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*Special Use Permit Application to  
White River Township*

*Appendix D  
Summary of Agency Consultations*

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**Lakeside Solar, LLC  
White River Township, Muskegon County, Michigan**



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Bloomington, MN 55437**

**September 2025**

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## ACRONYMS AND ABBREVIATIONS

Dkeys	determination keys
EGLE	Michigan Department of Environmental, Great Lakes, and Energy
ESA	Endangered Species Act
IPaC	Information for Planning and Consultation
Lakeside	Lakeside Solar, LLC
MDARD	Michigan Department of Agriculture and Rural Development
MDOT	Michigan Department of Transportation
MNFI	Michigan Natural Features Inventory
NPDES	National Pollutant Discharge Elimination System
Project	Lakeside Solar Project
RUMA	Road Use Maintenance Agreement
SESC	Soil Erosion and Sedimentation Control
SHPO	State Historic Preservation Office
Tetra Tech	Tetra Tech, Inc.
THPO	Tribal Historic Preservation Office
UDP	Unanticipated Discovery Plan
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service

## 1 INTRODUCTION

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Appendix D provides a summary of federal, state county and township agency consultations undertaken by Lakeside Solar, LLC (Lakeside) on behalf of the Lakeside Solar Project (Project). This Appendix includes a brief narrative of the consultation discussions, key outcomes, necessary permits, identified next steps, estimated timelines, and justification of any consultations deemed not necessary (if applicable) as well as a summary table of consultations.

Lakeside completed desktop reviews using agency on-line consultation tools and publicly available resource information to facilitate the permit and or approval process for the Project. Table 1.0-1 provides an overview of consultations with federal and state agencies that have been conducted to date. Table 1.0-1 also summarizes the date of the consultations, potential permits/approvals required, applicability and status. Detailed descriptions of the consultations are provided in Section 2.0.

<b>Table 1.0-1 Potential Permits and Approvals</b>				
<b>Responsible Agency</b>	<b>Dates of Consultation or Application</b>	<b>Permit/Approval</b>	<b>Applicability</b>	<b>Status</b>
<b>Federal</b>				
U.S. Army Corps of Engineers (USACE), Detroit District	Not anticipated	Section 404 Permit for wetland impacts	The State of Michigan has assumed Clean Water Act Section 404 regulatory authority for inland waterways and wetlands.	No coordination with the USACE is currently anticipated.
U.S. Fish and Wildlife Service (USFWS) – Michigan Ecological Field Office	Initiated online review through Information for Planning and Consultation (IPaC) tool in 2022	Review of Project from USFWS to determine no effect upon threatened and/ or endangered species	The potential for suitable threatened and endangered species habitat is present in the Land Control Area.	To be completed prior to construction

<b>Table 1.0-1 Potential Permits and Approvals</b>				
<b>Responsible Agency</b>	<b>Dates of Consultation or Application</b>	<b>Permit/Approval</b>	<b>Applicability</b>	<b>Status</b>
Federal Aviation Administration	4/10/2023 determination; expires 4/8/2026	Federal Aviation Administration Notice Criteria Tool to determine need to complete Form 7460-1, Notice of Proposed Construction	Notice and approval are required for structures over 200 feet above ground level, structures near airports, or siting within line of sight of radar of an air defense facility.	Further coordination with the Federal Aviation Administration is not required as the Project does not exceed the Notice Criteria.
<b>State</b>				
Michigan Department of Environmental, Great Lakes, and Energy (EGLE)	July 23, 2025 pre-application meeting	Part 301 Inland Lakes and Streams	An Inland Lakes and Streams Permit (Part 301) is required if the Project will place fill, remove soil, or otherwise alter regulated streams or inland lakes.	Lakeside will apply for this permit prior to the start of construction if impacts to streams are unavoidable.
	July 23, 2025 pre-application meeting	Part 303 Wetlands	A Wetlands Protection Permit (Part 303) is required if the Project will place fill, remove soil, or otherwise alter regulated wetlands.	Lakeside will apply for this permit prior to the start of construction if impacts to streams are unavoidable.
	Coordination will be initiated following receipt of the Part 91 Soil Erosion and Sediment Control Permit.	National Pollutant Discharge Elimination System (NPDES) Permit	A Notice of Coverage for a NPDES Construction Stormwater Permit is required if the Project disturbs greater than five acres.	Lakeside will apply for this permit upon receipt of the Part 91 Soil Erosion and Sediment Control permit from the Muskegon County Department of Public Works.

<b>Table 1.0-1 Potential Permits and Approvals</b>				
<b>Responsible Agency</b>	<b>Dates of Consultation or Application</b>	<b>Permit/Approval</b>	<b>Applicability</b>	<b>Status</b>
	Not anticipated	Part 22/31 Groundwater Discharge	A Notice of Coverage or Individual NPDES permit is required if the project will discharge waste or contaminated water to groundwater.	Lakeside anticipates this permit will not be required.
	Initiate following final design if encroachment within 100-year floodplain will occur	Part 31 Floodplain	A Floodplain Permit (Part 31) is required if the Project will place fill, remove soil, or otherwise alter regulated floodplains.	Lakeside will apply for this permit prior to the start of construction.
	Not anticipated	Permit to Install - Air Quality Permit	A Permit to Install is required if the Project produces a potential source of air pollution.	Lakeside anticipates this permit will not be required.
Michigan Department of Transportation (MDOT)	Following final site plans and route determination	Oversize/Overweight Transport Permit	An Oversize/Overweight Transport Permit will be required if the transportation of Project components exceeds MDOT's Maximum Legal Truck Loadings and Dimensions	Lakeside will apply for this permit prior to the start of construction and equipment delivery.
Michigan State Historic Preservation Office (SHPO)	Survey completed in June 2020 and May/June 2022; initial contact in January 2023; updated submittal July 2025	Consultation to identify known cultural resource locations.	Provide approval of Phase 1 field inventory methods and findings as per the cultural resources reports.	SHPO comments pending review of cultural resource reports by SHPO.

<b>Table 1.0-1 Potential Permits and Approvals</b>				
<b>Responsible Agency</b>	<b>Dates of Consultation or Application</b>	<b>Permit/Approval</b>	<b>Applicability</b>	<b>Status</b>
Tribal Historic Preservation Offices (THPOs)	Anticipated in December 2025	Consultation with interested Native American tribes identifies locations of sites with tribal significance.	Lakeside intends to engage in consultation with THPOs as part of the site design process.	Lakeside will initiate consultation with interested tribes, if necessary.
Michigan Natural Features Inventory (MNFI)	August 2022 and May 2025	Information Request	The Information Request provides information on known occurrences of species protected by Part 365 of the Natural Resources and Environment Protection Act, PA 451 of 1994	Continue coordination with MNFI. Complete prior to construction.
Michigan Department of Agriculture and Rural Development	June 2025	Farmland Development Rights Program	Protect farmland and open space through agreements that restrict development	Lakeside will comply with <i>Policy for Allowing Commercial Solar Panel Development on PA 116 Lands</i>
<b>County/Local</b>				
Muskegon County Department of Public Works	Application will be prepared prior to starting construction	Part 91 Soil Erosion and Sedimentation Control Permit (SESC)	A Part 91 SESC Permit is required if the Project will disturb greater than one acre.	Lakeside will apply for this permit prior to the start of construction.
Muskegon County Water Resources Commissioner's Office	Initiated July 2022 – 2025 (on-going) through final design	Drain Use/Modification Permit	A Drain Use/Modification Permit is required if the Project will cross, encroach upon, or modify county regulated drains.	Lakeside will apply for this permit prior to the start of construction.

**Table 1.0-1  
 Potential Permits and Approvals**

<b>Responsible Agency</b>	<b>Dates of Consultation or Application</b>	<b>Permit/Approval</b>	<b>Applicability</b>	<b>Status</b>
Muskegon County Road Commission	Initiate 5/1/2025 and follow up 7/1/2025; meeting pending	Driveway Permit and Road Use Maintenance Agreement	Driveway Permit and Road Use Maintenance Agreement are required if the Project will install new road access points.	Lakeside will apply for this permit prior to the start of construction.
	Following final design and determination of access routes	Transportation / Oversize/Overweight Permit	A Transportation - Oversize/Overweight Permit will be required if the transportation of Project components exceeds Muskegon County Road Commission weight and size limits for those times of the year outside of Seasonal Weight Restrictions.	Lakeside will apply for this permit prior to the start of construction and prior to equipment delivery.

## 2 AGENCY CONSULTATIONS

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### 2.1 FEDERAL CONSULTATIONS

#### 2.1.1 U.S. Fish and Wildlife Service

As part of the environmental due diligence for the Project, an IPaC review was conducted by Tetra Tech Inc. (Tetra Tech) in November 2022 and updated June 24, 2025 to identify federally protected species and critical habitats potentially present in the Land Control Area. The current IPaC results are contained in Appendix C of the Biological Resources Review (Tetra Tech 2025) (see Attachment A). Designated critical habitat is not present in the Land Control Area. The IPaC report identified the following species as having potential to occur within the Project vicinity:

- Karner blue butterfly (*Plebejus samuelis*) – Endangered
- Indiana bat (*Myotis sodalis*) – Endangered
- Eastern massasauga (*Sistrurus catenatus*) – Threatened
- Monarch butterfly (*Danaus plexippus*) – Candidate Species
- Piping plover (*Charadrius melodus*) – Endangered
- Red knot (*Calidris canutus rufa*) – Threatened
- Pitcher’s thistle (*Cirsium pitcheri*) - Threatened

Note that the tricolored bat, as a proposed listed species, is not protected by the take prohibitions of Section 9 of the Endangered Species Act (ESA) until the rule is finalized. An updated review of IPaC in June 2025 indicated that the tricolored bat and northern long-eared bat no longer appear; therefore, the species do not have to be considered in the effects analysis. Additionally, the monarch butterfly as a candidate species does not receive statutory protection under the ESA.

Lakeside understands that per the July 15, 2025, Department of the Interior memo titled, “Departmental Review Procedures for Decisions, Actions, Consultations, and other Undertakings Related to Wind and Solar Energy Facilities,” solar and wind projects are currently not eligible to utilize the IPaC website for official Project review. Lakeside will maintain updated IPaC results throughout development and again prior to the start of construction to ensure the species list remains current. Currently, solar projects are outside the scope of the determination keys (Dkeys) found in IPaC that were created as a tool to streamline the effects analysis process, finalize consultation under certain circumstances, and provide necessary information to the USFWS in the event that technical assistance is needed and/or consultation with the agency is required. As such, Lakeside will contact the USFWS Michigan Ecological Services Field Office for technical assistance as needed to fully analyze Project impacts and identify any necessary avoidance and minimization measures to ensure Project activities will not result in adverse impacts to federally listed species. If additional information for certain species is needed to complete the effects analysis, surveys may be conducted to determine the presence and extent of suitable habitat, and/or the presence or absence of individuals. Lakeside will coordinate with the USFWS and EGLE as

needed to ensure Project activities will not result in unauthorized take of federally listed species, and to develop conditions for threatened and endangered species for inclusion in permits.

## 2.2 State Consultations

### 2.2.1 Threatened and Endangered Species Review – Information Request (Part 365)

An Information Request submitted to the Michigan Natural Features Inventory (MNFI) resulted in a response on August 23, 2022. An updated Information Request was submitted, and a response was received on May 14, 2025 (see Attachment B). The Information Request data is masked to the section level. However, Lakeside reviewed the Information Request and identified state-protected species with records that fall in sections within 1 mile of the Project Land Control Area are identified below.

Scientific Name	Common Name	State Status
<i>Cirsium pitcheri</i>	Pitcher’s Thistle	Threatened
<i>Triphora trianthophora</i>	Nodding Pogonia	Threatened
<i>Terrapene carolina carolina</i>	Eastern Box Turtle	Threatened

Four natural communities were also listed in the Information Request including Floodplain Forest, Great Lakes Marsh, Mesic Northern Forest, and Open Dunes.

A Rare Species Review request was submitted to MNFI for the Land Control Area on September 2, 2025. Consultation with Michigan Department of Natural Resources and MNFI regarding listed species will continue as part of Michigan Department of Environment, Great Lakes, and Energy permit reviews.

### 2.2.2 Michigan State Historic Preservation Office

Cultural resources surveys were conducted for the Project by Atwell, LLC in 2020 and Tetra Tech in 2022. The resulting *Voluntary Phase I Cultural Resources Survey* dated October 22, 2020 and *Cultural Resources Assessment and Pedestrian Survey* dated January 27, 2023 reports indicate that cultural resource site 20MU138 has been destroyed by infrastructure development unrelated to the proposed Project and that cultural resource site 20MU0049 was not relocated within the surveyed Land Control Area. The status of 20MU0049 was discussed via email with the Michigan SHPO (Sarah Surface-Evans) on January 17, 2023 (see Attachment C). One new cultural resource site (20MU167) was discovered as a result of the surveys and is recommended not eligible for listing in the National Register of Historic Places. The *Cultural Resources Assessment and Pedestrian Survey* was submitted to the SHPO in 2023. The *Voluntary Phase I Cultural Resources Survey* and the *Cultural Resources Assessment and Pedestrian Survey* are available upon request and have not been included as part of the SUP application submission due to the sensitivity of the resources. Updated surveys were completed in June 2025 by Tetra Tech and an updated cultural resources report was submitted to the Michigan SHPO for review on August 1, 2025 (see Attachment C).

Additional consultation with SHPO will occur following review of their findings to ensure coordination on cultural resource protections prior to construction.

The Michigan SHPO (Sarah Surface-Evans) provided guidance regarding the preparation of the Unanticipated Discovery Plan (UDP) on January 27, 2023 (see Attachment C). This plan includes immediate work stoppage, notification procedures, and coordination with SHPO and tribal representatives as necessary. The Project will implement the UDP developed to address any unexpected discoveries of cultural materials during construction. An updated UDP is being prepared that will include cultural resources and will be provided upon completion.

### **2.2.3 Tribal Historic Preservation Offices**

Additionally, Lakeside will contact the 12 federally recognized tribes through the appropriate Tribal Historic Preservation Offices within Michigan to determine their interest in the proposed Project. The following Native American communities will be contacted as part of the agency coordination efforts.

- Bay Mills Indian Community
- Grand Traverse Band of Ottawa & Chippewa Indians
- Hannahville Indian Community
- Keweenaw Bay Indian Community of the Lake Superior Band of Chippewa Indians
- Lac Vieux Desert Band of Lake Superior Chippewa Indians
- Little River Band of Ottawa Indians
- Little Traverse Bay Bands of Odawa Indians
- Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians (Gun Lake Tribe)
- Nottawaseppi Huron Band of the Potawatomi
- Pokagon Band of Potawatomi Indians
- Saginaw Chippewa Indian Tribe of Michigan
- Sault Ste. Marie Tribe of Chippewa Indians

### **2.2.4 Michigan Department of Great Lakes, Environment, and Energy**

On-site delineations were conducted within the Land Control Area in 2019 by Atwell, LLC. Tetra Tech updated and verified all delineated features in 2022, with a more recent delineation update and verification being conducted in October 2024. An on-site wetland and waterway delineation was conducted between October 16 and 26, 2024 to identify and characterize wetlands and streams per USACE methodology and pursuant to Part 301 and Part 303 of NREPA. The delineation covered the entirety of the Land Control Area during the time of the investigation.

A Pre-application Meeting between Lakeside, EGLE, and Tetra Tech occurred on July 23, 2025. The Pre-application Meeting with EGLE was conducted to review proposed projects that may

impact water resources and determine the need for permits. Following the meeting, a summary letter was provided by EGLE to Lakeside on August 7, 2025, detailing the discussed items, recommended actions, and guidance on regulatory requirements, necessary permits, and potential environmental concerns (see Attachment D). This letter, valid for two years from issuance, serves as a reference for the applicant before submitting a formal permit application to the EGLE Water Resources Division.

### **2.2.5 Michigan Department of Transportation**

The Project anticipates the delivery of large components during the construction phase, including the main power transformer and other electrical equipment. Haul routes along state highways will be identified following final design and prior to equipment procurement and delivery. If transportation routes include any state highways under MDOT jurisdiction, an Oversize/Overweight Permit will be obtained, if necessary, prior to delivery to ensure compliance with MDOT regulations and safety standards.

The project team will coordinate with MDOT's Permit Gateway System to submit the required Oversize/Overweight Permit application, including load dimensions, axle weights, travel timing, and escort requirements, if applicable. All deliveries will comply with MDOT restrictions related to pavement preservation, bridge load limits, seasonal weight restrictions, and traffic safety.

No permit has been submitted at this time, as the delivery timeline and route specifics are still under development. Permit acquisition is anticipated during the detailed construction planning phase.

### **2.2.6 Michigan Department of Agriculture and Rural Development**

The Farmland and Open Space Preservation Program (Public Act 116 of 1974, as amended) is administered by the Michigan Department of Agriculture and Rural Development (MDARD) to preserve agricultural and open space lands through voluntary agreements that restrict non-agricultural development. In exchange, landowners receive income tax incentives and exemption from certain special assessments for utilities and non-farm infrastructure projects. The program's mission is to support long-term agricultural productivity and prevent the conversion of prime farmland to other uses.

The Project proposes utilizing parcels currently enrolled in the PA 116 program. Approximately nine parcels under consideration for development are subject to active PA 116 agreements. Development on these lands will proceed in accordance with MDARD's Policy for Allowing Commercial Solar Panel Development on PA 116 Lands. This policy outlines the conditions under which temporary non-agricultural uses, such as solar energy production, may be allowed while protecting the long-term viability of farmland.

Prior to construction, the Project, affected landowners, and MDARD will engage in an administrative process to coordinate solar releases on enrolled parcels. Requirements under this policy include, but are not limited to, pollinator-friendly ground cover, financial assurance for decommissioning, maintenance of any drainage features, and a return to agricultural use upon project decommissioning.

As part of 2025 due diligence activities, Lakeside coordinated via email directly with MDARD staff (Forest “Chip” Kraus and Jarrod Thelen) to verify the status of each PA 116 agreement. These communications confirmed that several previously identified agreements (such as Agreement 61-21963-123123 and 61-8410-123104) have expired, while others (e.g., 61-28257-123135 and 61-28258-123135) remain active through 2035. Agreement 61-45061B-123124 was found to have been incorrectly listed as active and is now marked expired as of 2004. Transfer requests and ownership clarifications were also submitted to MDARD to support accurate recordkeeping ahead of amendment requests. All active PA 116 agreements affected by the Project will undergo the formal MDARD amendment process following permit approval, as required.

## **2.3 County and local consultations**

### **2.3.1 Muskegon County Consultations**

#### **2.3.1.1 Consultation with Muskegon County Water Resources Commission**

On February 26, 2025, Lakeside sent an email to the Muskegon County Water Commissioner (Stephanie Barrett) and the Deputy Water Commissioner (Dallas Goldberg) at the Muskegon County Drain Commission to introduce Lakeside and the Project, notify them about the upcoming open house, and request an in person meeting in the future. On April 24, 2025, Lakeside arranged a virtual meeting with the Commission on May 1, 2025. On May 9, 2025, the Commission sent Lakeside spatial wetland information of two established wetlands from the Pierson Drain Swamp project. Muskegon County Water Resources was notified via email on June 5, 2025, of National Grid Renewables name change to Geronimo Power, LLC. Lakeside sent site plans to the Muskegon County Water Commissioner and Deputy Water Commissioner on June 26, 2025 and were resent on July 1, 2025. A future meeting to discuss the plans is pending.

The May 1, 2025 meeting included Lakeside (Amber Miller, Sophia Gilleland, Kendra Harrington, Vannessa Spencer and Amanuel Haile and the Muskegon County Drain Commission (Commissioner Stephanie Barrett and Deputy Commissioner Dallas Goldberg). During the May 1, 2025, meeting, the need for the following permits were discussed:

- Soil Erosion and Sedimentation Control (SESC) Permit (Muskegon County)
- Potential Drainage District permits for any work near or crossing regulated drains.

The discussion included the following items.

- The County highlighted erosion and land conversion as primary concerns, especially given past SESC compliance issues with similar projects. Lakeside committed to implementing robust erosion control best management practices and limiting grading to the extent practicable.
- Pierson Swamp Drain was identified as a key resource, with variable easement widths (50 to 100 plus feet). No permanent infrastructure, including fencing, will be placed within the drain easement.

- No drain or utility crossings (e.g., underground utilities, bores, or overhead lines) are permitted within the easement without prior approval and permitting from the County Drain Office.
- The County provided spatial data for two manmade wetland basins that are not part of the Pierson Swamp Drain system but are relevant for local hydrology considerations.
- Discussion included methods for pre-seeding cover crops (e.g., clover, rye, or winter wheat) depending on seasonal construction timelines.
- County staff emphasized that there is no routine drain maintenance schedule, so planning must accommodate ongoing access and potential future system work.
- Lakeside reaffirmed its intent to coordinate closely with the County Drain Office, including site-specific hydrology and drainage modeling based on updated drain data, and incorporate County feedback into stormwater and SESC planning.

Several items are planned as the site design develops. These items include:

- Maintain communication with the County Water Resources Commission,
- Initiate formal SESC permitting following design finalization,
- Implement a vegetation management plan to restore land to pre-disturbance vegetative condition,
- Secure approvals for any proposed crossings within the Pierson Swamp Drain easement, and
- Continue collaboration with landowners to map drain tile infrastructure and minimize construction impacts.

On May 9, 2025, the Commission sent Lakeside spatial wetland information of two established wetlands from the Pierson Drain Swamp project. Muskegon County Water Resources was notified via email on June 5, 2025, of National Grid Renewables name change to Geronimo Power, LLC. Lakeside sent site plans to the Muskegon County Water Commissioner and Deputy Water Commissioner on June 26, 2025, but were resent on July 1, 2025. Lakeside requested a future meeting to discuss the proposed Project and followed up again with the request for a meeting on August 7, 2025. The meeting was scheduled for August 22, 2025.

A summary of the August 22, 2025, meeting between Lakeside and Commissioner Stephanie Barrett and Deputy Commissioner Dallas Goldberg is described below.

- The Commission requested that sections of security fence crossing county drains be relocated to avoid crossing county drains. A drain crossing permit with the Commission must be filed for each proposed unavoidable crossing. Guidance will be provided on borings.
- The Commission stated that the site design may not block access and must allow sufficient space for maintenance activities to be performed. The Commissioners prefer that drains remain freely accessible for maintenance purposes. The Commissioners requested that access to every portion of the drain system from public rights-of-ways will not be affected

by proposed security fencing or other project components so maintenance activities can occur regularly.

- The Commission requires a member of their staff onsite when cabling is installed.
- The soil erosion and sedimentation control plan must be filed through and approved by Muskegon County Department of Public Works.
- It was discussed that Project mobilization will commence with BMPs for stormwater and erosion control, then move to constructing entrances/access roads and grading as needed, concurrently with delivery of project components at the primary laydown yard.
- Muskegon County Road Commission will approve right-of-way permits submitted via online portal and then dictate traffic control measures if needed.

### **2.3.1.2 Muskegon County Road Commission**

Muskegon County Road Commission indicated the need for Driveway (right-of-way access) Permit and Transportation Permit (haul route) approvals for construction traffic access and any oversize/overweight vehicles. Lakeside will document the haul routes and access locations for review by the Muskegon County Road Commission following final design. Driveway Permits and Transportation Permit approvals will be obtained prior to construction and equipment or component delivery.

The Muskegon County Road Commission indicated on May 8, 2025, via email to Lakeside that a Road Use Maintenance Agreement (RUMA) would likely be needed. A RUMA is an agreement between a project developer such as Lakeside and a road authority such as Muskegon County Road Commission that typically outlines:

- Allowed routes for construction traffic
- Maintenance responsibilities
- Repairs to roads damaged during construction
- Oversize/overweight transport restrictions

The Commission also requested a sample RUMA agreement, which Lakeside provided on July 1, 2025. The site plans were provided to Muskegon County Road Commission on July 1, 2025, via email.

# **ATTACHMENT A**

## **Biological Resources Review**

# Biological Resources Review

**Lakeside Solar  
White River Township  
Muskegon County, Michigan**



**August 13, 2025**

## PRESENTED TO

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## PRESENTED BY

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## MANAGEMENT SUMMARY

This report presents the findings of a biological resources review conducted for the proposed Lakeside Solar project (the Project), located near the intersection of Lamos Road and Eilers Road, approximately 1.5 miles west-northwest of Montague in White River Township, Muskegon County, Michigan. At this location, Lakeside Solar, LLC proposes to develop a solar facility on 1,576.2 acres of privately held leased land (Project Area).

Tetra Tech's biological resources review includes an assessment of the likelihood of occurrence for endangered or threatened species known to be present in the Project Area or suspected to be present based on observed natural resource areas.

For known and suspected populations, Tetra Tech reviewed 1) publicly available information obtained from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation System (IPaC) to identify federally-listed endangered or threatened species, and critical habitat in the Project Area, and 2) requested a Michigan Natural Features Inventory Information Request for the Project Area and 5 mile buffer from the Michigan Natural Features Inventory (MNFI).

Species designated as special concern were not reviewed as species within this category as they are not protected by the Part 365 Endangered Species Protection section of the Natural Resources and Environmental Protection Act of Michigan (M.C.L.A 324.36505), with the exception of amphibians and reptiles. Some amphibians and reptiles (including reptile eggs) are legally protected under Michigan Department of Natural Resources (MDNR) Director's Order No. FO-224.25.

To facilitate the likelihood of occurrence assessment, Tetra Tech biologists conducted an initial site visit in August 2022 and revisited the site in June 2025 to confirm the presence and extent of the natural resource areas (i.e., vegetated areas that are not cultivated cropland or otherwise human manipulated vegetation). Of the 1,576.2 acres reviewed, approximately 290.1 acres (18.4 percent of the Project Area) were documented as natural resource areas consisting predominantly of grassland herbaceous (194.0 acres), trees (63.0 acres), and wetland/streams (31.6 acres).

The review of federally listed and protected species determined that species with high or moderate likelihood of occurrence prefer grassland, forest, and wetland habitats and include the bald eagle, eastern massasauga rattlesnake, Indiana bat, and Karner blue butterfly. The review of state protected species determined that species with a moderate likelihood of occurrence prefer grassland, forest, and wetland habitats and include the Blanchard's cricket frog, Blanding's turtle, cerulean warbler, eastern box turtle, Karner blue butterfly, mudpuppy, and Persius dusky wing. Tetra Tech recommends siting facilities in cultivated cropland or grassland-hay areas to avoid and minimize the potential impacts to identified species. If impacts to suitable habitat are unavoidable, additional recommendations are provided in Section 4.0.

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## APPENDICES

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### APPENDIX A. FIGURES

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### APPENDIX C. IPAC RESULTS

### APPENDIX D. MNFI INFORMATION REQUEST

## 1.0 – INTRODUCTION

Lakeside Solar, LLC proposes to develop the Lakeside Solar project (Project) on a 1,576.2-acre site (Project Area) located near the intersection of Lamos Road and Eilers Road, approximately 1.5 miles west-northwest of Montague in White River Township, Muskegon County, Michigan (Appendix A: Figure 1). Tetra Tech conducted a biological resource review for the Project to provide Lakeside Solar, LLC with a preliminary analysis of those potential existing biological resources within and in the vicinity of the Project Area that may preclude, constrain, or otherwise affect development of the Project.

## 2.0 – METHODS

Tetra Tech's biological resources review includes an assessment of the likelihood of occurrence for endangered or threatened species known to be present in the Project Area or suspected to be present based on observed natural resource areas. Tetra Tech characterizes the likelihood of occurrence as follows:

- **High** - species observed during site visit, highly suitable habitat is present in Project Area, or known populations exist in Project Area.
- **Moderate** - species range overlaps with Project Area and suitable habitat present in Project Area, or species known to occur in habitat similar to Project Area.
- **Low** - species range overlaps with Project Area and marginally suitable habitat in Project Area.

For known and suspected populations, Tetra Tech (1) reviewed publicly available information obtained from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation System (IPaC) to identify federally-listed endangered or threatened species, and critical habitat in the Project Area, and 2) requested a Michigan Natural Features Inventory (MNFI) Information Request for the Project Area. The Information Request includes records within 5 miles of the Project Area and is valid for one year only.

Species designated as special concern were not reviewed as species within this category are not protected by the Part 365 Endangered Species Protection section of the Natural Resources and Environmental Protection Act of Michigan (M.C.L.A 324.36505), with the exception of amphibians and reptiles. Some amphibians and reptiles (including reptile eggs) are legally protected under Michigan Department of Natural Resources (MDNR) Director's Order No. FO-224.25 (MDNR 2024).

To facilitate the likelihood of occurrence assessment, Tetra Tech biologists conducted a desktop natural resource assessment by reviewing recent aerial photographs to identify areas that are not cultivated cropland within the Project Area. The natural resource areas were categorized by the dominant vegetation into subtypes of one of five broad categories – grassland herbaceous, shrub-scrub, trees, riparian, or wetlands/streams. Tetra Tech biologists conducted an initial site visit in August 2022 and revisited the site in June 2025 to confirm the presence and extent

of the natural resource areas (i.e., vegetated areas that are not cultivated cropland or otherwise human manipulated vegetation).

## 3.0 – RESULTS

### 3.1 – LAND USE AND VEGETATION

Of the 1,576.2 acres reviewed, 290.1 acres of natural resource areas were documented in the Project Area as part of the desktop natural resource assessment and site visits. The documented natural resource areas consist of predominantly grassland herbaceous (194.0 acres), trees (63.0 acres), and wetlands (31.6 acres) (Appendix A: Figure 2 and Figures 3A through 3F; Table 1). All three of the predominant natural resource area types are located throughout the Project Area. Representative photographs of natural resource area types are included as Appendix B.

**Table 1.** Surveyed Natural Resource Areas in the Project Area.

Natural Resource Area Type	Acres in Project Area	Percent of the Project Area
<b>Grassland Herbaceous</b>	<b>194.0</b>	<b>12.3</b>
<i>Grassland-Hay</i>	159.4	10.1
<i>Grassland-Swale/Buffer Strip</i>	22.0	1.4
<i>Grassland- CRP or Unmanaged</i>	12.5	0.8
<i>Grassland – Pasture</i>	<0.1	<0.1
<b>Trees</b>	<b>63.0</b>	<b>3.0</b>
<i>Forest/Woodlot</i>	51.9	3.3
<i>Tree Row</i>	9.3	0.6
<i>Individual tree</i>	1.9	0.1
<i>Tree cluster</i>	1.8	0.1
<b>Wetlands</b>	<b>31.6</b>	<b>2.0</b>
<i>Emergent Wetland</i>	11.4	0.7
<i>Woody Wetland</i>	14.0	0.9
<i>Scrub Shrub Wetland</i>	0.2	<0.1
<i>Perennial Stream</i>	4.9	0.3
<i>Intermittent Stream</i>	1.1	0.1
<b>Riparian</b>	<b>1.4</b>	<b>&lt;0.1</b>
<i>Riparian-Grasses or Forbs</i>	1.4	<0.1
<b>Shrub-Scrub</b>	<b>0.2</b>	<b>&lt;0.1</b>
<i>Shrub scrub</i>	0.2	<0.1
<b>Natural Resource Area Total</b>	<b>290.1</b>	<b>18.4</b>

Soil data for the Project Area was analyzed using the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA NRCS 2025a). The Project Area is comprised of 23 soil map units, 11 of which cover 83.7 percent of the Project Area (USDA NRCS 2025b). Soils of the same series are combined in Table 2 below (Table 2).

