comprehensive plan, as it relates to solar energy development.

<u>Local Businesses</u>
Meeting with Portage County Business Council
April 6, 2022
Met with leadership of the Portage County Business Council to discuss the business climate in Portage County and provide information.

Meeting with Portage County Business Council
March 1, 2023

Met with leadership of the Portage County Business Council to discuss the business environment in Portage County and discuss Doral Renewables' membership in the Chamber of Commerce. Vista Sands Solar maintains a membership with the business council.

Presented to membership of the Portage County Business Council
April 26, 2023
Representatives from Vista Sands Solar presented to the Board of the Portage County Business Council, comprised of area business leaders. Vista Sands Solar shared information about the Project and answered questions from business leaders.

State Elected Representatives and Regulatory Agencies

Department of National Resources
April 6, 2022
Met with WDNR Deputy Secretary Sarah Barry to give an overview of the Project and answer any questions about the Project.

May 11, 2023
Representatives from Vista Sands Solar met with representatives from the Wisconsin Department of Natural Resources to discuss conservation ground at the Project site.

Office of Sen. Patrick Testin
March 16, 2022
Met with Jeff Schutlz who is Sen. Testin's staff member who handles agriculture issues. Gave a preliminary overview of the Project and answered any questions.

September 15, 2022
Met with Sen. Testin in-district to discuss the Project more in-depth and hear any feedback or questions he has been getting from his constituents.

January 18, 2023
Met with Sen. Testin and gave an update on the Project. Heard feedback and questions from constituents.

May 1, 2023
Did a check-in with Sen. Testin to address any issues that may have come to his attention concerning the Project.

July 19, 2023
Shared an op-ed on renewables from the Wisconsin State Journal with Sen. Testin's legislative office.

August 23, 2023
Shared an article published in the Stevens Point Journal on the Project with Sen. Testin's legislative office.

August 28, 2023
Shared an invitation for the Vista Sands Solar open house with Sen. Testin's legislative office.

November 9, 2023
Virtual meeting with Sen. Testin's chief of staff Jim Emerson to give an update on the Project.

Office of Governor Tony Evers
March 16, 2022
Met with Jacob Pankratz who is a Senior Policy Advisor for Governor Evers who handles energy and environmental policy issues. Gave a preliminary overview of the Project and answered any questions.

January 18, 2023
Met with Jacob Pankratz and gave an update on the Project and timeline and heard what the office has heard from stakeholders.

Rep. David Steffen
January 18, 2023
Met with Rep. Steffen who chairs the Assembly Utilities Committee and gave an overview of the Project and its timeline. Answered questions and followed-up with additional information.

Rep. Katrina Shankland
January 18, 2023
Met with Rep. Shankland and gave an update on the Project and where it is in the permitting process. Heard feedback and answered questions she was hearing from constituents.

May 4, 2023
Did a check-in with Representative Shankland to answer any new questions she may have about the Project.

June 12, 2023
Connected with Rep. Shankland's staff to connect the Doral Renewables team with the renewable energy department at UWSP.

July 19, 2023
Shared an op-ed with Rep. Shankland's office from the Wisconsin State Journal on renewables.

August 23, 2023
Shared with Rep. Shankland's office an article published in the Stevens Point Journal on the Vista Sands Project.

August 28, 2023
Shared an invitation with Rep. Shankland's office for the Vista Sands Solar open house.

September 11, 2023
Rep. Shankland attended the Vista Sands open house.

November 9, 2023
Virtual meeting with Rep. Shankland's staffer Amy Snyder-Heitman to give an update on the Project.

Evan Miller, Staffer for Sen. Rob Cowles
January 18, 2023
Gave an overview of the Project and its timeline. Answered questions and discussed renewables

in Wisconsin.

Sen. Julian Bradley
January 19, 2023
Gave a general update of the Project, leasing, and stakeholder engagement. Answered questions and discussed various Project issues.

Rep. Greta Neubauer
January 19, 2023
Gave a general update of the Project, leasing, and stakeholder engagement. Answered questions and discussed what Doral Renewables has heard while being in the field.

Rep. Scott Krug
November 10, 2023
Virtual meeting with Rep. Krug to introduce him to the Project which is just outside his district. Gave a general overview of the Project details, where in the process the Project stands, and answered questions.

7.2.2 Provide copies of public outreach mailings or website addresses for project pages.

The URL for the Project website is www.vistasandssolar.com. Mailings sent to community members and state legislators are located in Appendix S Public Outreach.

7.2.3 Describe plans and schedules for maintaining communication with the public (e.g. public advisory board, open houses, suggestion boxes, and newsletters).

Project representatives have made themselves available and will continue to do so for phone calls, virtual conferences, in-person meetings, and open houses. For quick reference about the Project, individuals can view the Project's website at VistaSandSolar.com.

7.2.4 Identify all local media that have been informed about the project.

- Local media were repeatedly updated about the Project and provided up to date information. In addition, representatives from Vista Sands Solar made themselves available for interviews with members of the media. These interviews resulted in coverage in local news publications. Media stories are included in Appendix S – Public Outreach.

7.2.5 Describe the ongoing ways that the public would be able to communicate with plant operators or the company. Describe any internal process for addressing queries or complaints.

Vista Sands Solar will keep up-to-date contact information on file with host municipalities in case a complaint is placed directly with the towns or County. Vista Sands Solar will also develop a system for logging and investigating complaints related to Project operation, in consultation with local municipalities.

8 Waterway/Wetland Permitting Activities

Section 8.0 covers information required by WDNR for waterway and wetland permits. The following subsections apply to both proposed and alternative solar array sites.

Vista Sands Solar retained Stantec to identify wetlands and waterways within the Project Area. Wetland delineations were completed during the fall of 2021 and 2022 in accordance with the criteria and methods outlined in the U.S. Army Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (1987) and subsequent guidance documents, and applicable Regional Supplements to the Corps of Engineers Wetland Delineation Manual. The extent of the Project Area, detailed information on wetland and waterways, and the methodology used is provided in the Wetland Delineation Report included in Appendix H.

8.1 Waterway Permitting Activities

The Project was designed to avoid waterways to the extent practicable. No waterway impacts are anticipated from Project construction beyond the construction of a culvert in waterway AD-S5 for a permanent access road. The WDNR Wetland/Waterway Impact Location Table and Environmental Inventory Table (Tables 1 and 2, respectively) are provided in Appendix V.

8.1.1 Identify the number of waterways present, including all WDNR mapped waterways and field identified waterways, assuming all waterways are navigable until a navigability determination is conducted (if requested). Provide an overall project total, as well as broken down by the proposed site and the alternate site and their associated facilities.

Fifty-four waterways were identified within the Project Area. A summary of all waterbodies and waterways (hereafter collectively referred to as “waterways”) within the Project is presented below and in Appendix V – Wetland and Waterway Permitting: WDNR Table 1 and WDNR Table 2 and are shown on Figures 8.3.1 through 8.3.3 (Appendix A).

Segment	Project Component	Waterway Name	Feature Unique ID
Proposed Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 9	Not mapped	051.0-S1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 12	Ditch Number One (WBIC 1391600)	056.0-S1
Proposed Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 15	Not mapped	064.0-S1
Proposed Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 9	Not mapped	066.0-S1

Segment	Project Component	Waterway Name	Feature Unique ID
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 14	Not mapped	067.0-S1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 14	Unnamed (WBIC 5019538)	067.0-S2
Proposed Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 20	Not mapped	068.0-S1
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 20	Not mapped	068.0-S1
Proposed Solar Project Area	Collector Corridor. Nearest Fence ID: 16	Unnamed (WBIC 1391400)	077.0-S1
Alternative Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 16	Unnamed (WBIC 1391400)	077.0-S1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 15	Not mapped	080.0-OW1
Proposed Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 15	Twomile Creek (WBIC 1389900)	087.0-S1
Proposed Solar Project Area	Access Road; Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 24	Unnamed (WBIC 1391700)	093.0-S1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 24	Unnamed (WBIC 1391700)	093.0-S1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 24	Unnamed (WBIC 5019814)	094.0-S1
Proposed Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 19	Not mapped	096.0-S1
Alternative Solar Project Area	Collector Corridor; Perimeter Area - Outside	Not mapped	096.0-S1

Segment	Project Component	Waterway Name	Feature Unique ID
	Fence. Nearest Fence ID: 19		
Proposed Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 15	Not mapped	098.0-S1
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 15	Not mapped	098.0-S1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: Laydown 1	Fourmile Creek WBIC 1389600	1002-S1
Alternative Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 48	Fourmile Creek WBIC 1389600	1003-S1
Proposed Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 42	Unnamed (WBIC 5549910)	1016-OW1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 31	Buena Vista Creek (WBIC 1391300)	1017-S1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 23	Ditch #1 (WBIC 1391600)	1017-S2
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 23	Ditch #1 (WBIC 1391600)	1017-S2
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 31	Not mapped	1018-S1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 31	Not mapped	1020-OW1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 25	Buena Vista Creek (WBIC 1391300)	1026-S1
Proposed Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 11	Lateral #3 (WBIC 1392100)	1039-S1

Segment	Project Component	Waterway Name	Feature Unique ID
Alternative Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 11	Lateral #3 (WBIC 1392100)	1039-S1
Proposed Solar Project Area	Access Road; Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 11	Ditch Number One (WBIC 1391600)	1041-S1
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 11	Ditch Number One (WBIC 1391600)	1041-S1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 53	Fourmile Creek (WBIC 1389600)	1049-S1
Proposed Solar Project Area	Collector Corridor. Nearest Fence ID: 29	Unnamed (WBIC 1391400)/ Unnamed (WBIC 1391400)/ Unnamed (WBIC 5549620)	119.0-S1
Alternative Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 29	Unnamed (WBIC 1391400)/ Unnamed (WBIC 1391400)/ Unnamed (WBIC 5549620)	119.0-S1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 37	Not mapped	127.0-S1
Proposed Solar Project Area	Collector Corridor. Nearest Fence ID: 39	Buena Vista Creek (WBIC 1391300)	129.0-S1
Alternative Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 39	Buena Vista Creek (WBIC 1391300)	129.0-S1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 36	Buena Vista Creek (WBIC 1391300)	132.0-S1
Proposed Solar Project Area	Collector Corridor; Perimeter Area - Outside	Ditch #8 (WBIC 1393400)	134.0-S1

