

# Vegetation Management Plan

## Clear Mountain Energy Center

Clermont County, Ohio

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December 2023

*Prepared for:*

**Clear Mountain Energy Center, LLC**

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**TETRA TECH**

TABLE OF CONTENTS

1.0 INTRODUCTION ..... 1

1.1 Project Description..... 1

1.2 Purpose and Intent .....2

2.0 PRE-CONSTRUCTION SITE CONDITIONS ..... 3

2.1 Background Information .....3

2.2 Agency Coordination .....3

2.3 Field Survey.....4

2.3.1 Observed Vegetation Communities.....4

2.3.2 Presence of Invasive Species .....5

2.4 Agricultural Effects On Water Quality ..... Error! Bookmark not defined.

3.0 VEGETATION IMPACTS ..... 6

3.1 Construction Impacts.....6

3.1.1 Temporary Vegetation Establishment ..... Error! Bookmark not defined.

3.2 Operation Phase Impacts .....6

3.2.1 Permanent Vegetation Establishment.....6

3.2.2 Monitoring .....7

3.3 Invasive Species Management.....7

3.3.1 Monitoring .....8

4.0 DISCUSSION AND SUMMARY..... 10

5.0 REFERENCES ..... 11

LIST OF TABLES

Table 1. Vegetation Communities Identified within the Project Study Area ..... 5

Table 2. Typical Seed Mix ..... Error! Bookmark not defined.

Table 3. Potential Pollinator-Specific Plantings..... Error! Bookmark not defined.

LIST OF APPENDICES

APPENDIX A Figures

Figure 1. Site Location Map

Figure 2. Vegetation Communities Map

APPENDIX B Agency Correspondence

## LIST OF ACRONYMS/ABBREVIATIONS

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AC	alternating current
BMP	best management practice(s)
CMSP	Clear Mountain Solar Project
DC	direct current
DOW	Ohio Division of Wildlife
E&S Plan	erosion and sediment control plan
ft	feet
footprint	the limits of the Project's operational layout
GIS	geographic information system
HSE manager	Health, Safety, and Environmental Manager
HUC	Hydrologic Unit Code
IPaC	Information for Planning and Consultation
IS	invasive species
kV	kilovolts
LOD	the Project's approximate limits of disturbance
MW	megawatt
NRCS	Natural Resources Conservation Service
ODNR	Ohio Department of Natural Resources
OPHI	Ohio Pollinator Habitat Initiative
Project	equipment and infrastructure associated with the Project
Project Area	The area to be leased
PV	photovoltaic
Tetra Tech	Tetra Tech, Inc.
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

## 1.0 INTRODUCTION

Clear Mountain Energy Center, LLC ("Clear Mountain") is proposing to construct the Clear Mountain Energy Center (Project), a 100-megawatt ("MW") photovoltaic ("PV") solar generation facility ("Project") with a 52-MW battery energy storage system ("BESS"). The Project is situated on approximately 1,215 acres of privately-owned land located in Clermont County, Ohio, which Clear Mountain will control via leases or purchase options with the individual owners ("Project Area").

On behalf of Clear Mountain, Tetra Tech, Inc. ("Tetra Tech") completed desktop and field surveys to support the development of a plan for revegetation of the Project. Limits of the desktop and field review encompassed the Project's approximately 1,057-acre Project Study Area. It is important to note that the Project study area includes the project limit of disturbance ("LOD") which will include the final design of the Project ("footprint"), and all temporary workspaces needed to construct, operate, and maintain the Project throughout the operational lifetime. This report provides a Vegetation Management Plan ("Plan") for the construction, operations, and maintenance phases of the Project. This report is structured to provide a summary of the pre-construction conditions, an identification of potential Project impacts to vegetation communities, a plan for revegetating areas impacted by construction, and vegetation maintenance schedules during operation of the Project. Based on the final Project design, an updated Vegetation Management Plan will be prepared and submitted to the Ohio Power Siting Board prior to construction to finalize the revegetation plan and maintenance activities.

### 1.1 PROJECT DESCRIPTION

Clear Mountain is proposing to construct the Project on privately-owned land that Clear Mountain will control via leases or purchase options with the individual landowners. The Project is located in Clermont County, Ohio approximately 2 miles northwest of the Village of Williamsburg and approximately 23 miles east of the City of Cincinnati. The Project is bounded roughly by Sharps Cutoff Road to the east, Hawley Road to the west, Jackson Pike Road to the north, and State Route 276 which bisects the southern portion of the Project. The Project will have a nameplate capacity of approximately 100 MW alternating current ("AC"), consisting of solar arrays and associated infrastructure, comprising the following components:

- A solar field of PV panels producing direct current ("DC") electricity mounted on fixed-tilt tracking structures or single-axis tracking structures that will follow the sun throughout the day;
- Inverters within boxes will be situated amongst the solar arrays to convert DC electricity to AC electricity;
- A medium-voltage cable collection system that will extend underground to aggregate the AC output from the inverters; and
- Internal infrastructure including permanent gravel access roads and security fencing.

The Project will also have a 52-MW BESS component that will be placed in the vicinity of a proposed substation/switchyard and will include a graveled area surrounded by a chain-link fence. The BESS system will likely be placed on concrete slabs and will be connected to the substation/switchyard by buried electrical cables. PV panels will be ground-mounted on a low-profile tracking system that will be supported by small I-beam posts driven into the ground. The result is an extremely small ground disturbance footprint associated with the panels. In addition, temporary laydown and parking areas will be created and used during construction. These areas are not planned to be used during long-term operation and maintenance.



During construction, minimal site grading activities are anticipated for installation of the facility components and for management of stormwater runoff.

Each proposed solar array area will have an access driveway off the public roads, and there will be internal gravel access roads within the solar panel array areas. The Project will include four main components that include the panel array areas, interconnection corridors, battery storage area, and switchyard/substation area.

## 1.2 PURPOSE AND INTENT

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This Plan is designed to summarize existing site conditions, as determined from field surveys and desktop review, and provide a conceptual overview of proposed vegetation management in the LOD. Vegetation management will include (1) temporary plantings to prevent erosion during construction; (2) installation, maintenance, and monitoring of permanent plantings in and around solar arrays; (3) invasive species monitoring and management; and (4) establishment of vegetative buffers, if necessary.

## 2.0 PRE-CONSTRUCTION SITE CONDITIONS

Tetra Tech used a combination of desktop assessment, field surveys, and post-field data analysis to develop the vegetation community assessment for the Project, which helps guide this Plan to best fit in the greater landscape.

### 2.1 BACKGROUND INFORMATION

The Project is located within the East Fork Little Miami River watershed with Hydrologic Unit Code (“HUC”) 05090202 including sub-watersheds of Pleasant Run, Kain Run, Backbone Creek, Owensville Creek, and Patterson Run. The area within a two-mile radius of the Project Area primarily consists of agricultural land with rural residences and forested areas scattered throughout. However, the area to the south-southeast along the south side of Route 32 includes commercial and industrial facilities and the community of Williamsburg. Appendix A, Figure 1 depicts the Project location on a topographic base map, and Figure 2 depicts current vegetation communities within the Project study area on an aerial base map.

According to *Descriptions of the Ecosystem Regions of the United States* (Bailey 1995), the Project Area is entirely within the Eastern Broadleaf Forest (Continental) Province, which is characterized by a temperate deciduous forest dominated by drought-resistant broadleaf tree species. These tree species typically provide a high canopy that is dense and continuous in the summer months then shed their leaves in winter.

Topography can be characterized as generally flat as the area is located within the Illinoian Till Plain, a region of the Central Lowland Till Plains. Soils within the Project Area are overwhelmingly silt loams (99.3%) including Clermont silt loam at 0 to 1% slopes (68%) and the Westboro Schaffer silt loams 0 to 2% slopes (22.7%) per USDA NRCS web soil survey (NRCS 2023).

### 2.2 AGENCY COORDINATION

On behalf of Clear Mountain, Tetra Tech initiated coordination with the regulating agencies and prepared protected species requests to the Ohio Department of Natural Resources (“ODNR”) and the United States Fish and Wildlife Service (“USFWS”) via email on April 6, 2021. Updated information was submitted to both the ODNR and USFWS via email on June 10, 2022. A third round of correspondence detailing updated Project limits and activities was submitted to both the ODNR and USFWS via email on May 31, 2023. The letters requested identification of any federal and/or state listed threatened, endangered, or species of concern, National Wildlife Refuges/management areas, significant habitats, or other natural landscape features that may be directly or indirectly impacted by construction and operation of the Project. A geographic information system (“GIS”) shapefile of the Project Area was submitted along with the request to be used as the minimum boundary limits to be evaluated by each agency.

In addition to agency coordination letters, Tetra Tech queried the USFWS’s online Information for Planning and Consultation (“IPaC”) tool initially on March 15, 2021, again on May 18, 2022, and once more on April 20, 2023 to confirm that the information was up to date. The most recent IPaC information identified Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), Tri-colored Bat (*Perimyotis subflavus*), and ray bean (*Villosa fabalis*) as having the potential to occur within the Project Study Area. The updated IPaC also listed the Monarch Butterfly (*Danaus plexippus*) as a candidate species, but no critical habitat has been designated for this species and it is not currently protected under the Endangered Species Act. According to the updated IPaC there are no critical habitats within the Project Study Area under the jurisdiction of the USFWS.

Correspondence from the USFWS, dated April 13, 2021, provided comments and recommendation relating to protected bat species habitat preferences, tree-cutting time of year restrictions, and minimization or avoidance of stream and wetland impacts. Correspondence from USFWS in response to updated Project review requests, dated

June 21, 2022, provided an additional comment and recommendations relating to inclusion of pollinator plantings and mowing maintenance schedules.

In response to a request from the USFWS, Tetra Tech provided an additional communication to both ODNR and USFWS via email on October 3, 2023, that detailed the anticipated impacts to wetlands and streams, and described and depicted the minimal proposed tree-clearing that will be necessary to construct the Project. This correspondence was to provide the most updated Project information to USFWS for informational purposes and to inquire whether any of the USFWS's previous responses would be updated based on the new information provided. Correspondence from USFWS, dated October 4, 2023, stated that USFWS does not anticipate adverse effects to any federally endangered, threatened, or proposed species, or proposed or designated critical habitat. No additional recommendations were provided in this final correspondence. Correspondence with USFWS is provided in Appendix B.

Correspondence from the ODNR (ODNR 2021), dated June 8, 2021, provided information on natural heritage database records within one mile of the Project Area, recommendations from the Ohio Division of Wildlife ("DOW") on behalf of the USFWS, and pollinator habitat recommendations provided by DOW and developed in cooperation with the Ohio Pollinator Habitat Initiative ("OPHI"). Additional correspondence from the ODNR, dated June 14, 2022, and July 3, 2023, detailed updated reviews and responses for the Project Area since each of the previous review requests. A final submittal to the ODNR via email on October 3, 2023 detailed the anticipated impacts to wetlands and streams, and described and depicted the proposed tree-clearing that will be necessary to implement the Project. This correspondence was to provide the most updated Project information to ODNR for informational purposes and to inquire whether any of the ODNRs previous responses would be updated based on the new information provided. Correspondence with ODNR is provided in Appendix B.

## 2.3 FIELD SURVEY

Experienced biologists from Tetra Tech conducted a general habitat assessment in conjunction with aquatic resource surveys to identify and delineate wetlands and waterbodies. The field surveys were completed in May and November of 2021 and December of 2022. Surveyors documented general habitat boundaries and conditions, representative plant species, vegetation age class, presence and extent of invasive species ("IS") infestations, and notable habitat features.

### 2.3.1 Observed Vegetation Communities

Based on data collected in the field and an evaluation of satellite imagery, eight primary habitat types were identified in the Project Area during the survey efforts, consisting of Early Successional Mixed Deciduous Forest, Managed Agricultural Field, Palustrine Emergent ("PEM") Wetland, Palustrine Forested ("PFO") Wetland, Ponds, Palustrine Scrub-Shrub ("PSS") Wetland, Residential, and Woodland Tree line. The forested land is primarily described as early successional mixed deciduous forest, though a number of woodland tree lines are present separating the managed agricultural land within the Project Study Area. Table 1 below summarizes the extent of each of the identified habitats present within the Project Study Area. Appendix A, Figure 2 shows the extent of the habitats located in the Project Study Area.

**Table 1. Vegetation Communities Identified within the Project Study Area**

Habitat Type	Acreage in Project Study Area <sup>(a), (b)</sup>	% of Project Study Area
Early Successional Mixed Deciduous Forest	16.6	1.6%
Managed Agricultural Field	846.4	80.1%
Palustrine Emergent (PEM) Wetland	10.4	1.0%
Palustrine Forested (PFO) Wetland	153.2	14.5%
Pond	0.5	<0.1%
Palustrine Scrub-Shrub (PSS) Wetland	1.1	0.1%
Residential	1.2	0.1%
Woodland Tree Line	27.1	2.6%
<b>TOTALS<sup>(a), (b)</sup></b>	<b>1,056.6</b>	<b>100%</b>

(a) All totals have been rounded up to the nearest 0.1 acre.

(b) Due to grouping, rounding, and geospatial projection calculations, minor, discountable acreage inconsistencies are present.

## 2.3.2 Presence of Invasive Species

General information on the presence of invasive species in the Project Area was assessed during field surveys. Invasive species identified in the Project Area include garlic mustard (*Alliaria petiolata*), Russian olive (*Elaeagnus angustifolia*), Japanese honeysuckle (*Lonicera japonica*), Morrow's honeysuckle (*Lonicera morrowii*), Tatarian honeysuckle (*Lonicera tatarica*), Japanese stiltgrass (*Microstegium vimineum*), reed canary grass (*Phalaris arundinacea*), multiflora rose (*Rosa multiflora*), and narrow leaved cattail (*Typha angustifolia*).

Reed canary grass was the most prominent invasive species and persisted in varying abundance throughout most of the Project Area in both forested and non-wooded habitats. Herbaceous species like Japanese stiltgrass and garlic mustard were often observed in open meadows or unfarmed areas adjacent to active agricultural fields or roads. Narrow leaved cattail was observed predominantly in roadside drainages as well as in some delineated wetlands. Japanese, Morrow's, and Tatarian honeysuckle as well as multiflora rose were common along woodlot borders adjacent to agricultural fields and also in upland transition zones within forested lots adjacent to riparian zones. Honeysuckle species and multiflora rose were also identified within wetlands delineated within the Project Area.

## 3.0 VEGETATION IMPACTS

The Project will impact the existing vegetation communities within the LOD, both temporarily and permanently. Temporary impacts will include mowing, clearing, trimming, trenching, and revegetating agricultural fields with native herbaceous vegetation. Permanent impacts will include grubbing, grading, biocide use, and landscape screening. Typical impacts associated with a solar PV and battery storage facility construction and operation activities are discussed below.

### 3.1 CONSTRUCTION IMPACTS

The construction phase of the Project will primarily be responsible for most of the temporary impacts and will result from site preparation work (e.g., mowing, clearing, trimming, and driving on herbaceous vegetation) and installation work. Areas that are disturbed during construction will be restored to their original conditions, including areas that have been excavated for the installation of collection lines.

During initial construction, temporary vegetation will be established as necessary to prevent erosion during stormwater events. Temporary vegetation will be discussed in detail in the Project's Erosion and Sediment Control Plan ("E&S Plan") but may include planting of temporary seed mixes or cover crops. Any seed, straw, and/or matting used within the Project Area shall meet Ohio stormwater standards (OEPA 2022).

### 3.2 OPERATION PHASE IMPACTS

Impacts to vegetation communities during operation and maintenance phases are typically restricted to general lawn care activities, such as mowing, string-trimming, targeted application of biocides, watering, tree trimming, and possibly fertilizing or overseeding if there are areas where groundcover fails for some reason. It is possible as part of unanticipated extensive maintenance activities that reseeding of areas may be necessary. Mowing activities will generally occur one or two times during the growing season to ensure the vegetation does not pose a risk to the Project equipment.