**Table 2.** USDA NRCS Web Soil Survey Results

Soil Map Unit	Percentage of Subject Property	Soil Series Description <sup>1</sup>
Nester soils, 12 to 25, 6 to 12, 25 to 45, 2 to 6, percent slopes, lake moderated	29.0	The Nester series consists of very deep, moderately well drained soils formed in till on ground moraines and end moraines. Slope ranges from 0 to 12 percent.
Tonkey and Deford soils	18.3	The Tonkey series consists of very deep, poorly drained and very poorly drained soils formed in stratified loamy and sandy glaciofluvial deposits on lake plains, outwash plains, or glacial drainageways. Slope ranges from 0 to 2 percent.
Kawkawlin loam, 0 to 2, 2 to 6, percent slopes	13.2	The Kawkawlin series consists of very deep, somewhat poorly drained soils formed in moderately fine and fine textured till on moraines. Slope ranges from 0 to 6 percent.
Belding and Allendale soils, 0 to 6 percent slopes	11.1	The Allendale series consists of very deep, somewhat poorly drained soils that formed in sandy sediments and in the underlying clayey lacustrine deposits or till on lake basins, lake terraces, lake plains, outwash plains, and ground moraines. Slope ranges from 0 to 12 percent.
Belding-Ubly sandy loams, 2 to 6 percent slopes	6.9	The Ubly series consists of very deep, well drained and moderately well drained soils formed in loamy glacial till materials on till plains and moraines. Permeability is moderately rapid in the upper part and moderately slow in the lower part. Slopes range from 0 to 35 percent.
Coloma-Brems-Metea complex, 6 to 12 percent slopes	5.2	The Coloma series consists of very deep, somewhat excessively drained or excessively drained soils formed in sandy drift. These soils are on moraines, outwash plains, deltas, and stream terraces. Slope ranges from 0 to 70 percent.

<sup>1</sup>Descriptions adapted from USDA Soil Series Descriptions (2025b)

## 3.2 – FEDERALLY-LISTED SPECIES AND CRITICAL HABITAT

The IPaC retrieved on June 24, 2025, indicates that the Project Area is within the range of the following species:

- three federally endangered species:
  - Indiana bat (*Myotis sodalis*),
  - piping plover (*Charadrius melodus*), and
  - Karner blue butterfly (*Lycaeides melissa samuelis*).
- three federally threatened species:
  - rufa red knot (*Calidris canutus rufa*),

- eastern massasauga rattlesnake (*Sistrurus catenatus*), and
- pitcher’s thistle (*Cirsium pitcheri*).
- one species proposed to be listed as threatened:
  - monarch butterfly (*Danaus plexippus*) (Appendix C; Table 3).

Proposed threatened species are not protected by the take prohibitions of Section 9 of the Endangered Species Act until the rule to list is finalized. The monarch butterfly was proposed to be listed in the Federal Register (FR) on December 12, 2024, and comments were due to the USFWS by March 12, 2025 (89 FR 100662, USFWS 2024). The USFWS reopened the public comment period on March 19, 2025, and comments were due to the USFWS by May 19, 2025 (USFWS 2025a).

The IPaC did not identify critical habitat for the Project Area (Appendix C: IPaC Results).

**Table 3.** Federally Threatened and Endangered Species that May Occur in the Project Area.

Common Name	Scientific Name	Federal Status	Observed Species Habitat	Likelihood of Occurrence <sup>1</sup>
<b>Mammal</b>				
Indiana bat	<i>Myotis sodalis</i>	Endangered	Contiguous forest habitat on northern, western, and southern edges of the Project Area; 131.9 acres of the Project Area are included in the USFWS Indiana Bat Habitat Suitability Model (Appendix A: Figure 4)	High
<b>Bird</b>				
Piping plover	<i>Charadrius melodus</i>	Endangered	Lack of shoreline habitat	Low
Rufa red knot	<i>Calidris canutus rufa</i>	Threatened	Lack of shoreline habitat	Low
<b>Reptile</b>				
Eastern massasauga rattlesnake	<i>Sistrurus catenatus</i>	Threatened	Wetland habitat in the Project Area	Moderate
<b>Insect</b>				
Karner blue butterfly	<i>Lycaeides melissa samuelis</i>	Endangered	While no lupine was observed in the Project Area during the field survey, wooded areas with adjacent unmanaged and buffer strip grassland habitat is present. Additionally, occurrences have been reported in the Project Area vicinity.	Moderate

Common Name	Scientific Name	Federal Status	Observed Species Habitat	Likelihood of Occurrence <sup>1</sup>
Monarch butterfly	<i>Danaus plexippus</i>	Proposed Threatened	Open grasslands and roadside habitat are present. Observed incidentally during field survey.	High
<b>Vascular Plant</b>				
Pitcher's thistle	<i>Cirsium pitcheri</i>	Threatened	Lack of sand dune habitat	Low

<sup>1</sup>Likelihood of Occurrence: Low- species range overlaps with Project Area and marginally suitable habitat in Project Area; Moderate- species range overlaps with Project Area and suitable habitat present in Project Area, or species known to occur in habitat similar to Project Area; High- species observed during site visit, highly suitable habitat present in Project Area, or known populations exist in Project Area.

In summer, the Indiana bat occupies roost sites in forested areas under the exfoliating bark of dead or dying trees that retain large, thick slabs of peeling bark (USFWS 2025b). During the winter months, these species are obligatory cave hibernators (USFWS 2025b). The only known Indiana bat hibernaculum in Michigan is located inside Tippy Dam, a hydroelectric dam located approximately 60 miles northeast of the Project Area (USFWS 2022). Suitable habitat for Indiana bats within the Project Area includes forests/woodlots, tree rows, isolated clusters of trees, and individual trees. Additionally, approximately 131.9 acres of the Project Area are included in the USFWS Indiana Bat Habitat Suitability Model (USFWS 2025c, Appendix A: Figure 4). Based on the identified USFWS modeled Indiana bat habitat in the Project Area and the presence of suitable wooded habitat within the Project Area, the Indiana bat has a high likelihood of occurrence.

The piping plover is a small species of shorebird that is found in coastal and shoreline habitats (USFWS 2025d). Suitable habitat for the piping plover was not observed in the Project Area. Critical habitat for the piping plover is located approximately 11 miles south of the Project Area in Muskegon State Park. Due to the lack of shoreline habitat within the Project Area, the piping plover has a low likelihood of occurrence.

The rufa red knot is a robin-sized shorebird that breeds in the central Canadian Arctic and winters along the Atlantic coasts of Argentina and Chile, South America, western Gulf of America, both coasts of Central America, and southeast United States from Alabama to North Carolina (USFWS 2025e). Migrating rufa red knots generally utilize coastal marine and estuarine habitats with large areas of exposed intertidal sediments, and there is little information to indicate whether or not rufa red knots may also use inland freshwater habits during migration (USFWS 2025e). The IPaC indicates that the species only needs to be considered for actions occurring along coastal areas during the migratory window of May 1 through September 30. Due to the lack of coastal shoreline habitat within Project Area, the rufa red knot has a low likelihood of occurrence.

The eastern massasauga rattlesnake inhabits wet prairies, marshes, fens, sedge meadows, peatlands and low areas along rivers and lakes (USFWS 2025f). Eastern massasauga rattlesnakes will use the adjoining upland habitat during the summer active period. Due to the suitable wetland habitat in the Project Area, there is a moderate likelihood of occurrence for the eastern massasauga rattlesnake.

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The Karner blue butterfly is typically associated with landscapes composed of sandy soils that support oak or oak-pine savanna or barrens (MNFI 2025a). The species often occurs in openings, old fields, and rights-of-way surrounded by close-canopied oak forest. The larvae feed exclusively on wild lupine (*Lupinus perennis*). While no lupine was observed in the Project Area during the field survey, wooded areas with adjacent unmanaged and buffer strip grassland habitat are present. MNFI results included records of Karner blue butterfly within 5 miles of the Project Area between 1956 and 2013. The nearest observation record was approximately 2 miles north of the northernmost part of the Project Area in Oceana County in 2013. Based on the suitable habitat and reported occurrences in the vicinity, the Karner blue butterfly has a moderate likelihood of occurrence.

The monarch butterfly is known for its striking appearance and long migration in which the species overwinters in central Mexico before migrating north in the spring, traveling up to 2,000 miles. During migration and breeding, the monarch butterfly occupies areas such as fields, roadsides, open grassland areas, wetlands, or even urban greenspaces, laying eggs on milkweed (primarily *Asclepias* spp.) host plants (USFWS 2025g). During the site visit, milkweed was observed in road rights-of-ways throughout the Project Area, and a monarch butterfly was incidentally observed. Due to an observation of the species and its host plant (milkweed) during the site visit and the presence of grasslands and roadside habitat, the monarch butterfly has a high likelihood of occurrence within the Project Area.

Pitcher's thistle is found on open sand dunes and low open beach ridges along the shoreline of Lake Michigan (USFWS 2025h). The MNFI identified open dunes within a 5-mile buffer of the Project Area but did not identify open dune habitat within the Project Area. Due to the lack of open sand dune habitat within the Project Area, Pitcher's thistle has a low likelihood of occurrence.

### **3.3 – FEDERALLY-PROTECTED SPECIES**

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The IPaC response stated that bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) are within the Project Area. While not federally endangered or threatened, the bald eagle and the golden eagle are afforded special federal protection by the Bald Eagle and Golden Eagle Protection Act (Appendix C).

The Project Area is located within the expected breeding range of the bald eagle but is not within the expected breeding range of the golden eagle (Cornell Lab of Ornithology 2025a, 2025b). Per the IPaC results, the expected breeding season for the bald eagle in the vicinity is September 1 through July 31 (Appendix C). Per USFWS guidelines, project development within 660 feet of an active bald eagle nest may require a Bald Eagle Incidental Take Permit (USFWS 2025i).

MNFI results included records of four bald eagle nests within 5 miles of the Project Area. These four records occurred between 2018 and 2019. The nearest observation record was approximately 3 miles south of the southernmost portion of the Project Area in 2018. There is a moderate potential for bald eagle to use or nest within the Project Area.

### 3.4 – STATE-LISTED SPECIES AND MNFI INFORMATION REQUEST

There are 10 state-listed endangered species, 38 state-listed threatened species, and 6 species of special concern (reptiles or amphibians) with recorded occurrences in Muskegon County (MNFI 2025b). There are 6 state-listed endangered species, 29 state-listed threatened species, and 4 species of special concern (reptiles or amphibians) with recorded occurrences in Oceana County (MNFI 2025b).

A MNFI Information Request was submitted and results received May 14, 2025, included recorded occurrences of 8 state-listed threatened and 2 species of special concern (reptiles or amphibians) within 5 miles of the Project Area<sup>1</sup> (Appendix D, Table 4). Available information on species habitat was reviewed on MNFI’s County Element Data (MNFI 2025b) webpage. Based on these descriptions and a review of documented natural resource areas in the Project Area, limited or no suitable habitat was identified for three species and the likelihood of occurrence for these species is low. Suitable habitat was identified for the remaining seven species and the likelihood of occurrence for these species is moderate.

**Table 4.** State Threatened and Special Concern Reptile and Amphibian Species with Recorded Occurrences within 5 Miles of the Project Area.

Common Name	Scientific Name	State Status	Last Observed	Species Habitat in Project Area	Likelihood of Occurrence Within the Project Area
<b>Amphibian</b>					
Blanchard’s cricket frog	<i>Acris blanchardi</i>	Threatened	1996	Wetland habitat present	Moderate
Mudpuppy	<i>Necturus maculosus</i>	Special Concern	2013	Wetland habitat containing permanent waters present	Moderate
<b>Arthropod</b>					
Karner blue butterfly	<i>Lycaeides melissa samuelis</i>	Threatened	2013	While no lupine was observed in the Project Area during the field survey, wooded areas with adjacent unmanaged and buffer strip grassland habitat is present. Additionally, occurrences have been reported in the Project Area vicinity.	Moderate

<sup>1</sup> Due to confidentiality, MNFI provided species location based on Township, Range, and Section.

Common Name	Scientific Name	State Status	Last Observed	Species Habitat in Project Area	Likelihood of Occurrence Within the Project Area
Persius dusky wing	<i>Erynnis persius persius</i>	Threatened	1956	While no lupine was observed in the Project Area during the field survey, wooded areas with adjacent unmanaged and buffer strip grassland habitat is present. Additionally, occurrences have been reported in the Project Area vicinity.	Moderate
<b>Bird</b>					
Cerulean warbler	<i>Setophaga cerulea</i>	Threatened	1999	Contiguous forest habitat on northern, western, and southern edges of the Project Area	Moderate
<b>Mussel</b>					
Black sandshell	<i>Ligumia recta</i>	Threatened	2004	No rivers with strong currents or lake habitat	Low
<b>Plant</b>					
Nodding pogonia (three birds orchid)	<i>Triphora trianthophora</i>	Threatened	1899	Forest habitat is present. While recorded occurrences were identified within the Project Area, all were from 1899.	Low
Pitcher's thistle	<i>Cirsium pitcher</i>	Threatened	2012	Lack of sand dune habitat	Low
<b>Reptile</b>					
Blanding's turtle	<i>Emydoidea blandingii</i>	Special Concern	2021	Shallow bodies of standing or slow-flowing water with muddy or mucky bottoms and aquatic or emergent vegetation	Moderate
Eastern box turtle	<i>Terrapene carolina carolina</i>	Threatened	2024	Forested habitats with sandy soils near a source of water such as a stream, pond, or wetland	Moderate

<sup>1</sup>Likelihood of Occurrence: Low- species range overlaps with Project Area and marginally suitable habitat in Project Area; Moderate- species range overlaps with Project Area and suitable habitat present in Project Area, or species known to occur in habitat similar to Project Area; High- species observed during site visit, highly suitable habitat present in Project Area, or known populations exist in Project Area.

The Blanchard's cricket frog typically inhabits the open edges of permanent ponds, lakes, floodings, bogs, seeps and slow-moving streams and rivers (MNFI 2025c). They also can utilize temporary water bodies if near permanent

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water. They prefer open or partially vegetated mud flats, muddy or sandy shorelines, and mats of emergent aquatic vegetation in shallow water. Blanchard's cricket frog was recorded approximately 0.25 to 1 mile north of the Project Area in 1996. Based on suitable habitat and reported occurrences, the Blanchard's cricket frog has a moderate likelihood of occurrence.

The mudpuppy occurs in areas with permanent waters, such as rivers, ponds, and lakes (MNFI 2025d). Mudpuppy was recorded approximately 3 miles north and 5 miles east of the Project Area in 2013. Based on suitable habitat and reported occurrences, there is a moderate likelihood of occurrence for the mudpuppy.

The Karner blue butterfly is discussed in Section 3.2 above.

The Persius dusky wing is typically found in oak-pine barrens and adjacent prairies and brushy fields, and along trails and utility rights-of-way through barrens (MNFI 2025e). The eggs are laid on wild blue lupine (*Lupinus perennis*). Persius dusky wing was recorded approximately 5 miles northeast of the Project Area in 1956. Based on the suitable habitat and reported occurrences, the Persius dusky wing has a moderate likelihood of occurrence.

The cerulean warblers prefer mesic sites and are most commonly found in the canopy of large tracts of mature deciduous forest (MNFI 2025f). The cerulean warbler was recorded approximately 4 miles southeast of the Project Area in 1999. Based on the suitable habitat and reported occurrences, the cerulean warbler has a moderate likelihood of occurrence.

The Blanding's turtle inhabits shallow ponds and marshes with abundant aquatic vegetation and soft muddy bottoms and nest in adjacent upland habitat with well-drained, sandy soils (MNFI 2025g). The Blanding's turtle was recorded approximately 5 miles east of the Project Area in 2021. Based on reported occurrences near the Project Area and the presence of suitable habitat and sandy soils in the Project Area (Table 2), the Blanding's turtle has a moderate likelihood of occurrence.

The eastern box turtle typically occurs in forested habitats with sandy soils near streams, ponds, lakes, and wetlands (MNFI 2025h). They also may be found in adjacent thickets, old fields, pastures, or vegetated dunes. Access to unshaded nesting sites in sandy, open areas is critical for successful reproduction. Eastern box turtles were reported approximately 0.25 miles east of the Project Area in 2024. Based on the suitable habitat and reported occurrences and sandy soils in the Project Area (Table 2), there is a moderate likelihood of occurrence for eastern box turtles.

MNFI recorded floodplain forest, Great Lakes marsh, mesic northern forest, and open dunes outside of the Project Area within the 5-mile buffer (Appendix D).

## 4.0 – RECOMMENDATIONS

The review of federal and state protected species determined that species with high or moderate likelihood of occurrence prefer grassland, forest, and wetland habitats. Tetra Tech recommends siting facilities in cultivated cropland or grassland-hay areas to avoid and minimize the potential impacts to identified species. If impacts to suitable habitat are unavoidable, additional recommendations are provided below.

### 4.1 FEDERALLY-LISTED SPECIES

Consultation with USFWS is recommended to identify agency concerns on potential impacts to federally listed species with a moderate or high likelihood of occurrence. However, consultation with the USFWS concerning proposed solar projects is on hold given current U.S. Department of the Interior (DOI) policies, which require submission to the submission to the Office of the Executive Secretariat and Regulatory Affairs, subsequent review by the Office of the Deputy Secretary, and final review by the Office of the Secretary of the DOI. While the process for implementation of this policy is reportedly still being determined, it has resulted in the pause of all review and comment by any federal agency under the DOI on any action associated with solar facilities.

Absent a federal nexus, the Project may determine the likelihood of impacts to federally listed species (Indiana bat, eastern massasauga rattlesnake, and Karner blue butterfly) based species-specific surveys to drive appropriate avoidance and minimization measures and in lieu of consultation with the USFWS, conduct consultation with MDNR to identify acceptable survey protocols.

Based on recent consultation with the USFWS, formal technical assistance has not yet been developed by the USFWS concerning the monarch butterfly. However, the USFWS anticipates that actions with the potential to result in the take of the species would include actions that affect milkweed plants or sources of nectar while monarch butterfly eggs, caterpillars, or adults are present. To help projects avoid potential impacts to the monarch butterfly, the USFWS's current recommendation is for projects to enroll in the Nationwide Candidate Conservation Agreement with Assurance (CCAA) for the Monarch Butterfly, which provides regulatory assurance under the Endangered Species Act that no additional conservation measures would be required if the monarch butterfly becomes a listed species in the future (Board of Trustees of the University of Illinois 2018). Enrollment in the CCAA entails contributing to the conservation of the species through the implementation of voluntary habitat management practices while maintaining flexibility in land use activities. If the Project has the potential to impact the monarch butterfly, Tetra Tech recommends enrolling in the CCAA.

### 4.2 FEDERALLY-PROTECTED SPECIES

Tetra Tech recommends conducting bald eagle nest surveys of the Project Area and a 660-foot buffer during leaf off (late fall through early spring) to confirm the presence or absence of bald eagle nests.

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## 4.3 STATE LISTED SPECIES

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The Project may determine the likelihood of impacts to state listed species with a moderate likelihood of occurrence (Blanchard's cricket frog, mudpuppy, Karner blue butterfly, Persius dusky wing, cerulean warbler, Blanding's turtle, and the eastern box turtle) through the MNFI Rare Species Review. Results would provide a list of all species that are located within 1.5 miles of the Project Area and discuss specific management recommendations and recommendations for species-specific surveys, if warranted.

## 5.0 – REFERENCES CITED

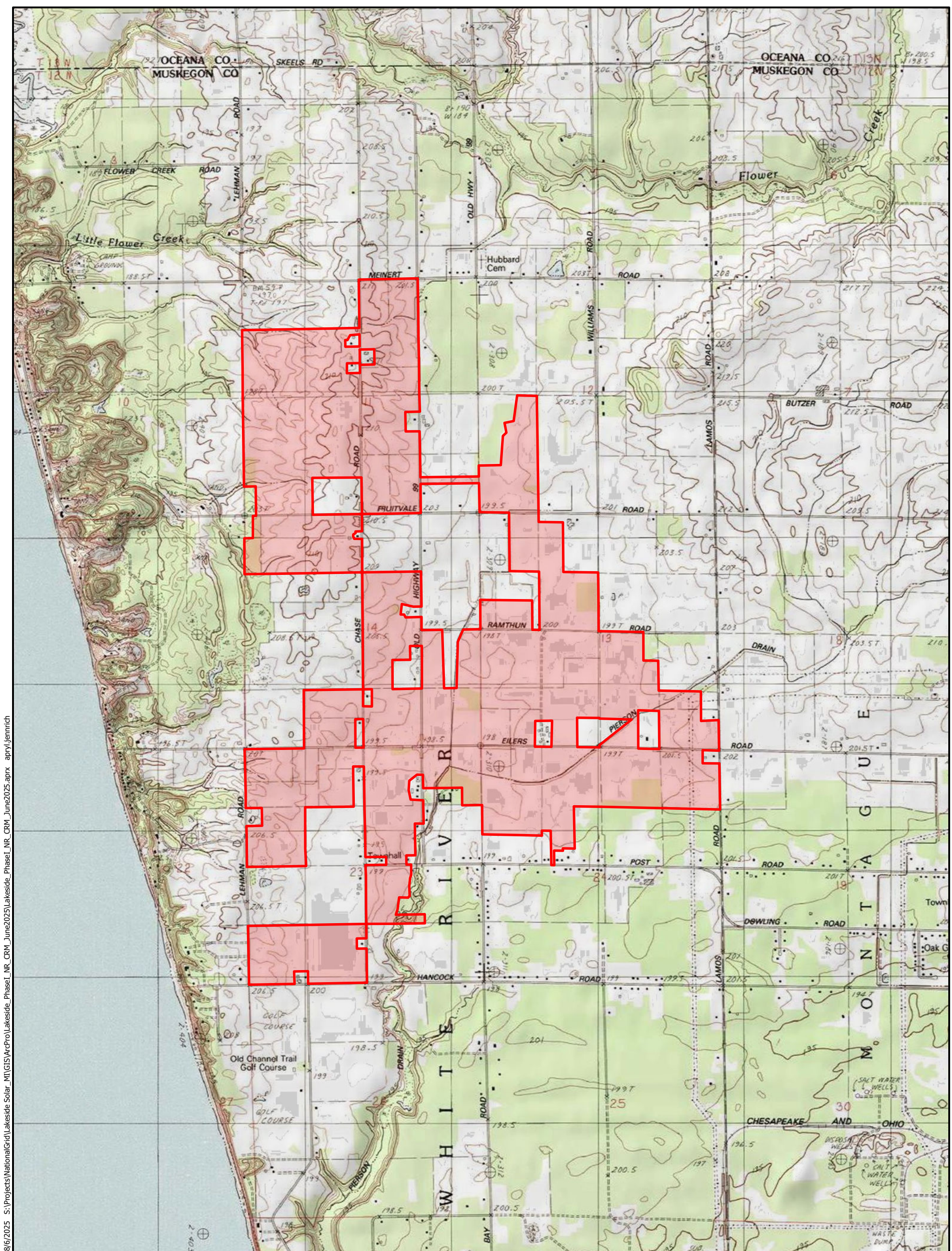
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- USFWS. 2025e. Rufa red knot. Available online at <https://www.fws.gov/species/rufa-red-knot-calidris-canutus-rufa>, accessed August 7, 2025.
- USFWS. 2025f. Massasauga. Available online at <https://www.fws.gov/species/massasauga-sistrurus-catenatus>, accessed on June 24, 2025.
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- USFWS. 2025h. Pitcher’s Thistle. Available online at <https://www.fws.gov/species/pitchers-thistle-cirsium-pitcheri>, accessed on August 6, 2025.
- USFWS. 2025i. Do I need an eagle take permit? Available online at <https://www.fws.gov/story/do-i-need-eagle-take-permit>, accessed June 25, 2025.

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## APPENDIX A. FIGURES

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S:\Projects\NationalGrid\Lakeside Solar\_MITGISArcPro\Lakeside\_Phase1\_NR\_CRM\_June2025.aprx apryl.jemrich

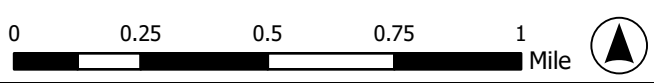
Source: Map adapted from USA Topo Maps Server and Project data by Lakeside Solar, LLC. Scale: 1:24,000

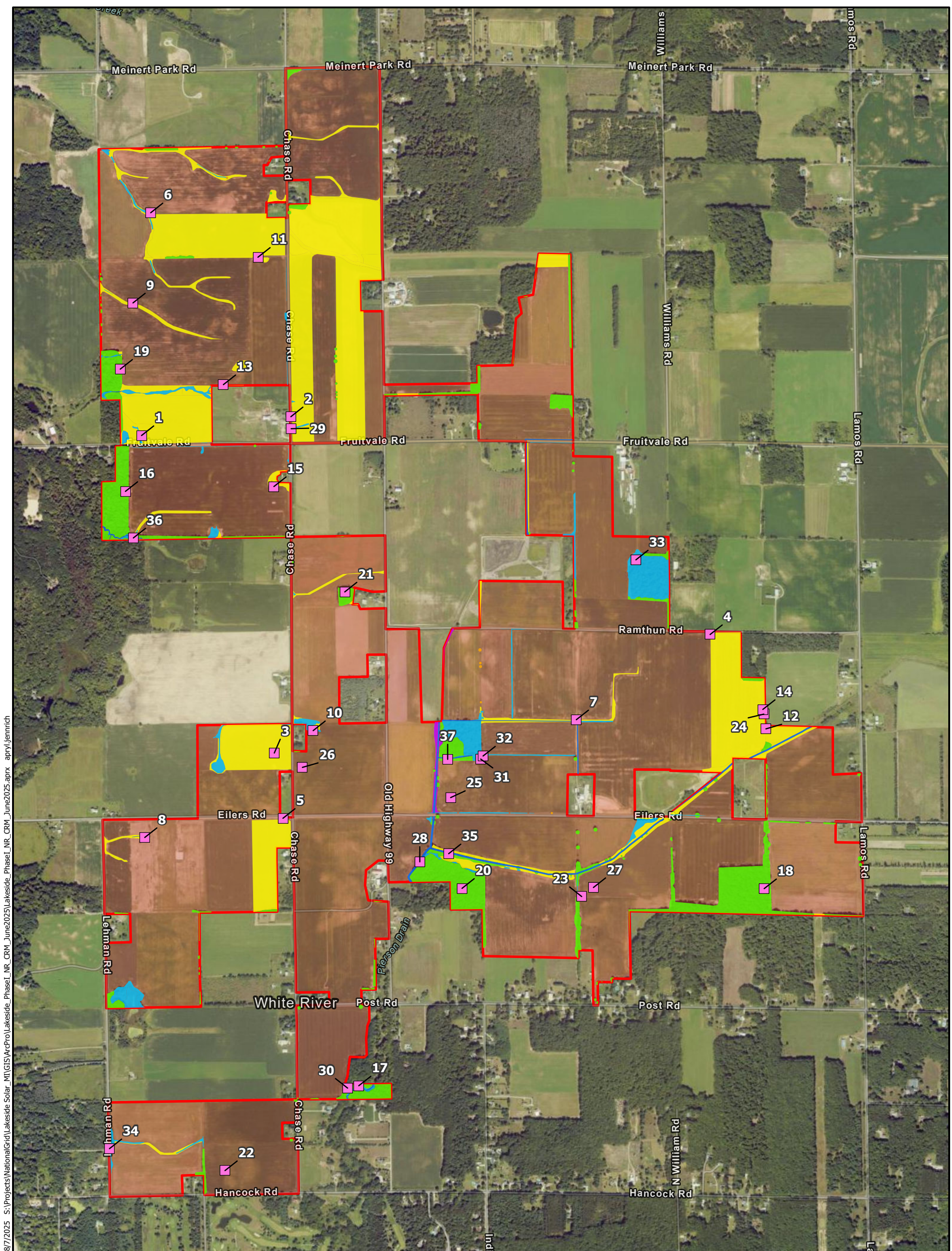


Project Area

**Figure 1**  
**Project Location**

**Lakeside Solar**  
**Muskegon County, Michigan**



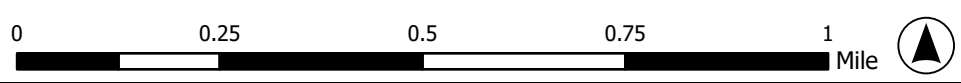


S:\Projects\NationalGrid\Lakeside Solar\_MITGIS(ArcPro)\Lakeside\_Phase1\_NR\_CRM\_June2025.aprx apryl.jennrich

Source: Map adapted from USDA 2024 NAIP, Tetra Tech natural resource field data, and Project data by Lakeside Solar, LLC. Scale: 1:15,000

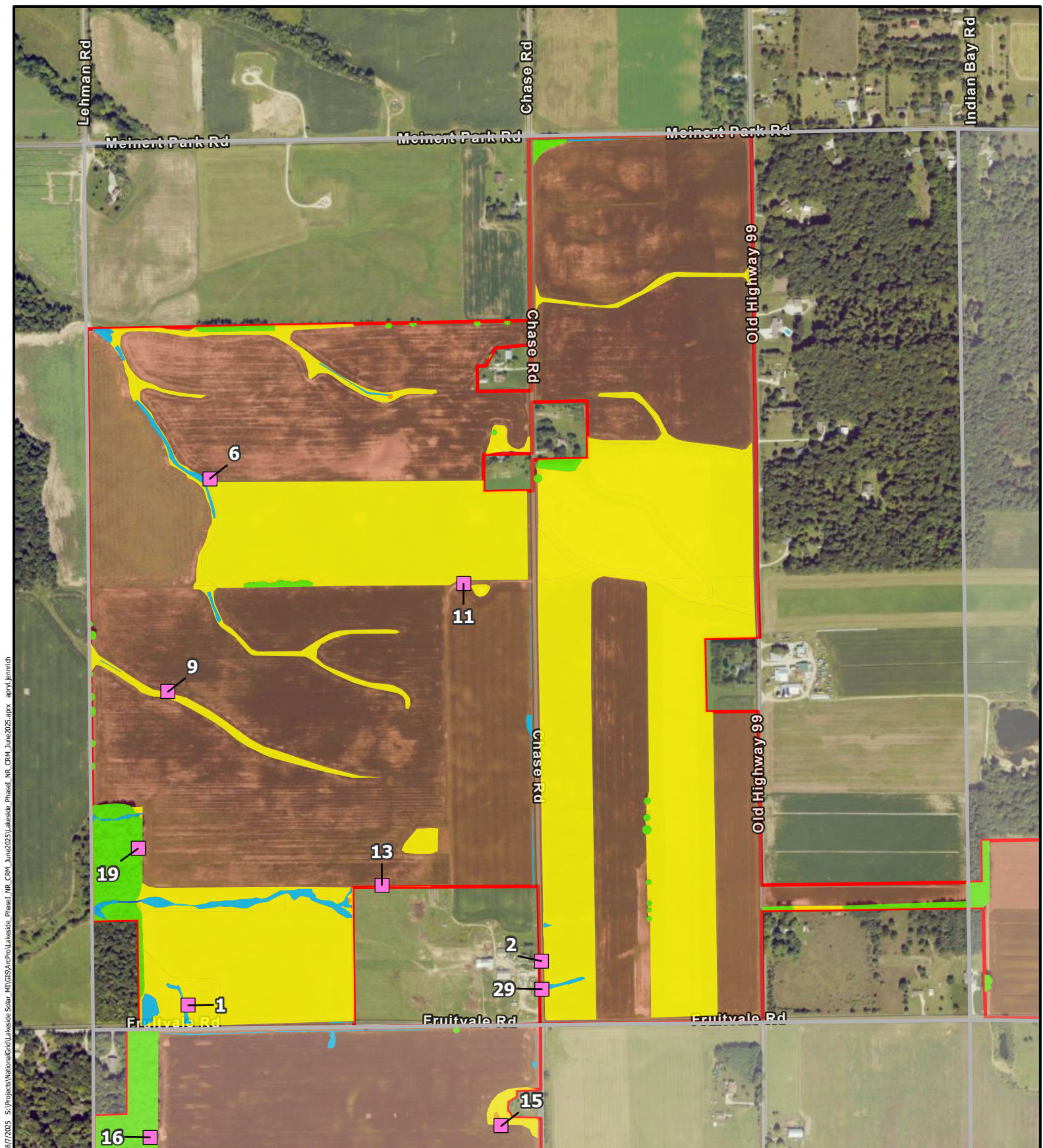


- Project Area
- Photo Point
- Grassland Herbaceous
- Shrub Scrub
- Trees
- Riparian
- Stream
- Wetland