Segment	Project Component	Waterway Name	Feature Unique ID
	Fence. Nearest Fence ID: 44		
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 43	Ditch #8 (WBIC 1393400)	141.0-S1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: Laydown 3	Ditch #8 (WBIC 1393400)	149.0-S1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 50	Ditch #3 (WBIC 1393300)	158.0-S1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 51	Ditch #3 (WBIC 1393300)	161.0-S1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 21	Not mapped	AD-S1
Proposed Solar Project Area	Access Road; Perimeter Area - Outside Fence. Nearest Fence ID: 21	Not mapped	AD-S2
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 21	Not mapped	AD-S3
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: Laydown 1	Fourmile Creek (WBIC 1389600)	AD-S4
Proposed Solar Project Area	Access Road; Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 3	Unnamed (WBIC# 1392200)	AD-S5
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 3	Unnamed (WBIC# 1392200)	AD-S5
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 25	Lateral #1 (WBIC 1392700)	AD-S6
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 53	Ditch #3 (WBIC 1393300)	C-S1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 38/41	Ditch #8 (WBIC 1393400)	C-S2
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 38/41	Ditch #8 (WBIC 1393400)	C-S2

Segment	Project Component	Waterway Name	Feature Unique ID
Proposed Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 21	Buena Vista Creek (WBIC 1391300)	C-S3
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 21	Buena Vista Creek (WBIC 1391300)	C-S3
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 13	Ditch #1 (WBIC 1391600)	C-S4
Proposed Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 13	Not mapped	C-S5
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 13	Not mapped	C-S5
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 13	Twomile Creek (WBIC 1389900)	MWOP-1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 13	Unnamed (WBIC 5019500)	MWOP-2
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 13	Unnamed (WBIC 5548865)	MWOP-3
Proposed Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 13	Unnamed (WBIC 5548874)	MWOP-4
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 13	Unnamed (WBIC 5548840)	MWOP-5
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 13	Unnamed (WBIC 5548910)	MWOP-6
Alternative Solar Project Area	Fence Construction. Nearest Fence ID: 25	Unnamed (WBIC 5019907)	MWOP-7
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 13	Ditch #1 (WBIC 1391600)	MWOP-8
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 13	Unnamed (WBIC 5019538)	MWOP-9

The identification of waterways was based on review of the WDNR 24K Hydrography layer, National Agriculture Imagery Program aerial photographs, and field delineations and observations within accessible portions of the Project Area. Features with distinguishable beds and banks and evidence of scour were considered to be a waterway, regardless of the width or if it was identified in the WDNR 24K Hydrography layer.

Five WDNR-mapped waterways did not correlate with delineated waterways or were observed to be absent. These features are summarized below and detailed in WDNR Table 2 (Appendix V).

Proposed Array: MWOP-1 (Twomile Creek - WBIC 1389900), MWOP-2 (Ditch #1 - WBIC 1391600) and two unnamed tributaries identified as MWOP-08 and MWOP-9 (WBIC's 5019500 and 5019538, respectively).

Alternative Solar Array: one unnamed tributary identified as MWOP-7 (WBIC 5019907).

Four WDNR-mapped waterbodies did not correlate with delineated open water features and were observed to be absent. These features are detailed in WDNR Table 2 (Appendix V).

Additional information about each waterway can be found in Appendix V – Wetland and Waterway Permitting.

8.1.2 Identify any waterways in the project area that are classified as Outstanding or Exceptional Resource Waters, Trout Streams, Wild Rice Waters, and Wild or Scenic Rivers.

The following are waterways are considered Areas of Special Natural Resource Interest (ASNRI) Trout Streams:

Type	Wetland Type or Waterway Name	Feature Unique ID	Trout Stream	ASNRI
Waterway	Ditch Number One (WBIC 1391600)	056.0-S1	Class 1	Trout Stream
Waterway	Unnamed (WBIC 1391400)	077.0-S1	Class 1	Trout Stream
Waterway	Fourmile Creek WBIC 1389600	1002-S1	Class I	Trout Stream
Waterway	Fourmile Creek WBIC 1389600	1003-S1	Class I	Trout Stream
Waterway	Buena Vista Creek (WBIC 1391300)	1017-S1	Class II	Trout Stream
Waterway	Ditch #1 (WBIC 1391600)	1017-S2	Class I	Trout Stream
Waterway	Buena Vista Creek (WBIC 1391300)	1026-S1	Class I	Trout Stream
Waterway	Lateral #3 (WBIC 1392100)	1039-S1	Class 1	Trout Stream
Waterway	Ditch Number One (WBIC 1391600)	1041-S1	Class I	Trout Stream

Type	Wetland Type or Waterway Name	Feature Unique ID	Trout Stream	ASNRI
Waterway	Unnamed (WBIC 1391400)/ Unnamed (WBIC 1391400)/ Unnamed (WBIC 5549620)	119.0-S1	Class I	Trout Stream
Waterway	Buena Vista Creek (WBIC 1391300)	129.0-S1	Class II	Trout Stream
Waterway	Buena Vista Creek (WBIC 1391300)	132.0-S1	Class II	Trout Stream
Waterway	Ditch #8 (WBIC 1393400)	134.0-S1	Class I	Trout Stream
Waterway	Ditch #8 (WBIC 1393400)	141.0-S1	Class I	Trout Stream
Waterway	Ditch #8 (WBIC 1393400)	149.0-S1	Class I	Trout Stream
Waterway	Ditch #3 (WBIC 1393300)	158.0-S1	Class II	Trout Stream
Waterway	Ditch #3 (WBIC 1393300)	161.0-S1	Class II	Trout Stream
Waterway	Fourmile Creek (WBIC 1389600)	AD-S4	Class I	Trout Stream
Waterway	Ditch #3 (WBIC 1393300)	C-S1	Class II	Trout Stream
Waterway	Ditch #8 (WBIC 1393400)	C-S2	Class I	Trout Stream
Waterway	Buena Vista Creek (WBIC 1391300)	C-S3	Class II	Trout Stream
Waterway	Ditch #1 (WBIC 1391600)	C-S4	Class I	Trout Stream
Waterway	Ditch #1 (WBIC 1391600)	MWOP-8	Class I	Trout Stream
Waterway	Fourmile Creek (WBIC 1389600)	1049-S1	Class I	Trout Stream, Outstanding and Exceptional Stream

None of the waterways within the Project Area are classified as Outstanding or Exceptional Resource Waters, Wild Rice Waters, and/or Wild or Scenic Rivers.

8.1.3 State if you are requesting WDNR staff perform a navigability determination on any of the WDNR mapped waterways and/or field identified waterways that would be impacted and/or crossed by project activities. If a navigability determination is requested, provide the following information in a separate appendix with the application.

Stantec has prepared a navigability determination request to WDNR for five instances where WDNR mapped waterways exist within the WDNR 24k hydro layer but were not identified in the field. The navigability determination request is included in Appendix BB – Navigability Determination Request.

8.1.4 For both the proposed and alternate sites and their associated facilities, provide the following:

8.1.4.1 The number of waterways that would be crossed by collection lines and specify the installation method (e.g. X waterways would be bored, Y waterways would be trenched, etc.).

Proposed Array: Sixteen waterways will be crossed by collection lines in the Proposed Array area. All will be crossed with HDD and not impacted. No waterways will be crossed by open trenching during the construction of the Proposed Arrays.

Alternative Array: Fourteen waterways will be crossed by collection lines in the Proposed Array area. All will be crossed with HDD and not impacted. No waterways will be crossed by open trenching during the construction of the Alternative Arrays.

8.1.4.2 The number of waterways that would be traversed with equipment for temporary access roads, and how that crossing would be accomplished (e.g. temporary clear span bridges (TCSB), use of existing bridge or culvert, etc.).

Proposed Array: No waterways are proposed to be traversed during construction.

Alternative Array: No waterways are proposed to be traversed during construction.

8.1.4.3 The number of waterways that would be impacted for permanent access roads, and how that crossing would be accomplished (e.g. placement of culvert, ford, permanent bridge, etc.).

Proposed Array: One waterway impact is anticipated for permanent access roads. A culvert to allow construction of a permanent access road is proposed at waterway AD-S5.

Alternative Array: No waterway impacts are anticipated for permanent access roads.

8.1.4.4 The number of waterways that would be impacted and/or crossed by fence installation and footings.

Proposed Array: No fence installations or footings are proposed to cross waterways associated with the Project.

Alternative Array: No fence installations or footings are proposed to cross waterways associated with the Project.

8.1.4.5 The number of waterways that would be impacted and/or crossed by other construction activities or facilities (e.g. placement of a stormwater pond within 500 feet of a waterway, stream relocation, staging areas, etc.).

Proposed Array: No waterway impacts are anticipated by other construction activities or facilities.

Alternative Array: No waterway impacts are anticipated by other construction activities or facilities.

8.1.5 Provide the methods to be used for avoiding, minimizing, and mitigation construction impacts in and near waterways. This discussion should include, but not be limited to, avoiding waterways, installation methods (i.e. directional bore versus open-cut trenching or plowing), equipment crossing methods (i.e. for temporary access, the use of TCSB versus temporary culvert; for permanent access, the use of permanent bridge versus permanent culvert), sediment and erosion controls, invasive species protocols for equipment, etc.

Vista Sands Solar designed the Vista Sands Solar Project to minimize impacts. All but one permanent access road (found at waterway AD-S5) was designed to avoid new waterway crossings. Sixteen waterways in the Proposed Arrays and 14 waterways in the Alternative Arrays will be crossed with underground collection cabling and these crossings will be performed with HDD borings rather than open-cut trenching or plowing to avoid waterway impacts. Proper sediment, erosion control, and invasive species control BMPs will be installed/utilized adjacent to all waterways prior to construction activities.