#### 3.2.1 Permanent Vegetation Establishment

In areas underneath solar arrays, a mix of low-growing vegetation will be planted to stabilize the soil and serve as long-term groundcover. Clear Mountain is committed to working to achieve the beneficial vegetation threshold and OPHI pollinator minimum score recommendations provided in ODNR's Guidance for Proposed Solar Energy Facilities in Ohio (ODNR 2022) to develop a seeding plan that relies on native and wildlife beneficial species as much as possible. This could include reseeding areas disturbed during construction with a low-growth, native grass seed mix or native prairie grasses for areas under the solar modules and native species pollinator-friendly seed mix in select open areas outside of the array and within the Project perimeter fence. The seed mixes will vary depending on availability, stakeholder/agency requests, and long-term management goals. Typically, a seed mix suitable for limited maintenance and compatibility with PV arrays is selected. Generally, these mixes are comprised of native grasses and forbs designed to provide a 2-ft clearance between the ground and the solar panels. In some cases, select areas may be managed agriculturally for row crops, specialty crops, and animal forage, with the ultimate mix being developed in consultation with local farmers, the local agricultural extension office, and other partners.

### **Use of Grazing Animals for Maintenance**

If Clear Mountain determines that there is potential for grazing animals (typically sheep) to be used in lieu of traditional mechanical mowing and maintenance, cover crop plantings will be revised to ensure all planted species are safe for the animals to eat and include some cereal grains and/or other preferred species.

### **Pollinator-Specific Plantings**

When possible, areas between and around solar panels will be planted with grasses, legumes, and wildflowers that are beneficial to pollinators, according to the OPHI. Specific species planted may vary based on availability but will, in general, be low-growing to avoid casting shadows on solar panels and to limit necessary maintenance mowing. Guidance for the selection of potential pollinator specific species that will be planted will be based on the ODNR-recommended plant species for Ohio solar facilities per Attachment A of the ODNR's Guidance for Proposed Solar Energy Facilities in Ohio (ODNR 2022).

Where possible outside of the PV array areas, such as along fence lines, around vegetative buffer areas, and along access roads, a taller-growing pollinator-specific seed mix will be planted with a more diverse array of perennial flowering plants. This seed mix will provide beneficial foraging habitat to small mammals, birds, and pollinators while reducing stormwater runoff, standing water, and erosion.

### **Collector Lines**

In areas where collector lines run through leased land, areas within active agricultural fields can continue to be farmed. Areas on the margins of farmed fields may be planted with the pollinator-specific seed mix described above.

### **Landscape Buffer Plantings**

Clear Mountain is planning to install landscape buffers at highly visible locations to help screen the Project from neighbors and mitigate visual impacts. In short, Clear Mountain will plant a mix of evergreen and deciduous tree and shrub species. For additional planting specifications see the Preliminary Landscape Screening Plan included with this submission.

## **3.2.2 Monitoring**

All planted vegetation will be monitored for success as required by any and all permits and authorizations received for the Project. All groundcover seeding and establishment will be monitored to ensure 70% coverage according to the Project's E&S Plan and required by OEPA (OEPA 2022). After all groundcover meets success criteria for the Project to have reached full stabilization and best management practice ("BMP") materials are removed from the Project, Clear Mountain representatives will ensure during routine equipment checks that the full extent of the Project footprint is vegetated appropriately and conduct minor vegetation management activities.

For tree and shrub plantings used as visual buffers, Clear Mountain will maintain the vegetative screening for the life of the Project and replace any failed plantings so that, after five years, at least 90 percent of the vegetation has survived.

## **3.3 INVASIVE SPECIES MANAGEMENT**

General construction procedures that will serve to prevent the establishment and spread of IS plants include:

- Training of construction contractor personnel to identify key invasive species and understand the measures to be implemented to reduce the chance of introduction and spread of invasive species;

- Preconstruction identification and treatment, or isolation during construction, of notably large or dense populations of invasive plants that have high potential to be spread to other areas that are currently free of infestation, as a result of construction activities;
- Inspection of contractor equipment and vehicles upon arriving to the Project Area to ensure the absence of foreign weed parts ("weed clean" inspection);
- Segregation of topsoil during construction in wetlands with saturated soils, and returning it to the top layer of soil during restoration;
- Restoration and seeding of workspace areas within prescribed timeframes, to minimize the amount of time disturbed soils remain bare and susceptible to infestation by invasive plants; and
- Mulching with straw, hay, wood fiber hydro-mulch, erosion control fabric, or some functional equivalent to prevent introduction of invasive weeds.

A comprehensive E&S Plan will be developed and implemented prior to construction of the Project. This plan will serve to prevent undisturbed areas and ecological resources in proximity to the Project Area from being impacted by sediment from construction activity through the use of site-specific measures and BMP. In areas with existing IS infestations deemed areas of concern, vegetation, soils, and trench spoil material will be stockpiled and contained at the affected site. Following construction, the material will be returned to its original location within the Project Area.

### 3.3.1 Monitoring

Clear Mountain will monitor and treat noxious weeds identified in Ohio Administrative Code Chapter 901:5-37 and invasive plant species identified in Ohio Administrative Code 901:5-30-01 within the LOD for a period of four years after construction has been completed. Areas of known infestations will be inspected and re-delineated each year and treated if they are found to have expanded 20% or greater beyond the extent documented during baseline surveys. Furthermore, any new IS occurrences will also be treated. Data collected during annual monitoring efforts will include identifying the IS; recording location or change in extent (if previously mapped); observable results of previous corrective actions implemented (if any); and recommendations for further control measures. Treatment methods for invasive species will include mechanical (e.g., manual removal, cutting), targeted chemical (i.e., herbicide), biological, or a combination thereof, depending on the target species and extent of the treatment area. Within a treatment year, control measures will be administered prior to seed maturation/development. If used at all, the use of herbicides will be in select and target areas, minimizing its use as is practicable.

To prevent potential impacts associated with improper herbicide application or accidental spills, Clear Mountain will use a licensed/certified applicator where required by law and develop site-specific herbicide application, handling, and cleanup guidelines. Herbicide applications will follow United States Environmental Protection Agency label guidelines and be performed in accordance with federal, state, and local laws and regulations.

Invasive species control will adhere to the following general guidelines:

- Herbicide applications will be suspended when:
  - Wind velocities exceed six miles per hour for the application of liquid materials and 15 miles per hour for the application of granular materials;
  - Ice covers the target vegetation; or
  - Precipitation is occurring or imminent.
- Herbicides will be transported in approved containers that are inspected daily for leaks, and only the quantity of material necessary to treat the expected weed population will be transported to the Project.
- Mixing of chemical controls will occur at least 200 feet from wetlands, waterbodies, or other known sensitive biological resources.

- Herbicides will not be used in or within 100 feet of wetlands or waterbodies unless specifically authorized by an appropriate regulatory agency.
- Material safety data sheets and spill kits will be kept in any vehicle transporting or applying herbicides.



## 4.0 DISCUSSION AND SUMMARY

After the construction activities have completed, the LOD will be seeded with appropriate seeding mixes to vegetate the vast majority of the LOD throughout the operations phase. This permanent, established ground cover will provide habitat for wildlife in addition to binding nitrogen and phosphorus in the plant material, helping to keep excessive nutrients out of surface water and groundwater. Native vegetation develops a deeper and more diverse root system than hay or row crops and would also eliminate the areas of bare soil associated with plowed fields or other agricultural practices, further decreasing runoff that would have the potential to influence surface water and groundwater. In short, water quality in both the local watershed and others downstream are expected to be improved during the operations phase of the Project through land use and management changes.

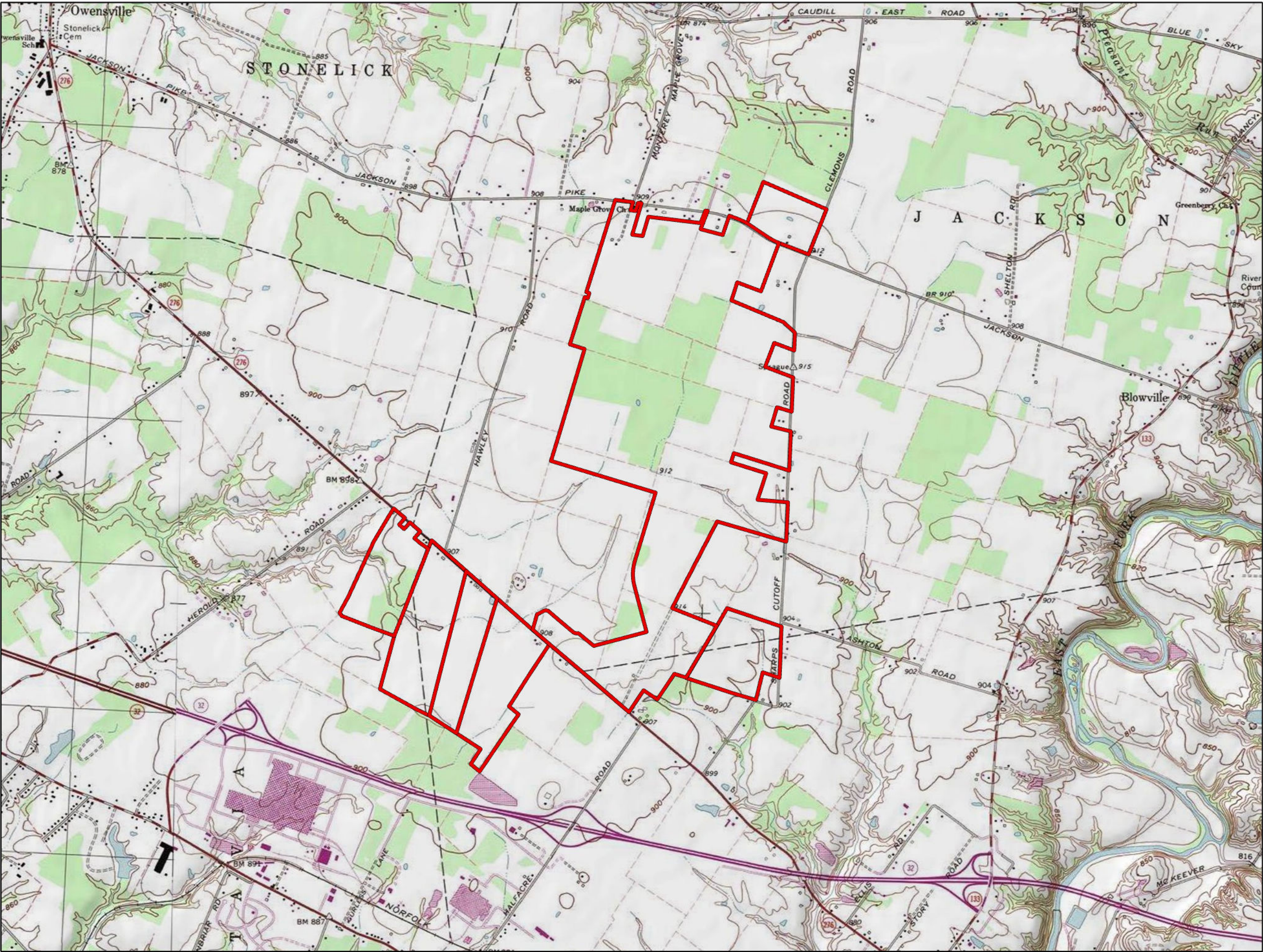
This Plan provides a conceptual overview of restoration activities and vegetation management through the full extent of the Project's LOD, including the footprint and all remaining temporarily-impacted areas. Vegetation management will include temporary plantings to prevent erosion during construction; installation, maintenance, and monitoring of permanent plantings in and around solar arrays; invasive species monitoring and management; establishment of vegetative buffers, where necessary.

## 5.0 REFERENCES

- Bailey, R. G. 1995. Description of the Ecoregions of the United States. 2nd ed. rev. and expanded (1st ed. 1980). Misc. Publ. No. 1391 (rev.), Washington, DC: USDA Forest Service. 108 pp. with separate map at 1:7,500,000.
- Brockman, C. S. 2007. Physiographic Regions of Ohio. Available at: [https://www.epa.gov/sites/default/files/2016-04/documents/05\\_oh\\_rec4.pdf](https://www.epa.gov/sites/default/files/2016-04/documents/05_oh_rec4.pdf). Accessed January 17, 2023.
- Ohio Environmental Protection Agency. 2022. Rainwater and Land Development, Ohio's Standards for Stormwater Management Land Development and Urban Stream Protection. Third Edition. Columbus, Ohio. Available at: <https://epa.ohio.gov/dsw/storm/rainwater>. Accessed November 2023.
- ODNR 2022. ODNR Guidance for Proposed Solar Energy Facilities in Ohio (updated 4/7/22). Available at: [https://ohiodnr.gov/static/documents/real-estate/ODNR-Guidance\\_for\\_ProposedSolarEnergyFacilities\\_in\\_Ohio.pdf](https://ohiodnr.gov/static/documents/real-estate/ODNR-Guidance_for_ProposedSolarEnergyFacilities_in_Ohio.pdf). Accessed November 2023.
- Millennium Ecosystem Assessment (MEA) 2005. Ecosystems and Human Well-Being: Policy Responses. Millennium Ecosystem Assessment. Vol 3. Ch 9 – Nutrient Management pp 297-311.
- United States Department of Agriculture–Natural Resource Conservation Service (USDA–NRCS). 2022. Web Soil Survey, Clermont County, Ohio. Available at: <https://websoilsurvey.sc.egov.usda.gov/>. Accessed February 2022.
- United States Forest Service. 2014. 222 Eastern Broadleaf Forest (Continental) Province. Available at: <https://www.fs.usda.gov/land/ecosysmgmt/colorimagemap/images/222.html#:~:text=Land%2Dsurface%20form.,found%20in%20Tennessee%20and%20Kentucky..> Accessed September 1, 2020.
- Wood, S., Sebastian, K, and S. Scherr. 2000. Pilot Analysis of Global Ecosystems, Agroecosystems. Published by World Resources Institute, Washington DC. pp 1-94.

## APPENDIX A FIGURES





**Clear Mountain Energy Center  
Clermont County, Ohio**

**Figure 1: USGS Project Location**

**LEGEND**  
— Project Area

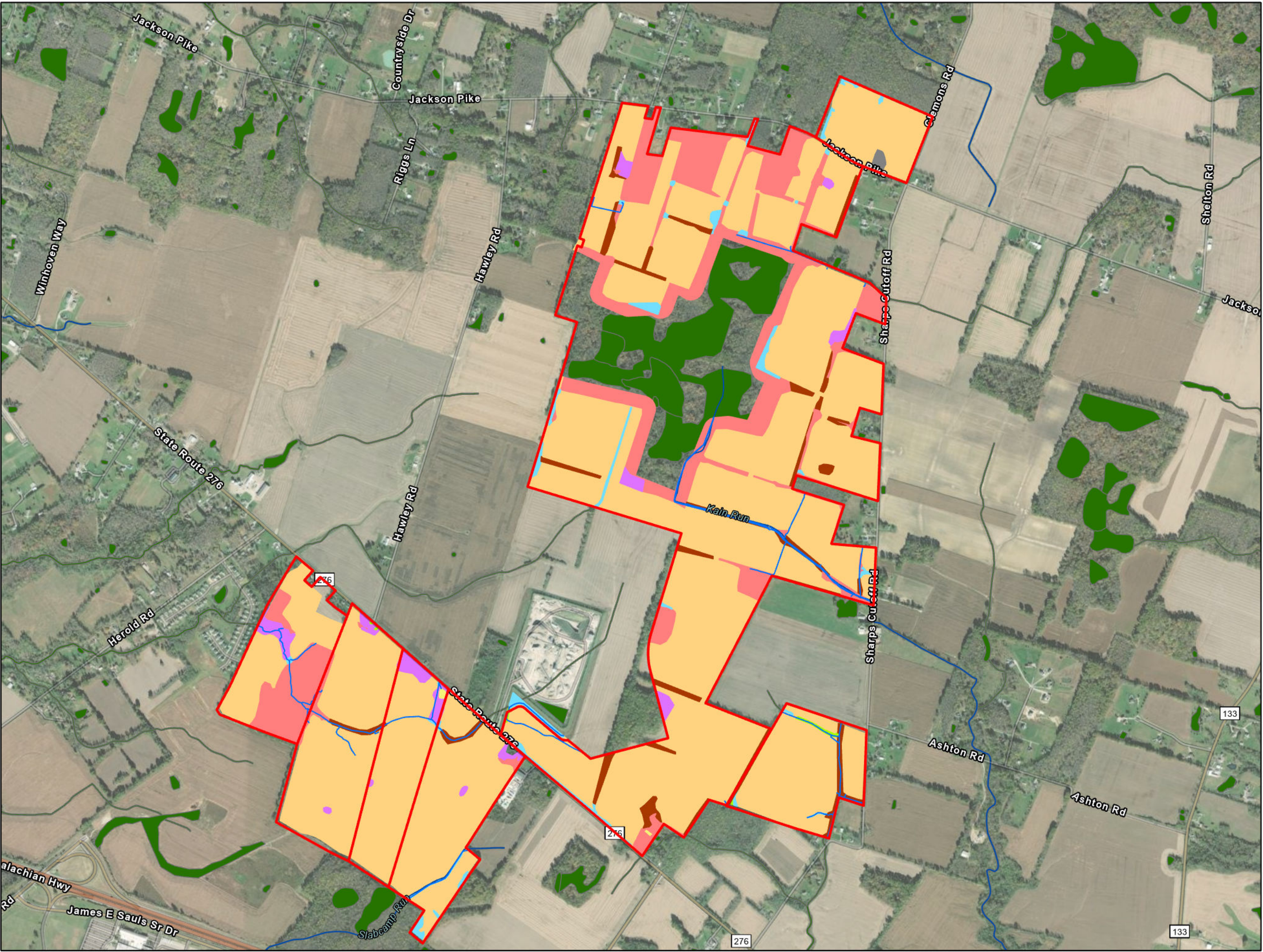
**Data Sources:**  
USGS 7.5 Minute Topographic Quadrangles  
Goshen, Newtonsville, Batavia, and  
Williamsburg