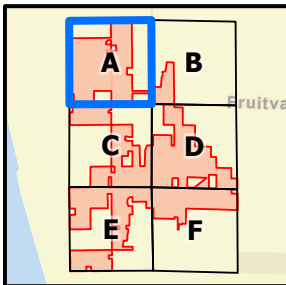
**Figure 2**  
**Natural Resource Areas Overview**  
 Lakeside Solar  
 Muskegon County, Michigan





8/17/2025 5:\Projects\NationalGrid\LakesideSolar\_MIT\GIS\ArcPro\Lakeside\_Phase1\_NR\_CRM\_June2025.aprx apryl.jennrich

Source: Map adapted from USDA 2024 NAIP, Tetra Tech natural resource field data, and Project data by Lakeside Solar, LLC. Scale: 1:9,000



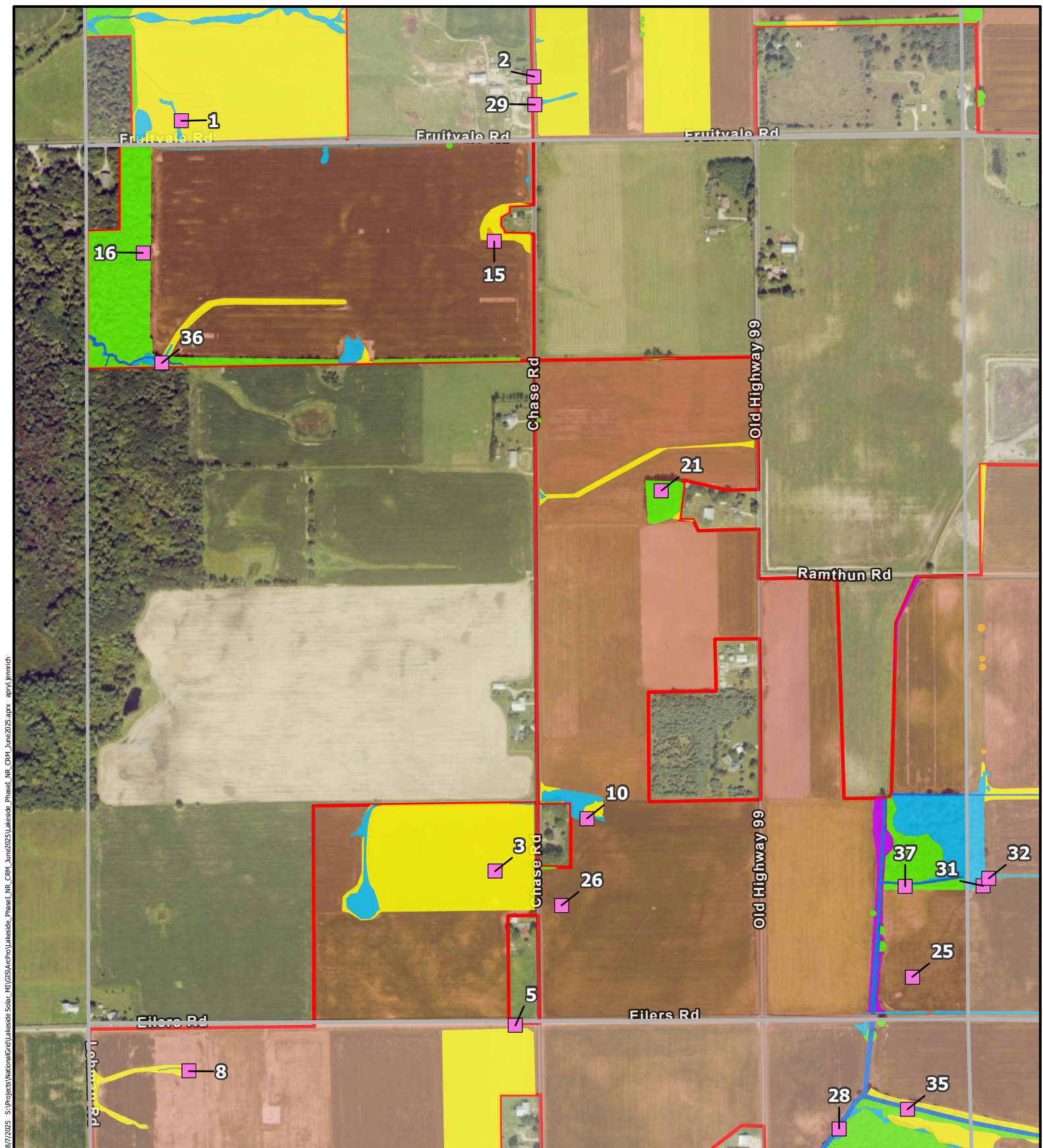
- Project Area
- Photo Point
- Grassland Herbaceous
- Shrub Scrub
- Trees
- Riparian
- Stream
- Wetland



**Figure 3A**  
**Natural Resource Areas**  
 Lakeside Solar  
 Muskegon County, Michigan

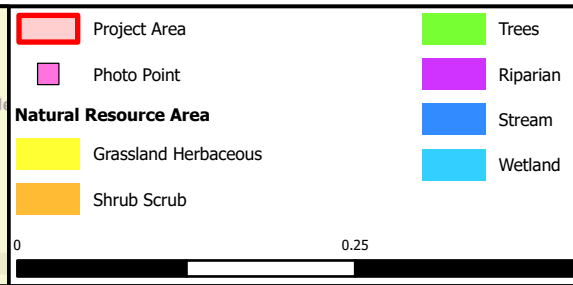
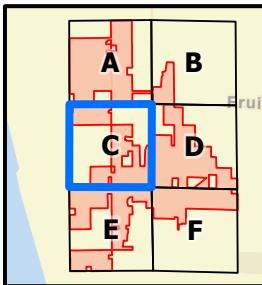




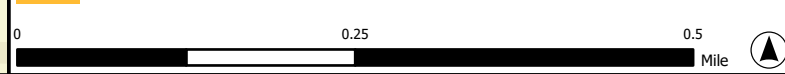


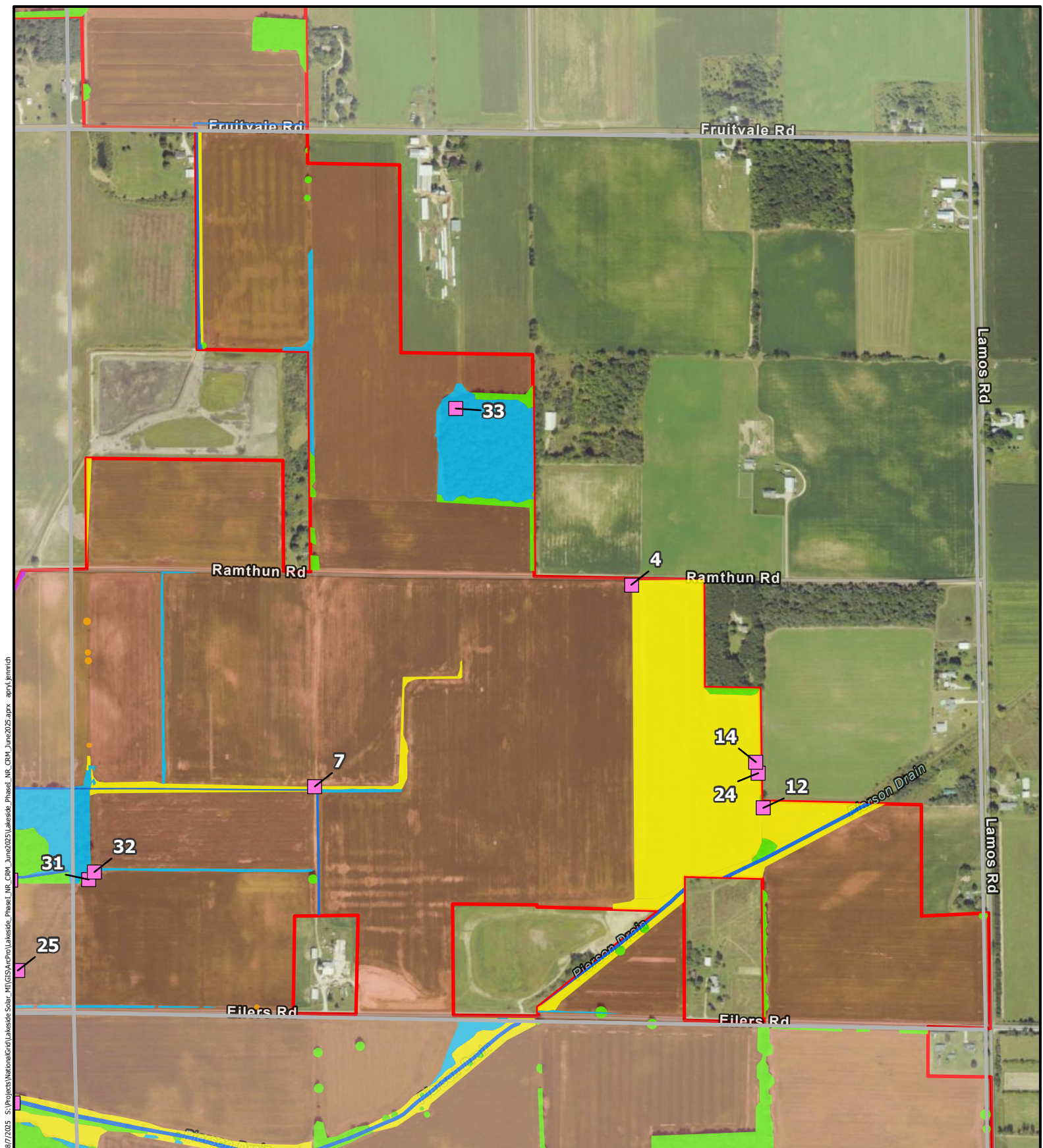
8/7/2025 5:\Projects\NationalGrid\Lakeside Solar\_MU\GIS\ArcPro\Lakeside\_Phase1\_NR\_CRM\_June2025.aprx apryl\_jennrich

Source: Map adapted from USDA 2024 NAIP, Tetra Tech natural resource field data, and Project data by Lakeside Solar, LLC. Scale: 1:9,000



**Figure 3C**  
**Natural Resource Areas**  
 Lakeside Solar  
 Muskegon County, Michigan





8/17/2025 5:\Projects\NationalGrid\Lakeside Solar\_MIT\GIS\Aerial\Photo\Lakeside\_Phase1\_NR\_CRM\_June2025\Lakeside\_Phase1\_NR\_CRM\_June2025.aprx\_aryl\_jennrich

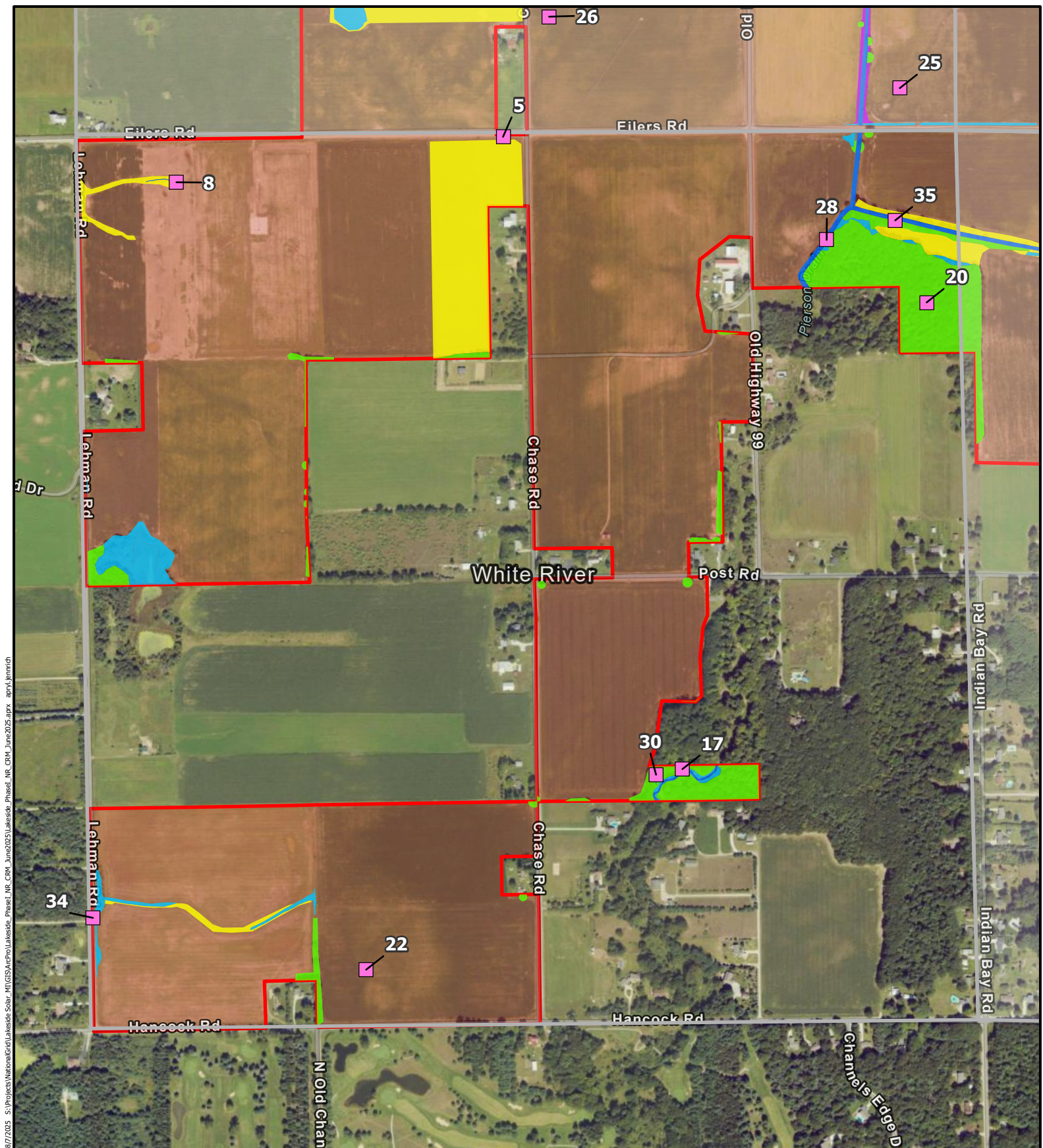
Source: Map adapted from USDA 2024 NAIP, Tetra Tech natural resource field data, and Project data by Lakeside Solar, LLC. Scale: 1:9,000



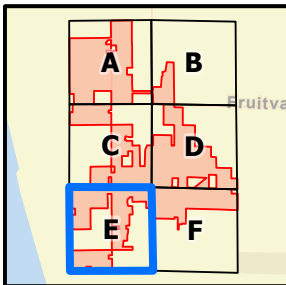
**Figure 3D**  
**Natural Resource Areas**

Lakeside Solar  
Muskegon County, Michigan





Source: Map adapted from USDA 2024 NAIP, Tetra Tech natural resource field data, and Project data by Lakeside Solar, LLC. Scale: 1:9,000

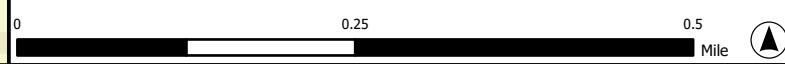


Project Area	Trees
Photo Point	Riparian
<b>Natural Resource Area</b>	Stream
Grassland Herbaceous	Wetland
Shrub Scrub	

**Figure 3E**  
**Natural Resource Areas**

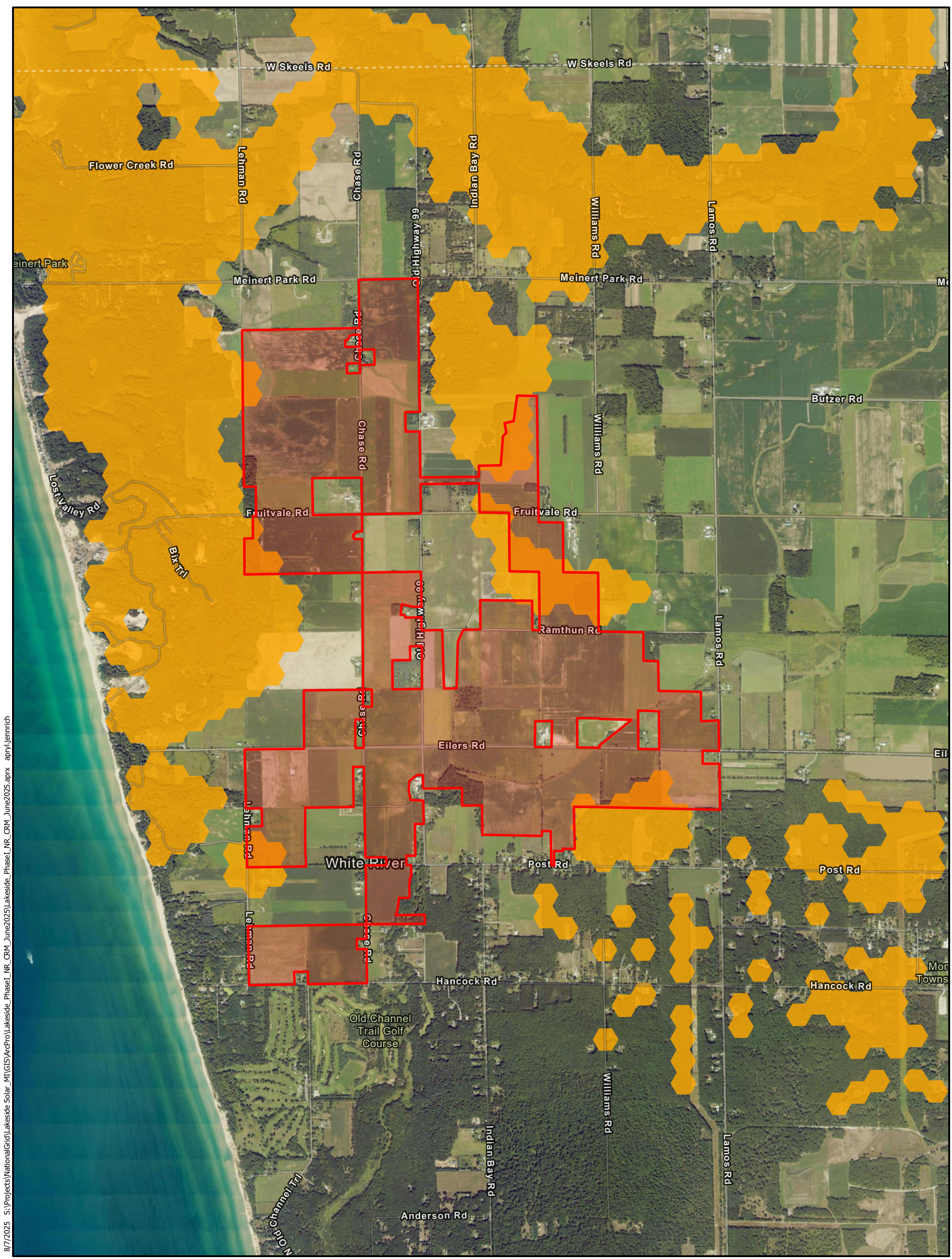
Lakeside Solar  
 Muskegon County, Michigan

TETRA TECH



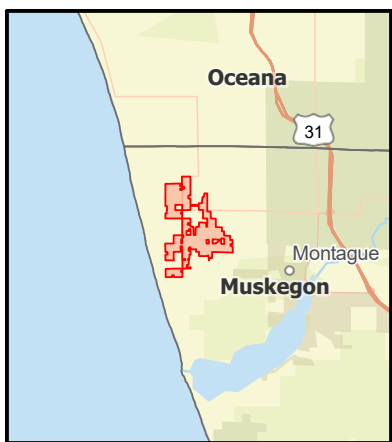
8/7/2025 5:10:05 PM S:\Projects\NationalGrid\LakesideSolar\_ML\GIS\ArcPro\Lakeside\_Phase1\_NR\_CRM\_June2025\Lakeside\_Phase1\_NR\_CRM\_June2025.aprx apryl\_jennrich



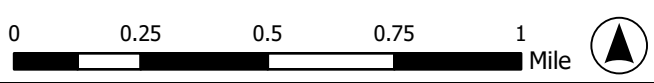


8/7/2025 S:\Projects\NationalGrid\Lakeside Solar\_MIT\GIS\ArcPro\Lakeside\_Phase1\_NR\_CRM\_June2025.aprx apryl.jennrich

Source: Map adapted from USDA 2024 NAIP, USFWS Indiana Bat Habitat Suitability Model, and Project data by Lakeside Solar, LLC. Scale: 1:24,000



- Project Area
- USFWS Indiana Bat Modeled Habitat



**Figure 4**  
**USFWS Indiana Bat**  
**Habitat Suitability Model**  
 Lakeside Solar  
 Muskegon County, Michigan



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## APPENDIX B. NATURAL RESOURCE PHOTOGRAPHS

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Natural Resource Photographs  
Lakeside Solar



**Photo Point 1**

**Type:** Grassland - Hay

**Orientation:** East

**Location:** 43.44523°, -  
86.43459°

**Date:** 6/10/2025



**Photo Point 2**

**Type:** Grassland - Hay

**Orientation:** East

**Location:** 43.44591°, -  
86.4267°

**Date:** 6/11/2025





**Photo Point 3**

**Type:** Grassland - Hay

**Orientation:** Southwest

**Location:** 43.43298°, -  
86.4277°

**Date:** 6/11/2025



**Photo Point 4**

**Type:** Grassland - Hay

**Orientation:** Southeast

**Location:** 43.43742°, -  
86.40465°

**Date:** 6/12/2025





**Photo Point 5**

**Type:** Grassland - Hay

**Orientation:** South

**Location:** 43.43047°, -  
86.42727°

**Date:** 6/11/2025



**Photo Point 6**

**Type:** Grassland - Hay

**Orientation:** Southeast

**Location:** 43.4538°, -  
86.43403°

**Date:** 6/10/2025





**Photo Point 7**

**Type:** Grassland - Buffer Strip or Swale

**Orientation:** East

**Location:** 43.43418°, -86.41174°

**Date:** 6/12/2025



**Photo Point 8**

**Type:** Grassland - Buffer Strip or Swale

**Orientation:** West

**Location:** 43.42976°, -86.43457°

**Date:** 6/11/2025





**Photo Point 9**

**Type:** Grassland - Buffer Strip or Swale

**Orientation:** Southeast

**Location:** 43.45033°, -86.435°

**Date:** 6/10/2025



**Photo Point 10**

**Type:** Grassland - CRP or Unmanaged

**Orientation:** Northeast

**Location:** 43.43383°, -86.42564°

**Date:** 6/12/2025





**Photo Point 11**

**Type:** Grassland - CRP  
or Unmanaged

**Orientation:** Southeast

**Location:** 43.45206°, -  
86.42838°

**Date:** 6/11/2025



**Photo Point 12**

**Type:** Grassland - CRP  
or Unmanaged

**Orientation:** East

**Location:** 43.43377°, -  
86.40174°

**Date:** 6/12/2025





**Photo Point 13**

**Type:** Grassland -  
Pasture

**Orientation:** South-  
southwest

**Location:** 43.44717°, -  
86.43025°

**Date:** 6/11/2025



**Photo Point 14**

**Type:** Shrub - Scrub

**Orientation:** Southeast

**Location:** 43.43452°, -  
86.40189°

**Date:** 6/12/2025



**Photo Point 15**

**Type:** Shrub - Scrub

**Orientation:** Northwest

**Location:** 43.44323°, -  
86.42762°

**Date:** 6/10/2025



**Photo Point 16**

**Type:** Tree - Forest

**Orientation:** Southwest

**Location:** 43.44308°, -  
86.43547°

**Date:** 6/10/2025



Natural Resource Photographs  
Lakeside Solar



**Photo Point 17**

**Type:** Tree - Large  
Woodlot

**Orientation:** West

**Location:** 43.42015°, -  
86.42336°

**Date:** 6/12/2025



**Photo Point 18**

**Type:** Tree - Large  
Woodlot

**Orientation:** Northwest

**Location:** 43.42763°, -  
86.40189°

**Date:** 6/11/2025





**Photo Point 19**

**Type:** Tree - Medium  
Woodlot

**Orientation:** West

**Location:** 43.44779°, -  
86.4357°

**Date:** 6/10/2025



**Photo Point 20**

**Type:** Tree - Medium  
Woodlot

**Orientation:** Southeast

**Location:** 43.42772°, -  
86.41784°

**Date:** 6/10/2025





**Photo Point 21**

**Type:** Tree - Small  
Woodlot

**Orientation:** South

**Location:** 43.43916°, -  
86.42393°

**Date:** 6/12/2025



**Photo Point 22**

**Type:** Tree - Treerow

**Orientation:** Northwest

**Location:** 43.41692°, -  
86.43045°

**Date:** 6/11/2025





**Photo Point 23**

**Type:** Tree - Treerow

**Orientation:** Southwest

**Location:** 43.42737°, -  
86.41152°

**Date:** 6/10/2025



**Photo Point 24**

**Type:** Tree - Individual  
Tree and Grassland -  
Hay

**Orientation:** South

**Location:** 43.43434°, -  
86.40184°

**Date:** 6/12/2025





**Photo Point 25**

**Type:** Tree - Individual  
Tree

**Orientation:** Northwest

**Location:** 43.43121°, -  
86.41841°

**Date:** 6/12/2025



**Photo Point 26**

**Type:** Tree - Cluster of  
Trees

**Orientation:** North

**Location:** 43.43242°, -  
86.42622°

**Date:** 6/12/2025





**Photo Point 27**

**Type:** Tree - Cluster of Trees

**Orientation:** Northwest

**Location:** 43.42772°, -86.4109°

**Date:** 6/10/2025



**Photo Point 28**

**Type:** Riparian - Grasses or Forbs

**Orientation:** Southwest

**Location:** 43.42875°, -86.42006°

**Date:** 6/10/2025





**Photo Point 29**

**Type:** Wetland -  
Emergent and  
Grassland - Hay

**Orientation:** East

**Location:** 43.44545° , -  
86.4267°

**Date:** 6/11/2025



**Photo Point 30**

**Type:** Wetland -  
Emergent and Tree –  
Large Woodlot

**Orientation:** East

**Location:** 43.42006° , -  
86.42395°

**Date:** 6/12/2025





**Photo Point 31**

**Type:** Wetland -  
Emergent

**Orientation:** East

**Location:** 43.43281°, -  
86.41668°

**Date:** 6/12/2025



**Photo Point 32**

**Type:** Wetland -  
Forested

**Orientation:** Northeast

**Location:** 43.43269°, -  
86.41681°

**Date:** 6/12/2025



Natural Resource Photographs  
Lakeside Solar



**Photo Point 33**

**Type:** Wetland -  
Forested

**Orientation:** East

**Location:** 43.44031°, -  
86.40854°

**Date:** 6/12/2025



**Photo Point 34**

**Type:** Wetland - Scrub  
Shrub

**Orientation:** Northeast

**Location:** 43.4178°, -  
86.43655°

**Date:** 6/11/2025



**Photo Point 35**

**Type:** Stream -  
Perennial and Tree –  
Tree – Medium Woodlot

**Orientation:** Northwest

**Location:** 43.42906° , -  
86.41853°

**Date:** 6/10/2025



**Photo Point 36**

**Type:** Stream –  
Intermittent and Tree –  
Forest

**Orientation:** East

**Location:** 43.44129° , -  
86.43506°

**Date:** 6/10/2025



Natural Resource Photographs  
Lakeside Solar



**Photo Point 37**

**Type:** Stream -  
Intermittent

**Orientation:** East

**Location:** 43.43269°, -  
86.41855°

**Date:** 6/12/2025



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## APPENDIX C. IPAC RESULTS

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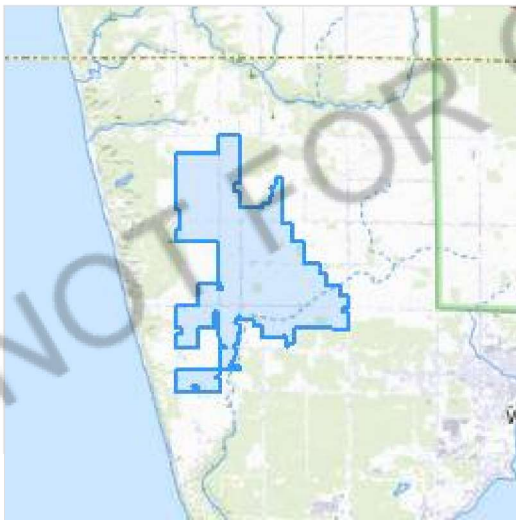
# IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

## Location

Muskegon County, Michigan



## Local office

Michigan Ecological Services Field Office

☎ (517) 351-2555

📅 (517) 351-1443

2651 Coolidge Road Suite 101  
East Lansing, MI 48823-6360

# Endangered species

**This resource list is for informational purposes only and does not constitute an analysis of project level impacts.**

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species<sup>1</sup> and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries<sup>2</sup>).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
  2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

## Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> Wherever found There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered

## Birds

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/6039">https://ecos.fws.gov/ecp/species/6039</a>	Endangered
Rufa Red Knot <i>Calidris canutus rufa</i> Wherever found This species only needs to be considered if the following condition applies: <ul style="list-style-type: none"> <li>Only actions that occur along coastal areas during the Red Knot migratory window of MAY 1 - SEPTEMBER 30.</li> </ul> There is <b>proposed</b> critical habitat for this species. Your location does not overlap the critical habitat. <a href="https://ecos.fws.gov/ecp/species/1864">https://ecos.fws.gov/ecp/species/1864</a>	Threatened

## Reptiles

NAME	STATUS
Eastern Massasauga (=rattlesnake) <i>Sistrurus catenatus</i> Wherever found This species only needs to be considered if the following condition applies: <ul style="list-style-type: none"> <li>For all Projects: Project is within EMR Range</li> </ul> No critical habitat has been designated for this species. <a href="https://ecos.fws.gov/ecp/species/2202">https://ecos.fws.gov/ecp/species/2202</a>	Threatened

## Insects

NAME	STATUS
------	--------

Karner Blue Butterfly *Lycaeides melissa samuelis* Endangered

Wherever found

There is **proposed** critical habitat for this species.