8.1.6 Describe fence crossings of waterways, including the location of support pilings (i.e. in waterway channel, at the top of the waterway banks) and the amount of clearance between the bottom of the fence and the ordinary high-water mark. Also describe any existing public use of the waterway and how this public use may be impacted by the fence crossing.

Proposed Array: No fence installations or footings are proposed to cross waterways associated with the Project.

Alternative Array: No fence installations or footings are proposed to cross waterways associated with the Project.

8.1.7 For waterways that would be open-cut trenched, provide the following:

No waterways will be open cut trenched or impacted by the Project. Therefore, responses to sections 8.1.7.1 thru 8.1.7.8 of the AFR are not provided.

8.1.8 For waterways that would be directionally bored, provide the following:

8.1.8.1 Where the equipment would operate from (e.g. from upland banks, from wetland banks, etc.) and if a TCSB is needed to access both banks.

HDD borings within the Proposed and Alternative Arrays will be completed from upland banks of the bored waterways. No impacts on wetlands associated with Project waterways are anticipated from either the boring or the bore pits.

8.1.8.2 The location and size of any temporary staging and equipment storage.

HDD boring equipment will be stored either in a Project laydown yard or near the location of the proposed borings. If the boring cannot be completed in one day, overnight storage of equipment will be in upland agricultural areas within 50 feet of the bore pits. Appropriate BMPs and contaminant management (oil absorbent booms, etc.) materials will be put in place prior to leaving the boring area for the day.

8.1.8.3 The location and size of bore pits.

A typical bore pit is approximately 10 feet by 20 feet by 6 feet deep. Approximately 1,200 cubic feet (45 cubic yards) of material may be excavated for each pit. Each of the borings within the Proposed and Alternative Arrays will require two bore pits, one for entry and one for exit. Each pit will be constructed on the upland banks of bored waterway 50 to 100 feet away from the waterways.

All materials removed from bore pits will be stored adjacent to the boring in upland areas with appropriate BMPs installed. Topsoil will be segregated. Once the boring is completed, the excavated material will be reused as backfill of the pit with topsoil replaced on top. Once a final grade is reached, the area will be seeded with a cover crop and permanent seed mixture with appropriate erosion control devices installed (silt fence, erosion matting, etc.), if necessary.

8.1.8.4 Provide a contingency plan for bore refusal and a plan for the containment and clean-up of any inadvertent releases of drilling fluid (e.g. a frac-out).

Contingency plans for bore refusal and frac-outs will be developed by the construction contractor prior to construction start by the HDD contractor. The plans are expected to include the following:

Prior to construction:

- The drilling entry and exit areas, surrounding work areas, and the drilling route (to the extent accessible) will be surveyed to ensure there are no protected resources on the surface;
- Any sensitive cultural or environmental resources will be flagged for avoidance or construction limits will be clearly marked;
- Barriers will be placed between the bore site and any nearby sensitive resources;
- Field personnel will be briefed on monitoring and timely reporting of frac-outs; and
- Necessary response equipment will be maintained on-site or at a readily accessible location.

Contingency response:

- Once a frac-out is identified, all drilling activities will be stopped, and the location and extent of the frac-out will be determined;
- All necessary notifications will be made to the proper authorities;
- Appropriate mitigations will be taken based on the nature of the frac-out; and

- After the frac-out is stabilized and any required removal is complete, post-clean-up conditions will be documented and reported as required.

While not anticipated, if there is general bore refusal, the proposed HDD alignment will be modified using the same general location with drilling reattempted. If the HDD bore cannot be advanced and abandonment is required, the bore hole will be grouted with an approved material and the bore pits will be backfilled to pre-existing land surface contours.

8.1.9 For waterways that would have a TCSB installed across them, provide the following:

8.1.9.1 A description of the TCSB proposed, including dimensions, materials, and approaches.

8.1.9.2 State if any waterways are wider than 35 feet, and/or if any in-stream supports would be used.

8.1.9.3 State how the TCSB placement and removal would occur (e.g. carried in and placed with equipment, assembled on site, etc.) and if any disturbance would occur to the bed or banks for the installation and removal, including bank grading or cutting.

8.1.9.4 The duration of the TCSB and when installation and removal would occur.

8.1.9.5 Describe sediment controls that would be installed during the installation, use, and removal of the TCSBs.

8.1.9.6 Describe how the TCSBs would be inspected during use, and how they would be anchored to prevent them from being transported downstream.

8.1.9.7 State if the required five foot clearance would be maintained, or if the standards in Wis. Admin. Code NR 320.04(3) would be complied with.

8.1.9.8 How the waterway banks would be restored when the TCSB is removed.

No TCSBs are proposed for the electric generation portion of the Vista Sands Solar Project. TCSBs required for the Project Transmission Lines are described in Section 8.1 of the Vista Sands Transmission Line CPCN application.

8.1.10 Describe the proposed area of land disturbance and vegetation removal at waterway crossings. Include a description of the type of vegetation to be removed, and if this vegetation removal would be temporary (allowed to regrow) or permanent (maintained as cleared).

Vista Sands Solar anticipates utilizing the HDD boring method to cross 16 waterways in the Proposed Project Area and 14 waterways in the Alternative Project Area to avoid waterway and wetland impacts. Bore pits will be located in upland areas (upland agricultural fields) and vegetation removal will be minimal and confined to low growing herbaceous vegetation along the field edges. No trees will be cleared to prepare for HDD borings. Vegetation removal will be temporary, and all areas restored will be seeded and stabilized following boring completion.

The approximate land disturbance caused by the HDD boring pits will be 200 ft^2 per boring pit (4 total pits = 800 total ft^2). An additional 500 ft^2 per boring may be disturbed by activities associated

with the HDD boring. All impacts will be temporary in nature and will be confined to upland agricultural land.

8.1.11 If any of the following activities are proposed, provide the information as detailed on the applicable permit checklist:

- **New culvert placement: https://WDNR.wi.gov/topic/waterways/documents/PermitDocs/GPs/GP-CulvertWPEDesign.pdf (General Permit) or https://WDNR.wi.gov/topic/Waterways/documents/PermitDocs/IPs/IP-culvert.pdf (Individual Permit).**

One new culvert is proposed to allow construction of a permanent access road at waterway AD-S5. A culvert plan will be provided after field review in 2024.

- **New permanent bridge placement: https://WDNR.wi.gov/topic/waterways/documents/PermitDocs/GPs/GP-ClearSpanBridge.pdf (General Permit, no in-stream supports) or https://WDNR.wi.gov/topic/Waterways/documents/PermitDocs/IPs/IP-bridgeTempCross.pdf (Individual Permit, in-stream supports).**

No new permanent bridge placement is anticipated for the Project.

- **New stormwater pond placed within 500 feet of a waterway: https://WDNR.wi.gov/topic/waterways/documents/PermitDocs/GPs/GP-StormwaterPond.pdf.**

See section 2.4.6 describing permanent stormwater management facilities. No new stormwater facilities are proposed within 500 feet of a waterway.

8.2 Wetland Permitting Activities

This section should be consistent with the wetlands included in WDNR Tables 1 and 2 and associated figures. See page iii in this document on what to include in WDNR Tables 1 and 2 regarding wetland resources.

The Project was designed to avoid wetlands to the extent practicable. The WDNR Wetland/Waterway Impact Location Table and Environmental Inventory Table (Tables 1 and 2, respectively) are provided in Appendix V.

8.2.1 Describe the method used to identify wetland presence and boundaries within the project area (i.e. wetland delineation, wetland determination, review of desktop resources only, etc.). If a combination of methods were used, describe which project areas utilized which method. The associated delineation report and/or desktop review documentation should be uploaded to the PSC's website as part of the application filing. State if wetlands mapped via desktop resources would be field confirmed, and when (if known).

Wetland determinations were based on the criteria and methods outlined in the *Corps of Engineers Wetlands Delineation Manual,* Technical Report Y-87-1 (1987) and subsequent

guidance documents, and Northcentral/Northeast Regional Supplement to the *Corps of Engineers Wetland Delineation Manual*.

The wetland determination involved the use of available resources to assist in the assessment such as U.S. Geological Survey (USGS) topographic maps, U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) soil survey, WDNR Wisconsin Wetland Inventory (WWI) mapping, WDNR Digital Elevation Model (DEM) and historic aerial photography. These resources were reviewed to identify potential farmed wetlands so presence or absence could be confirmed during the field delineation.

Field Delineation

Access was permitted across most of the Project, and on-site wetland delineations were completed using the three criteria (vegetation, soil, and hydrology) and technical approach defined in the USACE 1987 Manual and applicable Regional Supplement. According to procedures described in the 1987 Manual and applicable Regional Supplement, areas that under normal circumstances reflect a predominance of hydrophytic vegetation, hydric soils, and wetland hydrology (e.g., inundated or saturated soils) are considered wetlands.

Wetland boundaries and sampling points were identified and surveyed with a Global Positioning System (GPS) capable of sub-meter accuracy and mapped using Geographical Information System (GIS) software.

Desktop Review/ Field-Determined Methods

While the majority of the Project Area was field delineated, access was limited in some portions of the Project (Appendix B, Figure 1). A few areas were observable from legally accessible public roadways, and wetland boundaries were determined in the field by direct observation and sketched on aerial imagery. A desktop review was completed for other portions of the Project Area that were added after the field investigations, and wetland boundaries were conservatively estimated using aerial photograph interpretation, soil survey mapping, DEMs and WWI maps.

Additional field investigations will be performed during the 2024 or 2025 growing season in areas where desktop methodology was used to determine wetland locations.

A combined Wetland Delineation Report for the Vista Sands Solar Farm and all associated Project Transmission Lines is found in Appendix H – Wetland Delineation Report.