**Prepared for:** Savion  
**Prepared by:** Tetra Tech GIS Team (JSB)  
**Updated:** 1/2/2024



Spatial Reference: NAD 1983  
StatePlane Ohio South FIPS: 3402





Clear Mountain Energy Center  
Clermont County, Ohio

Figure 2: Habitat Assessment

LEGEND

- Project Area
- NHD Streams
- NHD Waterbodies
- NWI Wetlands
- Field Delineated Features (Tetra Tech, 2023)
  - Streams
  - PEM Wetland
  - PFO Wetland
  - PSS Wetland
  - Open Waterbody
  - Early Successional Mixed Deciduous Forest
  - Managed Agricultural Field
  - Woodland Treeline
  - Residential

**Data Sources:**  
ESRI Aerial Imagery 2020, Tetra Tech 2023,  
NHD 2022,  
Scale: 1:17,000

**Prepared for:** Savion  
**Prepared by:** Tetra Tech GIS Team (JSB)  
**Updated:** 1/2/2024



Spatial Reference: NAD 1983  
StatePlane Ohio South FIPS: 3402



## APPENDIX B AGENCY CORRESPONDENCE



September 28, 2023

United States Fish and Wildlife Service  
Ohio Field Office  
4625 Morse Road, Suite 104  
Columbus, OH 43230-8355

Subject: Updated Project Review Request  
Project Code: 2023-0072056  
(Previously Consultation Codes: 2022-0044443 & 03E15000-2021-SLI-0985)  
(Previous Event Codes: 2022-0044443 & 03E15000-2021-SLI-0985)  
Clear Mountain Energy Center Project  
Jackson and Williamsburg Townships, Clermont County, Ohio

To Whom It May Concern:

Tetra Tech, Inc. is requesting updated information, a No Effect determination, and/or clearance from the United States Fish and Wildlife Service (USFWS) regarding the potential presence of threatened or endangered species on or near a property located in Clermont County, Ohio (OH) as shown on the attached United States Geological Survey (USGS) Project Location Map (Attachment 1, Figure 1). Clear Mountain Energy Center, LLC (Clear Mountain Energy Center) is proposing to develop and operate the Clear Mountain Energy Center Project (Project), a new photovoltaic solar facility, an approximately 100-megawatt (MW) solar facility with an 84-MW battery storage component. The current Project study area now totals approximately 1,057 acres and is comprised of the preliminary Project study area (subsequently reduced to remove wooded acreage) and two additional survey areas adding approximately 502 acres to the initial study area. The Project will be the subject of an application for submittal to the Ohio Power Siting Board (OPSB).

The preliminary Project, totaling approximately 817 acres (subsequently reduced to remove wooded acreage), was originally located between OH-276 to the south, Hawley Road to the west, Sharps cutoff Road to the east, and Jackson Pike to the north, in Jackson and Williamsburg Townships, Clermont County, Ohio. Since initial coordination with USFWS the specific parcels utilized within the Project study area have been redefined and additional parcels have been added and surveyed. An additional approximately 399 acres were added to the Project study area, primarily just south of OH 276, as property became available, and the Project layout design progressed. An additional 103 acres were then added to the Project study area in December 2022, primarily within the north central portion of the study area. The last correspondence with USFWS, in May 2023, focused on the addition of the 103 acres to the Project study area that occurred after the initial USFWS clearance was secured. The additional acreage consists of mid-successional, mixed deciduous forest/woodland lots and a woodland tree line. The purpose of adding the 103 acres to the Project study area was to study those areas in order to identify the extent and location of any sensitive natural resources (i.e. wetlands or potentially suitable T&E habitat) that may lie adjacent to the proposed Project area for avoidance purposes. Project activities are not proposed in the 103 acres that were added

to the Project study area. Tetra Tech performed field surveys for the additional acreage on December 5 and 6, 2022. Field surveys were performed by qualified wetland scientists that are experienced in the region.

The current Project study area has not changed since the May 2023 USFWS coordination and is shown on the attached Project Location Map. Since the May 2023 USFWS coordination the Project layout and design have been refined and a clearer understanding of the anticipated tree felling acreages and impacts can now be provided. The focus of this coordination is to outline the anticipated impacts and anticipated conservation measures that will be adhered to in order to minimize potential impacts to sensitive species and habitats and secure a No Effect determination and clearance from the agency.

The USFWS Information and Planning Consultation (IPaC) tool was used to determine the potential for any federal threatened and endangered species that may occur in the proposed Project location, and/or may be affected by the proposed activities. An IPaC Official Species List was first generated for the Project on March 15<sup>th</sup>, 2021, prior to onsite surveys, and was provided to USFWS and ODNR during initial agency consultation. All submittals and responses from initial consultation with USFWS (Consultation Code: 03E15000-2021-SLI-0985) are provided in Attachment 2 – Previous USFWS Coordination - 2021. A second updated IPaC Official Species List was generated for the Project on May 18<sup>th</sup>, 2022, identifying Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) as having the potential to occur within the Project study area. The updated list no longer listed the running buffalo clover (*Trifolium stoloniferum*) which was included in the original IPaC. Since the initial coordination for this Project occurred the USFWS has removed running buffalo clover from the Federal List of Endangered and Threatened Plants on the basis of recovery. All submittals and responses from second consultation with USFWS (Consultation Code: 2022-0044443) are provided in Attachment 3 – Previous USFWS Coordination - 2022. A third updated IPaC Official Species List was generated for the Project on April 20<sup>th</sup>, 2023, identifying Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), Tri-colored Bat (*Perimyotis subflavus*), and ray bean (*Villosa fabalis*) as having the potential to occur within the Project study area. The updated IPaC also listed the Monarch Butterfly (*Danaus plexippus*) as a candidate species, but no critical habitat has been designated for this species and it is not currently protected under the Endangered Species Act. According to the updated IPaC there are no critical habitats within the Project study area under the jurisdiction of the USFWS.

Prior to the start of field surveys, an initial desktop analysis of the Project study area was conducted through a review of available Geographic Information Systems (GIS) resources. Information reviewed included the following:

- USGS topographic mapping (Attachment 1, Figure 1).
- National Land Cover Database (NLCD) Land Cover mapping (Attachment 1, Figure 2).
- USFWS National Wetland Inventory (NWI) mapping and USGS National Hydrography Dataset (NHD) mapping (Attachment 1, Figure 3).

Onsite wetland delineation, stream identification, and habitat assessment surveys were performed between May 10, 2021 and December 10, 2022. The entire 1,057-acre Project study area has been surveyed for the aforementioned purposes and the details of habitat assessment findings are detailed below. Additionally, anticipated impacts and associated anticipated avoidance, minimization, and conservation measures are summarized below.

The Project study area is primarily rural agricultural land in private ownership. It is comprised almost entirely of agricultural fields managed for soybeans and/or hay, with a few intact portions of palustrine forested wetland and



the occasional thin wooded tree line. While investigating the Project study area the following habitats were identified: managed agricultural fields (i.e. corn and soybeans), palustrine emergent wetland, palustrine forested wetland, open waterbodies, woodland tree lines, and patches of early successional mixed deciduous upland forest. The Habitat Assessment Map, provided as Figure 2 (Attachment 1), illustrates the locations of habitats identified during the onsite field habitat assessment. Non-native species such as Japanese stilt grass (*Microstegium vimineum*), Japanese Knotweed (*Reynoutria japonica*), autumn olive (*Elaeagnus umbellata*), Russian olive (*Elaeagnus angustifolia*), multiflora rose (*Rosa multiflora*), garlic mustard (*Alliaria petiolata*), and Tatarian honeysuckle (*Lonicera tatarica*) were identified within the Project study area.

Environmentally sensitive areas (i.e. intact forested areas and field delineated wetlands and waterbodies) identified during the initial desktop analysis and subsequent onsite aquatic resource delineations are being avoided to minimize environmental impacts to the maximum extent practicable. The streams and wetlands identified within the Project study area during onsite field delineations generally occur within actively managed agricultural fields and most of the streams have been historically channelized and heavily manipulated.

The majority of the Project study area is not wooded and lacks suitable bat habitat for the Indiana bat, northern long-eared bat (NLEB), and tricolored bat. A few heavily wooded, mid-successional, mixed deciduous forested wetland habitats are located within the Project study area which may serve as roosting and/or foraging habitat for the Indiana bat, NLEB, and tricolored bat. Additionally, there are a number of narrow tree lines separating agricultural fields that could potentially provide roosting and/or foraging habitat. Trees located in these wooded areas generally consisted of Pin oak (*Quercus palustris*), red maple (*Acer rubrum*), sugar maple (*Acer saccharum*), shag-bark hickory (*Carya ovata*), and eastern cottonwood (*Populus deltoides*). Trees ranged from approximately 5-inch diameter at breast height (DBH) to 35-inches DBH. Supplemental photographs of the additional wooded habitat surveyed during the December 5 and 6, 2022 are provided in Attachment 5 - Supplemental Habitat Photographs. No caves, rock shelters, or abandoned underground mines were observed during the field survey of the study area. Though no bats were observed during the onsite habitat surveys, the Project study area does have potentially suitable habitat for the federally listed Indiana bat, NLEB, and tricolored bat; therefore, Indiana bat, NLEB, and tricolored bat have the potential to be present within the Project study area.

Clear Mountain Energy Center anticipates avoiding and minimizing tree clearing to the maximum extent practicable during the design and installation of the Project. After refining the Project design Clear Mountain Energy Center anticipates that approximately 8.34 acres of tree clearing will be required to execute the Project. Anticipated tree felling areas are depicted on the Impacts Map (Attachment 1, Figure 4), and illustrate that tree clearing is primarily limited to narrow tree lines separating agricultural fields, small, wooded tree patches located within agricultural fields, and wooded tree lines along the peripheral of the proposed Project. Clear Mountain Energy Center understands that the clearing required for the implementation of the Project should be conducted for trees greater than 3 inches diameter at breast height during the seasonal period between November 1 and March 31. Clear Mountain Energy Center is committed to adhering to the tree clearing time of year restrictions. If tree clearing can be avoided during the time of year restrictions, it is Clear Mountain Energy Center's understanding that no further restrictions related to these species will be required. If anticipated tree removal cannot be avoided during the time of year restrictions, Clear Mountain Energy Center will coordinate with qualified biologist(s) and/or USFWS as appropriate concerning appropriate measures to ensure Indiana bat, NLEB, and tricolored bat are not adversely affected.

The majority of the Project study area has been historically and currently subject to disturbances associated with adjacent agricultural management. The streams identified on site have been historically modified for agricultural purposes and are not large enough nor contain adequate riffle-pool complexes to sustain the rayed bean (*Villosa fabalis*); therefore, no suitable habitat for the rayed bean is present within the Project study area. The Project design has been refined to avoid and minimize potential stream and wetland impacts to the maximum practicable extent, but anticipated project activities will involve the installation of permanent culverted crossings of three streams (Attachment 1, Figure 4). Of the three streams with anticipated impacts, only one (Kain Run) was classified during the delineations as a perennial stream. Clear Mountain Energy Center is committed to adhering to the time of year restrictions and will not conduct in-water work within perennial streams from March 15 through June 30.

The focus of this coordination is to outline the anticipated impacts and anticipated conservation measures that will be adhered to in order to minimize potential impacts to sensitive species and habitats and secure a No Effect determination and clearance from the agency. The attached PDF mapping (Attachment 1) and ArcGIS shapefiles (attached electronically) contain the Project study area, identified habitats, and delineated aquatic resources. If you have any questions or require additional information, please do not hesitate to contact me (540.325.2791; [Alexandra.Cross@tetrattech.com](mailto:Alexandra.Cross@tetrattech.com)). Thank you in advance for your assistance.

Sincerely,

Tetra Tech, Inc.

A handwritten signature in cursive script that reads "Alexandra Cross".

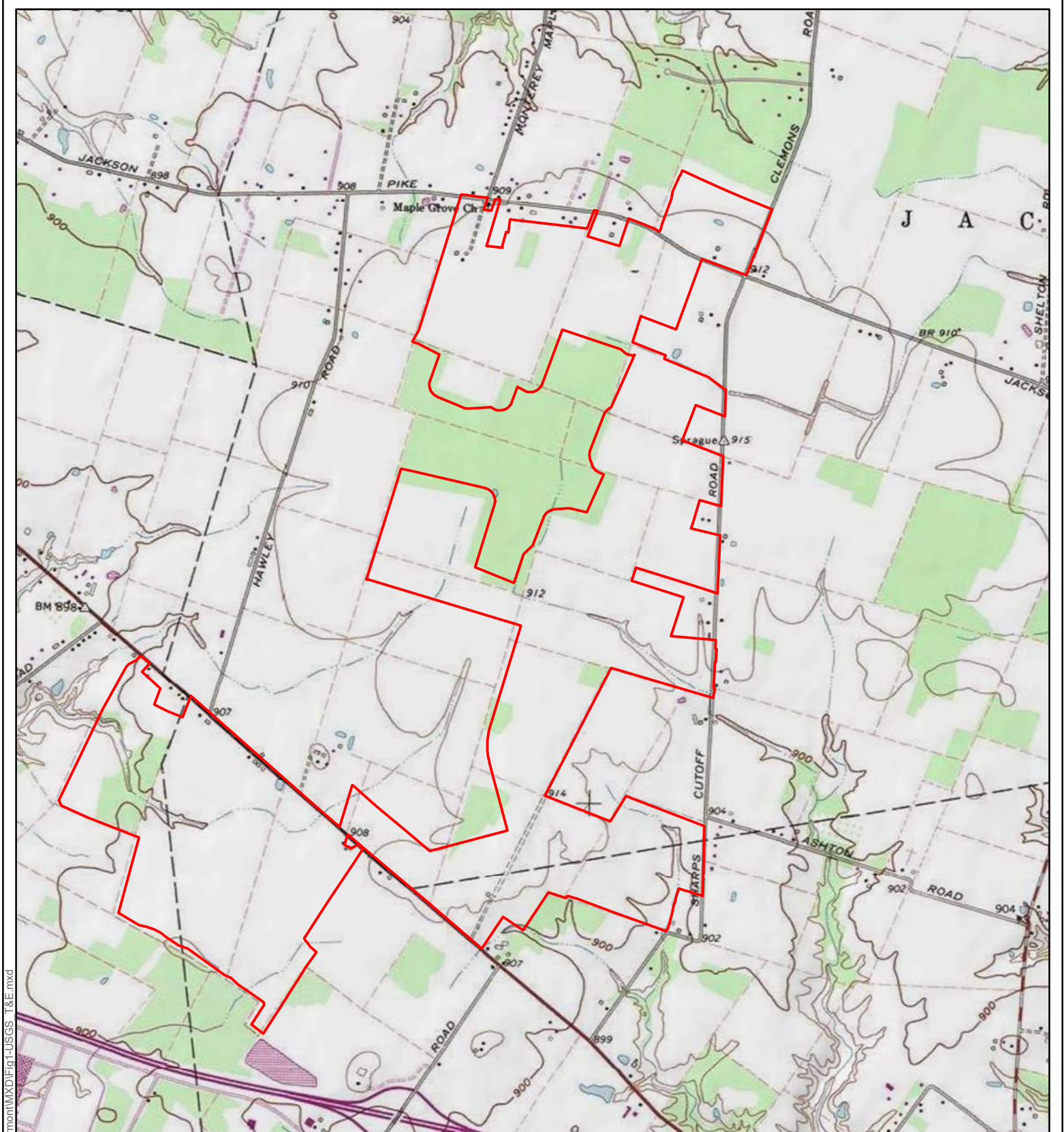
Alexandra Cross

Project Manager

Attachments:

- Attachment 1 – Updated Figures
  - Figure 1 - USGS Project Location Map
  - Figure 2 - Habitat Assessment Map
  - Figure 3 - NWI Wetlands and NHD Stream Map
  - Figure 4 - Impacts Map
- Attachment 2 –Previous USFWS Coordination - 2021
- Attachment 3 –Previous USFWS Coordination - 2022
- Attachment 4 – Updated IPAC Official Species List
- Attachment 5 – Supplemental Habitat Photographs
  
- ArcGIS Shapefiles (attached electronically)

## ATTACHMENT 1 – FIGURES



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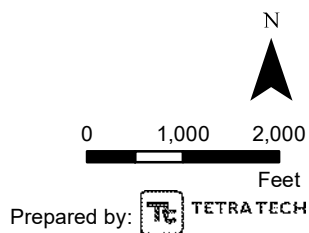
 Project Area

**Clear Mountain Energy Center**

**Clear Mountain  
Energy Center, LLC**

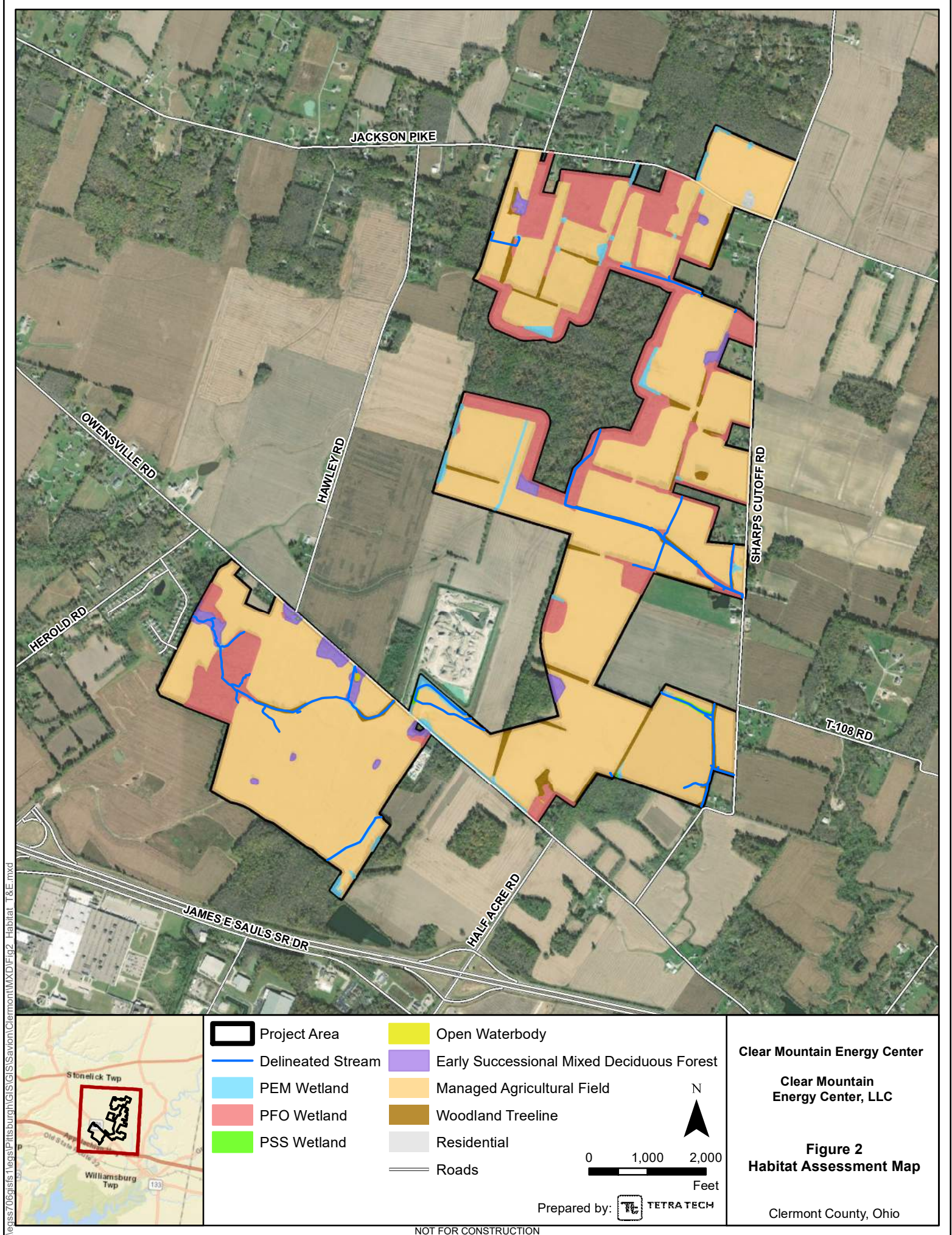
**Figure 1  
USGS Project Location Map**

Clermont County, Ohio

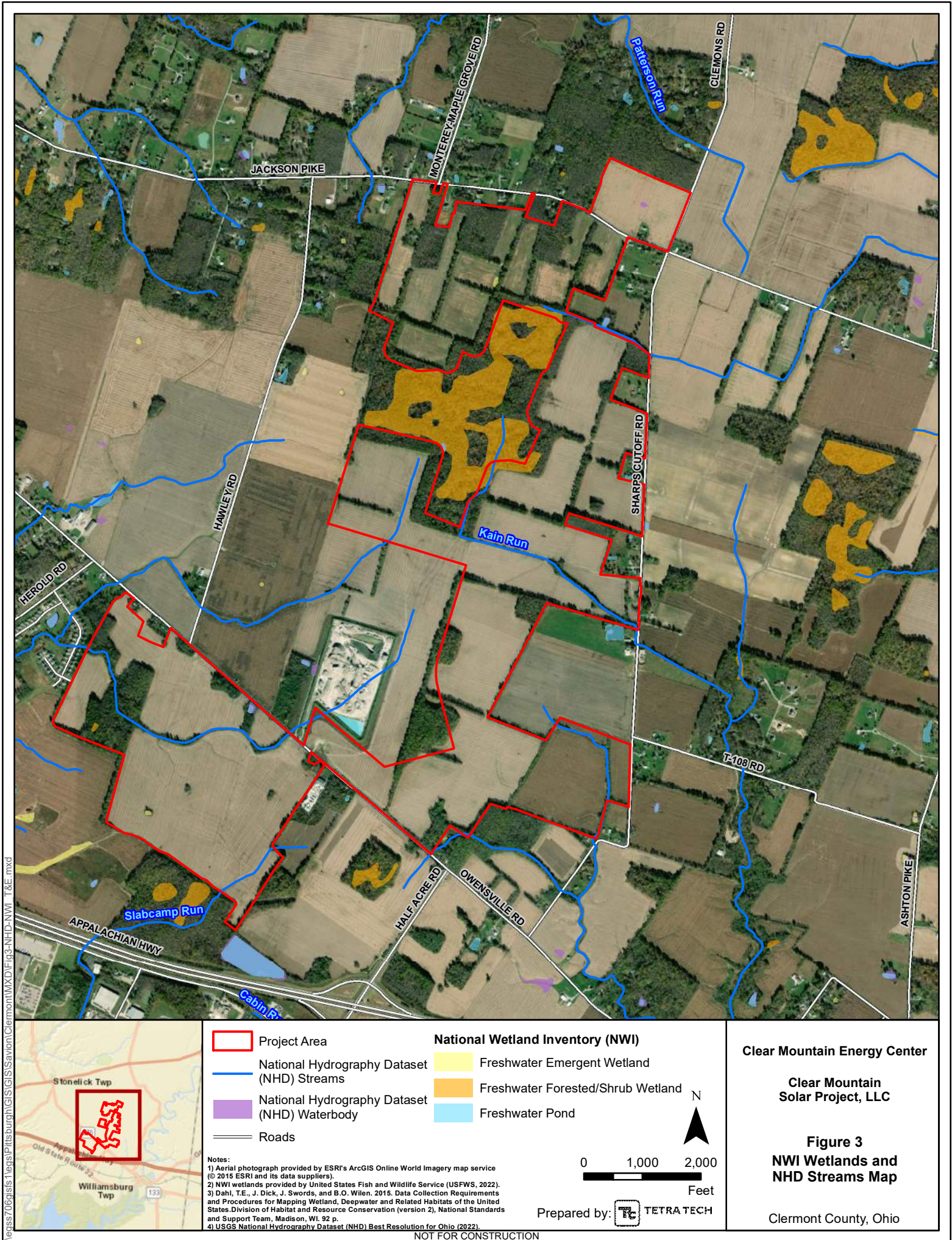


NOT FOR CONSTRUCTION

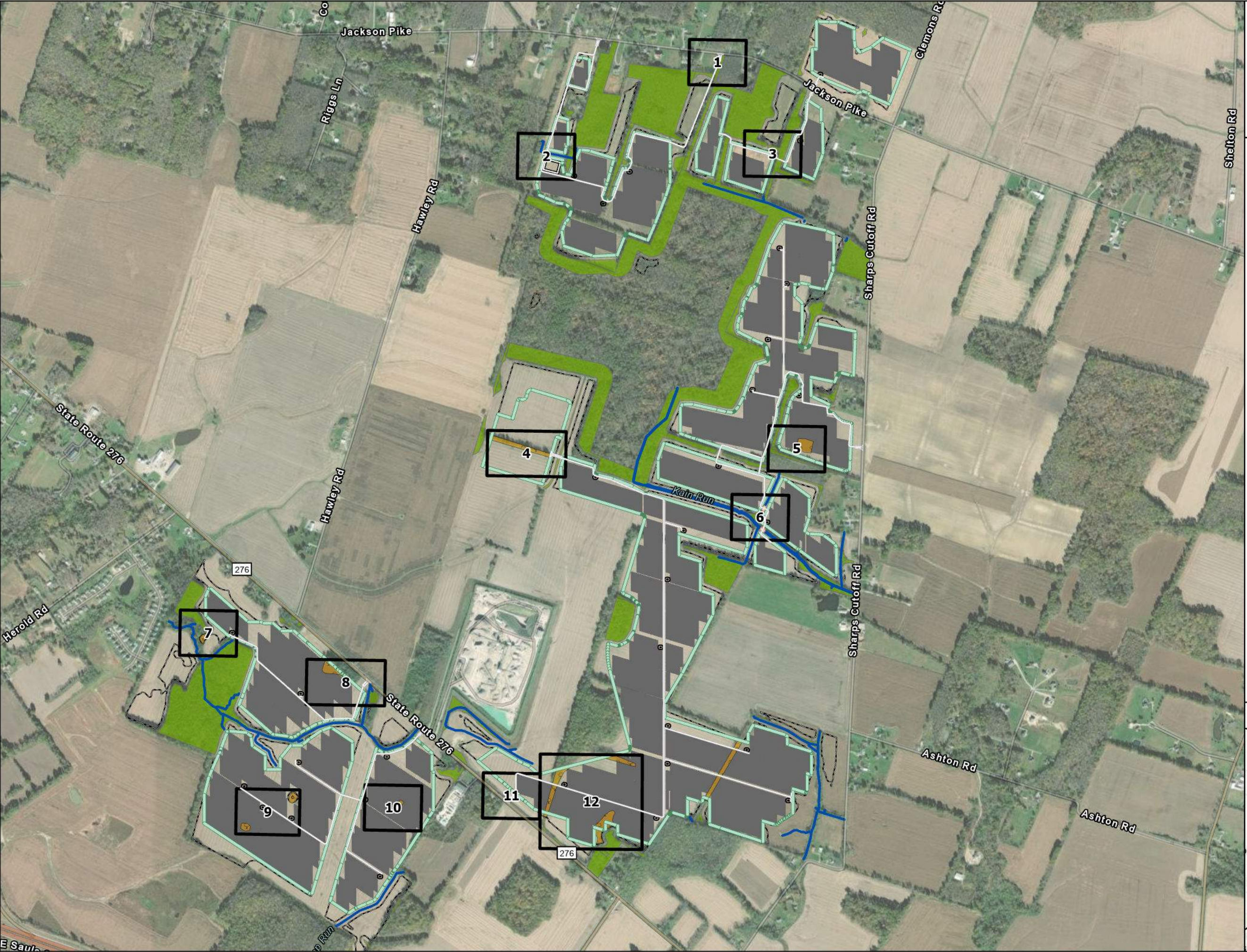












**Clear Mountain Solar Project**

Clear Mountain  
Energy Center, LLC

**Figure 4 - Index Impacts Map**

**LEGEND**

- Panels
- Buildable Area
- Fenceline
- Inverters
- Roads
- Facility Laydown Areas
- ▭ Inset Map Outlines

**Impacts**

- Stream
- Wetland
- Stream Impact Areas
- ▨ Wetland Impact Areas
- Tree Felling Areas



0 1,000 2,000  
Feet

Note: Orthoimagery provided by Savion  
collected in June 2023



**NOT FOR CONSTRUCTION**



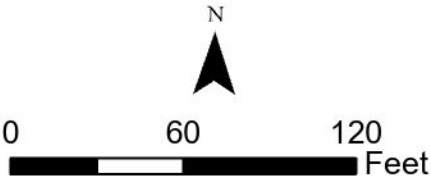
Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 1 of 12

- LEGEND
- Panels
  - Fenceline
  - Buildable Area
  - Inverters
  - Facility Laydown Areas
- Impacts
- Stream
  - Wetland
  - Stream Impact Areas
  - Wetland Impact Areas
  - Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023





Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 2 of 12

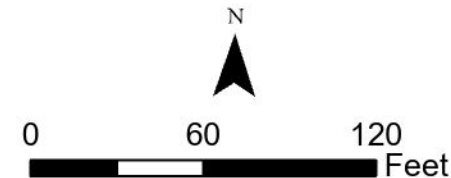
LEGEND

- Panels
- Fenceline
- Buildable Area
- Inverters
- Facility Laydown Areas

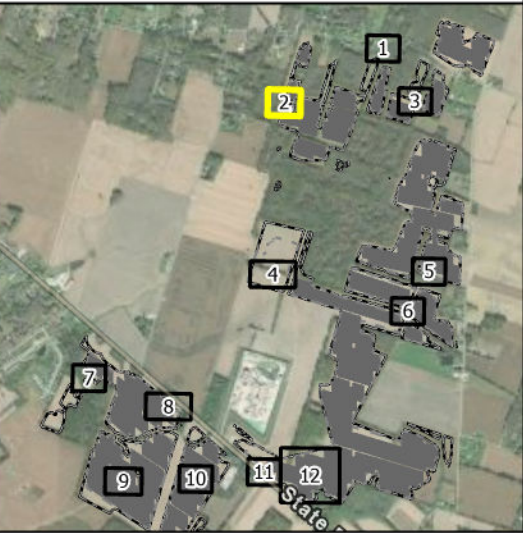
Impacts

- Stream
- Wetland
- Stream Impact Areas
- Wetland Impact Areas
- Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



NOT FOR CONSTRUCTION



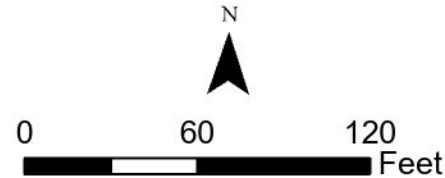
Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 3 of 12