<https://ecos.fws.gov/ecp/species/6656>

Monarch Butterfly *Danaus plexippus* Proposed Threatened

Wherever found

There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/9743>

## Flowering Plants

NAME

STATUS

Pitcher's Thistle *Cirsium pitcheri* Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/8153>

## Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

## Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act <sup>2</sup> and the Migratory Bird Treaty Act (MBTA) <sup>1</sup>. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds  
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds  
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC  
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are Bald Eagles and/or Golden Eagles in your [project](#) area.

### Measures for Proactively Minimizing Eagle Impacts

For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the [National Bald Eagle Management Guidelines](#). You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#).

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

If disturbance or take of eagles cannot be avoided, an [incidental take permit](#) may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the [Do I Need A Permit Tool](#). For assistance making this determination for golden eagles, please consult with the appropriate Regional [Migratory Bird Office](#) or [Ecological Services Field Office](#).

### Ensure Your Eagle List is Accurate and Complete

If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

### Review the FAQs

The FAQs below provide important additional information and resources.

NAME

BREEDING SEASON

**Bald Eagle** *Haliaeetus leucocephalus*

Breeds Dec 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

**Golden Eagle** *Aquila chrysaetos*

Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of

presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

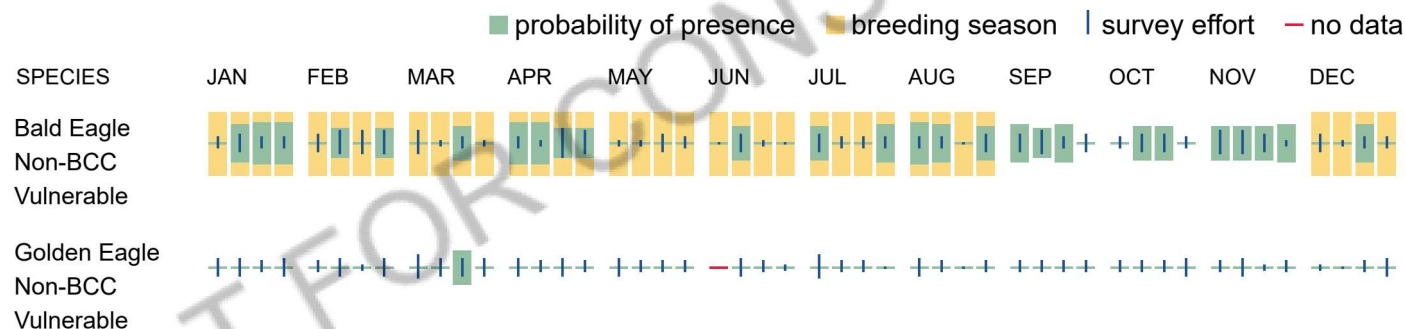
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

### No Data (—)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



## Bald & Golden Eagles FAQs

### What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply).

### Proper interpretation and use of your eagle report

On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the

potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

### **How do I know if eagles are breeding, wintering, or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **Interpreting the Probability of Presence Graphs**

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

#### ***How is the probability of presence score calculated? The calculation is done in three steps:***

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

#### **Breeding Season ()**

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

#### **Survey Effort ()**

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

#### **No Data ()**

A week is marked as having no data if there were no survey events for that week.

#### **Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

# Migratory birds

The Migratory Bird Treaty Act (MBTA) <sup>1</sup> prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

## Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases [birds of concern](#), including [Birds of Conservation Concern \(BCC\)](#), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the [Nationwide avoidance and minimization measures for birds](#) document, and any other project-specific avoidance and minimization measures suggested at the link [Measures for avoiding and minimizing impacts to birds](#) for the birds of concern on your list below.

## Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the [Supplemental Information on Migratory Birds and Eagles document](#), to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

## Review the FAQs

The FAQs below provide important additional information and resources.

NAME

BREEDING SEASON

<b>Bald Eagle</b> <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1626">https://ecos.fws.gov/ecp/species/1626</a>	Breeds Dec 1 to Aug 31
<b>Bobolink</b> <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
<b>Canada Warbler</b> <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
<b>Chimney Swift</b> <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
<b>Eastern Whip-poor-will</b> <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
<b>Golden Eagle</b> <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a>	Breeds elsewhere
<b>Golden-winged Warbler</b> <i>Vermivora chrysoptera</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/8745">https://ecos.fws.gov/ecp/species/8745</a>	Breeds May 1 to Jul 20
<b>Grasshopper Sparrow</b> <i>Ammodramus savannarum perpallidus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA <a href="https://ecos.fws.gov/ecp/species/8329">https://ecos.fws.gov/ecp/species/8329</a>	Breeds Jun 1 to Aug 20

**Lesser Yellowlegs *Tringa flavipes***

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9679>

**Red-headed Woodpecker *Melanerpes erythrocephalus***

Breeds May 10 to Sep 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

**Rusty Blackbird *Euphagus carolinus***

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

**Semipalmated Sandpiper *Calidris pusilla***

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

**Upland Sandpiper *Bartramia longicauda***

Breeds May 1 to Aug 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9294>

**Wood Thrush *Hylocichla mustelina***

Breeds May 10 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

## Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "[Supplemental Information on Migratory Birds and Eagles](#)", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

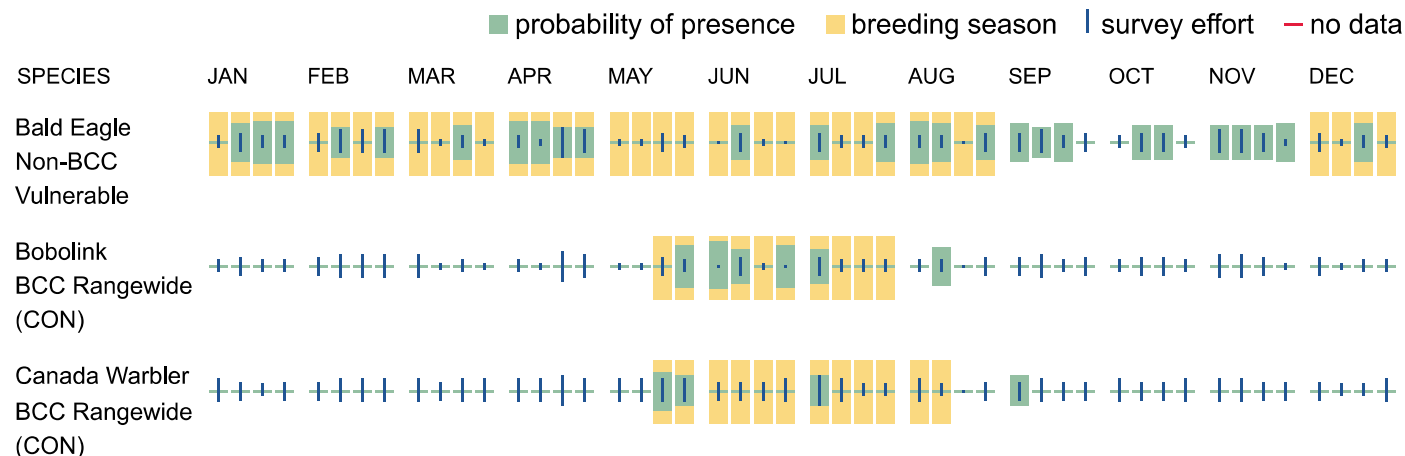
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

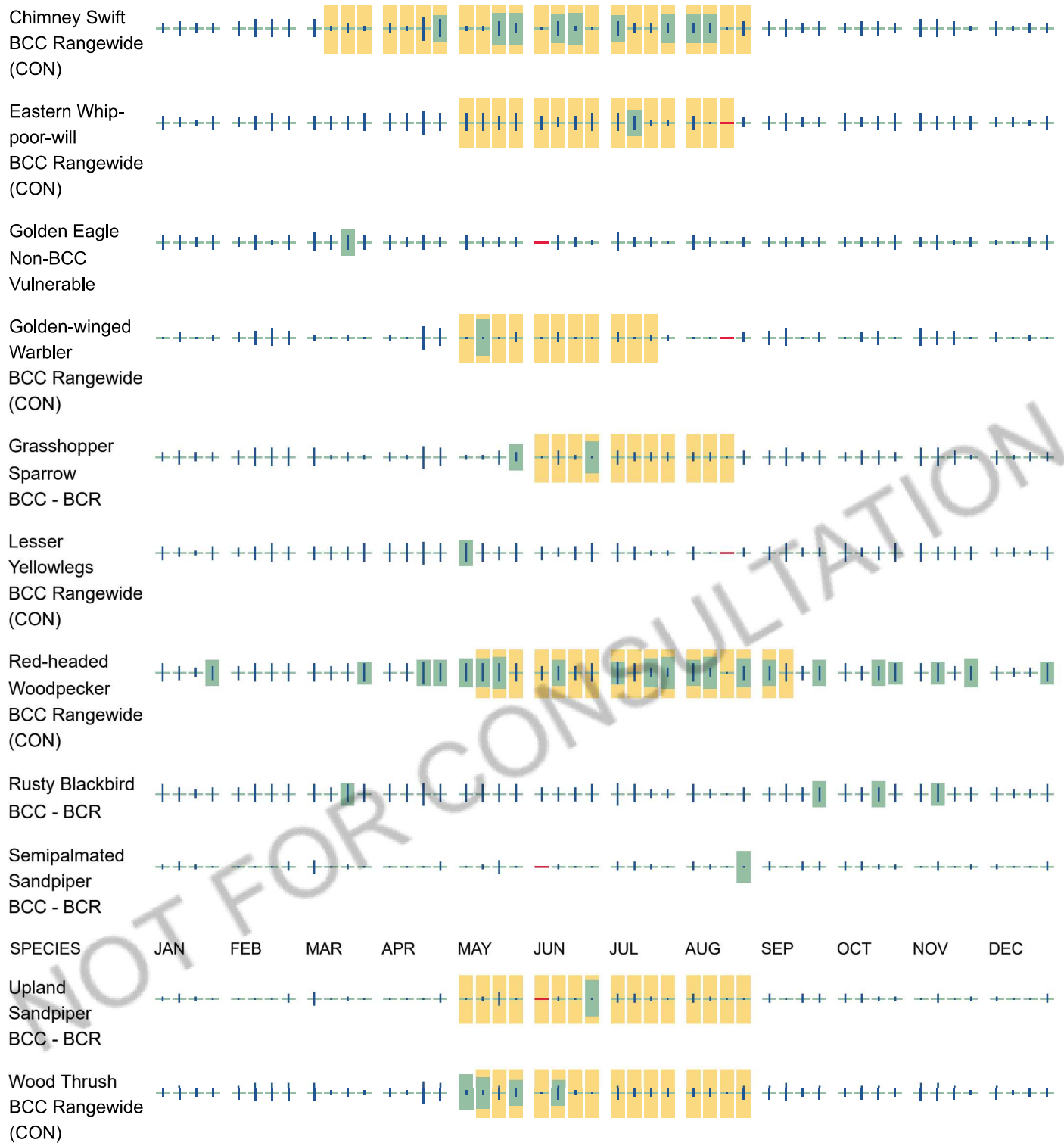
### No Data (-)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





## Migratory Bird FAQs

**Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Avoidance & Minimization Measures for Birds](#) describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see

when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

### **What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the [Bald and Golden Eagle Protection Act](#) and those species marked as "Vulnerable". See the FAQ "What are the levels of concern for migratory birds?" for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that area, an eagle ([Bald and Golden Eagle Protection Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### **Why are subspecies showing up on my list?**

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering, or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the [RAIL Tool](#) and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in

your "IPaC PROBABILITY OF PRESENCE SUMMARY" at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Bald and Golden Eagle Protection Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ "Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

### **Proper interpretation and use of your migratory bird report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

### Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

#### ***How is the probability of presence score calculated? The calculation is done in three steps:***

The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

#### **Breeding Season ()**

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

#### **Survey Effort ()**

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

#### **No Data ()**

A week is marked as having no data if there were no survey events for that week.

#### **Survey Timeframe**

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

## Facilities

### National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

# Fish hatcheries

There are no fish hatcheries at this location.

## Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

### FRESHWATER EMERGENT WETLAND

[PEM1Ad](#)

[PEM1C](#)

### FRESHWATER FORESTED/SHRUB WETLAND

[PFO1C](#)

[PSS1C](#)

### FRESHWATER POND

[PUBG](#)

### RIVERINE

[R5UBH](#)

[R4SBC](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

**NOTE:** This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

### Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

### **Data exclusions**

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

### **Data precautions**

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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## APPENDIX D. MNFI INFORMATION REQUEST

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# Michigan Natural Features Inventory Information Request

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**Requestor:** Adam Holven

**Project Name:** Lakeside Solar, White River Township, Muskegon County, MI

**Project Location:** White River Township, Muskegon County, MI

**Date Created:** 05/14/2025

## Use of Data

By acceptance of the information services made available through MNFI the recipient understands that access to the information is provided for primary use only. MNFI requests that the user respect the confidential and sensitive nature of the information. There should be no redistribution of the information. Indiscriminate distribution of information regarding locations of many rare species represents a threat to their protection. Additionally, since the information is constantly being updated MNFI requests that any information service provided by MNFI is destroyed upon completion of the primary use. This information is valid for one year only.

The recipient(s) of the information understand that state endangered and threatened species are protected under state law (Act 451 of 1994, the Natural Resources and Environmental Protection Act, Part 365, Endangered Species Protection). Any questions, observations, new findings, violations or clearance of project activities should be conducted with the Michigan Department of Natural Resources, Wildlife Division. Contact the Endangered Species Coordinator at (517) 284-9453. The recipient(s) of the information understand that federally endangered and threatened species are protected under federal law (Endangered Species Act of 1973). Any questions, observations, new findings, violations or clearance of project activities should be conducted with the U.S. Fish and Wildlife Service in East Lansing at (517) 351-2555. Recipients of the information are responsible for ensuring the protection of protected species and obtaining proper clearance before project activities begin.

## Description of Data

The species in this report are listed alphabetically by scientific name. Each record from the database is listed individually. Therefore you may see multiple listings for the same species. The locational and survey date information may be the only differentiating factors when looking at multiple occurrences for a given species. Heritage methodology is followed when entering species occurrences into the MNFI database. Detailed information on heritage methodology can be obtained from NatureServe's website at <http://www.natureserve.org>. Detailed information on the species listed in this report can be found in abstracts and the rare species explorer on the MNFI website at <https://mnfi.anr.msu.edu>.

The MNFI database is an ongoing and continuously updated information base. The database is the only comprehensive single source of existing information on Michigan's endangered, threatened, or otherwise significant plant and animal species, natural plant communities, and other natural features. This database cannot provide a definitive statement on the presence, absence, or condition of the natural features in any given locality, since most sites have not been specifically or thoroughly surveyed for their occurrence. Some of the element records are historical. While this historical information may not be important for regulatory purposes, it is important for management and restoration purposes and for scientific use. Furthermore, plant and animal populations and natural communities change with time. Therefore, the information services provided should not be regarded as a complete statement on the occurrence of special natural features of the area in question. In many cases the information may require the interpretation of a trained scientist.

Any comments or questions can be directed to MNFI via our e-mail at [mnfi@msu.edu](mailto:mnfi@msu.edu) or by calling 517-284-6200.

# Michigan Natural Features Inventory Information Request

## Plants and Animals

Scientific Name	Common Name	State Status	Federal Status	Count
<i>Acris blanchardi</i>	Blanchard's cricket frog	T		1
<i>Atrytonopsis hianna</i>	Dusted skipper	SC		1
<i>Cirsium pitcheri</i>	Pitcher's thistle	T	LT	2
<i>Cistothorus palustris</i>	Marsh wren	SC		1
<i>Emydoidea blandingii</i>	Blanding's turtle	SC		2
<i>Erynnis persius persius</i>	Persius dusky wing	T		1
<i>Haliaeetus leucocephalus</i>	Bald eagle	SC		4
<i>Ligumia recta</i>	Black sandshell	T		1
<i>Necturus maculosus</i>	Mudpuppy	SC		1
<i>Pandion haliaetus</i>	Osprey	SC		1
<i>Plebejus samuelis</i>	Karner blue	T	LE	6
<i>Pyganodon subgibbosa</i>	Round lake floater	SC		1
<i>Setophaga cerulea</i>	Cerulean warbler	T		1
<i>Setophaga citrina</i>	Hooded warbler	SC		1
<i>Terrapene carolina carolina</i>	Eastern box turtle	T		4
<i>Triphora trianthophora</i>	Nodding pogonia or three birds orchid	T		1
<i>Truncilla truncata</i>	Deertoe	SC		1
<i>Utterbackia imbecillis</i>	Paper pondshell	SC		1

**Number of Species: 18**

**Number of Occurrences: 31**

# Michigan Natural Features Inventory Information Request

---

## Natural Communities

Community Type	Count
Floodplain Forest	1
Great Lakes Marsh	2
Mesic Northern Forest	2
Open Dunes	2

**Number of Community Types: 4**

**Number of Occurrences: 7**

# Michigan Natural Features Inventory Information Request

---

## *Acris blanchardi*

### Blanchard's cricket frog

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G5                      **State Rank:** S2S3

---

**Last Observed Date:** 1996-06

---

**County:** Muskegon, Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
-------------------	----------------

T12NR18W	3, 4
----------	------

T13NR18W	34
----------	----

---

## *Atrytonopsis hianna*

### Dusted skipper

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G4G5                      **State Rank:** S3

---

**Last Observed Date:** 1976

---

**County:** Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
-------------------	----------------

T13NR17W	21
----------	----

---

# Michigan Natural Features Inventory Information Request

---

## *Cirsium pitcheri*

### Pitcher's thistle

---

Federal Status: LT      State Status: T      Global Rank: G3      State Rank: S3

---

Last Observed Date: 2012-06-21

---

County: Muskegon

Watershed: PERE MARQUETTE-WHITE, LAKE MICHIGAN

<u>Town Range</u>	<u>Section</u>
T12NR18W	3, 4, 9, 10, 15

---

## *Cirsium pitcheri*

### Pitcher's thistle

---

Federal Status: LT      State Status: T      Global Rank: G3      State Rank: S3

---

Last Observed Date: 2006-08-04

---

County: Oceana

Watershed: PERE MARQUETTE-WHITE, LAKE MICHIGAN

<u>Town Range</u>	<u>Section</u>
T13NR18W	28

---

## *Cistothorus palustris*

### Marsh wren

---

Federal Status:      State Status: SC      Global Rank: G5      State Rank: S3

---

Last Observed Date: 2005-05-26

---

County: Muskegon

Watershed: PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	21, 28

---

# Michigan Natural Features Inventory Information Request

---

## *Emydoidea blandingii*

### Blanding's turtle

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G4                      **State Rank:** S2S3

---

**Last Observed Date:** 2005-05-26

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	21

---

## *Emydoidea blandingii*

### Blanding's turtle

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G4                      **State Rank:** S2S3

---

**Last Observed Date:** 2021-06-10

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	13, 26

---

## *Erynnis persius persius*

### Persius dusky wing

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G5T1T3                      **State Rank:** S3

---

**Last Observed Date:** 1956

---

**County:** Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T13NR17W	21

---

# Michigan Natural Features Inventory Information Request

## *Floodplain Forest*

**Federal Status:**                      **State Status:**                      **Global Rank:** G3?                      **State Rank:** S3

**Last Observed Date:** 2010-07-23

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR16W	4, 5, 6, 7, 8, 9
T12NR17W	1, 11, 12, 13, 14

## *Great Lakes Marsh*

**Federal Status:**                      **State Status:**                      **Global Rank:** G2                      **State Rank:** S3

**Last Observed Date:** 1986

**County:** Muskegon, Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR18W	3, 4
T13NR18W	34

## *Great Lakes Marsh*

**Federal Status:**                      **State Status:**                      **Global Rank:** G2                      **State Rank:** S3

**Last Observed Date:** 1988-07-21

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	14, 15, 16, 21, 22, 23, 28

# Michigan Natural Features Inventory Information Request

---

## *Haliaeetus leucocephalus*

### Bald eagle

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S4

---

**Last Observed Date:** 2018

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
-------------------	----------------

T11NR18W	2
----------	---

T12NR17W	33
----------	----

T12NR18W	35
----------	----

---

## *Haliaeetus leucocephalus*

### Bald eagle

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S4

---

**Last Observed Date:** 2019

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
-------------------	----------------

T12NR17W	23
----------	----

---

# Michigan Natural Features Inventory Information Request

---

## *Haliaeetus leucocephalus*

### Bald eagle

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S4

---

**Last Observed Date:** 2017

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	33

---

## *Haliaeetus leucocephalus*

### Bald eagle

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S4

---

**Last Observed Date:** 2019

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	22

---

## *Ligumia recta*

### Black sandshell

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G4G5                      **State Rank:** S1?

---

**Last Observed Date:** 2004

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	22

---

# Michigan Natural Features Inventory Information Request

## *Mesic Northern Forest*

**Federal Status:**                      **State Status:**                      **Global Rank:** G4                      **State Rank:** S3

**Last Observed Date:** 1985-07-25

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR18W	35

## *Mesic Northern Forest*

**Federal Status:**                      **State Status:**                      **Global Rank:** G4                      **State Rank:** S3

**Last Observed Date:** 2010-07-22

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR18W	24

## *Necturus maculosus*

### Mudpuppy

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S3S4

**Last Observed Date:** 2013-08-21

**County:** Muskegon, Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR16W	3, 4, 5, 6, 7, 8, 9
T12NR17W	11, 14, 21, 22, 23
T13NR15W	20, 21, 29
T13NR16W	25, 36

# Michigan Natural Features Inventory Information Request

---

## *Open Dunes*

---

**Federal Status:**                      **State Status:**                      **Global Rank:** G3                      **State Rank:** S3

---

**Last Observed Date:** 1992-10-22

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE, LAKE MICHIGAN

<u>Town Range</u>	<u>Section</u>
T11NR18W	2

---

## *Open Dunes*

---

**Federal Status:**                      **State Status:**                      **Global Rank:** G3                      **State Rank:** S3

---

**Last Observed Date:** 2015-06-29

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR18W	13, 24

---

## *Pandion haliaetus*

### Osprey

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S4

---

**Last Observed Date:** 2022-06-01

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	22

---

# Michigan Natural Features Inventory Information Request

---

## *Plebejus samuelis*

### Karner blue

---

**Federal Status:** LE      **State Status:** T      **Global Rank:** G1G2      **State Rank:** S2

---

**Last Observed Date:** 2002-07-26

---

**County:** Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T13NR17W	28, 33

---

## *Plebejus samuelis*

### Karner blue

---

**Federal Status:** LE      **State Status:** T      **Global Rank:** G1G2      **State Rank:** S2

---

**Last Observed Date:** 2003-06-05

---

**County:** Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T13NR17W	27, 33, 34

---

## *Plebejus samuelis*

### Karner blue

---

**Federal Status:** LE      **State Status:** T      **Global Rank:** G1G2      **State Rank:** S2

---

**Last Observed Date:** 1956

---

**County:** Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T13NR17W	21

---

# Michigan Natural Features Inventory Information Request

---

## *Plebejus samuelis*

### Karner blue

---

**Federal Status:** LE      **State Status:** T      **Global Rank:** G1G2      **State Rank:** S2

---

**Last Observed Date:** 2013-08-01

---

**County:** Muskegon, Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR16W	4, 5, 6
T12NR17W	1
T13NR16W	10, 22, 23, 26, 27, 28, 29, 31, 32, 33, 34, 35
T13NR17W	25, 26, 27, 28, 33, 34, 36

---

## *Plebejus samuelis*

### Karner blue

---

**Federal Status:** LE      **State Status:** T      **Global Rank:** G1G2      **State Rank:** S2

---

**Last Observed Date:** 2003-07-29

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	26

---

# Michigan Natural Features Inventory Information Request

---

## *Plebejus samuelis*

### Karner blue

---

Federal Status: LE

State Status: T

Global Rank: G1G2

State Rank: S2

---

Last Observed Date: 2004-07-29

---

County: Muskegon

Watershed: PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	22, 23

---

## *Pyganodon subgibbosa*

### Round lake floater

---

Federal Status:

State Status: SC

Global Rank: G1Q

State Rank: S1

---

Last Observed Date: 1930

---

County: Muskegon

Watershed: PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR17W	5, 6, 7
T11NR18W	1, 2, 11, 12
T12NR17W	21, 28, 29, 31, 32, 33

---

# Michigan Natural Features Inventory Information Request

---

## *Setophaga cerulea*

### Cerulean warbler

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G4                      **State Rank:** S3

---

**Last Observed Date:** 1999-06

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR17W	7, 17, 18, 19
T11NR18W	13, 24

---

## *Setophaga citrina*

### Hooded warbler

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S3

---

**Last Observed Date:** 1999-06

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR17W	7, 17, 18, 19
T11NR18W	13, 24

---

# Michigan Natural Features Inventory Information Request

---

## *Terrapene carolina carolina*

### Eastern box turtle

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G5T5                      **State Rank:** S2S3

---

**Last Observed Date:** 2024-06-05

---

**County:** Muskegon, Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
-------------------	----------------

T12NR16W	6, 7
----------	------

T12NR17W	1, 12, 22
----------	-----------

T13NR16W	31
----------	----

---

## *Terrapene carolina carolina*

### Eastern box turtle

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G5T5                      **State Rank:** S2S3

---

**Last Observed Date:** 1978-07

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
-------------------	----------------

T11NR18W	1, 2
----------	------

T12NR18W	25, 26, 35, 36
----------	----------------

---

# Michigan Natural Features Inventory Information Request

---

## *Terrapene carolina carolina*

### Eastern box turtle

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G5T5                      **State Rank:** S2S3

---

**Last Observed Date:** 2020-06-08

---

**County:** Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T13NR18W	28

---

## *Terrapene carolina carolina*

### Eastern box turtle

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G5T5                      **State Rank:** S2S3

---

**Last Observed Date:** 2021-08-03

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	20

---

# Michigan Natural Features Inventory Information Request

## *Triphora trianthophora*

Nodding pogonia or three birds orchid

**Federal Status:**                      **State Status:** T                      **Global Rank:** G4?                      **State Rank:** S1

**Last Observed Date:** 1899

**County:** Muskegon, Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR16W	4, 5, 6, 7, 8, 17, 18, 19
T11NR17W	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
T11NR18W	1, 2, 11, 12, 13
T12NR16W	6, 7, 8, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32, 33
T12NR17W	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T12NR18W	12, 13, 14, 23, 24, 25, 26, 35, 36
T13NR17W	33, 34, 35

## *Truncilla truncata*

Deertoe

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S2S3

**Last Observed Date:** 2004

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR18W	1

# Michigan Natural Features Inventory Information Request

---

## *Utterbackia imbecillis*

### Paper pondshell

---

**Federal Status:**

**State Status:** SC

**Global Rank:** G5

**State Rank:** S2S3

---

**Last Observed Date:** 2004

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

**Town Range**

**Section**

T12NR17W

23

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# Michigan Natural Features Inventory Information Request

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## Federal Protection Status Code Definitions

LE = Listed endangered  
LT = Listed threatened  
LE/LT = Partly listed endangered and partly listed threatened  
PDL = Proposed delist  
E(S/A) = Endangered based on similarities/appearance  
PS = Partial status (federally listed in only part of its range)  
C = Species being considered for federal status

## State Protection Status Code Definitions

E = Endangered  
T = Threatened  
SC = Special concern  
X = Presumed extirpated (legally 'threatened' if rediscovered)

## Global Heritage Status Rank Definitions

The priority assigned by NatureServe 's national office for data collection and protection based upon the element's status throughout its entire world-wide range. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.

**G1** = Critically imperiled globally because of extreme rarity (5 or fewer occurrences range-wide or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.  
**G2** = Imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.  
**G3** = Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g. a single western state, a physiographic region in the East) or because of other factor(s) making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100.  
**G4** = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.  
**G5** = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.  
**GH** = Of historical occurrence throughout its range, i.e. formerly part of the established biota, with the expectation that it may be rediscovered (e.g. Bachman's Warbler).  
**GU** = Possibly in peril range-wide, but status uncertain; need more information.  
**GX** = Believed to be extinct throughout its range (e.g. Passenger Pigeon with virtually no likelihood that it will be rediscovered).  
**G?** = Incomplete data  
**Q** = Taxonomy uncertain  
**T** = Subspecies  
**U** = Unmappable through out the global geographic extent  
**?** = Questionable

## Subnational Heritage Status Rank Definitions

The priority assigned by the Michigan Natural Features Inventory for data collection and protection based upon the element's status within the state. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.

**S1** = Critically imperiled in the state because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation in the state.  
**S2** = Imperiled in state because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extirpation from the state.  
**S3** = Rare or uncommon in state (on the order of 21 to 100 occurrences).  
**S4** = Apparently secure in state, with many occurrences.  
**S5** = Demonstrably secure in state and essentially ineradicable under present conditions.  
**SA** = Accidental in state, including species (usually birds or butterflies) recorded once or twice or only at very great intervals, hundreds or even thousands of miles outside their usual range.  
**SE** = An exotic established in the state; may be native elsewhere in North America (e.g. house finch or catalpa in eastern states).  
**SH** = Of historical occurrence in state and suspected to be still extant.  
**SN** = Regularly occurring, usually migratory and typically nonbreeding species.  
**SR** = Reported from state, but without persuasive documentation which would provide a basis for either accepting or rejecting the report.  
**SRF** = Reported falsely (in error) from state but this error persisting in the literature.  
**SU** = Possibly in peril in state, but status uncertain; need more information.  
**SX** = Apparently extirpated from state.

## **ATTACHMENT B**

# **Michigan Natural Features Inventory 2025 Receipt**

# Michigan Natural Features Inventory Information Request

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**Requestor:** Adam Holven

**Project Name:** Lakeside Solar, White River Township, Muskegon County, MI

**Project Location:** White River Township, Muskegon County, MI

**Date Created:** 05/14/2025

## Use of Data

By acceptance of the information services made available through MNFI the recipient understands that access to the information is provided for primary use only. MNFI requests that the user respect the confidential and sensitive nature of the information. There should be no redistribution of the information. Indiscriminate distribution of information regarding locations of many rare species represents a threat to their protection. Additionally, since the information is constantly being updated MNFI requests that any information service provided by MNFI is destroyed upon completion of the primary use. This information is valid for one year only.