8.2.2 Identify the number of wetlands present and by wetland type, using the Eggers and Reed classification. Provide as an overall project total, as well as broken down by the proposed site and the alternate site and their associated facilities.

A total of 142 wetlands were identified within the Proposed and Alternative Array areas. The Proposed Arrays contain 89 wetlands, and the Alternative Arrays contain 62 wetlands. Nine wetlands are located within both the Proposed and Alternative Array areas. The wetlands within the Project Area are summarized in the table below.

Segment	Project Component	Wetland Type	Feature Unique ID
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 4	Wet meadow	020.0-W1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 9	Farmed wetland	041.0-W1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 9	Shrub-carr	051.0-W1 SC
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 9	Shallow marsh	051.0-W1 SM
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 9	Wet meadow	051.0-W1 WM
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 9	Shallow marsh	053.0-W1 SM
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 9	Wet meadow	053.0-W1 WM
Proposed Solar Project Area	Fence Construction. Nearest Fence ID: 7	Shallow marsh	055.0-W1 SM
Proposed Solar Project Area	Collector Corridor. Nearest Fence ID: 7	Wet meadow	055.0-W1 WM
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 12	Wet meadow	056.0-W1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 12	Farmed wetland	056.0-W2
Proposed Solar Project Area	Fence Construction. Nearest Fence ID: 10	Farmed wetland	061.0-W1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 9	Shallow marsh	064.0-W1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 15	Farmed wetland	073.0-W1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 15	Farmed wetland	073.0-W2
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 15	Farmed wetland	074.0-W1
Proposed Solar Project Area	Collector Corridor. Nearest Fence ID: 16	Hardwood Swamp	077.0-W1 HS
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 16	Hardwood Swamp	077.0-W1 HS
Proposed Solar Project Area	Collector Corridor. Nearest Fence ID: 16	Wet meadow	077.0-W1 WM

Segment	Project Component	Wetland Type	Feature Unique ID
Alternative Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 16	Wet meadow	077.0-W1 WM
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 15	Farmed wetland	079.0-W1
Proposed Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 15	Farmed wetland	080.0-W1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 20	Wet meadow	081.0-W1
Proposed Solar Project Area	Collector Corridor; Perimeter - Outside Fence. Nearest Fence ID: 17	Shallow marsh	081.0-W2
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 17	Shallow marsh	081.0-W2
Alternative Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence. Nearest Fence ID: 19	Farmed wetland	085.0-W1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 15	Farmed wetland	087.0-W1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 15	Farmed wetland	087.0-W2
Proposed Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 15	Wet meadow	087.0-W3
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 15	Farmed wetland	088.0-W1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 15	Farmed wetland	088.0-W2
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence; PV Array Area. Nearest Fence ID: 15	Farmed wetland	088.0-W3 F
Proposed Solar Project Area	Fence Construction; Perimeter Area - Outside Fence; Perimeter Area - Inside Fence. Nearest Fence ID: 15	Wet meadow	088.0-W3 WM

Segment	Project Component	Wetland Type	Feature Unique ID
Alternative Solar Project Area	Fence Construction; Perimeter Area - Outside Fence. Nearest Fence ID: 20	Wet meadow	089.0-W1
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence; PV Array Area. Nearest Fence ID: 23	Farmed wetland	092.0-W1
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside; Perimeter Area - Outside. Nearest Fence ID: 23	Farmed wetland	092.0-W2
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence; PV Array Area. Nearest Fence ID: 23	Farmed wetland	092.0-W3
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 24	Farmed wetland	093.0-W1
Proposed Solar Project Area	Fence Construction; Perimeter - Inside Fence; Perimeter - Outside Fence. Nearest Fence ID: 24	Farmed wetland	093.0-W2
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence; PV Array Area. Nearest Fence ID: 24	Farmed wetland	093.0-W3 F
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 24	Open water	093.0-W3 OW
Proposed Solar Project Area	Fence Construction; Perimeter Area - Outside Fence . Nearest Fence ID: 24	Wet meadow	093.0-W3 WM
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence; PV Array Area. Nearest Fence ID: 24	Farmed wetland	094.0-W1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 24	Farmed wetland	094.0-W2

Segment	Project Component	Wetland Type	Feature Unique ID
Proposed Solar Project Area	Fence Construction. Nearest Fence ID: 24	Farmed wetland	094.0-W3
Proposed Solar Project Area	Fence Construction; Perimeter Area - Outside Fence; Perimeter Area - Inside Fence. Nearest Fence ID: 19	Farmed wetland	096.0-W1
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence; PV Array Area. Nearest Fence ID: 15	Farmed wetland	098.0-W1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: Laydown 1	Floodplain Forest	1002-W1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 42	Shallow Open Water	1004-W1 SOW
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 42	Wet Meadow	1004-W1 WM
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside Fence. Nearest Fence ID: 42	Wet Meadow	1004-W2
Alternative Solar Project Area	Perimeter Area - Inside Fence; Perimeter Area - Outside Fence. Nearest Fence ID: 42	Wet Meadow	1004-W2
Alternative Solar Project Area	Fence Construction; Perimeter Area - Outside Fence. Nearest Fence ID: 24	Wet Meadow	1017-W1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 24	Shallow Open Water	1017-W2
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 24	Shallow Open Water	1017-W3
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 24	Hardwood Swamp	1017-W4
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 31	Wet Meadow	1018-W1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 31	Hardwood Swamp	1018-W2
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 31	Shrub-Carr	1018-W3

Segment	Project Component	Wetland Type	Feature Unique ID
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 37	Hardwood Swamp	1019-W1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 37	Hardwood Swamp	1019-W2
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence . Nearest Fence ID: 23	Farmed wetland	102.0-W1 F
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 23	Wet meadow	102.0-W1 WM
Proposed Solar Project Area	Fence Construction. Nearest Fence ID: 23	Farmed wetland	102.0-W2 F
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 23	Wet meadow	102.0-W2 WM
Proposed Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 31	Seasonally Flooded Basin	1020-W1
Alternative Solar Project Area	Perimeter Area - Inside Fence . Nearest Fence ID: 31	Seasonally Flooded Basin	1020-W2
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 31	Shallow Open Water	1020-W3
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 31	Shallow Open Water	1020-W4
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 31	Hardwood Swamp	1020-W5 HS
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 31	Shrub Carr	1020-W5 SC
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 31	Shallow Open Water	1020-W5 SOW
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 37	Farmed Wetland	1021-W1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 37	Farmed Wetland	1021-W2
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 37	Sedge Meadow	1021-W3
Alternative Solar Project Area	PV Array Area. Nearest Fence ID: 25	Farmed Wetland	1025-W1
Alternative Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 25	Wet Meadow	1026-W1
Alternative Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 25	Wet Meadow	1026-W2

Segment	Project Component	Wetland Type	Feature Unique ID
Alternative Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; PV Array Area. Nearest Fence ID: 25	Farmed Wetland	1027-W1
Alternative Solar Project Area	Fence Construction; Perimeter Area - Outside Fence. Nearest Fence ID: 25	Wet Meadow	1027-W2
Proposed Solar Project Area	Collector Corridor; Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence; PV Array Area. Nearest Fence ID: 11	Farmed Wetland	1028-W1
Proposed Solar Project Area	Collector Corridor; Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence. Nearest Fence ID: 11	Farmed Wetland	1028-W2
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside; Perimeter Area - Outside; PV Array Area. Nearest Fence ID: 11	Farmed Wetland	1029-W1 F
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 11	Shrub-carr	1029-W1 SC
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 11	Wet Meadow	1029-W1 WM
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence; PV Array Area. Nearest Fence ID: 17	Farmed Wetland	1036-W1
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 17	Farmed Wetland	1036-W1
Proposed Solar Project Area	Collector Corridor; PV Array Areas. Nearest Fence ID: 17	Farmed Wetland	1037-W1
Proposed Solar Project Area	Collector Corridor; Fence Construction; Perimeter Area - Inside Fence. Nearest Fence ID: 11	Farmed Wetland	1039-W1

Segment	Project Component	Wetland Type	Feature Unique ID
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 11	Farmed Wetland	1039-W1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 11	Farmed Wetland	1039-W2
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 11	Farmed Wetland	1039-W3
Proposed Solar Project Area	Collector Corridor; Fence Construction; Perimeter Area - Inside Fence. Nearest Fence ID: 11	Farmed Wetland	1041-W1
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 11	Farmed Wetland	1041-W1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 17	Farmed Wetland	1042-W1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 17	Hardwood Swamp	1043-W1 HS
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 17	Shallow Open Water	1043-W1 OW
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 17	Shallow Marsh	1043-W1 SM
Alternative Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence. Nearest Fence ID: 53	Wet Meadow	1044-W1
Alternative Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 53	Farmed Wetland	1047-W1 F
Alternative Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence. Nearest Fence ID: 53	Wet Meadow	1047-W1 WM
Alternative Solar Project Area	PV Array Area. Nearest Fence ID: 53	Farmed Wetland	1047-W2
Alternative Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 53	Farmed Wetland	1047-W3
Alternative Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence; PV Array Area. Nearest Fence ID: 53	Farmed Wetland	1049-W1