- LEGEND
- Panels
  - Fenceline
  - Buildable Area
  - Inverters
  - Facility Laydown Areas
- Impacts
- Stream
  - Wetland
  - Stream Impact Areas
  - Wetland Impact Areas
  - Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



W-PZ02

W-JM01-PEM

W-JM01-PFO

Total Tree Felling Impact  
0.038 acres

1



W-JM05

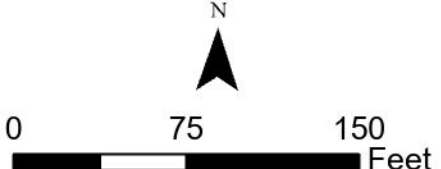
Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

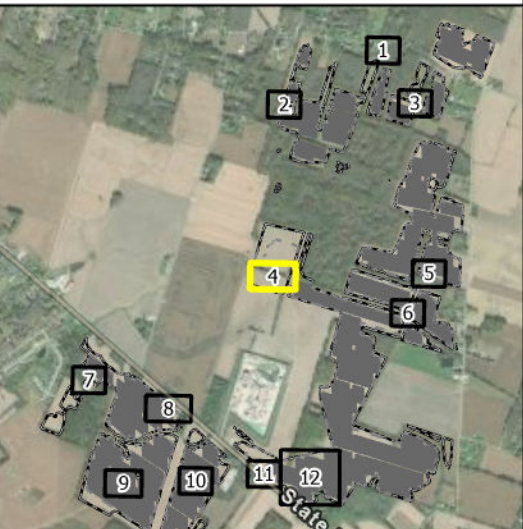
**Figure 4 - Impacts Map**  
Sheet 4 of 12

- LEGEND
- Panels
  - Fenceline
  - Buildable Area
  - Inverters
  - Facility Laydown Areas
- Impacts
- Stream
  - Wetland
  - Stream Impact Areas
  - Wetland Impact Areas
  - Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



Total Tree Felling Impact  
1.15 acres

3

W-JM03



Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 5 of 12

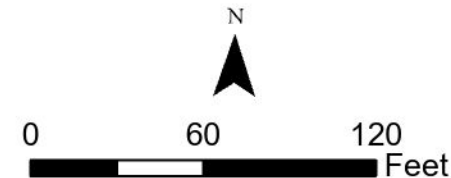
LEGEND

- Panels
- Fenceline
- Buildable Area
- Inverters
- Facility Laydown Areas

Impacts

- Stream
- Wetland
- Stream Impact Areas
- Wetland Impact Areas
- Tree Felling Areas

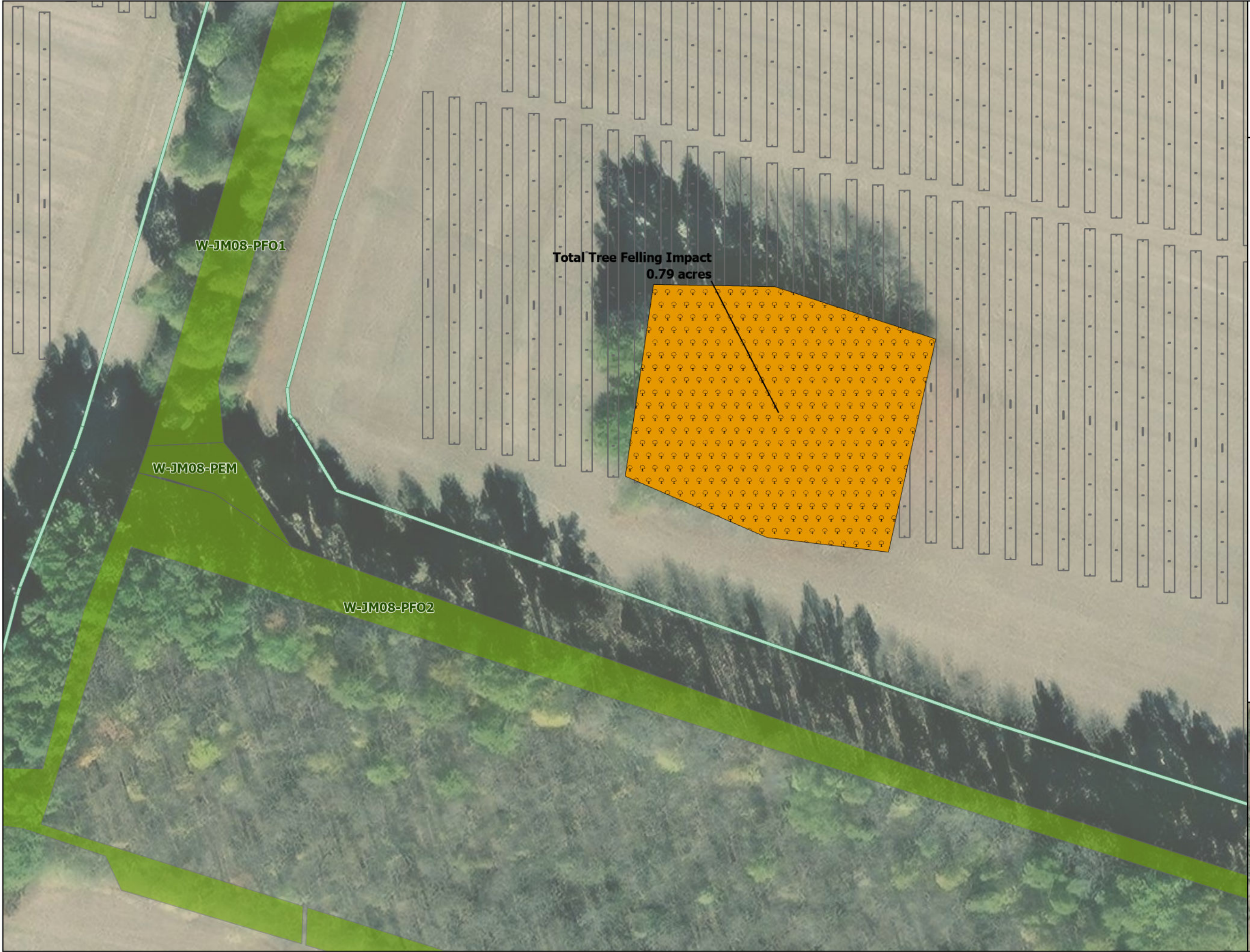
## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



NOT FOR CONSTRUCTION



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Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 6 of 12

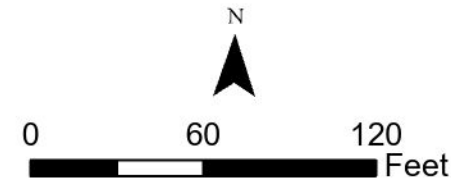
LEGEND

- Panels
- Fenceline
- Buildable Area
- Inverters
- Facility Laydown Areas

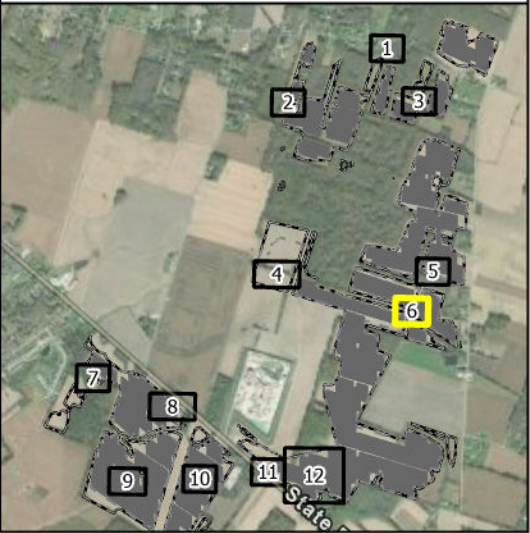
Impacts

- Stream
- Wetland
- Stream Impact Areas
- Wetland Impact Areas
- Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023





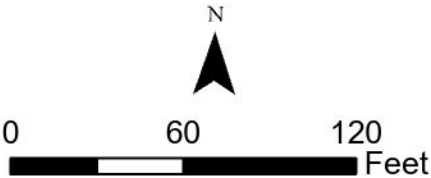
Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 7 of 12

- LEGEND
- Panels
  - Fenceline
  - Buildable Area
  - Inverters
  - Facility Laydown Areas
- Impacts
- Stream
  - Wetland
  - Stream Impact Areas
  - Wetland Impact Areas
  - Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



W-KM03

Total Tree Felling Impact  
0.19 acres

W-KM04-PEM

W-KM04-PFO1



Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 8 of 12

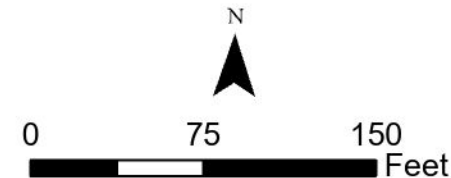
LEGEND

- Panels
- Fenceline
- Buildable Area
- Inverters
- Facility Laydown Areas

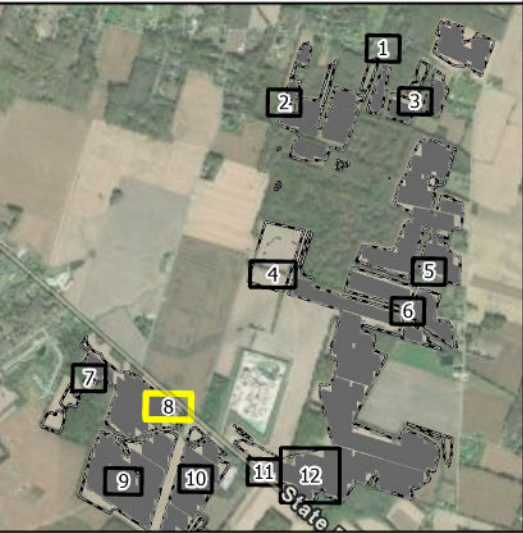
Impacts

- Stream
- Wetland
- Stream Impact Areas
- Wetland Impact Areas
- Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



Total Tree Felling Impact  
0.92 acres





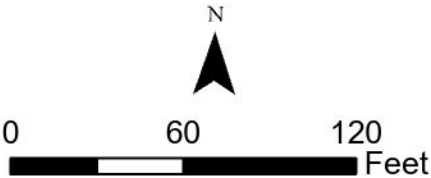
Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 9 of 12

- LEGEND
- Panels
  - Fenceline
  - Buildable Area
  - Inverters
  - Facility Laydown Areas
- Impacts
- Stream
  - Wetland
  - Stream Impact Areas
  - Wetland Impact Areas
  - Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



NOT FOR CONSTRUCTION





Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 10 of 12

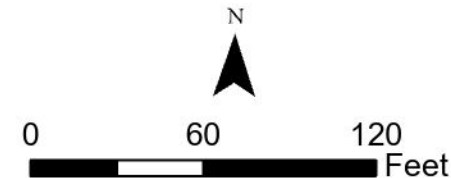
LEGEND

- Panels
- Fenceline
- Buildable Area
- Inverters
- Facility Laydown Areas

Impacts

- Stream
- Wetland
- Stream Impact Areas
- Wetland Impact Areas
- Tree Felling Areas

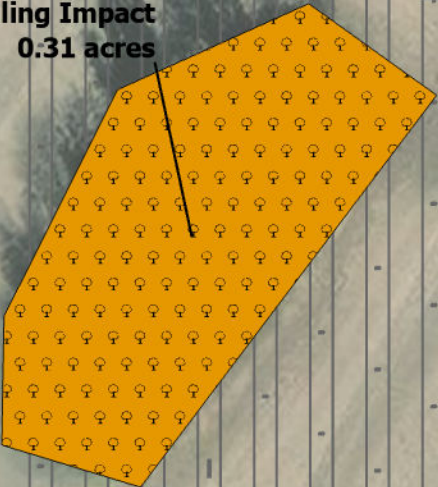
## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



Total Tree Felling Impact  
0.31 acres





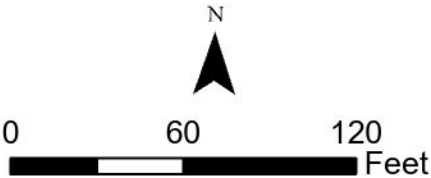
Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

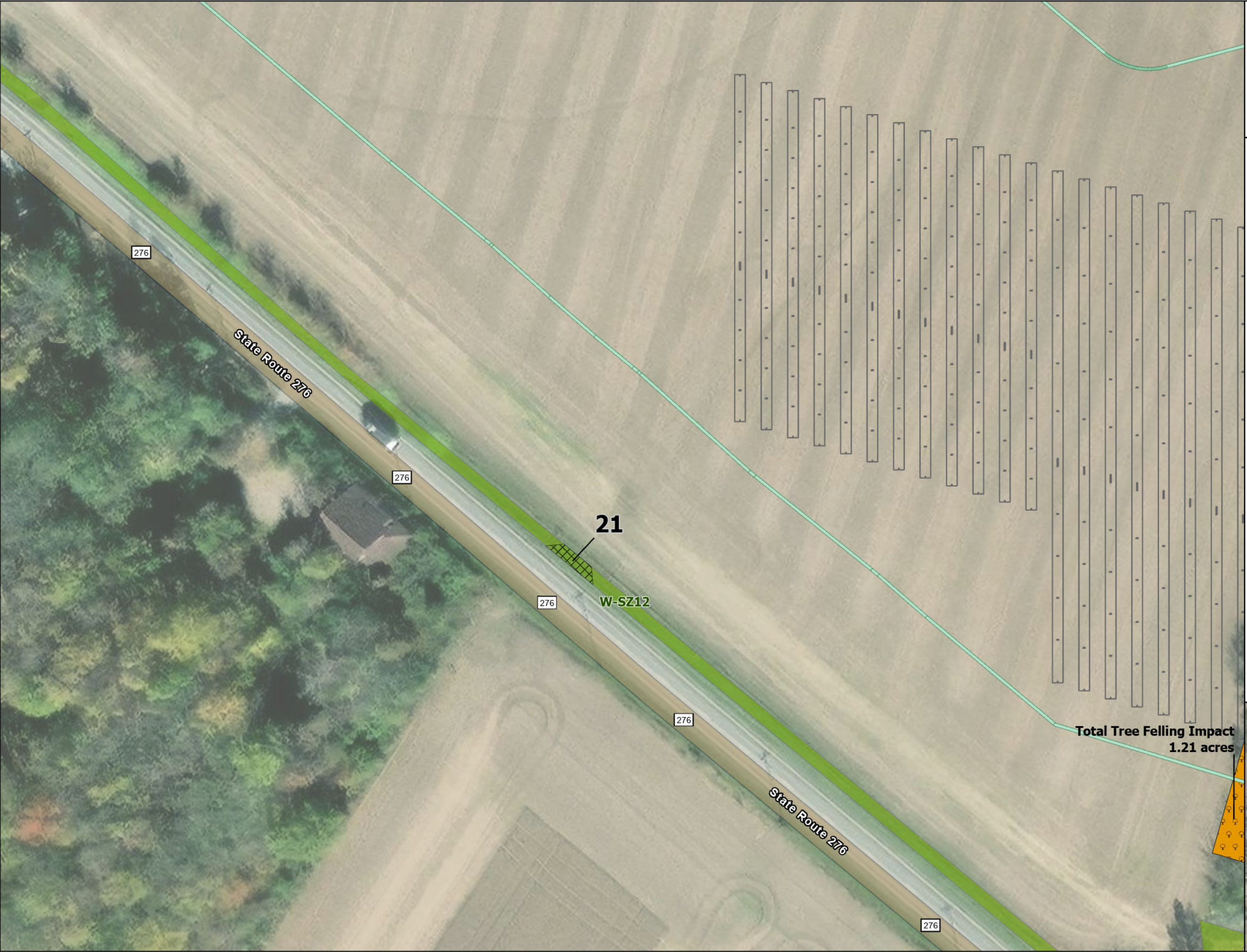
Figure 4 - Impacts Map  
Sheet 11 of 12

- LEGEND
- Panels
  - Fenceline
  - Buildable Area
  - Inverters
  - Facility Laydown Areas
- Impacts
- Stream
  - Wetland
  - Stream Impact Areas
  - Wetland Impact Areas
  - Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023





Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 12 of 12

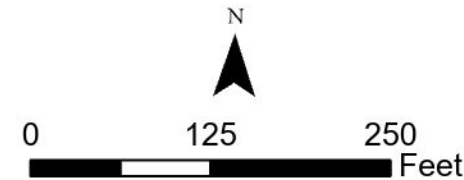
LEGEND

- Panels
- Fenceline
- Buildable Area
- Inverters
- Facility Laydown Areas

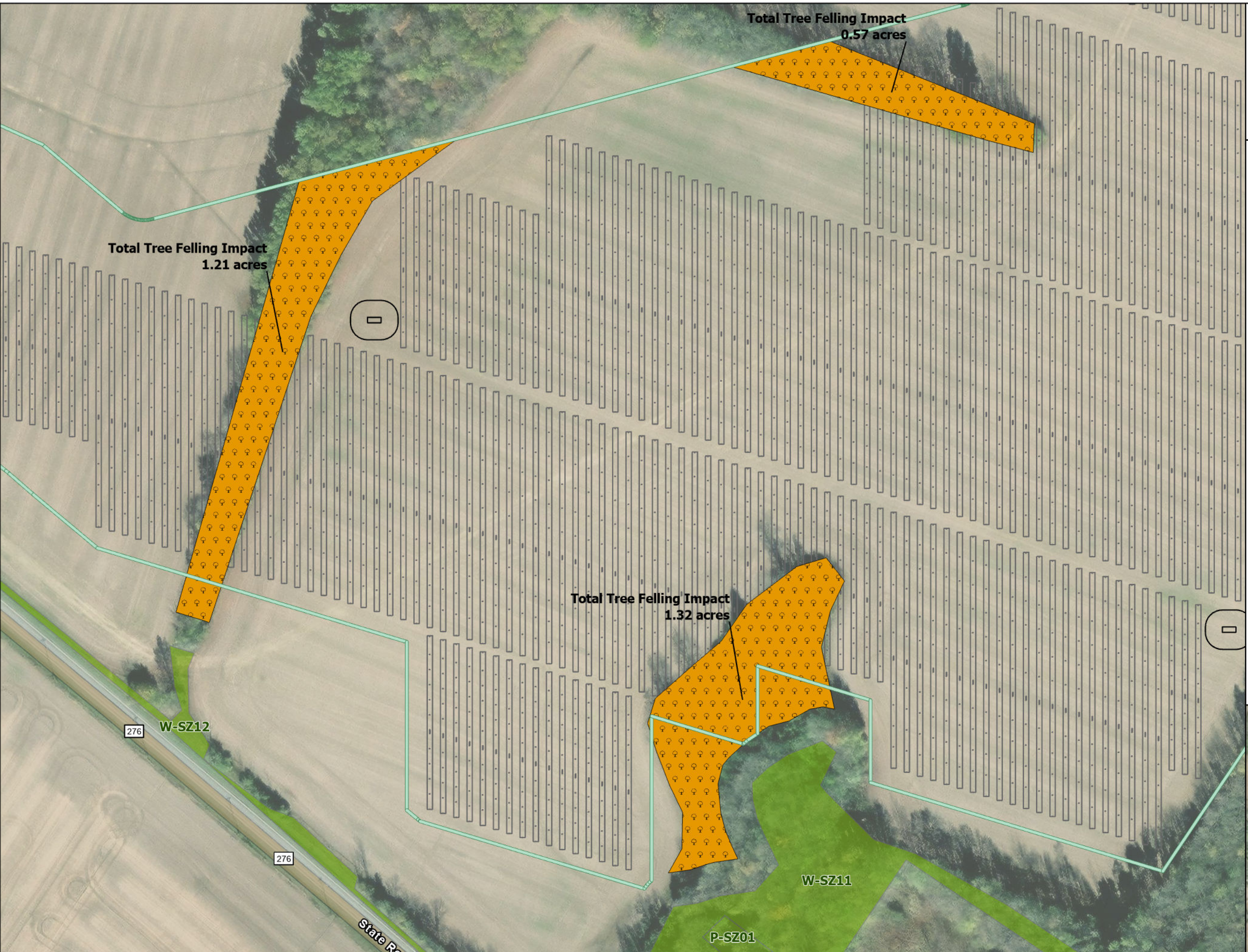
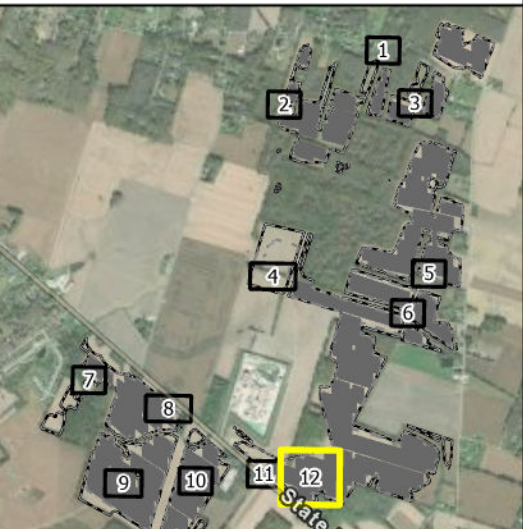
Impacts

- Stream
- Wetland
- Stream Impact Areas
- Wetland Impact Areas
- Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023





## **ATTACHMENT 2 – USFWS PREVIOUS USFWS COORDINATION - 2021**



April 6, 2021

United States Fish and Wildlife Service  
Ohio Field Office  
4625 Morse Road, Suite 104  
Columbus, OH 43230-8355

**Subject: Project Review Request**  
**Consultation Code: 03E15000-2021-SLI-0985**  
**Event Code: 03E15000-2021-E-01367**  
**DRAFT Clermont County Solar Project**  
**Jackson and Williamsburg Townships, Clermont County, Ohio**

To Whom It May Concern:

Tetra Tech, Inc. is requesting information from the United States Fish and Wildlife Service (USFWS) regarding the potential presence of threatened or endangered species on or near an approximately 817-acre property located in Clermont County, Ohio (OH) as shown on the attached United States Geological Survey (USGS) Project Location Map (Attachment 1, Figure 1). Clermont County Solar Project, LLC (Clermont County Solar) is proposing to develop and operate the Clermont County Solar Project (Project), an approximately 100-megawatt (MW) new photovoltaic solar facility. The preliminary Project area is generally located between OH-276 to the south, Hawley Road to the west, Sharps cutoff Road to the east, and Jackson Pike to the north, in Jackson and Williamsburg Townships, Clermont County, Ohio. The specific parcels utilized within the Project study area will be refined as layout design progresses. The Project will be the subject of an application for submittal to the Ohio Power Siting Board (OPSB).

Prior to the start of field surveys, an initial desktop analysis of the Project study area was conducted through a review of available Geographic Information Systems (GIS) resources. Information reviewed included the following:

- USGS topographic mapping (Attachment 1, Figure 1)
- National Land Cover Database (NLCD) Land Cover mapping (Attachment 1, Figure 2)
- USFWS National Wetland Inventory (NWI) mapping and USGS National Hydrography Dataset (NHD) mapping (Attachment 1, Figure 3)

The Project study area is primarily rural agricultural land in private ownership. It is comprised almost entirely of agricultural fields managed for soybeans and/or hay, occasionally interrupted by thin wooded tree lines. Environmentally sensitive areas (i.e. intact forested areas and NWI-mapped wetlands) identified during preliminary site selection were avoided to minimize environmental impacts to the maximum extent practicable. The streams identified within the Project study area during desktop analysis generally occur within actively managed agricultural fields and have been historically channelized and manipulated.

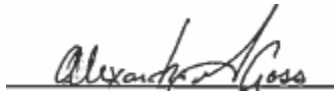
The United States Fish and Wildlife Service (USFWS) Information and Planning Consultation (IPaC) tool was used to determine the potential for any federal threatened and endangered species that may occur in the proposed

Project location, and/or may be affected by the proposed activities. Attachment 2 contains the IPaC Official Species List generated for the Project. The IPaC identified Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), and running buffalo clover (*Trifolium stoloniferum*) as having the potential to occur within the Project area. No critical habitats were identified in the IPaC search for the Project.

We are requesting USFWS provide any available information to indicate whether additional studies are required to determine the potential for protected species impacts within the Project study area prior to on-site delineation and habitat assessment field surveys. The attached PDF mapping (Attachment 1) and ArcGIS shapefiles (attached electronically) contain the Project study area. If you have any questions or require additional information, please do not hesitate to contact me at (540) 325-2791 or [Alexandra.Cross@tetrattech.com](mailto:Alexandra.Cross@tetrattech.com). Thank you in advance for your assistance.

Sincerely,

**Tetra Tech, Inc.**

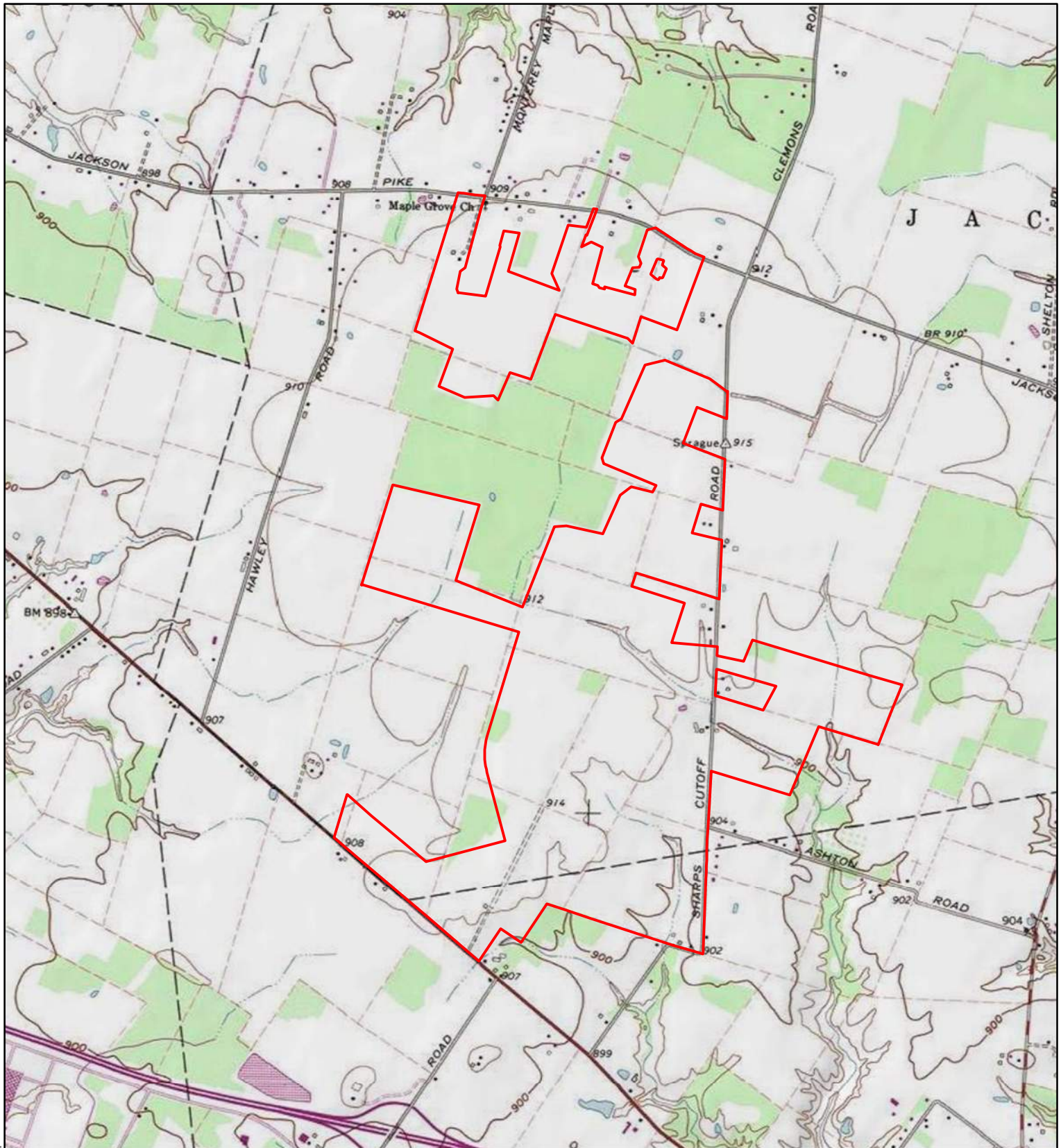
A handwritten signature in black ink, appearing to read "Alexandra Cross", is written over a horizontal line.

Alexandra Cross  
Project Manager

Attachments:

- Attachment 1 - Figures
  - o Figure 1 DRAFT USGS Project Location Map
  - o Figure 2 DRAFT NLCD Land Cover Map
  - o Figure 3 DRAFT NWI Wetlands and NHD Stream Map
- Attachment 2 – IPaC Official Species List
- ArcGIS Shapefiles (attached electronically)

## ATTACHMENT 1 – FIGURES



 Project Area

**DRAFT**



0 1,000 2,000  
Feet

Prepared by:  TETRA TECH

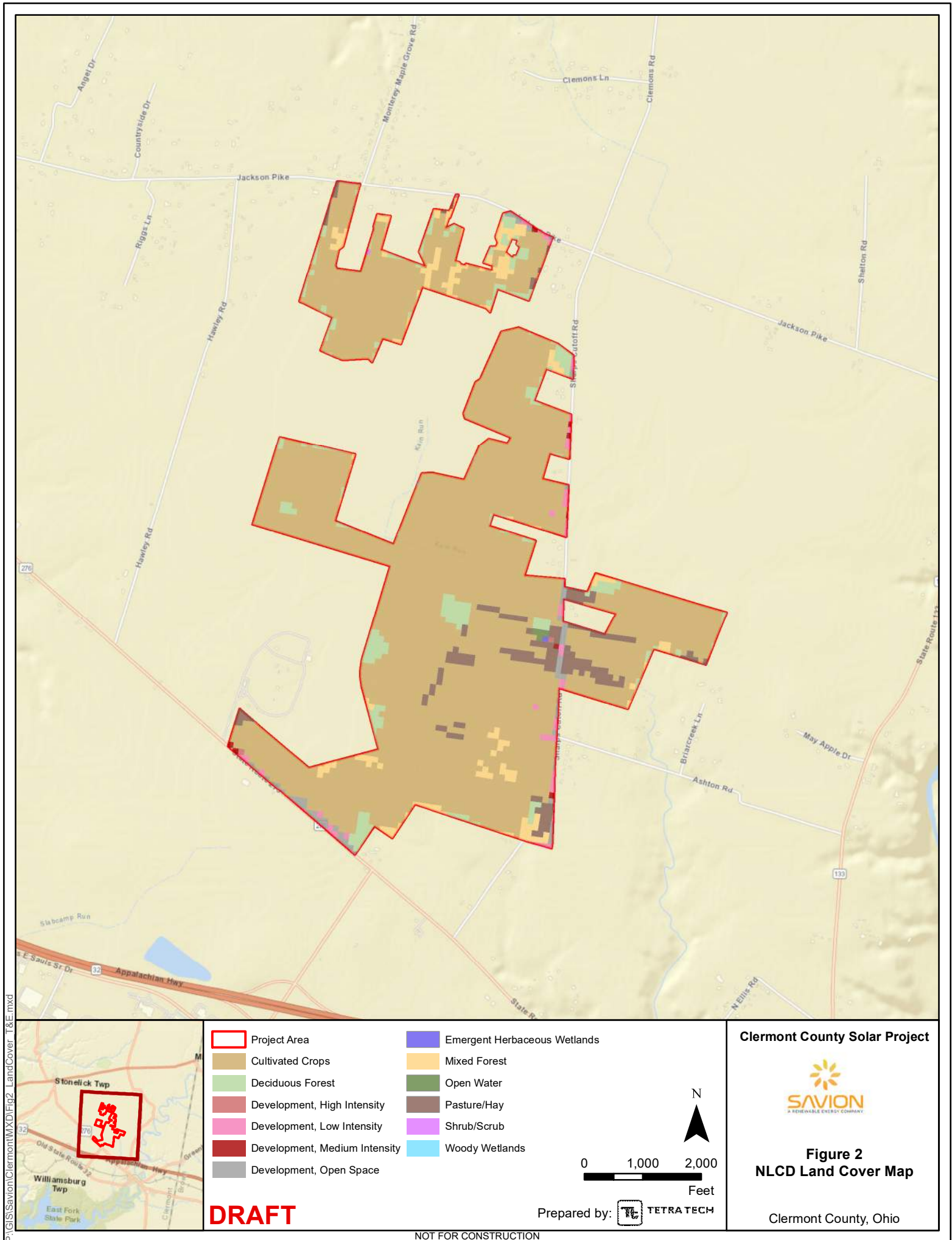
Clermont County Solar Project



**Figure 1**  
**USGS Project Location Map**

Clermont County, Ohio









## ATTACHMENT 2 – IPAC OFFICIAL SPECIES LIST





## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Ohio Ecological Services Field Office

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

Phone: (614) 416-8993 Fax: (614) 416-8994



In Reply Refer To:

March 15, 2021

Consultation Code: 03E15000-2021-SLI-0985

Event Code: 03E15000-2021-E-01367

Project Name: DRAFT Clermont County Solar Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

#### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))



(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <http://www.fws.gov/migratorybirds/RegulationsandPolicies.html>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/BirdHazards.html>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <http://www.fws.gov/migratorybirds/AboutUS.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List



## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Ohio Ecological Services Field Office**

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

(614) 416-8993

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## Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [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.

## Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> <li>Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at <a href="https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html">https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html</a></li> </ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

## Flowering Plants

NAME	STATUS
Running Buffalo Clover <i>Trifolium stoloniferum</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2529">https://ecos.fws.gov/ecp/species/2529</a>	Endangered

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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## McCluskey, Korey

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**From:** Ohio, FW3 <ohio@fws.gov>  
**Sent:** Tuesday, April 13, 2021 11:22 AM  
**To:** Cross, Alexandra  
**Cc:** nathan.reardon@dnr.state.oh.us; Parsons, Kate; Drane, Larry; Rowe, Victoria; McCluskey, Korey; Sean Flannery; Sara Mills; Joshua Crumpler  
**Subject:** Clermont Solar Project, Cass Township in Clermont County, Ohio  
**Attachments:** Ohio Solar Site Pollinator Habitat Planning and Assessment Form v.9 FINAL\_5\_3\_2018.pdf; solar panel installations.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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



UNITED STATES DEPARTMENT OF THE INTERIOR  
U.S. Fish and Wildlife Service  
Ecological Services Office  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / Fax (614) 416-8994



TAILS# 03E15000-2021-TA-0985

Dear Ms. Cross,

The U.S Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees  $\geq 3$  inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

We recommend minimizing tree clearing to the maximum extent possible and avoiding clearing of any woodlots and we appreciate your commitment to preserving forested areas where possible and to clearing



unavoidable trees only between October 1 and March 31. However, at this time we are unable to fully assess the potential impact of the project on federally listed bats. Therefore, we recommend additional coordination with this office regarding project siting and the amount of proposed tree clearing in order for us to provide project-specific conservation recommendations for federally listed bats.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus it is important to conserve the functions and values of the remaining wetlands in Ohio ([https://epa.ohio.gov/portals/47/facts/ohio\\_wetlands.pdf](https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf)). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at [mike.pettegrew@dnr.state.oh.us](mailto:mike.pettegrew@dnr.state.oh.us).

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or [ohio@fws.gov](mailto:ohio@fws.gov).

Sincerely,



Patrice M. Ashfield  
Ohio Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW  
Kate Parsons, ODNR-DOW



The Service is working closely with our partners at Ohio Pollinator Habitat Initiative (OPHI) to create and enhance pollinator habitat at solar power installations. Attached for your use is the Ohio Solar Site Pollinator Habitat Planning and Assessment Form. This form was developed by the OPHI Solar Pollinator Program Advisory Team. We recommend that the areas between the solar panels be planted with legumes and wildflowers (i.e. forbs) that are beneficial to pollinators and other wildlife instead of non-native grass. Pollinators are beneficial to agricultural communities like the project area because they pollinate many varieties of fruits and vegetables. The recommended legumes and forbs are short (low-growing) so as not to cast shadows on the solar panels and would only require one to two mowings a year for maintenance, which should allow the project proponent to minimize maintenance costs. For other areas of the installation where vegetation does not have to be low-growing, alternative pollinator mixes are available with a more diverse array of flowering plants. This perennial vegetation will provide beneficial foraging habitat to songbirds and pollinators (e.g., monarch butterfly and the federally listed rusty patched bumblebee) while reducing storm water runoff, standing water, and erosion. Native plants can act as host plants for insect larva while flowering plants provide nectar sources for adult butterflies as well as other pollinators such as hummingbirds. Seeds from these plants can also provide food for a wide variety of bird species. Please contact the Ohio Pollinator Habitat Initiative ( <http://www.ophi.info/>, and specifically Mike Retterer [mretterer@pheasantsforever.org](mailto:mretterer@pheasantsforever.org)) for further information on solar power facility pollinator plantings.

Recommended low-growing grasses and forbs may include:

Little Bluestem	<i>Schizachyrium scoparium</i>
Sideoats Grama	<i>Bouteloua curtipendula</i>
Alfalfa	<i>Medicago spp.</i>
Alsike Clover	<i>Trifolium hybridum</i>
Brown-eyed Susan	<i>Rudbeckia triloba</i>
Butterfly Milkweed	<i>Asclepias tuberosa</i>
Lanceleaf Coreopsis	<i>Coreopsis lanceolata</i>
Partridge Pea	<i>Chamaecrista fasciculata</i>
Timothy	<i>Phleum pratense</i>
Orchardgrass	<i>Dactylis glomerata</i>
Crimson Clover	<i>Trifolium incarnatum</i>
Ladino or White Clover	<i>Trifolium repens</i>

# Ohio Solar Site Pollinator Habitat Planning and Assessment Form

1. Percent of total site planted with native or beneficial introduced flowering plants.

25-50%	10 points
51-75%	20 points
76-100%	30 points

2. Flowering plant diversity in site perimeter & buffer area (species with more than 1% cover).

9-12 species	5 points
13-16 species	10 points
17-20 species	15 points
20+ species	20 points
Site specific Milkweed included @2,000 pls/ac minimum	10 points

\* If no boxes were selected in questions 1 or 2 then your site does not meet criteria to be considered as an OPHI Solar Pollinator Habitat. However, OPHI can work with you on ways to increase the pollinator score of your site.

3. Flowering plant seed mixes and plantings to be used.

Native species local to the site are preferred; otherwise species native to Ohio are encouraged.

Includes only native plant species	15 points
Includes native and beneficial introduced plant species	10 points
Includes only beneficial introduced plant species	5 points

4. Flowering plant diversity in rows & under solar array.

4-6	5 points
7+	10 points
Site specific Milkweed included @2,000 pls/ac minimum	10 points

5. Seasons with at least 3 blooming species. Check all that apply.

Spring (April – May)	5 points
Summer (June – August)	5 points
Fall (September – October)	5 points

6. Available habitat components within ¼ mile of site.

Check all that apply.

Native grasses	2 points
Trees and shrubs	2 points
Forest edge habitat	2 points
Cavity nesting sites	2 points
Clean perennial water sources	2 points

7. Planned vegetative buffers adjacent to the solar site. Check all that apply.

Site has planned buffer adjacent to solar site	5 points
Buffer is at least 30 feet wide as measured from array fencing or edge of flower plantings	5 points
Buffer is at least 50 feet wide as measured from array fencing or edge of flower plantings	10 points
Buffer includes flowering Shrubs/trees and other shrubs/trees that provide food for wildlife	5 points

8. Habitat site preparation prior to implementation.

Measures taken to control weeds and invasive species prior to seeding/planting.	10 points
Appropriate soil preparation done to reduce erosion	
And enhance germination/growth	5 points
None	-10 points

9. Planned management practices for areas designated as part of the pollinator habitat site. Check all that apply.

Detailed establishment and management plan developed for site	10 points
Mowing Follows OPHI mowing schedule for monarchs each year	5 points
Mowing is staggered over a 2 week period	5 points
Signage indicating site is wildlife & pollinator-friendly	5 points
Creation of habitat features (e.g. boxes, pass-through tunnels, bee hotels)	5 points
Long-term monitoring plan developed that includes re-certification as Solar Site Pollinator Habitat	10 points

10. Insecticide risk. Check if applicable.

Communication with adjacent landowners about the project and possible impacts of their insecticide use is critical

Site is adjacent to land (within 120 ft.) where insecticides are used	-20 points
Planned on-site insecticide use (including pre-treated seeds/plants)	-40 points

Total Points: \_\_\_\_\_

Provides High Quality Pollinator Habitat > 85  
Meets OPHI Solar Pollinator Habitat Standards 70-84

Site Owner/Operator:

Project Location:

Project Size (acres):

Planned Source of Seeds:

Planned Seeding Date:

Habitat & Vegetation Consultant:

Refer to [www.ophi.info](http://www.ophi.info) for more information regarding solar pollinator habitat development.

Version 1 - March 2018

Developed by the OPHI Solar Pollinator Program Advisory Team





## **ATTACHMENT 3 – USFWS PREVIOUS USFWS COORDINATION - 2022**



June 10, 2022

United States Fish and Wildlife Service  
Ohio Field Office  
4625 Morse Road, Suite 104  
Columbus, OH 43230-8355

Subject: Updated Project Review Request  
Project Code: 2022-0044443 (Previously Consultation Code: 03E15000-2021-SLI-0985)  
(Previous Event Code: 03E15000-2021-SLI-0985)  
Clermont County Solar Project  
Jackson and Williamsburg Townships, Clermont County, Ohio

To Whom It May Concern:

Tetra Tech, Inc. is requesting updated information from the United States Fish and Wildlife Service (USFWS) regarding the potential presence of threatened or endangered species on or near a property located in Clermont County, Ohio (OH) as shown on the attached United States Geological Survey (USGS) Project Location Map (Attachment 1, Figure 1). Clermont County Solar Project, LLC (Clermont County Solar) is proposing to develop and operate the Clermont County Solar Project (Project), a new photovoltaic solar facility, an approximately 100-megawatt (MW) solar facility with an 84-MW battery storage component. The preliminary Project, totaling approximately 817 acres, was originally located between OH-276 to the south, Hawley Road to the west, Sharps cutoff Road to the east, and Jackson Pike to the north, in Jackson and Williamsburg Townships, Clermont County, Ohio. Since initial coordination with USFWS the specific parcels utilized within the Project study area have been redefined and additional parcels have been added and surveyed. An additional approximately 399 acres were added to the Project study area, primarily just south of OH 276, as property became available, and the Project layout design progressed. The current Project study area is shown on the attached Project Location Map (Attachment 1, Figure 1). The Project will be the subject of an application for submittal to the Ohio Power Siting Board (OPSB).

The United States Fish and Wildlife Service (USFWS) Information and Planning Consultation (IPaC) tool was used to determine the potential for any federal threatened and endangered species that may occur in the proposed Project location, and/or may be affected by the proposed activities. An IPaC Official Species List was first generated for the Project on March 15<sup>th</sup>, 2021, prior to onsite surveys, and was provided to USFWS and ODNR during initial agency consultation. All submittals and responses from initial consultation with USFWS (Consultation Code: 03E15000-2021-SLI-0985) are provided in Attachment 2 – Previous Agency Coordination. An updated IPaC Official Species List was generated for the Project on May 18<sup>th</sup>, 2022, identifying Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) as having the potential to occur within the Project area (Attachment 3). The updated list no longer lists the running buffalo clover (*Trifolium stoloniferum*) which was included in the original IPaC. Since the initial coordination for this Project occurred the USFWS has removed running buffalo clover from



the Federal List of Endangered and Threatened Plants on the basis of recovery. The updated IPaC did list the Monarch Butterfly (*Danaus plexippus*) as a candidate species, but no critical habitat has been designated for this species and it is not currently protected under the Endangered Species Act. According to the updated IPaC there are no critical habitats within the Project area under the jurisdiction of the USFWS.

Prior to the start of field surveys, an initial desktop analysis of the Project study area was conducted through a review of available Geographic Information Systems (GIS) resources. Information reviewed included the following:

- USGS topographic mapping (Attachment 1, Figure 1).
- National Land Cover Database (NLCD) Land Cover mapping (Attachment 2, Figure 2).
- USFWS National Wetland Inventory (NWI) mapping and USGS National Hydrography Dataset (NHD) mapping (Attachment 1, Figure 3).

The Project study area is primarily rural agricultural land in private ownership. It is comprised almost entirely of agricultural fields managed for soybeans and/or hay, with a few intact portions of palustrine forested wetland and the occasional thin wooded tree line. While investigating the Project study area the following habitats were identified: managed agricultural fields (i.e. corn and soybeans), palustrine emergent wetland, palustrine forested wetland, open waterbodies, woodland tree lines, and patches of early successional mixed deciduous forest. The Habitat Assessment Map, provided as Figure 2 (Attachment 1), illustrates the locations of habitats identified during the onsite field habitat assessment. Non-native species such as Japanese stilt grass (*Microstegium vimineum*), Japanese Knotweed (*Reynoutria japonica*), autumn olive (*Elaeagnus umbellata*), Russian olive (*Elaeagnus angustifolia*), multiflora rose (*Rosa multiflora*), garlic mustard (*Alliaria petiolata*), and Tatarian honeysuckle (*Lonicera tatarica*) were identified within the Project study area.

Environmentally sensitive areas (i.e. intact forested areas, NWI-mapped wetlands, and field delineated wetlands and waterbodies) identified during the initial desktop analysis and subsequent onsite aquatic resource delineations are being avoided to minimize environmental impacts to the maximum extent practicable. The streams and wetlands identified within the Project study area during onsite field delineations generally occur within actively managed agricultural fields and most of the streams have been historically channelized and heavily manipulated.

The majority of the Project study area is not wooded and lacks suitable bat habitat for the Indiana bat and northern long-eared bat (NLEB). A few heavily wooded, mid-successional, mixed deciduous forested wetland habitats are located within the Project study area which may serve as roosting and/or foraging habitat for the Indiana bat and NLEB. Additionally, there are a number of narrow tree lines separating agricultural fields that could potentially provide roosting and/or foraging habitat. Trees located in these wooded areas generally consisted of oak species (*Quercus* spp.), red maple (*Acer rubrum*), sugar maple (*Acer saccharum*), shag-bark hickory (*Carya ovata*), and eastern cottonwood (*Populus deltoides*). Trees ranged from approximately 5-inch diameter at breast height (DBH) to 35-inches DBH. No caves, rock shelters, or abandoned underground mines were observed during the field survey of the study area. Though no bats were observed during the onsite habitat surveys, the Project study area does have potentially suitable habitat for the federally listed Indiana bat and NLEB; therefore, Indiana bat and NLEB have the potential to be present within the Project study area.

Tetra Tech recommends avoiding and minimizing tree clearing to the maximum extent practicable during the design and installation of the Project. Tetra Tech recommends that if clearing is required for the implementation of the Project it should be conducted for trees greater than 3 inches diameter at breast height during the seasonal period

between November 1 and March 31, adhering to the time of year restrictions. If disturbances can be avoided during the time of year restrictions, no further restrictions related to these species may be required. If certain tree removal cannot take place outside of tree roosting season, Clermont County Solar will coordinate with qualified biologist(s) and/or USFWS as appropriate concerning appropriate measures to ensure Indiana bat and NLEB are not adversely affected.

We are requesting USFWS provide any updated information to indicate whether additional studies are required to determine the potential for protected species impacts within the Project study area. The attached PDF mapping (Attachment 1) and ArcGIS shapefiles (attached electronically) contain the Project study area, identified habitats, and delineated aquatic resources. If you have any questions or require additional information, please do not hesitate to contact me (540.325.2791; Alexandra.Cross@tetrattech.com). Thank you in advance for your assistance.

Sincerely,

Tetra Tech, Inc.

A handwritten signature in black ink, appearing to read "Alexandra Cross", is written over a horizontal line.