The recipient(s) of the information understand that state endangered and threatened species are protected under state law (Act 451 of 1994, the Natural Resources and Environmental Protection Act, Part 365, Endangered Species Protection). Any questions, observations, new findings, violations or clearance of project activities should be conducted with the Michigan Department of Natural Resources, Wildlife Division. Contact the Endangered Species Coordinator at (517) 284-9453. The recipient(s) of the information understand that federally endangered and threatened species are protected under federal law (Endangered Species Act of 1973). Any questions, observations, new findings, violations or clearance of project activities should be conducted with the U.S. Fish and Wildlife Service in East Lansing at (517) 351-2555. Recipients of the information are responsible for ensuring the protection of protected species and obtaining proper clearance before project activities begin.

## Description of Data

The species in this report are listed alphabetically by scientific name. Each record from the database is listed individually. Therefore you may see multiple listings for the same species. The locational and survey date information may be the only differentiating factors when looking at multiple occurrences for a given species. Heritage methodology is followed when entering species occurrences into the MNFI database. Detailed information on heritage methodology can be obtained from NatureServe's website at <http://www.natureserve.org>. Detailed information on the species listed in this report can be found in abstracts and the rare species explorer on the MNFI website at <https://mnfi.anr.msu.edu>.

The MNFI database is an ongoing and continuously updated information base. The database is the only comprehensive single source of existing information on Michigan's endangered, threatened, or otherwise significant plant and animal species, natural plant communities, and other natural features. This database cannot provide a definitive statement on the presence, absence, or condition of the natural features in any given locality, since most sites have not been specifically or thoroughly surveyed for their occurrence. Some of the element records are historical. While this historical information may not be important for regulatory purposes, it is important for management and restoration purposes and for scientific use. Furthermore, plant and animal populations and natural communities change with time. Therefore, the information services provided should not be regarded as a complete statement on the occurrence of special natural features of the area in question. In many cases the information may require the interpretation of a trained scientist.

Any comments or questions can be directed to MNFI via our e-mail at [mnfi@msu.edu](mailto:mnfi@msu.edu) or by calling 517-284-6200.

# Michigan Natural Features Inventory Information Request

## Plants and Animals

Scientific Name	Common Name	State Status	Federal Status	Count
<i>Acris blanchardi</i>	Blanchard's cricket frog	T		1
<i>Atrytonopsis hianna</i>	Dusted skipper	SC		1
<i>Cirsium pitcheri</i>	Pitcher's thistle	T	LT	2
<i>Cistothorus palustris</i>	Marsh wren	SC		1
<i>Emydoidea blandingii</i>	Blanding's turtle	SC		2
<i>Erynnis persius persius</i>	Persius dusky wing	T		1
<i>Haliaeetus leucocephalus</i>	Bald eagle	SC		4
<i>Ligumia recta</i>	Black sandshell	T		1
<i>Necturus maculosus</i>	Mudpuppy	SC		1
<i>Pandion haliaetus</i>	Osprey	SC		1
<i>Plebejus samuelis</i>	Karner blue	T	LE	6
<i>Pyganodon subgibbosa</i>	Round lake floater	SC		1
<i>Setophaga cerulea</i>	Cerulean warbler	T		1
<i>Setophaga citrina</i>	Hooded warbler	SC		1
<i>Terrapene carolina carolina</i>	Eastern box turtle	T		4
<i>Triphora trianthophora</i>	Nodding pogonia or three birds orchid	T		1
<i>Truncilla truncata</i>	Deertoe	SC		1
<i>Utterbackia imbecillis</i>	Paper pondshell	SC		1

**Number of Species: 18**

**Number of Occurrences: 31**

# Michigan Natural Features Inventory Information Request

---

## Natural Communities

Community Type	Count
Floodplain Forest	1
Great Lakes Marsh	2
Mesic Northern Forest	2
Open Dunes	2

**Number of Community Types: 4**

**Number of Occurrences: 7**

# Michigan Natural Features Inventory Information Request

---

## *Acris blanchardi*

### Blanchard's cricket frog

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G5                      **State Rank:** S2S3

---

**Last Observed Date:** 1996-06

---

**County:** Muskegon, Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR18W	3, 4
T13NR18W	34

---

## *Atrytonopsis hianna*

### Dusted skipper

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G4G5                      **State Rank:** S3

---

**Last Observed Date:** 1976

---

**County:** Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T13NR17W	21

---

# Michigan Natural Features Inventory Information Request

---

## *Cirsium pitcheri*

### Pitcher's thistle

---

**Federal Status:** LT      **State Status:** T      **Global Rank:** G3      **State Rank:** S3

---

**Last Observed Date:** 2012-06-21

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE, LAKE MICHIGAN

<u>Town Range</u>	<u>Section</u>
T12NR18W	3, 4, 9, 10, 15

---

## *Cirsium pitcheri*

### Pitcher's thistle

---

**Federal Status:** LT      **State Status:** T      **Global Rank:** G3      **State Rank:** S3

---

**Last Observed Date:** 2006-08-04

---

**County:** Oceana

**Watershed:** PERE MARQUETTE-WHITE, LAKE MICHIGAN

<u>Town Range</u>	<u>Section</u>
T13NR18W	28

---

## *Cistothorus palustris*

### Marsh wren

---

**Federal Status:**      **State Status:** SC      **Global Rank:** G5      **State Rank:** S3

---

**Last Observed Date:** 2005-05-26

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	21, 28

---

# Michigan Natural Features Inventory Information Request

---

## *Emydoidea blandingii*

### Blanding's turtle

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G4                      **State Rank:** S2S3

---

**Last Observed Date:** 2005-05-26

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	21

---

## *Emydoidea blandingii*

### Blanding's turtle

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G4                      **State Rank:** S2S3

---

**Last Observed Date:** 2021-06-10

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	13, 26

---

## *Erynnis persius persius*

### Persius dusky wing

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G5T1T3                      **State Rank:** S3

---

**Last Observed Date:** 1956

---

**County:** Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T13NR17W	21

---

# Michigan Natural Features Inventory Information Request

## *Floodplain Forest*

**Federal Status:**                      **State Status:**                      **Global Rank:** G3?                      **State Rank:** S3

**Last Observed Date:** 2010-07-23

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR16W	4, 5, 6, 7, 8, 9
T12NR17W	1, 11, 12, 13, 14

## *Great Lakes Marsh*

**Federal Status:**                      **State Status:**                      **Global Rank:** G2                      **State Rank:** S3

**Last Observed Date:** 1986

**County:** Muskegon, Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR18W	3, 4
T13NR18W	34

## *Great Lakes Marsh*

**Federal Status:**                      **State Status:**                      **Global Rank:** G2                      **State Rank:** S3

**Last Observed Date:** 1988-07-21

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	14, 15, 16, 21, 22, 23, 28

# Michigan Natural Features Inventory Information Request

---

## *Haliaeetus leucocephalus*

### Bald eagle

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S4

---

**Last Observed Date:** 2018

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
-------------------	----------------

T11NR18W	2
----------	---

T12NR17W	33
----------	----

T12NR18W	35
----------	----

---

## *Haliaeetus leucocephalus*

### Bald eagle

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S4

---

**Last Observed Date:** 2019

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
-------------------	----------------

T12NR17W	23
----------	----

---

# Michigan Natural Features Inventory Information Request

---

## *Haliaeetus leucocephalus*

### Bald eagle

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S4

---

**Last Observed Date:** 2017

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	33

---

## *Haliaeetus leucocephalus*

### Bald eagle

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S4

---

**Last Observed Date:** 2019

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	22

---

## *Ligumia recta*

### Black sandshell

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G4G5                      **State Rank:** S1?

---

**Last Observed Date:** 2004

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	22

---

# Michigan Natural Features Inventory Information Request

## *Mesic Northern Forest*

**Federal Status:**                      **State Status:**                      **Global Rank:** G4                      **State Rank:** S3

**Last Observed Date:** 1985-07-25

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR18W	35

## *Mesic Northern Forest*

**Federal Status:**                      **State Status:**                      **Global Rank:** G4                      **State Rank:** S3

**Last Observed Date:** 2010-07-22

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR18W	24

## *Necturus maculosus*

### Mudpuppy

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S3S4

**Last Observed Date:** 2013-08-21

**County:** Muskegon, Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR16W	3, 4, 5, 6, 7, 8, 9
T12NR17W	11, 14, 21, 22, 23
T13NR15W	20, 21, 29
T13NR16W	25, 36

# Michigan Natural Features Inventory Information Request

---

## *Open Dunes*

---

**Federal Status:**                      **State Status:**                      **Global Rank: G3**                      **State Rank: S3**

---

**Last Observed Date:** 1992-10-22

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE, LAKE MICHIGAN

<u>Town Range</u>	<u>Section</u>
T11NR18W	2

---

## *Open Dunes*

---

**Federal Status:**                      **State Status:**                      **Global Rank: G3**                      **State Rank: S3**

---

**Last Observed Date:** 2015-06-29

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR18W	13, 24

---

## *Pandion haliaetus*

### Osprey

---

**Federal Status:**                      **State Status: SC**                      **Global Rank: G5**                      **State Rank: S4**

---

**Last Observed Date:** 2022-06-01

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	22

---

# Michigan Natural Features Inventory Information Request

---

## *Plebejus samuelis*

### Karner blue

---

**Federal Status:** LE      **State Status:** T      **Global Rank:** G1G2      **State Rank:** S2

---

**Last Observed Date:** 2002-07-26

---

**County:** Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T13NR17W	28, 33

---

## *Plebejus samuelis*

### Karner blue

---

**Federal Status:** LE      **State Status:** T      **Global Rank:** G1G2      **State Rank:** S2

---

**Last Observed Date:** 2003-06-05

---

**County:** Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T13NR17W	27, 33, 34

---

## *Plebejus samuelis*

### Karner blue

---

**Federal Status:** LE      **State Status:** T      **Global Rank:** G1G2      **State Rank:** S2

---

**Last Observed Date:** 1956

---

**County:** Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T13NR17W	21

---

# Michigan Natural Features Inventory Information Request

---

## *Plebejus samuelis*

### Karner blue

---

**Federal Status:** LE      **State Status:** T      **Global Rank:** G1G2      **State Rank:** S2

---

**Last Observed Date:** 2013-08-01

---

**County:** Muskegon, Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR16W	4, 5, 6
T12NR17W	1
T13NR16W	10, 22, 23, 26, 27, 28, 29, 31, 32, 33, 34, 35
T13NR17W	25, 26, 27, 28, 33, 34, 36

---

## *Plebejus samuelis*

### Karner blue

---

**Federal Status:** LE      **State Status:** T      **Global Rank:** G1G2      **State Rank:** S2

---

**Last Observed Date:** 2003-07-29

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	26

---

# Michigan Natural Features Inventory Information Request

---

## *Plebejus samuelis*

### Karner blue

---

Federal Status: LE

State Status: T

Global Rank: G1G2

State Rank: S2

---

Last Observed Date: 2004-07-29

---

County: Muskegon

Watershed: PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	22, 23

---

## *Pyganodon subgibbosa*

### Round lake floater

---

Federal Status:

State Status: SC

Global Rank: G1Q

State Rank: S1

---

Last Observed Date: 1930

---

County: Muskegon

Watershed: PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR17W	5, 6, 7
T11NR18W	1, 2, 11, 12
T12NR17W	21, 28, 29, 31, 32, 33

---

# Michigan Natural Features Inventory Information Request

---

## *Setophaga cerulea*

### Cerulean warbler

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G4                      **State Rank:** S3

---

**Last Observed Date:** 1999-06

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR17W	7, 17, 18, 19
T11NR18W	13, 24

---

## *Setophaga citrina*

### Hooded warbler

---

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S3

---

**Last Observed Date:** 1999-06

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR17W	7, 17, 18, 19
T11NR18W	13, 24

---

# Michigan Natural Features Inventory Information Request

---

## *Terrapene carolina carolina*

### Eastern box turtle

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G5T5                      **State Rank:** S2S3

---

**Last Observed Date:** 2024-06-05

---

**County:** Muskegon, Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
-------------------	----------------

T12NR16W	6, 7
----------	------

T12NR17W	1, 12, 22
----------	-----------

T13NR16W	31
----------	----

---

## *Terrapene carolina carolina*

### Eastern box turtle

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G5T5                      **State Rank:** S2S3

---

**Last Observed Date:** 1978-07

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
-------------------	----------------

T11NR18W	1, 2
----------	------

T12NR18W	25, 26, 35, 36
----------	----------------

---

# Michigan Natural Features Inventory Information Request

---

## *Terrapene carolina carolina*

### Eastern box turtle

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G5T5                      **State Rank:** S2S3

---

**Last Observed Date:** 2020-06-08

---

**County:** Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T13NR18W	28

---

## *Terrapene carolina carolina*

### Eastern box turtle

---

**Federal Status:**                      **State Status:** T                      **Global Rank:** G5T5                      **State Rank:** S2S3

---

**Last Observed Date:** 2021-08-03

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T12NR17W	20

---

# Michigan Natural Features Inventory Information Request

## *Triphora trianthophora*

Nodding pogonia or three birds orchid

**Federal Status:**                      **State Status:** T                      **Global Rank:** G4?                      **State Rank:** S1

**Last Observed Date:** 1899

**County:** Muskegon, Oceana

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR16W	4, 5, 6, 7, 8, 17, 18, 19
T11NR17W	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
T11NR18W	1, 2, 11, 12, 13
T12NR16W	6, 7, 8, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32, 33
T12NR17W	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
T12NR18W	12, 13, 14, 23, 24, 25, 26, 35, 36
T13NR17W	33, 34, 35

## *Truncilla truncata*

Deertoe

**Federal Status:**                      **State Status:** SC                      **Global Rank:** G5                      **State Rank:** S2S3

**Last Observed Date:** 2004

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

<u>Town Range</u>	<u>Section</u>
T11NR18W	1

# Michigan Natural Features Inventory Information Request

---

## *Utterbackia imbecillis*

### Paper pondshell

---

**Federal Status:**

**State Status:** SC

**Global Rank:** G5

**State Rank:** S2S3

---

**Last Observed Date:** 2004

---

**County:** Muskegon

**Watershed:** PERE MARQUETTE-WHITE

**Town Range**

**Section**

T12NR17W

23

---

# Michigan Natural Features Inventory Information Request

---

## Federal Protection Status Code Definitions

LE = Listed endangered  
LT = Listed threatened  
LE/LT = Partly listed endangered and partly listed threatened  
PDL = Proposed delist  
E(S/A) = Endangered based on similarities/appearance  
PS = Partial status (federally listed in only part of its range)  
C = Species being considered for federal status

## State Protection Status Code Definitions

E = Endangered  
T = Threatened  
SC = Special concern  
X = Presumed extirpated (legally 'threatened' if rediscovered)

## Global Heritage Status Rank Definitions

The priority assigned by NatureServe 's national office for data collection and protection based upon the element's status throughout its entire world-wide range. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.

**G1** = Critically imperiled globally because of extreme rarity (5 or fewer occurrences range-wide or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.  
**G2** = Imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.  
**G3** = Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g. a single western state, a physiographic region in the East) or because of other factor(s) making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100.  
**G4** = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.  
**G5** = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.  
**GH** = Of historical occurrence throughout its range, i.e. formerly part of the established biota, with the expectation that it may be rediscovered (e.g. Bachman's Warbler).  
**GU** = Possibly in peril range-wide, but status uncertain; need more information.  
**GX** = Believed to be extinct throughout its range (e.g. Passenger Pigeon with virtually no likelihood that it will be rediscovered).  
**G?** = Incomplete data  
**Q** = Taxonomy uncertain  
**T** = Subspecies  
**U** = Unmappable through out the global geographic extent  
**?** = Questionable

## Subnational Heritage Status Rank Definitions

The priority assigned by the Michigan Natural Features Inventory for data collection and protection based upon the element's status within the state. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.

**S1** = Critically imperiled in the state because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation in the state.  
**S2** = Imperiled in state because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extirpation from the state.  
**S3** = Rare or uncommon in state (on the order of 21 to 100 occurrences).  
**S4** = Apparently secure in state, with many occurrences.  
**S5** = Demonstrably secure in state and essentially ineradicable under present conditions.  
**SA** = Accidental in state, including species (usually birds or butterflies) recorded once or twice or only at very great intervals, hundreds or even thousands of miles outside their usual range.  
**SE** = An exotic established in the state; may be native elsewhere in North America (e.g. house finch or catalpa in eastern states).  
**SH** = Of historical occurrence in state and suspected to be still extant.  
**SN** = Regularly occurring, usually migratory and typically nonbreeding species.  
**SR** = Reported from state, but without persuasive documentation which would provide a basis for either accepting or rejecting the report.  
**SRF** = Reported falsely (in error) from state but this error persisting in the literature.  
**SU** = Possibly in peril in state, but status uncertain; need more information.  
**SX** = Apparently extirpated from state.

**ATTACHMENT C**

**Michigan State Historic Preservation Office  
Coordination**

**From:** [Surface-Evans, Sarah \(LEO\)](#)  
**To:** [Holven, Adam](#)  
**Subject:** RE: Site 20MU0049 Update  
**Date:** Friday, January 27, 2023 10:29:19 AM  
**Attachments:** [image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)

**CAUTION:** This email originated from an external sender. Verify the source before opening links or attachments.

Electronic versions are fine. I would submit it through the Section 106 portal if it is a survey for an application. Please be sure to include site forms as an appendix.



**Sarah Surface-Evans, Ph.D., RPA**

Senior Archaeologist  
**State Historic Preservation Office**  
300 N. Washington Square  
Lansing, MI 48913  
Office: 517.282.7959  
[michigan.gov/shpo](http://michigan.gov/shpo)

Get the latest news with the [SHPO](#) and [MEDC Community Development](#) newsletters!

**From:** Holven, Adam <[adam.holven@tetrattech.com](mailto:adam.holven@tetrattech.com)>  
**Sent:** Friday, January 27, 2023 11:27 AM  
**To:** Surface-Evans, Sarah (LEO) <[SurfaceEvansS1@michigan.gov](mailto:SurfaceEvansS1@michigan.gov)>  
**Cc:** Gerber, Creighton <[Creighton.Gerber@tetrattech.com](mailto:Creighton.Gerber@tetrattech.com)>  
**Subject:** RE: Site 20MU0049 Update

**CAUTION: This is an External email. Please send suspicious emails to [abuse@michigan.gov](mailto:abuse@michigan.gov)**

Hi Sarah,

Thanks for sending those links and the template.

The client approved sending the report to your office. Do you prefer an electronic copy or hard copy?

Adam

**From:** Surface-Evans, Sarah (LEO) <[SurfaceEvansS1@michigan.gov](mailto:SurfaceEvansS1@michigan.gov)>  
**Sent:** Friday, January 27, 2023 10:21 AM  
**To:** Holven, Adam <[adam.holven@tetrattech.com](mailto:adam.holven@tetrattech.com)>  
**Cc:** Gerber, Creighton <[Creighton.Gerber@tetrattech.com](mailto:Creighton.Gerber@tetrattech.com)>  
**Subject:** RE: Site 20MU0049 Update

⚠ **CAUTION:** This email originated from an external sender. Verify the source before opening links or attachments. ⚠

Dear Adam,

Here are some links to Michigan Burial and Antiquities laws:

- CEMETERY OR BURIAL GROUNDS Act 215 of 1937 [mcl-chap128.pdf \(mi.gov\)](#)
- CEMETERY REGULATION ACT Act 251 of 1968 [mcl-Act-251-of-1968.pdf \(mi.gov\)](#)
- NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT (EXCERPT) Act 451 of 1994 ABORIGINAL RECORDS AND ANTIQUITIES AND ABANDONED PROPERTY PART 761 ABORIGINAL RECORDS AND ANTIQUITIES [mcl-451-1994-III-4-2-ABORIGINAL-RECORDS-AND-ANTIQUITIES-AND-ABANDONED-PROPERTY.pdf \(mi.gov\)](#)
- Mich. Admin. Code R. 325.8051 [Mich. Admin. Code R. 325.8051 - Discovery of remains: notification of police required; exception | State Regulations | US Law | LII / Legal Information Institute \(cornell.edu\)](#)
  - AG opinion [Opinion #6585 \(state.mi.us\)](#)

I've also attached a template for an unanticipated discoveries plan that I send to agencies requesting assistance.

Best,  
Sarah



**Sarah Surface-Evans, Ph.D., RPA**

Senior Archaeologist  
**State Historic Preservation Office**  
300 N. Washington Square  
Lansing, MI 48913  
Office: 517.282.7959  
[michigan.gov/shpo](http://michigan.gov/shpo)

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---

**From:** Holven, Adam <[adam.holven@tetrattech.com](mailto:adam.holven@tetrattech.com)>  
**Sent:** Friday, January 27, 2023 9:49 AM  
**To:** Surface-Evans, Sarah (LEO) <[SurfaceEvansS1@michigan.gov](mailto:SurfaceEvansS1@michigan.gov)>  
**Cc:** Gerber, Creighton <[Creighton.Gerber@tetrattech.com](mailto:Creighton.Gerber@tetrattech.com)>  
**Subject:** RE: Site 20MU0049 Update

**CAUTION: This is an External email. Please send suspicious emails to [abuse@michigan.gov](mailto:abuse@michigan.gov)**

Hi Sarah,

I am working on an unanticipated discoveries plan to accompany the cultural report describing our survey efforts for 20MU0049 and the surrounding area and I am having some trouble finding any

state laws describing the protection of unmarked burials.

Could you point me in the direction of the laws in Michigan to protect unmarked graves?

Thanks,  
Adam

**Adam C. Holven** | Senior Archaeologist/Project Manager  
Direct: 612.643.2237 | Main: 612.643.2200 | Fax: 612.643.2201  
[adam.holven@tetrattech.com](mailto:adam.holven@tetrattech.com)

Tetra Tech  
2001 Killebrew Drive, Suite 141 | Bloomington, Minnesota 55425 | [www.tetrattech.com](http://www.tetrattech.com)  
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**From:** Gerber, Creighton <[Creighton.Gerber@tetrattech.com](mailto:Creighton.Gerber@tetrattech.com)>  
**Sent:** Tuesday, January 17, 2023 1:16 PM  
**To:** Surface-Evans, Sarah (LEO) <[SurfaceEvansS1@michigan.gov](mailto:SurfaceEvansS1@michigan.gov)>  
**Cc:** Holven, Adam <[adam.holven@tetrattech.com](mailto:adam.holven@tetrattech.com)>  
**Subject:** RE: Site 20MU0049 Update



Thank you for the quick response! We will make sure to submit an updated site form with the report.

Creighton

**Creighton Gerber** | Archaeologist  
Direct +1 (612) 643-2209 | Mobile +1 (402) 679-8099 | Fax +1 (612) 643-2201 | [creighton.gerber@tetrattech.com](mailto:creighton.gerber@tetrattech.com)  
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**From:** Surface-Evans, Sarah (LEO) <[SurfaceEvansS1@michigan.gov](mailto:SurfaceEvansS1@michigan.gov)>  
**Sent:** Tuesday, January 17, 2023 1:11 PM  
**To:** Gerber, Creighton <[Creighton.Gerber@tetrattech.com](mailto:Creighton.Gerber@tetrattech.com)>  
**Subject:** RE: Site 20MU0049 Update

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Dear Creighton,

Normally we would not remove a site altogether, but we can update the site record to indicate the boundaries of where you surveyed and the results. Please send in a revised site form with your report.

Best,

Sarah



**Sarah Surface-Evans, Ph.D., RPA**

Senior Archaeologist

**State Historic Preservation Office**

300 N. Washington Square

Lansing, MI 48913

Office: 517.282.7959

[michigan.gov/shpo](http://michigan.gov/shpo)

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**From:** Gerber, Creighton <[Creighton.Gerber@tetrattech.com](mailto:Creighton.Gerber@tetrattech.com)>

**Sent:** Tuesday, January 17, 2023 1:54 PM

**To:** Surface-Evans, Sarah (LEO) <[SurfaceEvansS1@michigan.gov](mailto:SurfaceEvansS1@michigan.gov)>

**Cc:** Holven, Adam <[adam.holven@tetrattech.com](mailto:adam.holven@tetrattech.com)>

**Subject:** Site 20MU0049 Update

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Hello,

I work with Tetra Tech and we completed an archaeological survey for Lakeside Solar in Muskegon County. As a part of the investigation, we evaluated the reported location of Site 20MU0049, which was based on historical references to a 17<sup>th</sup> Century Potawatomi village. Based on our evaluation, the reported location does not match the historical references and we did not identify any archaeological evidence of the village site within the reported boundary during our pedestrian survey. Additional survey in the area did not identify any archaeological evidence indicative of a village site. It is our opinion that the site was likely incorrectly mapped based on the historical references and should be removed.

Let me know if SHPO would concur with this evaluation, if a site form update will be needed, or if there is any other context you need. We can submit a copy of the report when it is completed.

Thank you,  
Creighton

**Creighton Gerber** | Archaeologist

Direct +1 (612) 643-2209 | Mobile +1 (402) 679-8099 | Fax +1 (612) 643-2201 | [creighton.gerber@tetrattech.com](mailto:creighton.gerber@tetrattech.com)

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## **Unanticipated Discoveries Plan**

### **Purpose**

This document outlines the procedures to prepare for and address the unanticipated discovery of historic properties or human remains. It provides direction regarding the proper procedures to follow in the event that unanticipated cultural materials or human remains are encountered during construction. An unanticipated discovery can result when previously undocumented or unknown historic properties are discovered during the course of projects.

Cultural materials include human-made objects (both pre-contact and historic period) and features (e.g., foundation walls, hearths, middens, or other remnants of cultural activity) that are part of an archaeological site. Examples of cultural materials include:

- An accumulation of shell, burned rocks, or other food related materials,
- Bones or small pieces of bone,
- An area of charcoal or very dark stained soil with artifacts,
- Stone tools or waste flakes (i.e., an arrowhead, or stone chips),
- Clusters of tin cans or bottles,
- Logging or agricultural equipment that appears to be older than 50 years,
- Buried railroad tracks, decking, or other industrial materials.

Human remains are physical remains of a human body or bodies, including, but not limited to, bones, teeth, hair, ashes, and preserved soft tissues (mummified or otherwise preserved) of an individual. Remains may be articulated or disarticulated bones or teeth. Any human skeletal remains, regardless of antiquity or ethnic origin, will at all times be treated with dignity and respect.

### **Procedures for Archaeological Discoveries**

- 1) STOP WORK. If any employee, contractor, or subcontractor believes that he or she has uncovered cultural materials relating to an archaeological site at any point in the project, all work at and adjacent to the discovery must stop. The discovery location should be secured at all times. Minimize movement of vehicles and equipment in area immediately surrounding the discovery.
- 2) CONTACT. If the discovery does not appear to be human remains, the applicant will contact AGENCY and AGENCY will notify the SHPO/THPO of the discovery and the possible actions within two business days of discovery if the discovery occurs Monday through Friday. If the discovery occurs during a weekend or Federal holiday, AGENCY will notify the SHPO/THPO on the first working day after the weekend and/or holiday. The SHPO/THPO will respond within 48 hours of the notification or on the first working day if preceded by a weekend or holiday. AGENCY will take into account the SHPO's/THPO's recommendations and advise the Applicant to carry out appropriate and specific actions.

- 3) EVALUATE. Archaeological discoveries will be identified and evaluated by a qualified professional who shall meet, at a minimum, the Secretary of Interior's Professional Qualification Standards (44 FR 44738-9) for archeologists. The professional archaeologist will examine the location of the discovery. All work to evaluate significance and Project effects will be confined to the Project's potential area of impact. The costs of such professional services will generally be the responsibility of the Applicant.
  - a) If the archaeologist determines that the discovery is not a cultural resource, the archaeologist will immediately advise AGENCY in writing and will notify the SHPO/THPO of their findings.
  - b) If the archaeologist determines that the discovery is a cultural resource, the archaeologist will immediately advise AGENCY and AGENCY will notify the SHPO/THPO. The SHPO will assign an Archaeological Site Number to the discovery.
    - i) If the resource is not significant, the archaeologist will document the discovery in a report (including photographs of the discovery site). The report must also include a completed site form for the discovery and an explanation of why they believe the resource is not significant. The archaeologist will formally request permission from AGENCY and SHPO/THPO for construction to recommence.
    - ii) SHPO and identified tribal representatives will be invited to observe the implementation of any proposed work.
    - iii) If the resource is believed to be significant, the archaeologist will document the discovery in a report (including photographs of the discovery site). The report must also include a completed site form for the discovery and an explanation of why they believe the resource is significant and a proposal for mitigation or data recovery. Then based on this information, AGENCY and SHPO/THPO will consider mitigation efforts.
  
- 4) MITIGATE. For resources that are deemed significant, AGENCY and its Applicant will consult with the SHPO/THPO on measures to avoid further impacts to the discovery. If the SHPO/THPO does not object to AGENCY's recommendations, AGENCY will require the Applicant to modify the project design plans to implement any recommendations. If the SHPO/THPO objects to the recommendations, AGENCY and the SHPO/THPO will consult further to resolve the objection through actions including, but not limited to, identifying project alternatives that may result in the undertaking having no adverse effect on historic properties. The costs of such recovery and recordation will generally be the responsibility of the Applicant.
  - a) When an Applicant's project cannot be modified and will have adverse effects on an archaeological property, AGENCY may treat the adverse effect by providing for the recovery of significant information through archaeological data recovery or other scientific means. To accomplish this objective, AGENCY will follow the Council's "Recommended Approach for Consultation on Recovery of Significant Information from Archaeological Sites" published in the Federal Register (64 FR 27085, May 18, 1999); and consult with the other consulting parties to prepare a data recovery plan, including material and record curation provisions. A report of data recovery efforts must be completed and submitted to the SHPO/THPO for review.

- b) For sites where AGENCY determines other treatment measures are appropriate, AGENCY will consult further with the other consulting parties to develop an appropriate approach to resolving the adverse effects.

### **Procedures for the discovery of human skeletal materials and associated funerary items**

1. STOP WORK. If any employee, contractor, or subcontractor believes that he or she has uncovered skeletal remains at any point in the project, all work adjacent to the discovery must stop. The discovery location should be secured at all times. Minimize movement of vehicles and equipment in area immediately surrounding the discovery.
2. CONTACT. Notify the appropriate local law enforcement agency and AGENCY immediately. Law enforcement will then determine if the remains are human, and whether the discovery constitutes a crime scene.
  - a. If the police determine that human remains represent evidence of a crime or missing person, they will complete their investigation.
  - b. If skeletal remains are determined to be non-human and there is no archaeological association, then AGENCY will notify SHPO/THPO and work can proceed.
  - c. If the police determine that human remains do not represent evidence of a crime or missing person, but an archaeological burial site, then AGENCY will notify SHPO/THPO and in consultation with the SHPO/THPO a recovery plan will be developed. In most cases, it is preferred that burial sites be preserved, adequately documented, and maintained in place. If this is not possible, the remains and any associated materials would need to be moved for their protection. The following sequence of steps will be employed if it is not possible to preserve and maintain an inadvertently discovered burial in place:
3. DOCUMENT. A qualified archaeologist experienced in human remains recovery shall document and recover the remains and any related materials that may be present. Archaeological expertise is important in documenting the discovery context and evaluating whether the remains are isolated or if additional remains may be immediately present. Archaeological recovery may be done under the auspices of law enforcement. If law enforcement chooses not to be involved, a permit for disinterment must be obtained from the local Department of Public Health, or through a court order.
  - a. Documentation and recovery shall be respectful and conducted out of public view, to the extent possible.
  - b. As soon as possible, the remains shall be examined by a physical anthropologist using standard non-invasive methods and procedures to create a basic biological profile and estimate ethnicity. Known or suspected Native American Ancestors or other materials subject to NAGPRA will not be moved, touched, or further disturbed after discovery until completion of Tribal consultation or emergent circumstances arise.
  - c. If it can be determined immediately that a discovery is, or has the potential to be, a Native American Ancestor and/or other materials subject to NAGPRA (i.e., associated or unassociated funerary objects, sacred objects, and objects of cultural patrimony), the THPOs will be notified within 48 hours of discovery and potential identification. Tribal notification and consultation will be coordinated by AGENCY and SHPO.