Segment	Project Component	Wetland Type	Feature Unique ID
Alternative Solar Project Area	Fence Construction; Perimeter Area - Outside Fence. Nearest Fence ID: 53	Farmed Wetland	1049-W2
Alternative Solar Project Area	Perimeter Area - Inside Fence; PV Array Area. Nearest Fence ID: 53	Farmed Wetland	1049-W3 F
Alternative Solar Project Area	Fence Construction; Perimeter Area - Inside Fence. Nearest Fence ID: 53	Wet Meadow	1049-W3 WM
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence. Nearest Fence ID: 26	Wet meadow	106.0-W1
Alternative Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence; PV Array Area. Nearest Fence ID: 26	Farmed wetland	108.0-W1 F
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 26	Hardwood Swamp	108.0-W1 HS
Alternative Solar Project Area	Fence Construction; Perimeter Area - Outside Fence. Nearest Fence ID: 26	Wet meadow	108.0-W1 WM
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 27	Farmed wetland	109.0-W1 F
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 27	Hardwood Swamp	109.0-W1 HS
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 27	Wet meadow	109.0-W2
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 29	Wet meadow	111.0-W1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 26	Farmed wetland	116.0-W1
Alternative Solar Project Area	PV Array Area. Nearest Fence ID: 26	Farmed wetland	116.0-W2
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 30	Wet meadow	118.0-W1
Proposed Solar Project Area	Collector Corridor. Nearest Fence ID: 35	Hardwood Swamp	122.0-W1

Segment	Project Component	Wetland Type	Feature Unique ID
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 35	Hardwood Swamp	122.0-W1
Proposed Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 37	Wet meadow	127.0-W1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 37	Wet meadow	127.0-W2
Proposed Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 37	Wet meadow	127.0-W3
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 37	Wet meadow	127.0-W4
Proposed Solar Project Area	Collector Corridor. Nearest Fence ID: 40	Hardwood Swamp	129.0-W1 HS
Proposed Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 40	Sedge meadow	129.0-W1 SE
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: Laydown 4	Floodplain forest	131.0-W1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: Laydown 4	Floodplain forest	131.0-W2
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: Laydown 4	Floodplain forest	131.0-W3
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: Laydown 4	Floodplain forest	131.0-W4
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: Laydown 4	Floodplain forest	131.0-W5
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: Laydown 4	Hardwood Swamp	131.0-W6
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: Laydown 4	Floodplain forest	132.0-W1
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 36	Hardwood Swamp	132.0-W2
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 36	Floodplain Forest	133.0-W1 FF
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 36	Hardwood Swamp	133.0-W1 HS

Segment	Project Component	Wetland Type	Feature Unique ID
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 36	Hardwood Swamp	133.0-W2
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 36	Floodplain Forest	133.0-W3
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 36	Floodplain Forest	133.0-W4 FF
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 36	Hardwood Swamp	133.0-W4 HS
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 36	Floodplain Forest	133.0-W5
Proposed Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 44	Wet meadow	145.0-W1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 43	Farmed wetland	146.0-W1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 51	Farmed wetland	160.0-W1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 51	Farmed wetland	160.0-W2
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 21	Farmed Wetland	AD-W1
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 38/41	Farmed Wetland	AD-W10
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 38/41	Farmed Wetland	AD-W11
Proposed Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 38/41	Farmed Wetland	AD-W12
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 38/41	Farmed Wetland	AD-W13
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 38/41	Farmed Wetland	AD-W14
Proposed Solar Project Area	Perimeter Area - Inside Fence; PV Array Area. Nearest Fence ID: 38/41	Farmed Wetland	AD-W15
Alternative Solar Project Area	PV Array Area. Nearest Fence ID: 38/41	Farmed Wetland	AD-W16
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 38/41	Farmed Wetland	AD-W17
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 49	Hardwood Swamp	AD-W18

Segment	Project Component	Wetland Type	Feature Unique ID
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 35	Floodplain Forest	AD-W19
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 21	Farmed Wetland	AD-W2
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 14	Hardwood Swamp	AD-W20
Alternative Solar Project Area	Collector Corridor; Perimeter Area - Outside Fence. Nearest Fence ID: 27	Hardwood Swamp	AD-W21 HS
Alternative Solar Project Area	Collector Corridor . Nearest Fence ID: 27	Sedge Meadow	AD-W21 SM
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 46	Hardwood Swamp	AD-W22
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 48	Hardwood Swamp	AD-W23
Alternative Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: Laydown 1	Floodplain Forest	AD-W24
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence; PV Array Area. Nearest Fence ID: 13	Farmed Wetland	AD-W27
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 13	Farmed Wetland	AD-W28
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 13	Farmed Wetland	AD-W29
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 21	Farmed Wetland	AD-W3
Proposed Solar Project Area	Perimeter Area - Inside Fence. Nearest Fence ID: 21	Farmed Wetland	AD-W4
Proposed Solar Project Area	Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence. Nearest Fence ID: 38/41	Farmed Wetland	AD-W5
Alternative Solar Project Area	Collector Corridor. Nearest Fence ID: 38/41	Farmed Wetland	AD-W5

Segment	Project Component	Wetland Type	Feature Unique ID
Proposed Solar Project Area	Collector Corridor; Fence Construction; Perimeter Area - Inside Fence; Perimeter Area - Outside Fence; PV Array Area. Nearest Fence ID: 38/41	Farmed Wetland	AD-W6
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 38/41	Farmed Wetland	AD-W7
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 38/41	Farmed Wetland	AD-W8
Proposed Solar Project Area	PV Array Area. Nearest Fence ID: 38/41	Farmed Wetland	AD-W9
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 13	Hardwood Swamp	C-W1
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 13	Hardwood Swamp	C-W2
Proposed Solar Project Area	Perimeter Area - Outside Fence. Nearest Fence ID: 13	Hardwood Swamp	C-W3

The wetlands delineated within the Project Area are further summarized in the Wetland Delineation Report and displayed on Figure 4 in Appendix H. A summary of the wetland communities is also included in WDNR Tables 1 and 2 in Appendix V.

The delineated wetlands located with the Project Area consist of wet meadow, farmed, seasonally flooded basin, shallow marsh, shallow open water, sedge meadow, shrub-carr and hardwood swamp wetlands. A summary of the wetland communities surveyed within the Project Area is presented below:

Wet Meadow

The wet meadow communities were typically located within wet ditches or the outer margins of agricultural fields. Many of these wetlands are degraded by drainage attempts, mowing, grazing or other land conversion and typically supported low plant diversity, and were most often dominated by reed canary grass (*Phalaris arundinacea*). Other common plant species observed within the wet meadow wetlands include fall panic grass (*Panicum dichotomiflorum*), redtop (*Agrostis gigantea*), stinging nettle (*Urtica dioca*), wool grass (*Scirpus cyperinus*), giant goldenrod (*Solidago gigantea*), panicled aster (*Symphyotrichum lanceolatum*), Pennsylvania smartweed (*Persicaria pensylvannica*), tussock sedge (*Carex stricta*), and yellow foxtail (*Setaria pumila*).

Farmed Wetland

Farmed wetland communities were the most prevalent community type and were disturbed due to agricultural practices including vegetation removal (harvest), plowing, planting, excavation, sand fill, drainage via constructed ditches, and altered hydrology due to irrigation systems. As a

result of these disturbances, and abnormally dry conditions during the survey period, some of the farmed wetlands were dominated by non-hydrophytic agricultural weeds or lacked vegetative cover altogether. Where vegetation was present, typical dominant species included stressed crops, barnyard grass (*Echinochloa crus-galli*), fall panic grass, bog yellowcress (*Rorippa palustris),* lamb's quarters (*Chenopodium album*), narrow-leaved cattail (*Typha angustifolia*), blunt spikerush (*Eleocharis obtusa*), field pennycress (*Thlaspi arvense*), and shepherd's purse (*Capsella bursa-pastoris*).

Seasonally Flooded Basin

Two small seasonally flooded basins were documented within the Project Area and correlate with WWI-mapped Excavated Ponds. Both wetlands are located within a pasture and the topsoil was observed to have been historically removed. These communities were inundated at the time of the investigation and dominated by redtop grass and annuals, including barnyard grass, slender false fox-glove (*Agalinis tenuifolia*), spotted lady's thumb (*Persicaria maculosa*), and blunt spike-rush.

Shallow Marsh

Two wetlands (064.0-W1, 081.0-W2) and portions of wetlands 053.0-W1, 055.0-W1 and 1043-W1 were identified as shallow marsh communities. These communities were either associated with field-delineated waterways, located within excavated ditches along the edges of agricultural fields and roadways, or associated with open water features. The shallow marsh communities were typically degraded by surrounding land use and dominated by reed canary grass, white panicled aster (*Symphyotrichum lanceolatum*), narrow-leaved cattail, soft rush (*Juncus effusus*) and scattered sandbar willow (*Salix interior*).

Shallow Open Water

Shallow open water communities occurred as isolated features or were associated with larger wetland complexes. These communities were often degraded by surrounding land use and/ or historically excavated. Aquatic vegetation such as Illinois pondweed *(Potamogeton illinoensis*, OBL), duckweeds (*Lemna spp*, OBL) and algae typically dominated the central portions, and reed canary grass, narrow-leaved cattail, common lake sedge (*Carex lacustris*, OBL), marsh pepper weed (*Persicaria hydropipier*, OBL), soft-stem bulrush (*Schoenoplectus tabernaemontani*, OBL) and various sedges (Carex sp., FACW-OBL) around the perimeter.

Sedge Meadow

Sedge meadow communities were observed in wetland 1021-W3 and a small portion of wetland 129.0-W1. Wetland 1021-W3 is an isolated depression dominated by yellow lake sedge (*Carex utriculata*) located between a farm field access and woodland. The sedge meadow in 129-W1 is located under a cleared transmission line corridor along the east side of 110th Street South. No sample points were collected in the sedge meadow portion of 129-W1; however, the area was observed to be dominated by tussock sedge (*Carex stricta*) and is contiguous with the hardwood swamp component of the wetland.

Shrub-Carr

Few shrub-carr communities were identified in the Project Area and were typically part of larger complexes and usually were associated with waterways or drainageways. Dominant species common in the shrub layer are sandbar willow and tree saplings, including black ash (*Fraxinus nigra*), red maple (*Acer rubrum*), American elm (*Ulmus americana*). Herb layer dominants include jewelweed (*Impatiens capensis*), various sedges (*Carex sp*.) and reed canary grass.

Hardwood Swamp

Hardwood swamp communities were associated with other wetland community types in a complex, and/or were associated with waterways, smaller tributaries, or drainageways. Other hardwood swamp communities were isolated wetlands and were not observed to have a hydrologic connection to other features. Common canopy dominants observed in the hardwood swamp communities include black ash, quaking aspen (*Populus tremuloides*), green ash (*Fraxinus pensylvanica),* silver maple (*Acer saccharinum*), giant goldenrod (*Solidago gigantea*), Canada bluejoint (*Calmagrostis canadensis*), reed canary grass, sensitive fern (*Onoclea sensibilis*), American manna grass (*Glyceria grandis*), various sedges and skunk cabbage (*Symplocarpus foetidus).*

Floodplain Forest

Floodplain forest communities were associated with Buena Vista Creek and Fourmile Creek. Wetland 133.0-W5, on the south side of Buena Vista Creek, was inaccessible to field crews and therefore the wetland boundary and community type was approximated based aerial imagery, NRCS soil and WWI mapping. Wetland AD-W19 was aerially delineated via desktop review on a segment of Fourmile Creek just east of a field-delineated segment of the waterway. The floodplain forest communities were often dominated by black ash and green ash in the overstory, with speckled alder (*Alnus incana*) and nannyberry (*Viburnum lentago*) in the shrub layer, and Canada bluejoint, sensitive fern, American manna grass, various sedges and skunk cabbage in the herbaceous stratum.

8.2.3. Wetland functional values:

8.2.3.1. Discuss the existing functional values of the wetland present. Functional values include but are not limited to floristic diversity, fish and wildlife habitat, flood storage, water quality, groundwater discharge and recharge, public use, etc.

Most of the wetlands within the Project Area are degraded wet meadows or farmed wetlands characterized by low floristic diversity that provide little significant fish and wildlife habitat or flood storage. Nor do they provide significant water quality, groundwater discharge and recharge, or public use benefits.

Wetlands with higher functional values within the Project Area are typically associated with waterways and are noted in Sections 8.2.4.1 and 8.2.4.2. These wetlands maintain higher floristic diversity and provide greater fish and wildlife habitat than the degraded wet meadows and farmed wetlands within the Project Area.

8.2.3.2. Discuss how the project may impact existing functional values of wetlands.

Forty-six wetlands in the Proposed Arrays will have approximately 52.2 acres (2,273,183 square feet) construction matting placed within them to facilitate vehicle access during construction. Nine wetlands in the Alternative Arrays will have approximately 22.9 acres (998,024 square feet of construction matting placed within them to facilitate vehicle access during construction. These wetlands are all farmed wetlands.

Functional values of the farmed wetlands that will be covered with construction matting will be enhanced as they will be re-vegetated with the wet-mesic Graminoid Plus seed mix found in Appendix I Vegetation Management Plan. The conversion of these farmed wetlands into wet meadows via seeding will provide significant functional lift with increases in floristic diversity, wildlife habitat, soil stabilization, carbon sequestration and water quality.

8.2.3.3. Provide Wisconsin Rapid Assessment Methodology (WRAM) forms, or other assessment methodology documentation, if completed.

WRAM forms were not completed during the wetland delineation.

8.2.4 Identify the any wetlands in the project area that are considered sensitive and/or high-quality wetlands, including, but not limited to:

8.2.4.1 Any wetlands in or adjacent to an area of special natural resource interest (Wis. Admin. Code NR § 103.04).

The following are wetlands are in or adjacent to considered Areas of Special Natural Resource Interest (ASNRI) waterways:

Type	Wetland Type or Waterway Name	Feature Unique ID	ASNRI
Wetland	Shrub-Carr	1018-W3	Associated with Class II trout stream, Buena Vista Creek
Wetland	Hardwood Swamp	122.0-W1	Associated with Class II trout stream, Buena Vista Creek
Wetland	Sedge meadow/ Hardwood Swamp	129.0-W1	Associated with Class II trout stream, Buena Vista Creek
Wetland	Floodplain forest	131.0-W1	Associated with Class II trout stream, Buena Vista Creek
Wetland	Floodplain forest	131.0-W2	Associated with Class II trout stream, Buena Vista Creek

Type	Wetland Type or Waterway Name	Feature Unique ID	ASNRI
Wetland	Floodplain forest	131.0-W3	Associated with Class II trout stream, Buena Vista Creek
Wetland	Floodplain forest	131.0-W4	Associated with Class II trout stream, Buena Vista Creek
Wetland	Floodplain forest	131.0-W5	Associated with Class II trout stream, Buena Vista Creek
Wetland	Floodplain forest	132.0-W1	Associated with Class II trout stream, Buena Vista Creek
Wetland	Hardwood Swamp	132.0-W2	Associated with Class II trout stream, Buena Vista Creek
Wetland	Hardwood Swamp/ Floodplain Forest	133.0-W1	Associated with Class II trout stream, Buena Vista Creek
Wetland	Hardwood Swamp	133.0-W2	Associated with Class II trout stream, Buena Vista Creek
Wetland	Floodplain Forest	133.0-W3	Associated with Class II trout stream, Buena Vista Creek
Wetland	Hardwood Swamp/ Floodplain Forest	133.0-W4	Associated with Class II trout stream, Buena Vista Creek
Wetland	Floodplain Forest	133.0-W5	Associated with Class II trout stream, Buena Vista Creek
Wetland	Floodplain Forest	AD-W19	Associated with Class II trout stream, Buena Vista Creek
Wetland	Floodplain Forest	1002-W1	Associated with Class 1 trout stream, Fourmile Creek
Wetland	Hardwood Swamp	AD-W22	Associated with Class 1 trout stream, Fourmile Creek
Wetland	Floodplain Forest	AD-W24	Associated with Class 1 trout stream, Fourmile Creek

Type	Wetland Type or Waterway Name	Feature Unique ID	ASNRI
Wetland	Wet meadow/ Hardwood Swamp	077.0-W1	Associated with Class 1 trout stream, Unnamed WBIC 1391400)
Wetland	Wet meadow	111.0-W1	Associated with Class 1 trout stream, Unnamed WBIC 1391400)
Wetland	Hardwood Swamp	131.0-W6	Associated with Class 1 trout stream, Unnamed WBIC 1391400)
Wetland	Wet meadow	056.0-W1	Associated with Class I Trout Stream, Ditch #1
Wetland	Wet Meadow, Farmed Wetland, Shrub-carr	1029-W1	Associated with Class I Trout Stream, Ditch #1
Wetland	Hardwood Swamp	C-W3	Associated with Class II Trout Stream,

8.2.4.2 Any of the following types: deep marsh, northern or southern sedge meadow not dominated by reed canary grass, wet or wet-mesic prairie not dominated by reed canary grass, fresh wet meadows not dominated by reed canary grass, coastal marsh, interdunal or ridge and swale complex, wild rice-dominated emergent aquatic, open bog, bog relict, muskeg, floodplain forest, and ephemeral ponds in wooded settings.

The table below identifies which wetlands meet the criteria in question 8.2.4.2

Wetland Type	Feature Unique ID	Wetland Quality
Floodplain Forest	1002-W1	Floodplain forest associated with waterway 1002-S1 (Ditch Number 3) comprised of reed canary grass, jewelweed, riverbank grape, rice cutgrass, broadleaf arrowhead, fowl manna grass, speckled alder, peach leaf willow, sandbar willow, pussy willow, boxelder, river birch, silver maple, Eastern cottonwood, and American elm.
Wet Meadow	1018-W2	Isolated, wet/sedge meadow comprised of lake sedge, tussock sedge, Canada goldenrod, giant goldenrod, virgin's bower, and unknown grasses.
Hardwood Swamp	1018-W2	Isolated hardwood swamp comprised of black ash, red maple, interrupted fern and wood fern.
Farmed wetland/ Hardwood Swamp	109.0-W1	No waterways/open water features identified within the Project Area. Hardwood swamp comprised of quaking aspen and black ash trees over lake sedge, Eastern star sedge, tussock sedge, Canada bluejoint, American manna grass, Virginia wild rye, giant goldenrod, gray dogwood, and glossy buckthorn (around the perimeter of the wetland). Farmed wetland comprised of yellow foxtail and fall panic grass.
Hardwood Swamp	122.0-W1	Associated with waterway 129.0-S1 (Buena Vista Creek), consisting of green ash, tag alder, woolgrass, Canada bluejoint, and stinging nettle. Floodplain forest consists of green ash, gray alder, reed canary grass, jewelweed, arrowleaf tearthumb, and northern water plantain.
Sedge meadow/ Hardwood Swamp	129.0-W1	Hardwood swamp/floodplain forest associated with waterway 129.0-S1 (Buena Vista Creek). Wetland is comprised of green ash, grey alder, reed canary grass, jewelweed, and arrowleaf tearthumb.
Floodplain forest	131.0-W1	Floodplain forest associated with waterway 132.0-S1 (Buena Vista Creek). Wetland is comprised of American elm, green ash, Canada bluejoint, fowl manna grass, and skunk cabbage.

Wetland Type	Feature Unique ID	Wetland Quality
Floodplain forest	131.0-W2	Floodplain forest associated with waterway 132.0-S1 (Buena Vista Creek). Wetland is comprised of American elm, green ash, Canada bluejoint, and fowl manna grass.
Floodplain forest	131.0-W3	Floodplain forest associated with waterway 132.0-S1 (Buena Vista Creek). Wetland is comprised of green ash and Canada bluejoint.
Floodplain forest	131.0-W4	Floodplain forest associated with waterway 132.0-S1 (Buena Vista Creek). Wetland is comprised of green ash, speckled alder, Canada bluejoint, and various sedge species.
Floodplain forest	131.0-W5	Floodplain forest associated with waterway 132.0-S1 (Buena Vista Creek). Wetland is comprised of green ash, speckled alder, and Canada bluejoint.
Hardwood Swamp	131.0-W6	Hardwood swamp associated with waterway 119.0-S1. Wetland is comprised of green ash, winterberry, Virginia wild rye, spotted Joe-pye weed, and bedstraw species.
Floodplain forest	132.0-W1	Floodplain forest associated with waterway 132.0-S1 (Buena Vista Creek). Wetland is comprised of green ash, American elm, speckled alder, Canada bluejoint, and sedge species.
Hardwood Swamp	132.0-W2	Hardwood swamp associated with waterway 132.0-S1 (Buena Vista Creek) and is comprised of black ash, green ash, boxelder, buttercup, Canada bluejoint, blunt broom sedge, Eastern star sedge, alder, sensitive fern, and skunk cabbage. Wetland has micro-topographic variations, mucky surface in low spots, and mostly high chroma mineral soils.
Hardwood Swamp/ Floodplain Forest	133.0-W1	Forested floodplain associated with waterway 133.0-S1 (Buena Vista Creek). Wetland is comprised of green ash trees over fowl manna grass, skunk cabbage, Virginia wild rye, asters, and some reed canary grass along the waterway.