- d. After notification and initial consultation, consulting Tribes may request that all federally recognized Tribes likely to be culturally affiliated with the discovery be notified in writing by mail or email and further consultation initiated regarding the cultural affiliation, care, handling, excavation (if necessary), and/or disposition per NAGPRA.
  - e. Accommodations will be made for traditional or ceremonial practices in association with discoveries. Consulting Tribes will be afforded opportunities to employ proper traditional cultural practices and treatments during periods of non-Tribal holding of discoveries.
  - f. Photographs shall not be taken, except when necessary for identification and documentation. Tribes may request that any photographs of Native American Ancestors or other materials subject to NAGPRA be destroyed or repatriated at the end of the project.
  - g. Pending consultations, documentation of the discovery will include a written description, mapping and sketching, and precise GPS coordinates. This documentation will be curated with other project records and not be published or made publicly available in any way.
  - h. To ensure the protection, preservation, and proper respectful treatment of any discovered materials, pursuant to applicable law, the nature and location of any discovery shall remain confidential as best as reasonably possible given the circumstances and location. Only those persons and entities identified in this plan shall be notified of the discovery or given information about the discovery. AGENCY and related contractors will ensure all staff and consulting personnel are appropriately trained for their respective roles in implementing this plan.
  - i. The permanent care of Native American Ancestors and materials subject to NAGPRA will be determined by the appropriate Tribe or Tribes in consultation with the SHPO.
4. REPORTING. Draft and final archaeological reports, with related physical anthropological reports and law enforcement case documentation appended, will be submitted to AGENCY, SHPO, and consulting THPOs.



---

**EXTERNAL: FW: Confirmation - Michigan State Historic Preservation Office Project Review Submissions**

---

**From** Sophia Gilleland <sgilleland@geronimopower.com>  
**Date** Mon 8/4/2025 8:04 AM  
**To** Ken Leister <ken.leister@merjent.com>; Michelle Cohen <michelle.cohen@merjent.com>  
**Cc** Monika Davis <monika.davis@merjent.com>; Amber Miller <amiller@geronimopower.com>; Kendra Harrington <kharrington@geronimopower.com>

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**Sophia Gilleland**

Permitting Associate

952.988.9000

612.504.3307

sgilleland@geronimopower.com

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**From:** Holven, Adam <adam.holven@tetrattech.com>  
**Sent:** Friday, August 1, 2025 5:08 PM  
**To:** Amber Miller <amiller@geronimopower.com>; Sophia Gilleland <sgilleland@geronimopower.com>  
**Cc:** McCall, Patti <Patti.Mccall@tetrattech.com>  
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Hi Amber and Sophia,

The Lakeside CRM report has been submitted to the MI SHPO. The submittal form is heavily based on the Section 106 process, which we are not doing.

I hope we are not the first.

Have a good weekend.

Adam

Adam C. Holven | Senior Archaeologist/Project Manager  
Direct: 612.643.2237 | Main: 612.643.2200 | Fax: 612.643.2201  
[adam.holven@tetrattech.com](mailto:adam.holven@tetrattech.com)

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**From:** Smartsheet Forms <[forms@app.smartsheet.com](mailto:forms@app.smartsheet.com)>  
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**To:** Holven, Adam <[adam.holven@tetrattech.com](mailto:adam.holven@tetrattech.com)>  
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Thank you for submitting your request for consultation under Section 106 of the National Historic Preservation Act of 1966, as amended. A copy is included below for your records.

If you have concerns about your submission or were not able to attach all of your documents, please contact Scott Slagor at [SlagorS2@Michigan.gov](mailto:SlagorS2@Michigan.gov).

## Michigan State Historic Preservation Office Project Review Submissions

<b>Project Name:</b>	Lakeside Solar
<b>Project Street Address:</b>	Near the intersection of Eilers Road and Chase Road approximately 2 miles northwest of the city of Montague in White River Township, Muskegon County, Michigan
<b>Project Municipal Unit:</b>	White River Township
<b>Project County:</b>	Muskegon
<b>Federal Agency:</b>	Not Applicable - PA233 of 2023
<b>Federal Agency Contact Name:</b>	Not Applicable
<b>Federal Agency Mailing Address</b>	Not Applicable

**(street, city, state,  
zip code):**

**Consultant/Applicant  
Name** Adam Holven

**Consultant/Applicant  
Agency/Firm:** Tetra Tech, Inc.

**Consultant/Applicant  
Mailing Address:** 2001 Killebrew Drive  
Suite 141  
Bloomington, MN 55425

**Consultant/Applicant  
Phone Number:** 612-643-2237

**Consultant/Applicant  
Email Address:** [adam.holven@tetrattech.com](mailto:adam.holven@tetrattech.com)

### File Attachments

**Lakeside Solar - CRM Report\_2025-08-01.pdf** (19147k)

**Lakeside Solar-PA233 of 2023 application\_20250801.pdf** (591k)

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## **Attachment D**

# **Michigan Department of Environmental, Great Lakes, and Energy (EGLE)**



GRETCHEN WHITMER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

WATER RESOURCES DIVISION



PHILLIP D. ROOS  
DIRECTOR

August 07, 2025

VIA E-MAIL

Amber Miller  
8400 Normandale Lake Boulevard  
Suite 1200  
Bloomington, MN 55437

Dear Amber Miller:

SUBJECT: Preapplication Meeting  
Site Name: 61-Eilers Rd and Old Hwy 99-Montague  
Submission Number: HQD-SDPZ-4WS4A  
T12N, R18W, Section 11-14 & 23-24, Montague, Muskegon County

This letter is a follow up to our July 23, 2025, preapplication meeting regarding the proposed project in Montague, Muskegon County. The purpose of a preapplication meeting is to provide you with information that will clarify the permit process, answer preliminary questions about your specific project in order to avoid delays at a later date, and to determine, if possible, the need for wetland or inland lakes and streams permits.

During this meeting, we reviewed the need to obtain a permit under Part 301, Inland Lakes and Streams; and Part 303, Wetlands Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). The review was based on discussion of the proposed project and/or draft permit application, the proposed site, and potential modifications to the project discussed during our meeting.

During the review of the project site, the Michigan Department of Environment, Great Lakes, and Energy's (EGLE) Water Resources Division (WRD) made the following findings regarding the need for a permit under Part 301 and Part 303 of the NREPA:

A permit is required for the project as proposed.

This determination is based on the project plan prepared by Tetra Tech and dated July 22, 2025, along with other information provided at the time of this meeting only. Provided that the proposed project and location are not altered, this determination is binding on EGLE for a period of two years from the date of this meeting.

During the review of the proposed project, the WRD noted activities that, as currently designed, would require authorization under:

- Floodplain Regulatory Authority in Part 31, Water Resources Protection, of the NREPA.

During the meeting, we also discussed a number of issues related to the project, including the following:

- Information on completing an application form. Please submit the Joint Permit Application (JPA) using the same MiEnviro Portal site as was used for this preapplication meeting request.
- Possible alternative design options to minimize project effects on aquatic resources; specifically;
  - Shifting culvert locations to avoid higher quality wetland or utilize existing road crossings;
  - Moving or eliminating panels to avoid or reduce tree clearing and conversion impacts within forested wetland.
- Needed clarification in the project plans; specifically, stormwater features and other associated infrastructure (e.g., security fencing) should be included in the permit application and on site plans. Some stormwater features may require a permit (e.g., basins within 500 feet of a regulated stream or discharges to wetland and/or stream).
- The potential presence of state- or federally-listed threatened or endangered species on the site. We recommend review of the material available on the Michigan Department of Natural Resources' Web site at [Michigan.gov/Threatened and Endangered Species](http://Michigan.gov/ThreatenedandEndangeredSpecies).
- Provide the results of the IPaC determination by providing the All MI Species DKey output letter for application completeness.
- Based on the information provided during the pre-application meeting, the project may be able to meet exemptions for utility line installation and may be able to be applied under GP/MP categories only. At the time of the meeting, details were not sufficient to confirm under which permit categories the activities may be applied. To assist with providing complete information for the application, please refer to the conditions and best management practices of the following categories:
  - GP G. Culverts and Bridges – Small
  - GP H. Wetland Equalizer
  - GP BB. Utility Line Activities
  - MP 11. Culverts and Bridges – Large
  - MP 17. Driveway
  - MP 18. Fences
  - MP 50. Stormwater Outfall Structures
- Site Plans must include all regulated features and boundaries within or near the project area. It was stated that the applicant intends to avoid impacts to all wetlands identified within the project area, regardless of jurisdictional determination. Note that for the purposes of the pre-application meeting, EGLE has not confirmed the jurisdictional determination of every wetland within the project area.
- Site Plans must include clearly marked 100-year floodplain elevations.

Please note that this is not a permit. The WRD cannot indicate during a preapplication meeting whether or not a permit will be issued. The WRD cannot make a decision regarding a permit until it has considered all of the information provided in the final permit application, and, in some instances, has also considered comments received in response to a public notice of the project. Therefore, the WRD cannot legally tell you whether the project will be permitted in advance of a permit application being submitted and reviewed.

The EGLE submission number assigned to this project is HQD-SDPZ-4WS4A. Please keep a record of this submission number and use it when submitting a final application or otherwise corresponding with our office on this project.

We appreciate the opportunity to meet with you or your representative to address these concerns. We have established a submission for this project, and the information submitted to date will be used to facilitate processing of the final application. If you should have follow-up questions before then, please contact me at Chad Hipshier; HipshierC@michigan.gov; or EGLE, WRD, P.O. Box 30458, Lansing, Michigan 48909-7958.

Sincerely,



Chad Hipshier  
Water Resources Division  
Grand Rapids District Office

cc: Kate Kirkpatrick, EGLE  
Patti McCall, Tetra Tech

---

*Special Use Permit Application to  
White River Township*

*Appendix D  
Summary of Chief Elected Official  
Documentation and Community Outreach and  
Education Efforts*

---

**Lakeside Solar, LLC  
White River Township, Muskegon County, Michigan**



**8400 Normandale Lake Blvd., Suite 1200  
Bloomington, MN 55437**

**September 2025**

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## 1 INTRODUCTION

Appendix D contains a detailed description of Lakeside Solar, LLC’s (Lakeside) communications and outreach with stakeholders over the past several years. This appendix contains two main sections of communication and outreach descriptions which include:

- Chief Elected Official Documentation, and
- Community Outreach and Education Efforts.

## 2 CHIEF ELECTED OFFICIAL DOCUMENTATION

Lakeside began reaching out to the White River Township representatives during the early development phase in 2019. Outreach efforts during the early development phase focused on introducing the proposed Project and gathering information about regulatory requirements. As the project developed Lakeside reached out to the Muskegon County Commissioners. Table 1.0-1 provides a summary of elected official outreach efforts related to meetings that have been conducted to date for the Project. A detailed description of meeting efforts is provided in Sections 2.1 through 2.3.

<b>Table 1.0-1 Summary of Chief Elected Officials Outreach</b>		
<b>Area / Outreach Effort</b>	<b>Date</b>	<b>Outreach Type-Location</b>
<b>Muskegon County</b>		
Offer to Meet Muskegon County Board Chair	December 4, 2024	Letter Invitation to Meet via Mail
Offer to Meet Muskegon County Board of Commissioners	June 10, 2025	Email request to Meet
Public Meeting and Open House Number 2	July 17, 2025	Public Meeting and Open House - Nellie B. Chisholm Middle School Gymnasium, Montague
<b>White River Township</b>		
Public Meeting and Open House Number 1	December 8, 2022	Public Meeting and Open House - St. James Lutheran Church, Montague
Offer to Meet	December 4, 2024	Letter Invitation to Meet via Mail
Public Meeting and Open House Number 2	July 17, 2025	Public Meeting and Open House - Nellie B. Chisholm Middle School Gymnasium, Montague
White River Township Planning Commission	February 19, 2019	Planning Commission Meeting
White River Township Planning Commission	October 28, 2019	Public Hearing
White River Township Planning Commission	November 19, 2019	Planning Commission Meeting

<b>Table 1.0-1 Summary of Chief Elected Officials Outreach</b>		
<b>Area / Outreach Effort</b>	<b>Date</b>	<b>Outreach Type-Location</b>
White River Township Planning Commission	December 17, 2019	Planning Commission Meeting
White River Township Planning Commission	January 21, 2020	Planning Commission Meeting
White River Township Planning Commission	February 2021	Planning Commission Meeting
White River Township Planning Commission	April 20, 2021	Planning Commission Meeting
White River Township Planning Commission	May 18, 2021	Planning Commission Meeting
White River Township Zoning Administrator	September 2022 <sup>1</sup>	Meeting
White River Township Supervisor and Zoning Officer	February 6, 2025	Meeting
White River Township Planning Commission	May 20, 2025	Planning Commission Meeting
White River Township Board Meeting	June 10, 2025	Board Meeting
White River Township Planning Commission	July 8, 2025	Meeting
<sup>1</sup> Lakeside representatives had ongoing conversations with White River Township Zoning Administrator regarding the application and the Project throughout the Fall of 2022.		

Between September 2022 and May 2024, additional Project related activities/communications were occurring between Lakeside and White River Township and are described in Section 2.2.4.

## **2.1 PUBLIC MEETING OVERVIEW**

Lakeside invited White River Township elected officials to the first public information meeting and open house (Public Information Meeting and Open House Number 1) for the Project in Montague, Michigan of December 8, 2022. Invitations to the public information meeting and open house were mailed on November 16, 2022. Invitations are contained in Attachment A. The public meeting and open house provided an opportunity for elected officials to learn about the Project and connect with Project representatives.

Lakeside Solar, LLC, a subsidiary of Geronimo Power, LLC (formerly National Grid Renewables Development, LLC) sent Muskegon County and White River Township elected officials offer to meet letters on December 4, 2024. A copy of the letters inviting the county and township to meet are contained in Attachment A. No response was received from Muskegon County elected officials.

A second public information and open house meeting was planned for April 17, 2025, and White River Township and Muskegon County were invited. The public information meeting and open

house meeting to provide updates regarding the Project development was postponed and rescheduled for July 17, 2025, in Montague, Michigan. The invitation letters to the July 17, 2025, public information meeting and open house were mailed to elected officials on May 5, 2025. Copies of the invitation and postponement letters to White River Township and Muskegon County are contained in Attachment A.

In addition, to the county and township invitations to the public information meeting and open house, Michigan State Senator John Bumstead was notified on June 2, 2025 of the July 17, 2025 public meeting and open house.

## **2.2 MUSKEGON COUNTY COORDINATION**

### **2.2.1 OFFER TO MEET INVITATION**

Lakeside offered to meet with Muskegon County on December 4, 2024, to provide updates and review the site plan for the Lakeside Solar project. Pursuant to Act 233 of the Public Acts of Michigan of 2023, MCL 460.1223, et seq. (“Act 233”). Lakeside formally offered in writing to meet with the White River Township's chief elected official or the chief elected official’s designee to discuss the Lakeside Solar site plan for a solar energy facility in accordance with Section 223(2) of Act 233. However, Muskegon County was notified because if the County asserted that it is an “affected local unit” under Act 233, Lakeside offered to meet with the chief elected official of the County under a full reservation of rights. A copy of the letter is contained in Attachment B. A meeting between Lakeside and Muskegon County was not scheduled or held.

### **2.2.2 PUBLIC MEETING NUMBER 2**

Lakeside notified Muskegon County (County Board Chair) on February 27, 2025, of a public open house event on April 17, 2025, from 5:00 PM to 7:00 PM at the Nellie B. Chisholm Middle School Gymnasium in Montague, Michigan regarding the Lakeside Solar project. The open house will provide the opportunity for the public to learn about the project and for Geronimo Power, LLC to receive feedback. The County was notified on March 27, 2025, that the public open house was postponed. Lakeside notified the County in a letter dated May 5, 2025, that the open house was rescheduled to July 17, 2025, from 5:00 PM to 7:00 PM at the Nellie B. Chisholm Middle School Gymnasium in Montague, Michigan. Open house notification and postponement letters are contained in Attachment A.

### **2.2.3 ADDITIONAL OUTREACH AND COORDINATION**

Additionally, Lakeside sent email on June 10, 2025, to Muskegon County Board of Commissioners to provide an update regarding National Grid Renewables name change to Geronimo Power, LLC and to request a virtual or in person meeting to discuss and update on the proposed Project.

## **2.3 WHITE RIVER TOWNSHIP COORDINATION**

### **2.3.1 OFFER TO MEET**

Lakeside offered to meet with White River Township Supervisor on December 4, 2024 to provide updates and review the site plan for the Lakeside Solar project. Lakeside formally offered in writing to meet with the Township's chief elected official or the chief elected official's designee to discuss the Lakeside Solar site plan for a solar energy facility in accordance with Section 223(2) of the Public Acts of Michigan of 2023, MCL 460.1223, et seq. ("Act 233"). A copy of the letter is contained in Attachment A.

### **2.3.2 PUBLIC MEETING NUMBER 1**

Lakeside representatives had ongoing conversations with White River Township Zoning Administrator regarding the application and the Project throughout the Fall of 2022. The first public meeting for the Project was held on December 8, 2022, at the St. James Lutheran Church in Montague, Michigan. The invitation letter was sent on November 16, 2022, and is contained in Attachment B.

In addition to the White River Township elected officials, the Pierson Swamp Drain Drainage District was invited via letter on November 16, 2022 to the open house (Attachment A).

### **2.3.3 PUBLIC MEETING NUMBER 2**

Lakeside notified White River Township on February 27, 2025, of a public open house event on April 17, 2025, from 5:00 P.M. to 7:00 P.M. at the Nellie B. Chisholm Middle School Gymnasium in Montague, Michigan regarding the Lakeside Solar project. The open house will provide the opportunity for the public to learn about the project and for Lakeside to receive feedback. The Township was notified on March 27, 2025, that the public open house was postponed. Lakeside Solar, LLC notified the County in a letter dated May 5, 2025, that the open house was rescheduled to July 17, 2025, from 5:00 P.M. to 7:00 P.M. at the Nellie B. Chisholm Middle School Gymnasium in Montague, Michigan. Open house notification and postponement letters are contained in Attachment A.

In addition, the following elected officials were notified in a letter dated June 2, 2025, that the public meeting and open house was rescheduled to July 17, 2025.

- White River Township Board
- White River Planning Commission
- Montague City Council
- City of Montague Planning Commission
- Muskegon County Water Commissioner and Deputy Water Commissioner
- Muskegon County Board of Commissioners
- Muskegon County Sheriff

## **2.3.4 ADDITIONAL OUTREACH AND COORDINATION**

### **2.3.4.1 White River Township**

Lakeside provided a landowner presentation at the White River Township Planning Commission meeting on February 19, 2019. Lakeside attended a public hearing meeting on October 28, 2019 regarding a proposed solar ordinance in the Township. Lakeside discussed the solar ordinance with the White River Township Planning Commission at the planning commission meeting on November 19, 2019. On January 21, 2020, Lakeside recommends changes to the solar ordinance at the White River Township Planning Commission meeting. Lakeside attended Planning Commission meetings on February 2021, April 20, 2021, and May 18, 2021. Lakeside representatives had ongoing conversations with the Zoning Administrator during the fall of 2022, regarding items such as the application, public hearing, open house, and Project. Lakeside representatives met on September 14, 2022, with the Zoning Administrator, Planning Commission Chairman, and Township Assessor.

Between September 2022 and May 2024 additional Project related activities and communications were occurring between Lakeside and White River Township. The communications are described below.

- On October 4, 2022, Lakeside emails the Township Zoning Administrator to inquire about the application, public hearing, open house and variance requests for height. The Township indicates the questions will be answered at the Planning Commission meeting on October 18, 2022.
- On October 28, 2022, Lakeside sends questions to the Township Zoning Administrator regarding the results of a Township opinion survey (conducted in October) to residents that included solar energy. The Township Planning Commission responded indicating the survey showed comments about restricting conversion of open space/farmland for alternative energy production to the existing industrial zone.
- On November 16, Lakeside files a Special Land Use Application with White River Township.
- On November 28, 2022, the Applicant corresponded with the White River Township Supervisor via email discussing the status of the project and the identification of the recipients to benefit from the power generated by the Project.
- On December 22, 2022, White River Township holds a special meeting to discuss adopting a moratorium on solar development.
- On January 17, 2024, White River Township adopts a six-month moratorium on all solar development.
- On February 28, 2023, Lakeside Solar, LLC files a complaint against White River Township initiating a lawsuit.
- On August 26, 2023, White River Township amends the zoning ordinance regarding solar with restrictive requirements.

- On December 20, 2023, Lakeside resubmits the Special Land Use Permit Application.
- In May/June 2024, Lakeside requests case to be dismissed without prejudice in preparation for when State siting requirements go into effect.
- On September 10, 2024, White River Township amends the solar ordinance to bring in line with State requirements (Public Act, PA, 233) and also created a renewable energy overlay district on a contaminated brownfield site consisting of a single parcel owned by a single landowner.
- On November 29, 2024, PA 233 becomes effective which established new regulations for the siting of utility scale renewable energy facilities. The new law grants permitting authority to the Michigan Public Service Commission unless local governments adopt Compatible Renewable Energy Ordinances (CREO).
- In 2025, Lakeside will submit a Special Land Use Application for the third time to White River Township since the Township declared in February 2025 a CREO is in place.

In person meetings were held between Lakeside and White River Township Supervisor and Zoning Officer on February 6, 2025, to review the Project's preliminary site plan and answer any questions. Lakeside informed the Township of the intent to hold a future open house.

Lakeside attended a regular White River Township Planning Commission meeting on May 20, 2025, to introduce new Lakeside members to the White River Township Supervisor and Zoning Administrator and to learn about community activities.

On June 5, 2025, White River Township (including the Board) was notified of National Grid Renewables name change to Geronimo Power, LLC.

On June 10, 2025, Lakeside informed White River Township Supervisor that they would be attending the regular White River Township Board Meeting that night to introduce the new community advocated to the board. An opportunity was available for anyone who would like to request a meeting with Lakeside or have specific questions to sign up in order to address concerns in an effective manner. The Supervisor indicated there would be time in the second part of the meeting for Lakeside to comment regarding the sign-up opportunity. Additionally, the Supervisor asked about the open house and if there would be an opportunity to speak. Lakeside replied that the open house will have a comment station where people can submit comments or questions in writing. Lakeside let the Supervisor know that landowners within 0.5 mile received letters regarding the open house. Landowners that directly abut the Project were notified that they were directly adjacent and their viewshed may be affected and offered to meet with each abutting landowner individually, if requested.

On June 10, 2025, the White River Township Board of Appeals (John Howell) indicated to Lakeside that he did not receive a letter to the open house. The invitation was resent via email on June 12, 2025.

Lakeside provide the Project’s email and phone number on June 13, 2025, to the White River Township Planning Commission. Lakeside requested a comprehensive solar ordinance from the White River Township Board on June 25, 2025.

On July 8, 2025 Lakeside attended the White River Township Planning Commission meeting. After the meeting the Township Supervisor met with Lakeside to discuss community input.

On July 9, 2025, White River Township emailed Lakeside to request a site visit to address potential concerns regarding adjacent land. An on-site meeting is pending.

On July 14, 2025, Lakeside informed White River Township Planning Commission via email that they are preparing the community questions and answers and will cross reference with community comments from the public meeting and open house.

On July 24, 2025, Lakeside sent White River Township a copy of the Alternative Site Analysis Summary. Lakeside assisted White River Township on August 12, 2025 to access the Alternatives Analysis for review. The Alternative Site Analysis will be available for the public to review. On August 12, 2025 Lakeside received additional questions from White River Township which were posted in the Question and Answers document.

#### 2.3.4.2 City of Montague

The City of Montague Planning Commission was notified on June 5, 2025, of National Grid Renewables name change to Geronimo Power, LLC.

### 3 COMMUNITY OUTREACH AND EDUCATION EFFORTS

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In addition to chief elected official communications, Lakeside began reaching out to other community organizations/stakeholders in the Project area beginning in 2022. Outreach efforts focused on introducing the Project and gathering input though public information meetings and open houses and direct communications and meetings with organizations.

Table 3.0-1 provides a summary of community outreach and education efforts conducted to date for the Project. A detailed description of community outreach and education efforts is provided in Sections 3.1-3.3. Elected officials meetings are summarized previously in Table 1.0-1.

<b>Outreach Event</b>	<b>Date</b>	<b>Outreach Type-Location</b>
<b>Public Information Meetings and Open Houses</b>		
Meeting Number 1	December 8, 2022	St. James Lutheran Church, Montague
Meeting Number 2	July 17, 2025	Nellie B. Chisholm Middle School Gymnasium in Montague
<b>Other Stakeholders Meetings</b>		
Sierra Club	November 21, 2023	Virtual Meeting

<b>Table 3.0-1 Summary of Community Outreach and Education Efforts</b>		
<b>Outreach Event</b>	<b>Date</b>	<b>Outreach Type-Location</b>
Sierra Club	June 20, 2025	Meeting
White Lake Area Climate Action	November 21, 2023	Virtual Meeting
White Lake Area Climate Action	May 22, 2025	In Person Meeting
White Lake Area Climate Action	June 4, 2025	White Lake Area Climate Action Meeting
Michigan Farmers Union	August 29, 2024	Meeting via Phone
Montague Fire District Authority	May 12, 2024	Virtual Meeting
Muskegon County Water Resources and Muskegon County Drain Commission	May 1, 2025	Virtual Meeting
White Lake Area Chamber of Commerce	May 29, 2025	In Person Meeting
Muskegon County Conservation District	May 28, 2025	In Person Meeting
Muskegon County Conservation District	May 30, 2025	Meeting via Phone
Muskegon County Parks and Recreation	May 30, 2025	Meeting via Phone
Montague Area Public Schools	June 5, 2025	In Person Meeting
Greater Muskegon Economic Development	June 11, 2025	In Person Meeting
Muskegon County Water Resources and Muskegon County Drain Commission	August 22, 2025	Virtual Meeting

### **3.1 PUBLIC INFORMATION MEETING AND OPEN HOUSE NUMBER 1**

Lakeside invited landowners and tenants to a public information meeting and open house for the Project in Montague, Michigan on December 8, 2022. Invitations were mailed on November 16, 2022. Prior to the public information meeting and open house, Lakeside engaged with landowners and tenants via in-person meetings, phone, and text messaging to assess participation interest; discuss lease arrangements and purchase options; provide updates about the anticipated Project design and schedule; and to obtain access for Project field studies. The public information meeting and open house provided an opportunity for landowners and tenants to learn about the Project and connect with Project representatives.

The first public information meeting and open house was held at the St. James Lutheran Church in Montague, Michigan. Approximately 134 landowners (includes landowners within 300 feet of the Land Control Area) were invited. A sample invitation letter is provided in Attachment C. The open house began at 4:30 PM and the public information meeting began at 6:30 PM.

Lakeside provided a presentation describing the proposed Project that included:

- an introduction of the Project team;
- a description of the development and siting process;
- descriptions of typical solar components such as modules, racking, inverters, and access roads;
- an overview of the construction process; and
- a description of planned studies, community benefits, and the anticipated schedule for Project permitting and development.

A copy of the presentation from Public Information Meeting and Open House Number 1 is provided in Attachment D.

### **3.2 PUBLIC INFORMATION MEETING AND OPEN HOUSE NUMBER 2**

In the years following the first public information meeting and open house, Lakeside remained engaged with landowners/tenants through in-person meetings, phone calls, and text messaging regarding easement arrangements, Project status, and to respond to comments of support and opposition.

To provide updates on Project development, Lakeside plans to host an additional public information meeting and open house for the Project in Montague, Michigan on July 17, 2025. Lakeside initially notified landowners and tenants on February 27, 2025, of a planned second public open house event on April 17, 2025, at the Nellie B. Chisholm Middle School Gymnasium in Montague, Michigan. The landowners and tenants were notified on March 27, 2025 that the public open house event was postponed.

Invitations to the rescheduled public information meeting and open house on July 17, 2025, were sent to 11 landowners, 60 adjacent landowners, 40 additional stakeholders, and 219 neighbors within 0.25 mile of the Land Control Area on June 2, 2025. A sample invitation letter sent to landowners/tenants and additional stakeholders are provided in Attachment C. A sample invitation letter sent to neighbors within 0.25 mile of the Land Control Area is provided in Attachment C.

Additionally, a notice of intent to construct a solar energy and energy storage facility was published in the White Lake Beacon and Muskegon Chronicle prior to the public meeting and open house July 17, 2025, event. The open house provided the opportunity for Lakeside to provide updates about the Project and receive feedback from stakeholders.

Lakeside has engaged, and will continue to engage, with adjacent landowners to solicit feedback on project site design and to provide updates on project status, permit procedures, and approval timelines.

### **3.3 COMMUNITY ORGANIZATION SUMMARY OF MEETINGS AND COORDINATION**

Lakeside also met with various community organizations and other interested stakeholders to introduce the Project and solicit community input. A summary of this outreach is provided below.

#### **3.3.1 Sierra Club**

On November 21, 2023, Lakeside held a virtual meeting to introduce the Sierra Club to the Project and the local and state siting process.

On June 2, 2025, the Sierra Club was notified of National Grid Renewables name change to Geronimo Power, LLC.

Lakeside Solar arranged a second meeting with the Sierra Club on June 20, 2025 to review the site design plan.

#### **3.3.2 White Lake Area Climate Action**

On November 21, 2023, Lakeside held a virtual meeting to introduce the White Lake Area Climate Action (WLACA) organization to the Project and the local and state siting process. Additionally, an in-person meeting was held on May 22, 2025. The WLACA is generally supportive of renewable energy projects and provided Lakeside with a contact list of local organizations Lakeside may want to contact to introduce the Project. Lakeside indicated that they would offer support to the WLACA for any upcoming events, if interested.

WLACA notified Lakeside on June 2, 2025, of the organization's new group Michigan Homegrown Power and provided some information regarding a question-and-answer guide and renewable energy permitting guide. Lakeside attended a WLACA Meeting on June 4, 2025 and introduced the Project. On June 9, 2025, WLACA notified Lakeside that they will start to attend White River Township meetings to offer support for the Project.

The Michigan Climate Action Network provides grants and event coordination to promote clean energy solutions and climate sustainability. In an email dated June 13, 2025, WLACA notified Lakeside that they are applying to the Michigan Climate Action Network for funds to host events promoting clean energy solutions and if awarded, the associated work would run through the summer of 2025.

On June 2, 2025, the WLACA was notified via email of National Grid Renewables name change to Geronimo Power, LLC. Lakeside's coordination with WLACA is ongoing.

#### **3.3.3 Michigan Farmers Union**

Lakeside had a phone call on August 29, 2024, to introduce the Project.

On June 2, 2025, the Michigan Farmers Union was notified of National Grid Renewables name change to Geronimo Power, LLC.

### **3.3.4 Montague Fire District Authority**

Lakeside reached out to the Montague Fire District Authority on May 7, 2025, with an offer to meet and introduce the Project. A call was scheduled for May 12, 2024, and Lakeside met in-person and virtually with the Montague Fire District Authority. The White Lake Township Supervisor was also in attendance as a member of the Montague Fire District Authority. The purpose of the meeting was to learn about the Authority's concerns and questions about the proposed Project.

The Montague Fire District Authority asked questions about onsite chemical storage, entrance to the facility during an emergency, voltage at the facility, location of the battery storage, electric distribution, emergency contacts, response time of Lakeside during an emergency, life of the Project, composition of the panels and potential for leaching of the panels, potential for a lightning strike, and need of specialized equipment in the event of a vehicle crash with the solar panels.

On June 5, 2025, the Montague Fire District Authority was notified of National Grid Renewables name change to Geronimo Power, LLC.

On June 30, 2025 Lakeside emailed the fire chief with a questionnaire to assist in preparation of the Operations and Emergency Action Plan. On July 18, Lakeside emailed an Emergency Response Plan questionnaire to Montague Fire District Authority, which the Authority completed on July 21, 2025.

### **3.3.5 Muskegon County Water Resources / Muskegon County Drain Commission**

Early coordination efforts involved an invitation to the December 8, 2022 public meeting and open house to the Pierson Swamp Drain Drainage District via letter on November 16, 2022 (Attachment A).

On February 26, 2025, Lakeside sent an email to the Muskegon County Water Commissioner and the Deputy Water Commissioner (Commissioner/Commission) to introduce Lakeside and the Project, notify them about the upcoming open house, and request an in person meeting in the future. On April 24, 2025, Lakeside arranged a virtual meeting with the Commission on May 1, 2025.

The May 1, 2025, meeting included Lakeside (Amber Miller, Sophia Gilleland, Kendra Harrington, Vannessa Spencer and Amanuel Haile and the Muskegon County Drain Commission (Commissioner Stephanie Barrett and Deputy Commissioner Dallas Goldberg). During the May 1, 2025, meeting, the need for the following permits were discussed:

- Soil Erosion and Sedimentation Control (SESC) Permit (Muskegon County)
- Potential Drainage District permits for any work near or crossing regulated drains.

The discussion included the following items.

- The County highlighted erosion and land conversion as primary concerns, especially given past SESC compliance issues with similar projects. Lakeside committed to implementing robust erosion control best management practices and limiting grading to the extent practicable.
- Pierson Swamp Drain was identified as a key resource, with variable easement widths (50 to 100 plus feet). No permanent infrastructure, including fencing, will be placed within the drain easement.
- No drain or utility crossings (e.g., underground utilities, bores, or overhead lines) are permitted within the easement without prior approval and permitting from the County Drain Office.
- The County provided spatial data for two manmade wetland basins that are not part of the Pierson Swamp Drain system but are relevant for local hydrology considerations.
- Discussion included methods for pre-seeding cover crops (e.g., clover, rye, or winter wheat) depending on seasonal construction timelines.
- County staff emphasized that there is no routine drain maintenance schedule, so planning must accommodate ongoing access and potential future system work.
- Lakeside reaffirmed its intent to coordinate closely with the County Drain Office, including site-specific hydrology and drainage modeling based on updated drain data, and incorporate County feedback into stormwater and SESC planning.

Several items are planned as the site design develops. These items include:

- Maintain communication with the County Water Resources Commission,
- Initiate formal SESC permitting following design finalization,
- Implement a vegetation management plan to restore land to pre-disturbance vegetative condition,
- Secure approvals for any proposed crossings within the Pierson Swamp Drain easement, and
- Continue collaboration with landowners to map drain tile infrastructure and minimize construction impacts.

On May 9, 2025, the Commission sent Lakeside spatial wetland information of two established wetlands from the Pierson Drain Swamp project. Muskegon County Water Resources was notified via email on June 5, 2025, of National Grid Renewables name change to Geronimo Power, LLC. Lakeside sent site plans to the Muskegon County Water Commissioner and Deputy Water Commissioner on June 26, 2025, but were resent on July 1, 2025. Lakeside requested a future meeting to discuss the proposed Project and followed up again with the request for a meeting on August 7, 2025. The meeting was scheduled for August 22, 2025.

A summary of the August 22, 2025, virtual meeting between Lakeside and Commissioner Stephanie Barrett and Deputy Commissioner Dallas Goldberg is described below.

- The Commission requested that sections of security fence crossing county drains be relocated to avoid crossing county drains. A drain crossing permit with the Commission must be filed for each proposed unavoidable crossing. Guidance will be provided on borings.
- The Commission stated that the site design may not block access and must allow sufficient space for maintenance activities to be performed. The Commissioners prefer that drains remain freely accessible for maintenance purposes. The Commissioners requested that access to every portion of the drain system from public rights-of-ways will not be affected by proposed security fencing or other project components so maintenance activities can occur regularly.
- The Commission requires a member of their staff onsite when cabling is installed.
- The soil erosion and sedimentation control plan must be filed through and approved by Muskegon County Department of Public Works.
- It was discussed that Project mobilization will commence with BMPs for stormwater and erosion control, then move to constructing entrances/access roads and grading as needed, concurrently with delivery of project components at the primary laydown yard.
- Muskegon County Road Commission will approve right-of-way permits submitted via online portal and then dictate traffic control measures if needed.

### **3.3.6 Muskegon County Road Commission**

Lakeside sent an email on May 3, 2025, to the Commission (Kevin Mosher) requesting to meet to discuss the project and to address any concerns of the Commission regarding the Project. The Director of Engineering (Paul Bouman) reached out to Lakeside on May 7, 2025, to confirm he was the contact moving forward and what materials they would need to review in preparation for a meeting. Lakeside responded inquiring about a Road Use Maintenance Agreement (RUMA) and would keep the Commission apprised of the status of the Project during the permit application process. The Commission indicated on May 8, 2025, Lakeside should anticipate the possibility of a RUMA and requested a sample RUMA agreement. The Muskegon County Road Commission was notified via email on June 5, 2025 of National Grid Renewables name change to Geronimo Power, LLC. The Site Plans for the Project were sent to the Muskegon County Road Commission on July 1, 2025. A sample RUMA was sent on July 14, 2025, to the Muskegon County Road Commission for review. Lakeside requested a future meeting to discuss the proposed Project and followed up with the request for a meeting again on August 7, 2025.

### **3.3.7 White Lake Area Chamber of Commerce**

Lakeside and White Lake Area Chamber of Commerce (Executive Director) met on May 29, 2025. Lakeside was provided with application materials to join the chamber and invited to attend a tabling event. On June 2, 2025, the White Lake Area Chamber of Commerce was notified via email of National Grid Renewables name change to Geronimo Power, LLC.

### **3.3.8 Muskegon Chamber of Commerce**

On June 2, 2025, the Muskegon County Chamber of Commerce was notified via email of National Grid Renewables name change to Geronimo Power, LLC.

### **3.3.9 Muskegon County Conservation District**

Lakeside had an in person meeting on May 28, 2025, with the Conservation District. The Project was discussed including the Conservation District’s support of solar and their efforts to obtain a grant for an educational event for renewable energy. Additionally, the Conservation District and Lakeside had a call with the Muskegon County Parks and Recreation on May 30, 2025, regarding a volunteer beach clean-up event at Meinert Park. The Parks and Recreation Department mentioned that they do not get financial support from general funding. Lakeside offered to share future funding information from tax revenue from the Project. A follow-up discussion occurred on June 11, 2025, to discuss the educational event.

On June 2, 2025, the County Conservation District was notified via phone/text of National Grid Renewables name change to Geronimo Power, LLC.

### **3.3.10 Muskegon County Parks and Recreation**

The Muskegon County Parks and Recreation and the Muskegon County Conservation District had a call with Lakeside on May 30, 2025, regarding a volunteer beach clean-up event at Meinert Park. The Parks and Recreation Department mentioned that they do not get financial support from general funding. Lakeside offered to share future funding information from tax revenue from the Project. On June 2, 2025, Muskegon County Parks and Recreation was notified via phone/text of National Grid Renewables name change to Geronimo Power, LLC.

### **3.3.11 Montague Area Public Schools**

Lakeside and Montague Area Public Schools scheduled a meeting June 5, 2025. Superintendent Johnson attended the meeting and indicated that Montague Area Public Schools are neutral regarding the Project. Montague Area Public Schools requested additional information regarding the economic impact of increased tax revenues. On July 15, 2025, prior to the public meeting and open house, Lakeside communicated with the Montague Area Public Schools to review security and public safety. Lakeside emailed Montague Area Public Schools as an expression of thanks for the use of the school for the public meeting and open house. Lakeside requested a meeting with the school board to discuss the potential benefits of the Project.

### **3.3.12 Greater Muskegon Economic Development**

Lakeside and the Greater Muskegon Economic Development representatives scheduled an in-person meeting on June 11, 2025, which was postponed in order for Lakeside to meet with the new Chief Executive Officer.

On June 2, 2025, the Greater Muskegon Economic Development was notified via email of National Grid Renewables name change to Geronimo Power, LLC.

### **3.3.13 Montague Future Farmers of America (FFA) and Muskegon Area Career Tech Center FFA Chapter**

On June 2, 2025, the Montague FFA and Muskegon Area Career Tech Center FFA was notified via email of National Grid Renewables name change to Geronimo Power LLC. Lakeside requested to meet with the Chapter.

### **3.3.14 Michigan State University Extension**

Lakeside received email on June 6, 2025, from Michigan State University Extension (M. Charles Gould) in response to an open house letter given to him and he wanted to offer support for agrivoltaics for project. Lakeside offered to meet.

### **3.3.15 University of Michigan**

During the July 17, 2025 public meeting and open house a representative spoke to Lakeside to express concern regarding the care needed for successful of pollinator habitat plantings.

### **3.3.16 Chemours Environmental Impact Committee**

On June 2, 2025, the Chemours Environmental Impact Committee (CEIC) was notified of National Grid Renewables name change to Geronimo Power, LLC. Additionally, Lakeside offered to meet with CEIC Founder regarding the project but they declined on June 9, 2025, indicating a meeting isn't in alignment with their goals.

## **3.4 OTHER COMMUNITY OUTREACH AND EDUCATION EFFORTS**

In addition to the community organization meetings and communications described in Section 3.3, additional community organizations were contacted regarding the project, including an invitation to the July 17, 2025 public meeting and open house. A sample invitation letter is included in Attachment C. However, no direct engagement occurred. The organizations included:

- Montague-Whitehall Rotary Club,
- White Lake Ambulance Authority,
- Michigan Rural Caucus, Muskegon County Sheriff,
- White Lake Baptist Church,
- St James Catholic Church,
- White Lake United Methodist Church,
- White River Beach Association,
- White River Township Board of Review,

- White River Township Inspectors,
- City of Montague Planning Commission,
- City of Montague, Montague City Council,
- Muskegon County Board of Commissioners,
- Citizens for Local Choice, Our Home, Our Voice, and
- Michigan Department of Agriculture.

## **Attachment A**

### **Elected Official Public Meeting and Open House Letters**



November 16, 2022

TOWNSHIP OF WHITE RIVER  
7386 POST RD  
MONTAGUE MI 49437

Re: Please join us for a Lakeside Solar Project Open House and Public Information Meeting

Dear Property Owner,

We hope this letter finds you and your family healthy and well. We are contacting you as an adjacent landowner or tenant to invite you to a Public Information Meeting for the proposed Lakeside Solar Project. The public meeting will provide an opportunity for local community members and stakeholders near the Project to learn about it and connect with representatives to ask questions.

**About the Project**

The Project will be developed by National Grid Renewables and is proposed in White River Township in Muskegon County.

If approved, construction could begin as early as 2024 with completion expected by the end of 2025. The Project intends to interconnect to the International Transmission Company's (ITC) 138 kV line Du Pont – Cobb located within the proposed Project footprint.

National Grid Renewables has successfully developed renewable energy projects throughout North America, and we look forward to presenting this Project to you and other community stakeholders.

**Public Information Meeting Logistics**

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- Speakers include National Grid Renewables project representatives.

**Feel Free to Contact Us**

We look forward to introducing the Lakeside Solar Project to you and your community.

Should you have any additional questions or wish to speak to a member of our staff, contact us at the email or contact number listed below. You can also mail us at the address listed at the bottom of the page.

Sincerely,

A handwritten signature in black ink, appearing to read "Amber Miller".

Amber Miller  
Sr. Permitting Specialist  
[amiller@nationalgridrenewables.com](mailto:amiller@nationalgridrenewables.com)  
331-215-3406

A handwritten signature in blue ink, appearing to read "Kendra Harrington".

Kendra Harrington  
Developer  
[kharrington@nationalgridrenewables.com](mailto:kharrington@nationalgridrenewables.com)  
231-674-5685



November 16, 2022

PIERSON SWAMP DRAIN DRAINAGE DIST  
141 E APPLE AVE  
MUSKEGON MI 49442

Re: Please join us for a Lakeside Solar Project Open House and Public Information Meeting

Dear Property Owner,

We hope this letter finds you and your family healthy and well. We are contacting you as an adjacent landowner or tenant to invite you to a Public Information Meeting for the proposed Lakeside Solar Project. The public meeting will provide an opportunity for local community members and stakeholders near the Project to learn about it and connect with representatives to ask questions.

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Sr. Permitting Specialist  
[amiller@nationalgridrenewables.com](mailto:amiller@nationalgridrenewables.com)  
331-215-3406

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Kendra Harrington  
Developer  
[kharrington@nationalgridrenewables.com](mailto:kharrington@nationalgridrenewables.com)  
231-674-5685



February 27, 2025

VIA REGULAR U.S. MAIL, CERTIFIED U.S. MAIL AND VIA EMAIL TO:  
supervisorwrtownship@gmail.com,  
CC: wschmiege@outlook.com, clerkwrtownship@gmail.com

Mr. Ron Bailey  
Township Supervisor  
White River Township  
7386 Post Rd.  
Montague, MI 49437-9706

Hello Mr. Bailey,

Lakeside Solar, LLC (a National Grid Renewables Company) will be hosting an Open House event on Thursday, April 17, 2025, held from 5 - 7 P.M. at the Nellie B. Chisholm Middle School (NBC) Gymnasium at 4700 Stanton Blvd, Montague, MI 49437.

The Open House is an opportunity for the White River Township and Muskegon County communities to interact with the National Grid Renewables team and industry experts to learn about the proposed project, share feedback and ask questions.

Please contact the undersigned with any questions regarding the Open House event or the Lakeside Solar project.

Sincerely,

A handwritten signature in blue ink, appearing to read "K. Harrington", with a large, stylized flourish at the end.

Kendra Harrington  
Senior Developer  
231.674.5685  
kharrington@nationalgridrenewables.com



February 27, 2025

VIA REGULAR U.S. MAIL, CERTIFIED U.S. MAIL AND VIA EMAIL TO:  
nashch@co.muskegon.mi.us, CC: hoveywrightma@muskegoncounty.net

Mr. Charles Nash  
Muskegon County Board Chair  
1903 Marquette Avenue, Suite A111  
Muskegon, MI 49442

Hello Mr. Nash,

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Sincerely,

A handwritten signature in blue ink, appearing to read "Kendra", with a large, stylized flourish at the end.

Kendra Harrington  
Senior Developer  
231.674.5685  
kharrington@nationalgridrenewables.com



May 5, 2025

VIA REGULAR U.S. MAIL, CERTIFIED U.S. MAIL AND VIA EMAIL TO:

Mr. Ron Bailey (supervisorwrtownship@gmail.com)  
Township Supervisor  
White River Township  
7386 Post Road  
Montague, MI 49437-9706

Hello Mr. Bailey,

Lakeside Solar, LLC (a National Grid Renewables Company) will be hosting the rescheduled Lakeside Solar Open House event on Thursday, July 17, 2025, held from 5 P.M. - 7 P.M. at the Nellie B. Chisholm Middle School (NBC) Gymnasium at 4700 Stanton Boulevard, Montague, MI 49437.

The Open House is an opportunity to connect with the Muskegon County community and for Lakeside Solar to comply with Act 233 of the Public Acts of Michigan of 2023, MCL 460.1221, et seq. ("Act 233").

Please contact the undersigned with any questions regarding the Open House event or the Lakeside Solar project.

Sincerely,

A handwritten signature in black ink, appearing to read "Amber Miller".

Amber Miller  
Director, Permitting  
331.215.3406  
amiller@nationalgridrenewables.com

CC: Julie Goericke, Township Clerk (clerkwrtownship@gmail.com) (for distribution to the Township Board) and Bill Schmiede, Township Zoning Administrator (wschmiede@outlook.com)



May 5, 2025

VIA REGULAR U.S. MAIL, CERTIFIED U.S. MAIL AND VIA EMAIL TO:

Mr. Darrell Paige (paigeda@muskegoncounty.net)  
Muskegon County Board Chair  
1903 Marquette Avenue, Suite A111  
Muskegon, MI 49442

Hello Mr. Paige,

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Sincerely,

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Amber Miller  
Director, Permitting  
331.215.3406  
amiller@nationalgridrenewables.com

CC: Kim Cyr, Muskegon County Board Vice Chair (cyrki@muskegoncounty.net)



June 2, 2025

Senator Jon Bumstead  
Michigan State Senate  
P.O. Box 30036  
Lansing MI 48909

RE: Lakeside Solar Open House

Hello Senator Bumstead,

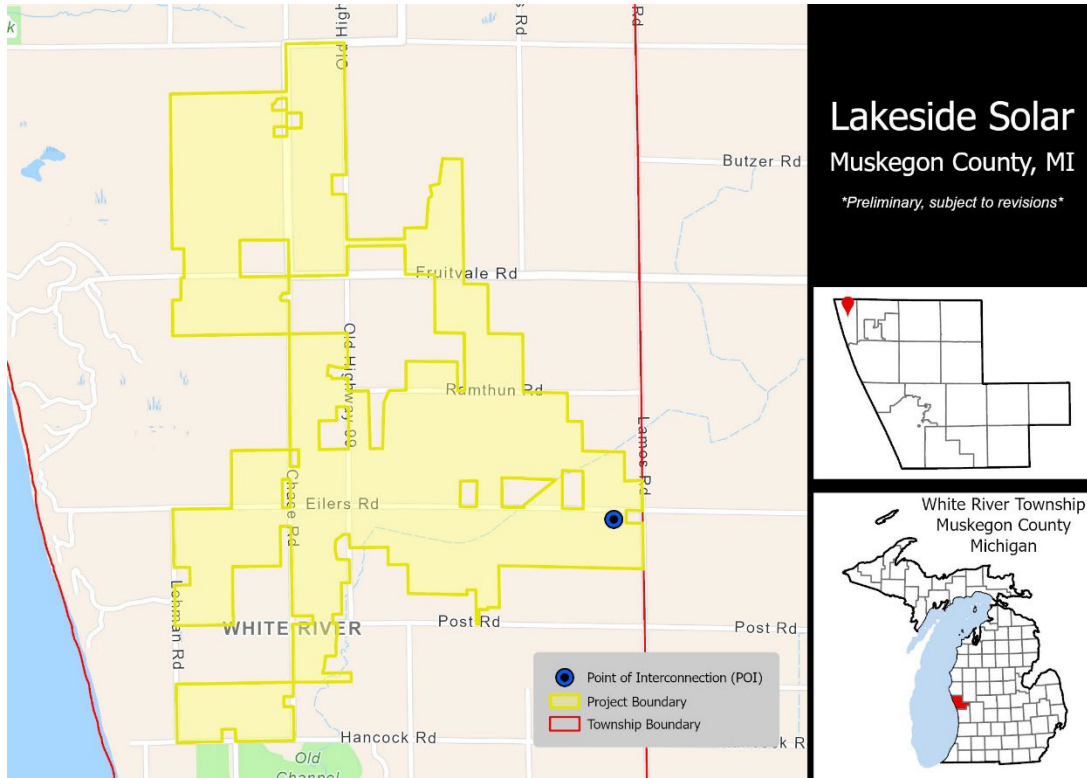
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Information about the Project developer, facility location, construction process, environmental studies, and economic benefits of the project will be presented at various stations and representatives from the Project, including a variety of subject matter experts will be available for one-on-one conversation. Written comments from the public will be collected at the open house and considered.

### [About the Project](#)

The Lakeside Solar Project is a proposed up to 200 megawatt (MW) solar energy project under development in White River Township in Muskegon County. The Project will maximize energy production from solar resources to deliver electricity to the regional transmission system. The Project is being developed by Lakeside Solar, LLC, a subsidiary of National Grid Renewables Development, LLC.

The parcels being considered for development total approximately 1,575 acres. Within this area, there will be separate fenced areas containing clusters of photovoltaic (PV) panels as well as interconnection facilities. Solar panels will NOT cover 1,575 acres in continuity.



We look forward to continuing conversations about the Lakeside Solar Project with you and the community! Should you have any additional questions or wish to speak to a member of our staff, please contact us directly by emailing [lakeside@nationalgridrenewables.com](mailto:lakeside@nationalgridrenewables.com) or calling us at: 952.988.9000.

Sincerely,

Kendra Harrington  
Project Development Manager  
National Grid Renewables Development, LLC



March 27, 2025

VIA REGULAR U.S. MAIL, CERTIFIED U.S. MAIL AND VIA EMAIL TO:  
supervisorwrtownship@gmail.com,  
CC: wschmiege@outlook.com, clerkwrtownship@gmail.com

Mr. Ron Bailey  
Township Supervisor  
White River Township  
7386 Post Rd.  
Montague, MI 49437-9706

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We sincerely apologize for any inconvenience this change in date may cause. We are currently working to determine a new date and will communicate this with you as soon as possible.

Please contact the undersigned with any questions regarding the Open House event or the Lakeside Solar project.

Sincerely,

A handwritten signature in blue ink, appearing to read "K. Harrington", with a large, stylized flourish at the end.

Kendra Harrington  
Senior Developer  
231.674.5685  
kharrington@nationalgridrenewables.com



March 27, 2025

VIA REGULAR U.S. MAIL, CERTIFIED U.S. MAIL AND VIA EMAIL TO:  
nashch@co.muskegon.mi.us, CC: hoveywrightma@muskegoncounty.net

Mr. Charles Nash  
Muskegon County Board Chair  
1903 Marquette Avenue, Suite A111  
Muskegon, MI 49442

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Kendra Harrington  
Senior Developer  
231.674.5685  
kharrington@nationalgridrenewables.com

**Attachment B**  
**Offer to Meet Letters**

**From:** [Sophia Gilleland](#)  
**To:** [supervisorwrtownship@gmail.com](mailto:supervisorwrtownship@gmail.com)  
**Cc:** [Amber Miller](#); [Kendra Harrington](#); [clerkwrtownship@gmail.com](mailto:clerkwrtownship@gmail.com); [wschmiege@outlook.com](mailto:wschmiege@outlook.com)  
**Subject:** National Grid Renewables, Lakeside Solar - Offer to Meet  
**Date:** Wednesday, December 4, 2024 3:02:16 PM  
**Attachments:** [NG Renewables Logo Primary RGB small\\_b3464f9a-abea-443c-8d43-87fd96c8afec.png](#)  
[LinkedInIcon\\_8e0cea1f-d234-405f-8a61-4afe010bf11b.png](#)  
[TwitterIcon\\_ff6acde5-6940-4a01-92b6-0ef9db8c446d.png](#)  
[WebIcon\\_e1c44bce-dc58-4738-94a6-8941e49d8897.png](#)  
[2024.12 NGR - Lakeside Solar - Letter re Offer to Meet - White River Twp.pdf](#)

---

Hello Mr. Bailey,

Please find attached a letter from the Director of Permitting at National Grid Renewables regarding the Lakeside Solar Project in White River Township.

Please reach out if you have any questions.

Thank you,

Sophia Gilleland



952.988.9000



**Sophia Gilleland**

Permitting Associate

**P** 612.504.3307

**E** [sgilleland@nationalgridrenewables.com](mailto:sgilleland@nationalgridrenewables.com)

8400 Normandale Lake Boulevard, Suite 1200 | Bloomington, MN 55437

**From:** [Sophia Gilleland](#)  
**To:** [nashch@co.muskegon.mi.us](mailto:nashch@co.muskegon.mi.us)  
**Cc:** [hoveywrightma@muskegoncounty.net](mailto:hoveywrightma@muskegoncounty.net); [Kendra Harrington](#); [Amber Miller](#)  
**Subject:** National Grid Renewables, Lakeside Solar - Offer to Meet  
**Date:** Wednesday, December 4, 2024 2:59:00 PM  
**Attachments:** [2024.12 NGR - Lakeside Solar - Letter re Offer to Meet - Muskegon Co.pdf](#)

---

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Please reach out if you have any questions.

Thank you,

Sophia Gilleland

**Attachment C**  
**Public Outreach Letters**



November 16, 2022

PPROPERTY OWNER ADDRESS

Re: Please join us for a Lakeside Solar Project Open House and Public Information Meeting

Dear Property Owner,

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- Speakers include National Grid Renewables project representatives.

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Sincerely,

A handwritten signature in black ink, appearing to read "Amber Miller".

Amber Miller  
Sr. Permitting Specialist  
[amiller@nationalgridrenewables.com](mailto:amiller@nationalgridrenewables.com)  
331-215-3406

A handwritten signature in blue ink, appearing to read "Kendra Harrington".

Kendra Harrington  
Developer  
[kharrington@nationalgridrenewables.com](mailto:kharrington@nationalgridrenewables.com)  
231-674-5685



June 2, 2025

Douglas and Debbie Aebig Trust  
9706 Whitbeck Road  
Montague MI 49437

RE: Lakeside Solar Open House

Hello,

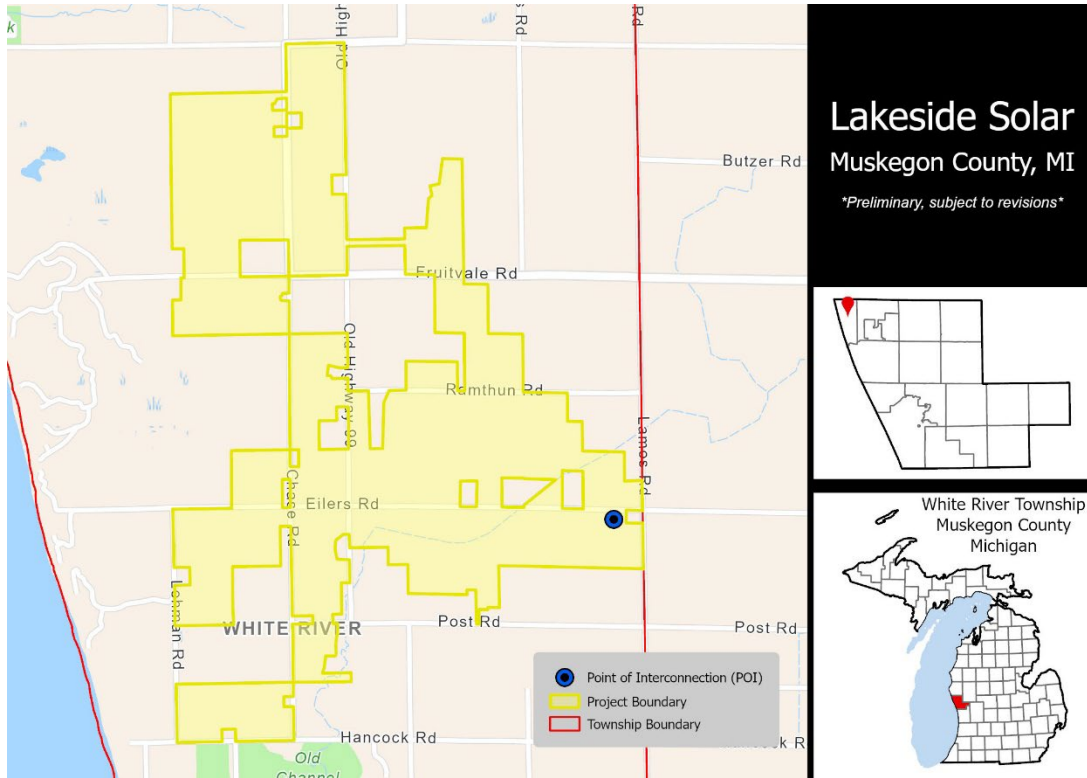
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Sincerely,

Kendra Harrington  
Project Development Manager  
National Grid Renewables Development, LLC



June 2, 2025

White Lake Ambulance Authority  
White Lake Ambulance Station 1  
8220 Whitehall Road  
Whitehall, MI 49461

RE: Lakeside Solar Open House

Hello,

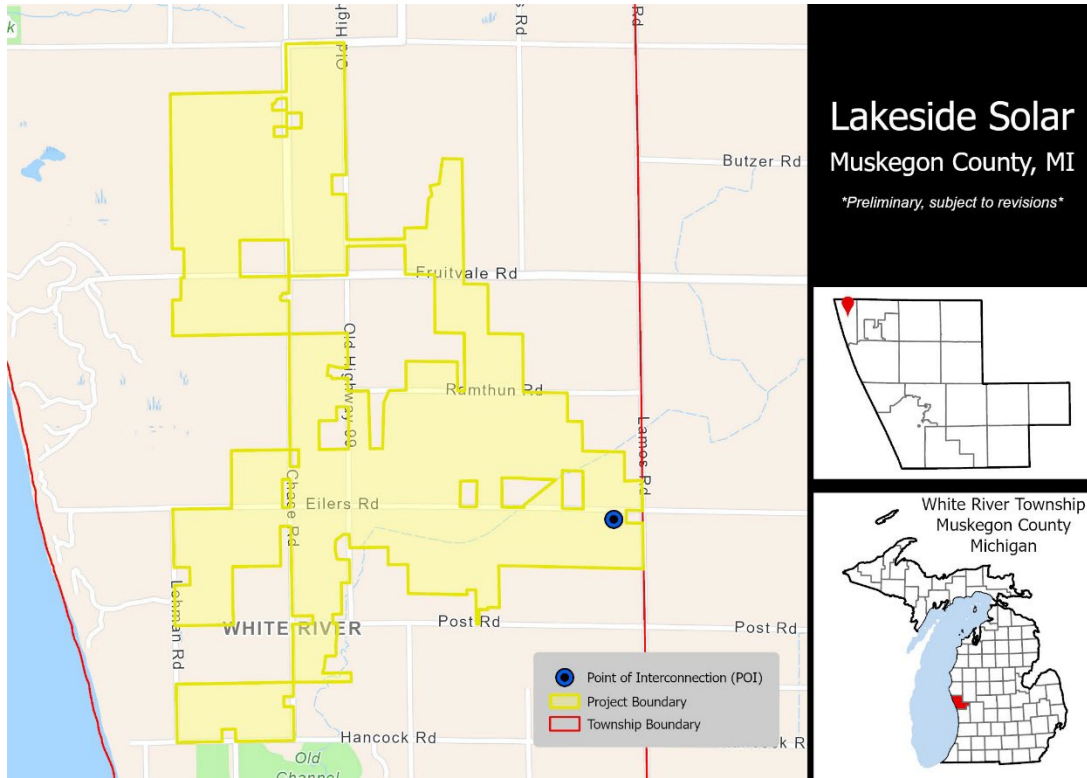
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Sincerely,

Kendra Harrington  
Project Development Manager  
National Grid Renewables Development, LLC



June 2, 2025

Insert Resident Address 0.25 mile

RE: Lakeside Solar Open House

Hello,

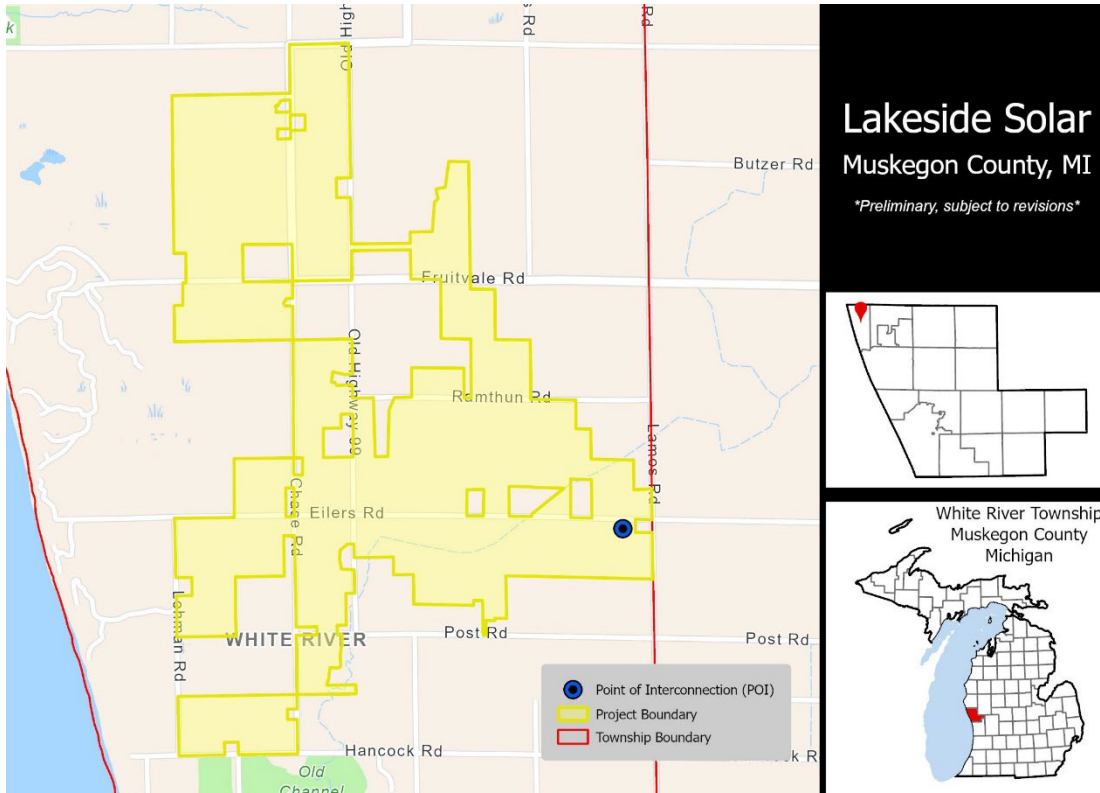
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*Preliminary desktop analysis indicates you may be able to see portions of the proposed project from your residence. We kindly request that you contact our team to set up a one-on-one meeting to discuss this further.*

We look forward to continuing conversations about the Lakeside Solar Project with you and your community! Please contact us directly by emailing [lakeside@nationalgridrenewables.com](mailto:lakeside@nationalgridrenewables.com) or calling us at: 952.988.9000.