Wetland Type	Feature Unique ID	Wetland Quality
Hardwood Swamp	133.0-W2	Hardwood swamp associated with waterway 133.0-S1 (Buena Vista Creek) and is comprised of black ash, speckled alder, nannyberry, sensitive fern, Virginia wild rye, American manna grass, various ferns, and reed canary grass along the waterway.
Floodplain Forest	133.0-W3	Floodplain forest associated with waterway 133.0-S1 (Buena Vista Creek) and comprised of black ash, speckled alder, nannyberry, American manna grass, little-leaf buttercup, Virginia wild rye, skunk cabbage, and various sedges.
Hardwood Swamp/ Floodplain Forest	133.0-W4	Hardwood swamp/floodplain forest associated with waterway 133.0-S1 (Buena Vista Creek) and comprised of black ash, green ash, boxelder, red oak, prickly ash, reed canary grass, little-leaf buttercup, Canada bluejoint, Italian rye grass, speckled alder, blunt broom sedge, Eastern star sedge, sensitive fern, skunk cabbage, and various asters. Wetland has micro-topographic variations, mucky surface in low spots, and mostly high chroma mineral soils.
Floodplain Forest	133.0-W5	Floodplain forest associated with waterway 133.0-S1 (Buena Vista Creek) and comprised of green ash, American elm, alder, nannyberry, and reed canary grass.
Floodplain Forest	AD-W19	Associated with waterway 129.0-S1 (Buena Vista Creek)
Hardwood Swamp/ Sedge Meadow	AD-W21	Contiguous with wetland 109.0-W1. Connection to waterway not observed within project.
Hardwood Swamp	AD-W22	Associated with waterway 1003-S1 (Fourmile Creek)
Floodplain Forest	AD-W24	Associated with waterway AD-S4 (Fourmile Creek)

8.2.4.3 Any wetlands with high functional values based on factors such as abundance of native species and/or rare species, wildlife habitat, hydrology functions, etc.

Please refer to Table 8.2.3.2.

8.2.5 For both the proposed and alternative sites and their associated facilities, provide

the following:

8.2.5.1 How many wetlands would be crossed by collection lines and specify the installation method (i.e. X wetlands would be bored, Y wetlands would be trenched).

Eleven wetlands will be crossed by Proposed Array MV collection lines and nine wetlands will be crossed by Alternative Array MV collection lines. All of these wetlands will be crossed via directional boring so no wetland impacts are anticipated for construction of MV collection lines associated with the Project.

8.2.5.2 How many wetlands would have construction matting placed within them to facilitate vehicle access and operation and material storage. Also provide the total amount of wetland matting, in square feet.

Vista Sands Solar understands that the WDNR has maintained that, in wetlands, elevated solar array panels with pile driven supports (no backfill) that can be installed without land disturbance would not constitute regulated wetland fill. Vista Sands Solar also understands that rutting or soil mixture from construction traffic in farmed and wet meadow wetlands may be considered a regulated impact. Therefore, Vista Sands Solar will install racking and panels in farmed and wet meadow wetlands either during frozen ground conditions or with the use of construction matting. For the purposes of this application, Vista Sands Solar assumes all farmed and wet meadow wetlands that will have piles driven in them will have construction matting placed within in them to facilitate vehicle access and avoid wetland impacts.

Forty-six wetlands in the Proposed Arrays will have approximately 52.2 acres (2,273,183 square feet) construction matting placed within them to facilitate vehicle access during construction. Nine wetlands in the Alternative Arrays will have approximately 22.9 acres (998,024 square feet of construction matting placed within them to facilitate vehicle access during construction. These wetlands are all farmed wetlands.

No permanent wetland impacts are anticipated from construction matting during the construction of the Project.

8.2.5.3 How many wetlands would be impacted for permanent access roads and indicate if culverts would be installed under the roads to maintain wetland hydrology.

No wetland impacts are anticipated for construction of permanent access roads.

8.2.5.4 How many wetlands would be impacted and/or crossed by fence installation and footings.

Vista Sands Solar understands that the WDNR has maintained that, in wetlands, fences with pile driven fenceposts (no backfill) that can be installed without land disturbance would not constitute regulated wetland fill. Vista Sands Solar has designed fences in farmed and wet meadow wetlands where avoidance was impractical. Vista Sands Solar also understands that rutting or soil mixture from construction traffic in farmed and wet meadow wetlands is a regulated impact. Where necessary, Vista Sands Solar will install fences in farmed and wet

meadow wetlands either during frozen ground conditions or with the use of construction matting. For the purposes of this application, Vista Sands Solar assumes all farmed and wet meadow wetlands that will have fenceposts driven in them will have construction matting placed within in them to facilitate vehicle access and avoid wetland impacts.

Twenty-four wetlands in the Proposed Arrays and twelve wetlands in the Alternative Arrays will have construction matting placed within them to facilitate vehicle access during construction. No wetland impacts are anticipated from construction of fences during the construction of the Project.

8.2.6 Describe if wetlands would be disturbed for site preparation activities (e.g. grading, leveling, etc.) in the array areas, and for the installation of the arrays and associated supports.

No wetland impacts are anticipated for construction-preparation activities.

8.2.7 Describe if wetlands will be disturbed for site preparation activities:

No wetland impacts are anticipated for site-preparation activities.

8.2.7.1 Grading, leveling, etc. in the array areas, and for the installation of the arrays and associated supports.

No wetland impacts are anticipated for the installation of arrays or associated supports.

8.2.7.2 If vegetation removal will be conducted in wetlands, describe how woody debris (i.e. brush piles, wood chips, etc.) would be handled and disposed of when clearing shrub and forested wetlands.

No vegetation removal/tree clearing is anticipated within wetlands for the Project.

8.2.8 Describe the sequencing of matting placement in wetlands and the anticipated duration of matting placement in wetlands. For matting placed in any wetland for longer than 60 consecutive days during the growing season, prepare and submit a wetland matting restoration plan with the application filing.

Construction matting will be delivered by pulp trucks with attached cranes. The attached cranes will be used to put construction matting in place and then remove the construction matting. Construction matting in wetlands are not anticipated to remain in any wetland for longer than 60 consecutive days during the growing season.

8.2.9 For wetlands that would be open-cut trenched, provide the following:

8.2.9.1 Provide details on the total disturbance area in wetland, including how total wetland disturbance was calculated. Include the size of the trench (length, width, and depth), where stockpiled soils would be placed (i.e. in upland, in wetlands on construction mats, etc.), and where equipment would operate.

No wetland impacts are anticipated from open-cut trenching for construction of the Project.

8.2.9.2 Details on the proposed trench dewatering, including how discharge would be treated and where the dewatering structure would be located.

No wetland impacts are anticipated from open-cut trenching for construction of the Project. Dewatering activities may be necessary during the excavation of directional drill bore pits and trenching. Water pumped during these activities will be discharged into upland vegetated areas or into a constructed dewatering basin. The contractor awarded the construction contract will comply with the standards and methodologies as presented in the WDNR Technical Standard 1061.

8.2.9.3 Duration and timing of the work in wetland.

No wetland impacts are anticipated from open-cut trenching for construction of the Project.

8.2.9.4 How the wetland would be restored to pre-existing conditions.

No wetland impacts are anticipated from open-cut trenching for construction of the Project.

8.2.10 For wetlands that would be directionally bored, provide the following:

8.2.10.1 How bored wetlands and associated bore pits would be accessed.

Access will be attained from upland areas (upland agricultural fields) within the Project Area utilizing existing public roads. Proper sediment, erosion control, and invasive species control BMPs will be installed/utilized adjacent to the bore pit prior to construction activities beginning to prevent sediment from leaving the workspace and entering any nearby wetlands.

8.2.10.2 The location and size of any temporary staging and equipment storage.

HDD boring equipment will be stored either in the Project laydown yard or near the location of the proposed boring. If the boring cannot be completed in one day, overnight storage of equipment will be in upland agricultural areas within 50 feet of the bore pits. Appropriate BMPs and contaminant management (oil absorbent booms, etc.) materials will be put in place prior to leaving the boring area for the day.

8.2.10.3 The location and size of bore pits.

A typical bore pit is approximately 10 feet by 20 feet by 6 feet. Approximately 1,200 cubic feet (45 cubic yards) of material may be excavated for each pit. The boring of wetlands will require two bore pits, one on each side of the wetland approximately 50 to 100 feet away from the wetland boundaries. The bore pits will not be located within any field delineated wetlands.

All materials removed from bore pits will be stored adjacent to the boring with appropriate BMPs installed. Once the boring is completed, the excavated material will be reused as backfill of the pit. Once a final grade is reached, the area will be seeded with a cover crop and permanent seed mixture with appropriate erosion control devices installed (silt fence, erosion matting, etc.), if necessary.

8.2.10.4 Provide a contingency plan for bore refusal and a plan for the containment and clean-up of any inadvertent releases of drilling fluid (e.g. a frac-out).