Sincerely,

Kendra Harrington

Project Development Manager

National Grid Renewables Development, LLC

**Attachment D**  
**Presentation for Public Meeting and**  
**Open House No. 1**



nationalgrid  
renewables



Lakeside Solar, LLC

# Welcome!



Amber Miller  
*Sr. Permitting Specialist*



Kendra Harrington  
*Developer*



Ben Adamich  
*Director, Development*



Brett Schneider  
*Sr. Project Manager*



Courtney Moynihan  
*Project Administrator*



Steven Gauger  
*Solar Facilities Superintendent*

- 
- ✓ **Introduction to National Grid Renewables, Development Process, and Solar Project Components – Ben Adamich**
  - ✓ **Solar Energy Project Construction Process – Brett Schneider/Courtney Moynihan**
  - ✓ **Jackson County Solar Project Details and Benefits – Amber Miller**

# Introduction

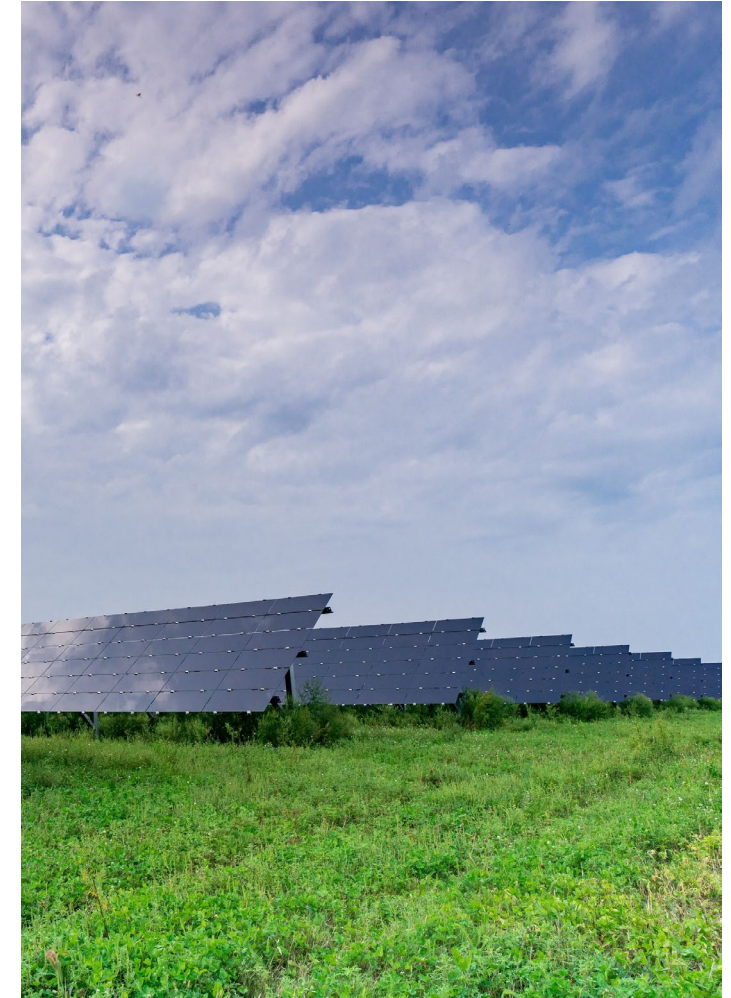
The What, How, and Why of National Grid Renewables  
and the Solar Development Process



Ben

## Expertise as Top U.S. Renewable Energy Company

- National Grid Renewables is a leading North American independent developer and operator of utility-scale renewable energy and battery storage projects
- National Grid Renewables includes the renewable energy development company formerly known as Geronimo Energy, whose team has successfully developed over 2,800 megawatts (MW) of wind and solar projects that are currently in operation or under construction
- We are experts in renewable energy project development, construction and operations
- The robust National Grid Renewables pipeline stretches across the United States, including projects in advanced development phases



*Brooten Community Solar*

# Farmer-Friendly, Community-Driven



## Who is National Grid?

- British based multinational electricity and gas utility company
  - Owns electricity transmission network in England and Wales, operates in Great Britain
  - Supplies 20+ million people in the NE US with electricity and gas
- National Grid Renewables is a subsidiary of National Grid's unregulated arm, National Grid Ventures, and is the company's first renewable energy platform



## What is the value-add to customers?

- **Long-term Ownership Partner**
  - We develop, construct, own and operate our projects
- **Financial Strength**
  - National Grid Renewables is one of the largest and strongest energy companies in the world with a fortified balance sheet
- **Competitive Renewables**
  - Scale and access to capital create efficiencies that result in low-cost renewable pricing



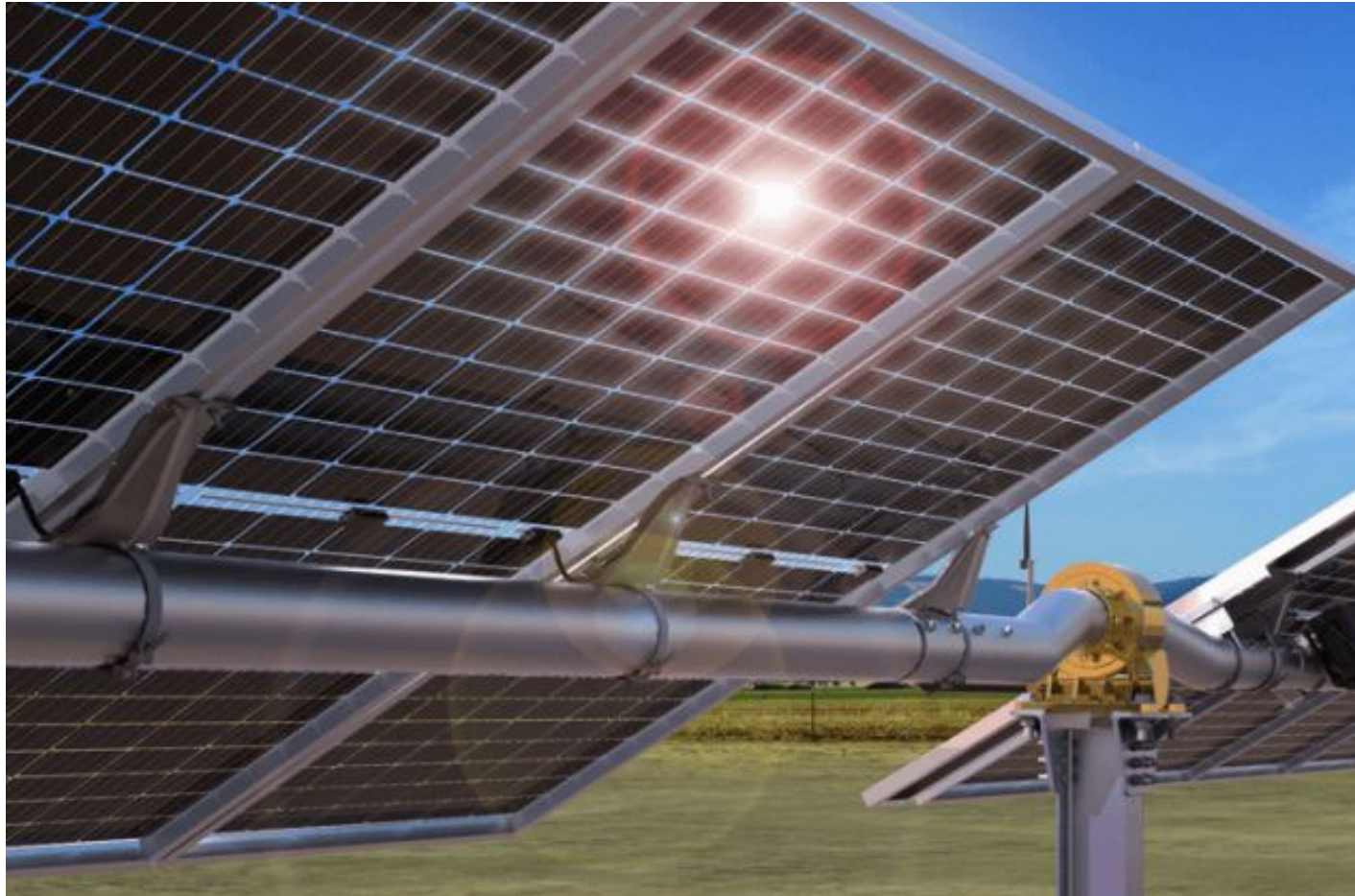
# Development – Siting Process

- Willing landowner(s) and supportive community
- Proximity to existing electrical infrastructure
- Marketability to power purchasers
- Compelling solar resource
- Large, flat parcels of land



*Sunrise Community Solar*

# Solar Project Components – Modules / Panels



Thin Film



Polycrystalline



# Solar Project Components - Racking



*Tracking Systems*

# Solar Project Components - Inverters



# Solar Project Components – Point of Interconnection



# Solar Project Components – Access Roads



# Solar Energy Project Construction

How We Construct Safely and Respectfully



Brett



Courtney

# Construction – Components Overview

- Usually takes 9-18 months
- Generally consists of:
  - Site preparation
  - Pier installation
  - Racking installation
  - Module installation
  - Interconnection
  - Re-vegetation



*Pierre Solar*

# Construction – Site Preparation

- Site Preparation
  - Tree Clearing
  - Grading
  - Access Roads
  - Fence Install



# Construction – Pier Installation

- Pier Installation
  - Piers for Racking
  - Piers for inverter skids

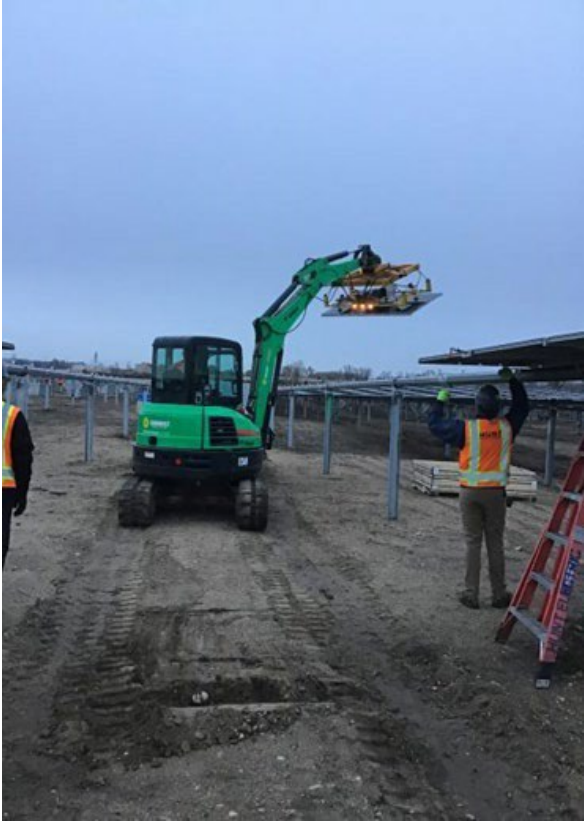


# Construction – Racking Installation

- Racking Installation
  - Fixed Tilt
  - Tracker



# Construction – Panel Installation



# Construction – DC Wire Installation

- DC Cable Install String harnesses connect panels together
  - String circuits connect into the combiner box
  - DC homeruns routes to inverter skids



# Construction – AC Wire Installation

- AC Cable Install
  - Below grade trenching
  - Overhead connection line
  - Depends on soil conditions



# Construction – Restoration and Re-Vegetation



# Solar Energy Project Operation

How We Operate Safe and Productive Projects



Steven

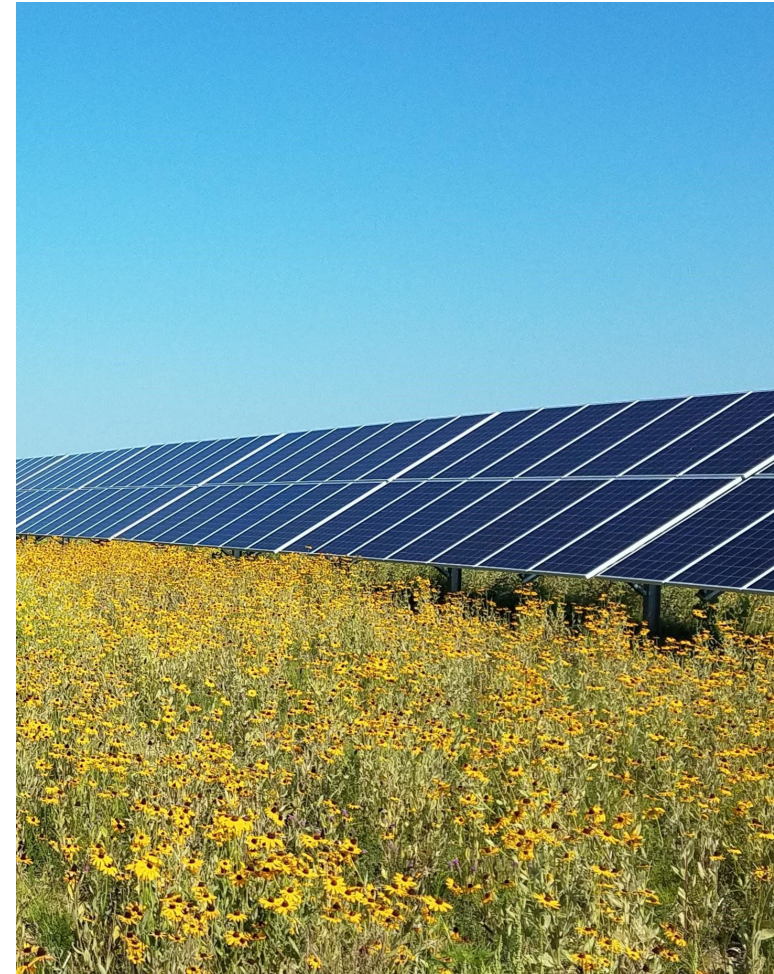
- Day to day maintenance is minimal
- Site inspections to assess vegetation growth and perform care if needed, including spot treatment for weeds
- Sites are generally mowed several times per year
- Equipment inspections are ongoing to ensure operations are running at optimal levels



*Pegasus Solar*

# Operations and Maintenance – Decommissioning

- Components are removed and reused or recycled at the end of the project's useful life
- The site can be restored to its previous use, or another use based on landowner wishes
- Soil quality generally has improved on sites previously used for agriculture as soils have rested during the project's life



*Kramer Solar*

# Lakeside Solar Project

Project Details and Benefits



Amber

# Project Details

- Operational capacity: up to 200 MW
- Location: White River Township, Michigan
- Expected COD: December 31, 2025
- Permitting Process started with White River Township



*Pegasus Solar*

- Cultural Resources
- Wetlands
- Threatened and Endangered Species
- Drainage
- Glare
- Hydrology
- Soils



# Community Impacts for the Project

## Our projects bring long-term, positive economic impacts to individuals and businesses



- ✓ Estimated to be nearly 300+ temporary construction jobs and 6 full-time equivalent jobs during annual operation\*



- ✓ Estimated Tax revenue of ~\$36 million over 25 years based on a 200MW solar project\*

- ✓ New income for local landowners and farmers



- ✓ Allows local farmers to keep farms within the family and return to farming at end of project life



- ✓ Increased local and state spending and approximately \$238 million in capital investment.



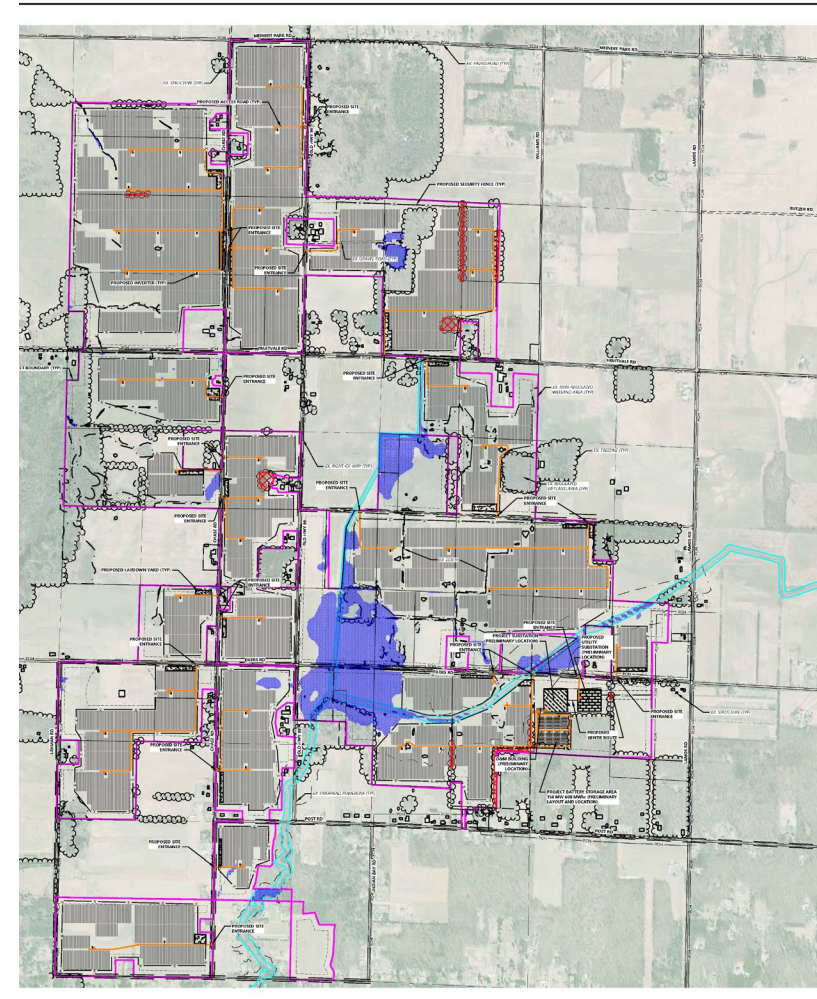
- ✓ Charitable Fund of \$200/MW (~\$20,000-\$40,000/year) donated to local non-profit to be allocated to various local needs

\*Calculations based on the current tax statutes and are subject to change.



# Project Details-Layout

Utility-Scale Solar Energy System Setback Requirement	White River Township Requirements	Proposed Setbacks
Any component of the Solar Energy System from property line of an adjacent Non-participating Residential Use	100 feet	100 feet
Front Property Line without an Adjacent Residential Use	50 feet	50 feet
Rear Property Line without an Adjacent Residential Use	15 feet	15 feet
Side Property Line without an Adjacent Residential Use	25 feet	25 feet
Residential Structure on a Participating Parcel	50 feet	50 feet
Maximum Height: Solar Array, collection device, and energy system components (excluding substation & electrical transmission equipment)	12 feet <sup>1</sup>	15 feet



# Project Details – Vegetation and Screening

## Vegetative Screening Plant Materials

Black Hills Spruce



Concolor Fir



Common Serviceberry



Redbud



Common Elderberry



Red Osier Dogwood

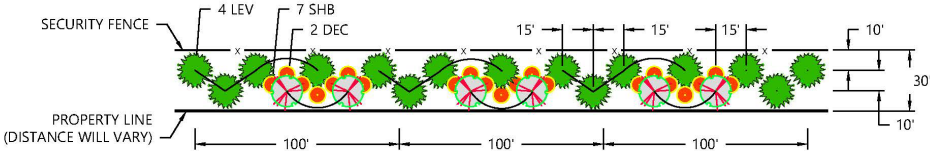


Common Ninebark



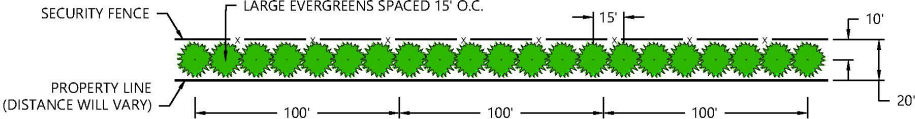
## Planting Detail Type 1 - Double Row Mixed Buffer

SCALE: 1" = 50'

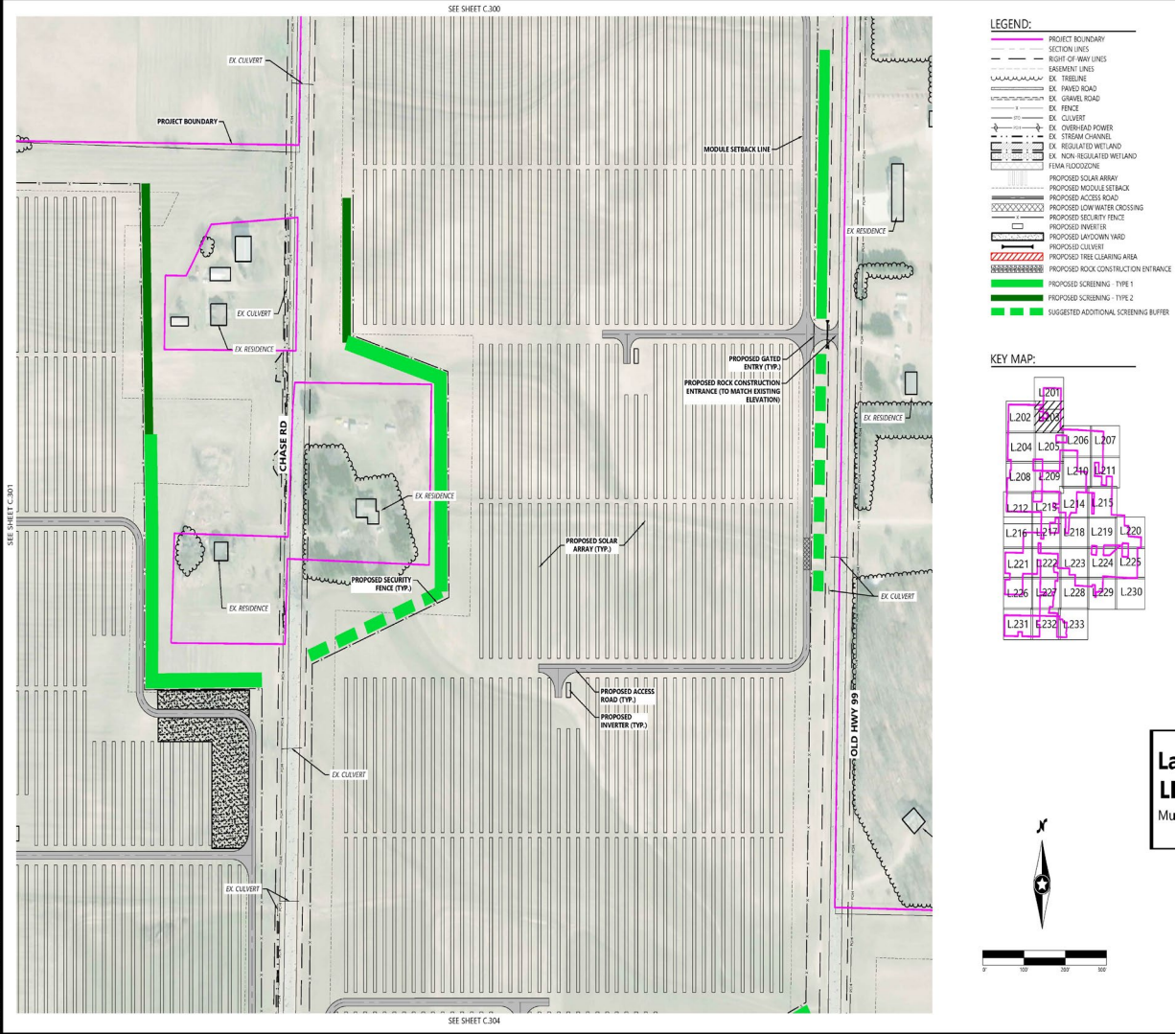


## Planting Detail Type 2 - Single Row Large Evergreens

SCALE: 1" = 50'



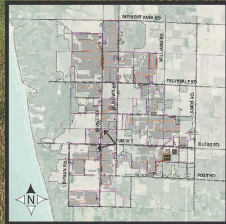
# Project Details – Vegetation and Screening



# Project Area – Visual Rendering

**VIEW 1: INTERSECTION OF EILERS RD. & OLD HWY. 99 - LOOKING NORTHEAST**

EXISTING CONDITIONS



Westwood  
002690A 11-15-22

**LAKESIDE SOLAR**  
MUSKEGON COUNTY, MI



**VIEW 1: INTERSECTION OF EILERS RD. & OLD HWY. 99 - LOOKING NORTHEAST**

PROPOSED SCREENING BUFFER AT PLANTING



Westwood  
002690A 11-15-22

**LAKESIDE SOLAR**  
MUSKEGON COUNTY, MI





# Project Area – Visual Rendering

**VIEW 5: CHASE RD., NORTH OF POST RD. - LOOKING EAST**  
PROPOSED SCREENING BUFFER AT PLANTING



**Westwood**  
Phone: (262) 331-1100 | Fax: (262) 331-1101  
www.westwoodenergy.com  
0026/004 11-15-22

**LAKESIDE SOLAR**  
MUSKEGON COUNTY, MI



# Project Area – Visual Rendering

## VIEW 5: CHASE RD., NORTH OF POST RD. - LOOKING EAST

PROPOSED SCREENING BUFFER AT 10 YEARS MATURITY



**Westwood**  
Phone: 0000000000 | 0000000000  
Fax: 0000000000 | 0000000000  
Web: 0000000000 | 0000000000  
0000000000 | 11-15-22

**LAKESIDE SOLAR**  
MUSKEGON COUNTY, MI



# Project Area – Visual Rendering



# Project Area – Visual Rendering

**VIEW 6: CHASE RD., SOUTH OF MEINERT PARK RD. - LOOKING SOUTHWEST**  
PROPOSED SCREENING BUFFER AT PLANTING



**Westwood**  
Project: 00266904 | 11-15-22  
City: Muskegon, MI  
County: Muskegon, MI  
Westwood Energy Services, Inc.  
00266904 | 11-15-22

**LAKESIDE SOLAR**  
MUSKEGON COUNTY, MI

# Project Area – Visual Rendering

## VIEW 6: CHASE RD., SOUTH OF MEINERT PARK RD. - LOOKING SW

PROPOSED SCREENING BUFFER AT 10 YEARS MATURITY



**Westwood**  
Energy Services, Inc.  
11111 Westwood Drive  
Muskegon, MI 49451  
Tel: 231.221.1111  
Fax: 231.221.1112  
www.westwoodenergy.com

**LAKESIDE SOLAR**  
MUSKEGON COUNTY, MI



# Project Details – Vegetation inside the array



# Solar Projects Are Good Neighbors

- Does not require additional services, so no pressure on local resources
- No harmful pollutants or negative health impacts
- No odor and minimal sound produced
- No operational air or water emissions
- Let soils rest during project life
- Perennial plantings increase soil stability, improve infiltration, and help promote biodiversity
- Reduces impacts from power generation as compared to more traditional power plants
- Not considered permanent, structures removed at end of project life





Questions?



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