Contingency plans for bore refusal and frac-outs will be developed by the construction contractor prior to construction start by the HDD contractor. The plans are expected to include the following:

Prior to Construction:

- The drilling entry and exit areas, surrounding work areas, and the drilling route (to the extent accessible) will be surveyed to ensure there are no protected resources on the surface;
- Any sensitive cultural or environmental resources will be flagged for avoidance or construction limits will be clearly marked;
- Barriers will be placed between the bore site and any nearby sensitive resources;
- Field personnel will be briefed on monitoring and timely reporting of frac-outs; and
- Necessary response equipment will be maintained on-site or at a readily accessible location.

Contingency Response:

- Once a frac-out is identified, all drilling activities will be stopped and the location and extent of the frac-out is determined;
- All necessary notifications will be made to the proper authorities;
- Appropriate mitigations will be taken based on the nature of the frac-out; and
- After the frac-out is stabilized and any required removal is complete, post clean up conditions will be documented and reported as required.

While not anticipated, if there is general bore refusal, the proposed HDD alignment will be modified using the same general location with drilling reattempted. If the HDD bore cannot be advanced and abandonment is required, the bore hole will be grouted with an approved material and backfilled.

8.2.11 Describe how fence installation would occur in wetlands, including the footing types (e.g. direct imbed, concrete, etc.), any associated wetland impact such as vegetation clearing, operation of equipment, etc.

Vista Sands Solar understands that driving fenceposts into farmed and wet meadow wetlands does not constitute a regulated wetland impact and has designed fences in farmed and wet meadow wetlands where avoidance was impractical. Vista Sands Solar also understands that rutting or soil mixture from construction traffic in farmed and wet meadow wetlands is a regulated impact. Therefore, Vista Sands Solar will install fences in farmed and wet meadow wetlands either during frozen ground conditions or with the use of construction matting. For the purposes of this application, Vista Sands Solar assumes all farmed and wet meadow wetlands that will have fenceposts driven in them will have construction matting placed within in them to facilitate vehicle access and avoid wetland impacts.

Twenty-four wetlands in the Proposed Arrays and 12 wetlands in the Alternative Arrays will have construction matting placed within them to facilitate vehicle access during construction. Construction matting will be delivered via the Project Transmission Line ROWs by pulp trucks with attached cranes. The attached cranes will be used to put construction matting in place. Construction crews will use the construction matting as access to drive fence posts (direct imbed) into the ground and then attach the fence material to the fence posts. Pulp trucks with cranes

will then remove the construction matting. Construction matting in wetlands are not anticipated to remain in any wetland for longer than 60 consecutive days during the growing season.

No wetland impacts are anticipated from construction of fences during the construction of the Project.

8.2.12 For wetland vegetation that would be cleared or cut, provide the following:

No vegetation removal/tree clearing is anticipated within wetlands for the Project.

8.2.12.1 The justification for why wetland trees and shrubs are proposed to be cleared, and what construction activity the clearing is associated with.

No vegetation removal/tree clearing is anticipated within wetlands for the Project. The clearing of trees and shrubs will be required to mitigate for panel shading. This clearing will occur within upland areas only.

8.2.12.2 The timing and duration of vegetation removal.

No vegetation removal/tree clearing is anticipated within wetlands for the Project.

8.2.12.3 Describe the type of equipment that would be used, and if the vegetation removal would result in soil disturbance, including rutting and soil mixing.

No vegetation removal/tree clearing is anticipated within wetlands for the Project.

8.2.12.4 The type of wetland and type of vegetation to be cleared.

No vegetation removal/tree clearing is anticipated within wetlands for the Project.

8.2.12.5 If tree and shrubs removed would be allowed to regrow or be replanted, or if cleared areas would be kept free of trees and shrubs long-term.

No vegetation removal/tree clearing is anticipated within wetlands for the Project.

8.2.12.6 Indicate the plan for removal and disposal of brush and wood chips.

No vegetation removal/tree clearing is anticipated within wetlands for the Project. Therefore, no brush or wood chips will be generated.

8.2.13 Indicate if any permanent wetland fill is proposed, such as for substation placement, permanent roads, fence or array footings, pole locations, etc. and provide the amount of permanent wetland fill.

No permanent wetland fill is proposed for the construction of the Project from solar generation assets such as substation placement, permanent roads, fence or array footings, pole locations, etc. Permanent wetland fill related to placement of Project Transmission Line is detailed in Section 8.2.5.3. of the Transmission Line CPCN application.

8.2.14 Provide the methods to be used for avoiding, minimizing, and mitigation construction impacts in and near wetlands. This discussion should include, but not limited to, avoiding wetlands, installation methods (i.e. directional bore versus open-cut trenching, soil segregation during trenching, etc.), equipment crossing methods (i.e. use of construction matting, frozen ground conditions, etc.), sediment

and erosion controls, invasive species protocols for equipment, etc. Additional guidance to prepare this discussion can be found here: https://wiWDNR.widen.net/s/fxdd8pmqgg/paasupp3utility.

No permanent wetland impacts are anticipated for the construction of the generation portion of the Project. For construction of solar arrays in farmed wetlands, Vista Sands Solar will use construction matting to avoid temporary impacts. Proper erosion control BMPs will be installed around field delineated wetlands to prevent sediment from reaching any nearby wetlands and/or waterways.

8.2.15 Indicate if an environmental monitor would be employed during project construction and restoration activities. If so, describe the monitors roles and responsibilities, frequency of visits, etc.

Vista Sands Solar will utilize an internal environmental Construction Compliance Program (CCP) that ensures compliance with all applicable environmental permits, plans, and regulations. An environmental monitor will conduct ongoing on-site inspections during construction to ensure all employees are environmentally aware and ensuring compliance throughout construction.

The environmental monitor will be responsible for implementing the CCP, which will consist of environmental training, regularly scheduled inspections, and tools such as permit matrices and inspection summary logs to ensure all environmental laws and conditions are met. Under the CCP, the environmental monitor will provide environmental training to all construction managers, foreman, and operators prior to construction.

Vista Sands Solar and the environmental monitor will ensure any employee who works at the Project is trained in accordance with the CCP and applicable environmental permitting. During construction, the environmental monitor will attend weekly meetings at the site and provide feedback to construction crews on issued previously identified.

8.2.16 Describe how all wetlands within the project area would be restored. This includes wetlands that would be encompassed within the arrays even if not directly impacted by project construction. This discussion should include details on the seeding plan, maintenance and monitoring, restoring elevations and soil profiles, restoring wetland hydrology, etc.

All field-verified wetlands will be avoided on this Project unless use of construction matting is required for pile or fence installation. Wetlands will be marked in the field and have silt fence installed around their perimeter to prevent disturbance.

After site grading is complete, a temporary cover crop will be planted to prevent soil erosion during construction. Upon completion of construction all disturbed areas will be seeded with a perennial seed mix that complies with Wis. Admin. Code ch. ATCP 20 regarding noxious weed seed content and labeling. Permanent seeding will comply with WDNR Conservation Practice Standard 1059 Seeding for Construction Site Erosion Control. If applied, mulch will comply with the WDNR Conservation Practice Standard 1058 Mulching for Construction Sites.

Revegetation of the site, including wetland specific seed mixes, is described further in Section 5.5 and included in the Vegetation Management Plan in Appendix I.

8.3 Mapping Wetland and Waterway Locations, Impacts, and Crossings

Provide the following map sets, as detailed below, for each proposed facility. Each map set should include an overview or index page that includes page extents for the corresponding smaller-scale map pages within the remainder of the map set. The smaller-scale map pages, to show the project and resources in greater detail, should include page numbers to reference to the overview page and have consistent scales throughout the smaller-scale pages.

Required maps depicting the information requested in Section 8.3.1 through 8.3.3 are included in Appendix A.

8.3.4 Topographic map set

8.3.5 Aerial imagery map set

8.3.6 A map showing which method(s) were used to identify wetland presence and boundaries within the project area (i.e. wetland delineation, wetland determination, review of desktop resources only).

9 WDNR Guidance Information regarding Erosion Control and Storm Water Management Plans (not PSC requirements)

Prior to construction, a Project-specific ECSWMP will be developed for the Project utilizing the Project Hydrologic & Hydraulic Analysis Report (Appendix N). The plan will include procedures for materials management and dewatering protocols that will be adhered to during Project construction. The ECSWMP will be prepared after the CPCN is granted by the PSCW and once Vista Sands Solar provides to the WDNR Office of Energy the 90% civil/site work engineering/design and contractor bidding documentation. Once finalized, the ECSWMP and Notice of Intent (NOI) will be submitted to the WDNR.

9.1 Erosion Control and Stormwater Management Plans

Once the Project is authorized, Vista Sands Solar will submit a Water Resource Application for Project Permits to the WDNR in accordance with Wis. Admin. Code Ch. NR 216. The application will include a site-specific ECSWMP. The plan will include technical drawings and descriptions of the Erosion Control BMPs that will be followed in compliance with WDNR technical standards. The ECSWMP will address soil and slope stabilization; seeding, mulching and establishment of vegetation; matting, tracking pads, silt fences, and stockpile protection; channel protection and other associated strategies to minimize site erosion.

Construction materials for the Project will be handled in accordance with the methodology outlined within the Materials Management Plan and the ECSWMP. The Materials Management Plan will address construction materials in terms of haul routes, stockpile areas, equipment staging areas, contaminant testing, quantities of materials, and disposal of materials not required for construction and not reserved for decommissioning.

Dewatering activities are not expected on this Project but may be necessary during the excavation of directional drill bore pits and trenching. Water pumped during these activities will be discharged into upland vegetated areas. The contractor awarded the construction contract will comply with the standards and methodologies as presented in the WDNR Technical Standard 1061. The Dewatering Plan will be prepared upon Project approval and will address the need for dewatering, minimization of downstream impacts, analysis of possible system overload scenarios, water discharge locations, back-up system details, high flow plan, and procedures for containment and handling of contaminated water or other materials if encountered.