Alexandra Cross

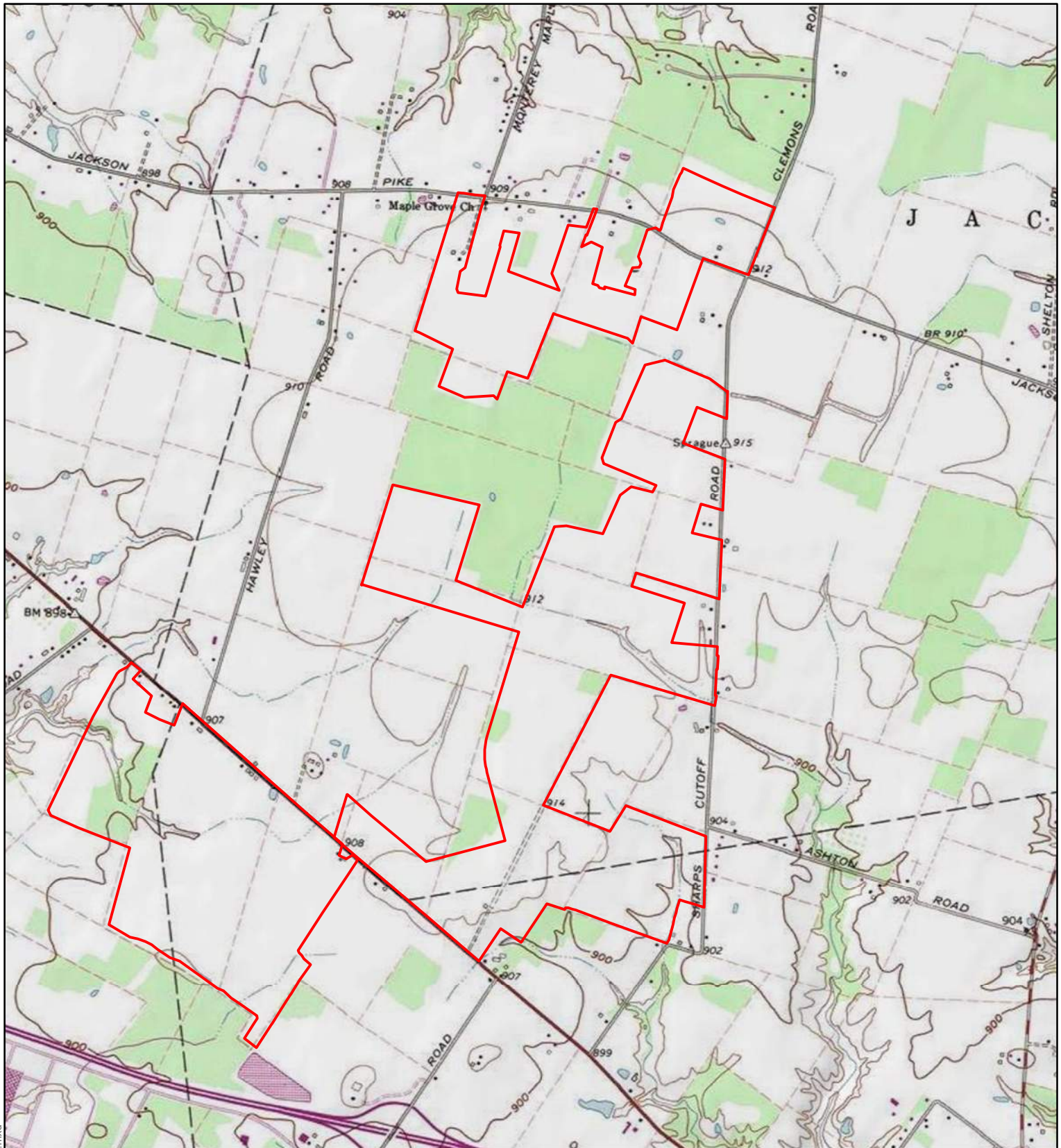
Project Manager

Attachments:

- Attachment 1 – Figures
  - Figure 1 - USGS Project Location Map
  - Figure 2 - Habitat Assessment Map
  - Figure 3 - NWI Wetlands and NHD Stream Map
- Attachment 2 – Previous Agency Coordination
- Attachment 3 – Updated IPAC Official Species List
- Attachment 4 – Habitat Photographs
  
- ArcGIS Shapefiles (attached electronically)



## ATTACHMENT 1 – FIGURES



P:\GIS\Savon\Clermont\MXD\Fig1-USGS\_Aquatics.mxd

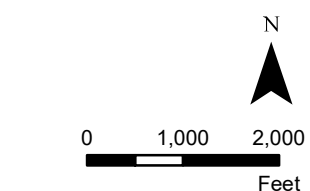


Survey Area

**Clermont County Solar Project**  
**Clermont County Solar Project, LLC**

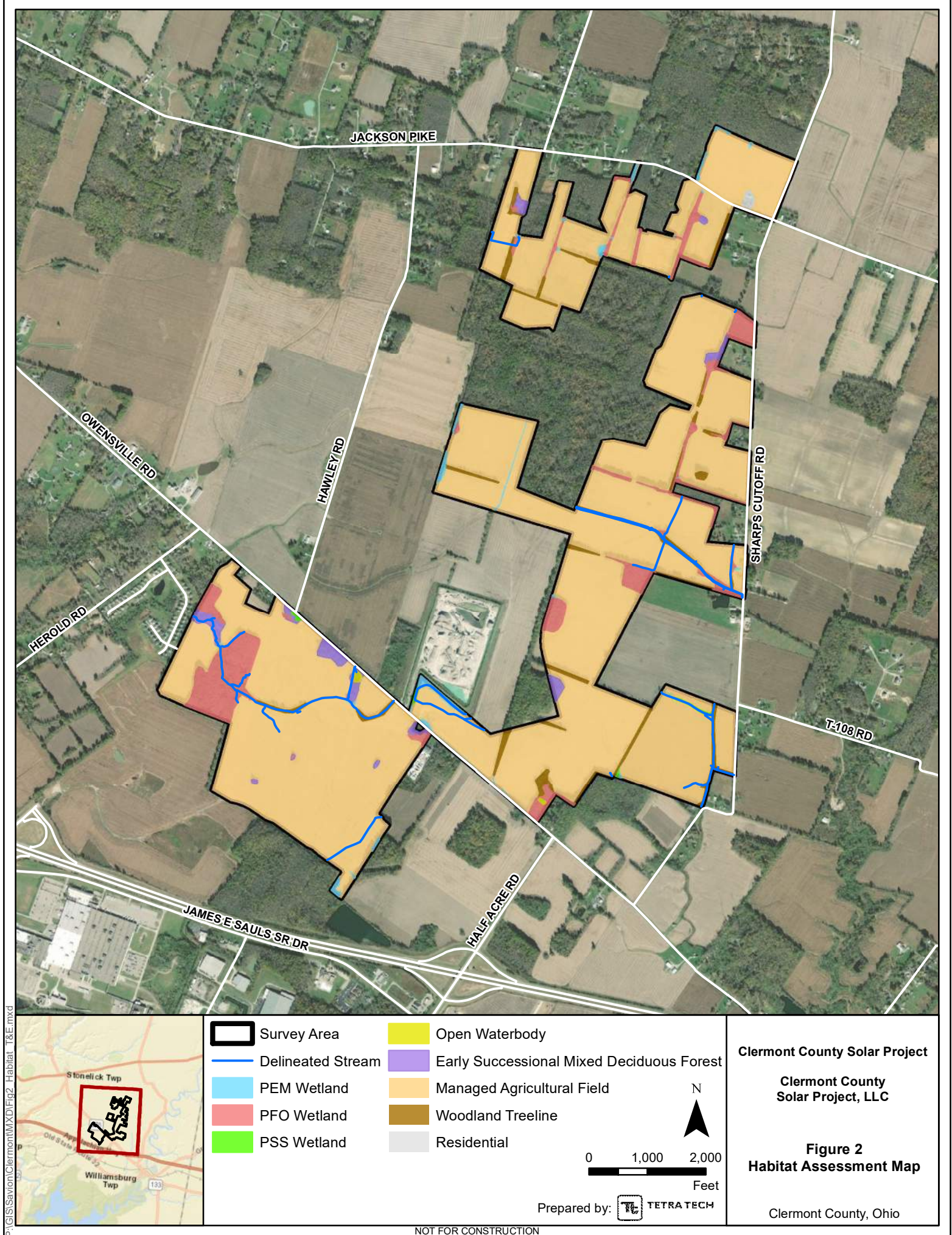
**Figure 1**  
**USGS Project Location Map**

Clermont County, Ohio



Prepared by: **TETRA TECH**











## **ATTACHMENT 2 – PREVIOUS AGENCY COORDINATION**



April 6, 2021

United States Fish and Wildlife Service  
Ohio Field Office  
4625 Morse Road, Suite 104  
Columbus, OH 43230-8355

**Subject: Project Review Request**  
**Consultation Code: 03E15000-2021-SLI-0985**  
**Event Code: 03E15000-2021-E-01367**  
**DRAFT Clermont County Solar Project**  
**Jackson and Williamsburg Townships, Clermont County, Ohio**

To Whom It May Concern:

Tetra Tech, Inc. is requesting information from the United States Fish and Wildlife Service (USFWS) regarding the potential presence of threatened or endangered species on or near an approximately 817-acre property located in Clermont County, Ohio (OH) as shown on the attached United States Geological Survey (USGS) Project Location Map (Attachment 1, Figure 1). Clermont County Solar Project, LLC (Clermont County Solar) is proposing to develop and operate the Clermont County Solar Project (Project), an approximately 100-megawatt (MW) new photovoltaic solar facility. The preliminary Project area is generally located between OH-276 to the south, Hawley Road to the west, Sharps cutoff Road to the east, and Jackson Pike to the north, in Jackson and Williamsburg Townships, Clermont County, Ohio. The specific parcels utilized within the Project study area will be refined as layout design progresses. The Project will be the subject of an application for submittal to the Ohio Power Siting Board (OPSB).

Prior to the start of field surveys, an initial desktop analysis of the Project study area was conducted through a review of available Geographic Information Systems (GIS) resources. Information reviewed included the following:

- USGS topographic mapping (Attachment 1, Figure 1)
- National Land Cover Database (NLCD) Land Cover mapping (Attachment 1, Figure 2)
- USFWS National Wetland Inventory (NWI) mapping and USGS National Hydrography Dataset (NHD) mapping (Attachment 1, Figure 3)

The Project study area is primarily rural agricultural land in private ownership. It is comprised almost entirely of agricultural fields managed for soybeans and/or hay, occasionally interrupted by thin wooded tree lines. Environmentally sensitive areas (i.e. intact forested areas and NWI-mapped wetlands) identified during preliminary site selection were avoided to minimize environmental impacts to the maximum extent practicable. The streams identified within the Project study area during desktop analysis generally occur within actively managed agricultural fields and have been historically channelized and manipulated.

The United States Fish and Wildlife Service (USFWS) Information and Planning Consultation (IPaC) tool was used to determine the potential for any federal threatened and endangered species that may occur in the proposed

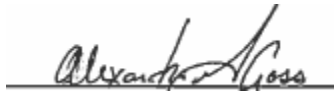


Project location, and/or may be affected by the proposed activities. Attachment 2 contains the IPaC Official Species List generated for the Project. The IPaC identified Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), and running buffalo clover (*Trifolium stoloniferum*) as having the potential to occur within the Project area. No critical habitats were identified in the IPaC search for the Project.

We are requesting USFWS provide any available information to indicate whether additional studies are required to determine the potential for protected species impacts within the Project study area prior to on-site delineation and habitat assessment field surveys. The attached PDF mapping (Attachment 1) and ArcGIS shapefiles (attached electronically) contain the Project study area. If you have any questions or require additional information, please do not hesitate to contact me at (540) 325-2791 or [Alexandra.Cross@tetratech.com](mailto:Alexandra.Cross@tetratech.com). Thank you in advance for your assistance.

Sincerely,

**Tetra Tech, Inc.**

A handwritten signature in black ink, appearing to read "Alexandra Cross", is written over a horizontal line.

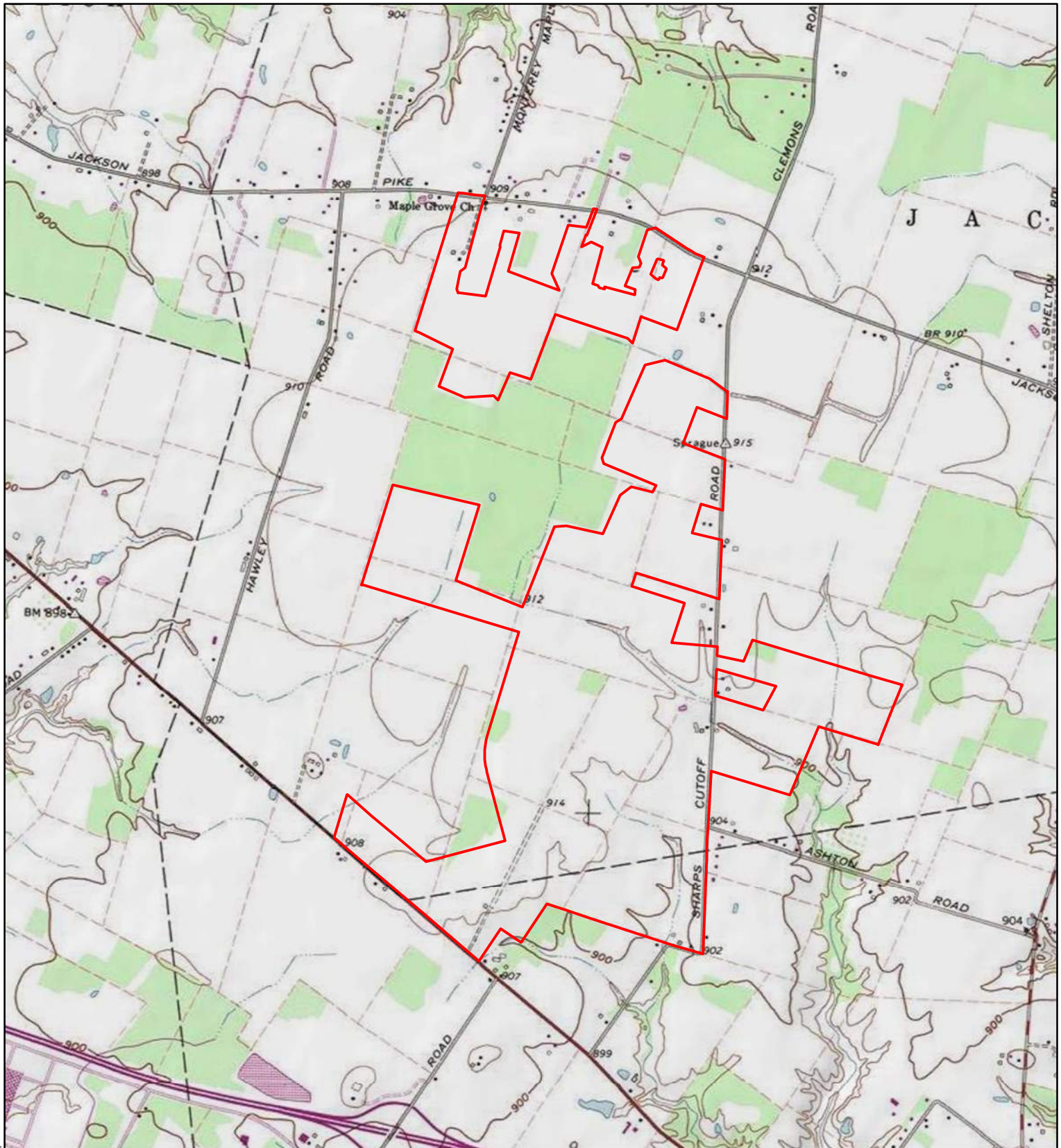
Alexandra Cross  
Project Manager

Attachments:

- Attachment 1 - Figures
  - o Figure 1 DRAFT USGS Project Location Map
  - o Figure 2 DRAFT NLCD Land Cover Map
  - o Figure 3 DRAFT NWI Wetlands and NHD Stream Map
- Attachment 2 – IPaC Official Species List
- ArcGIS Shapefiles (attached electronically)

## ATTACHMENT 1 – FIGURES





 Project Area

**DRAFT**



0 1,000 2,000  
Feet

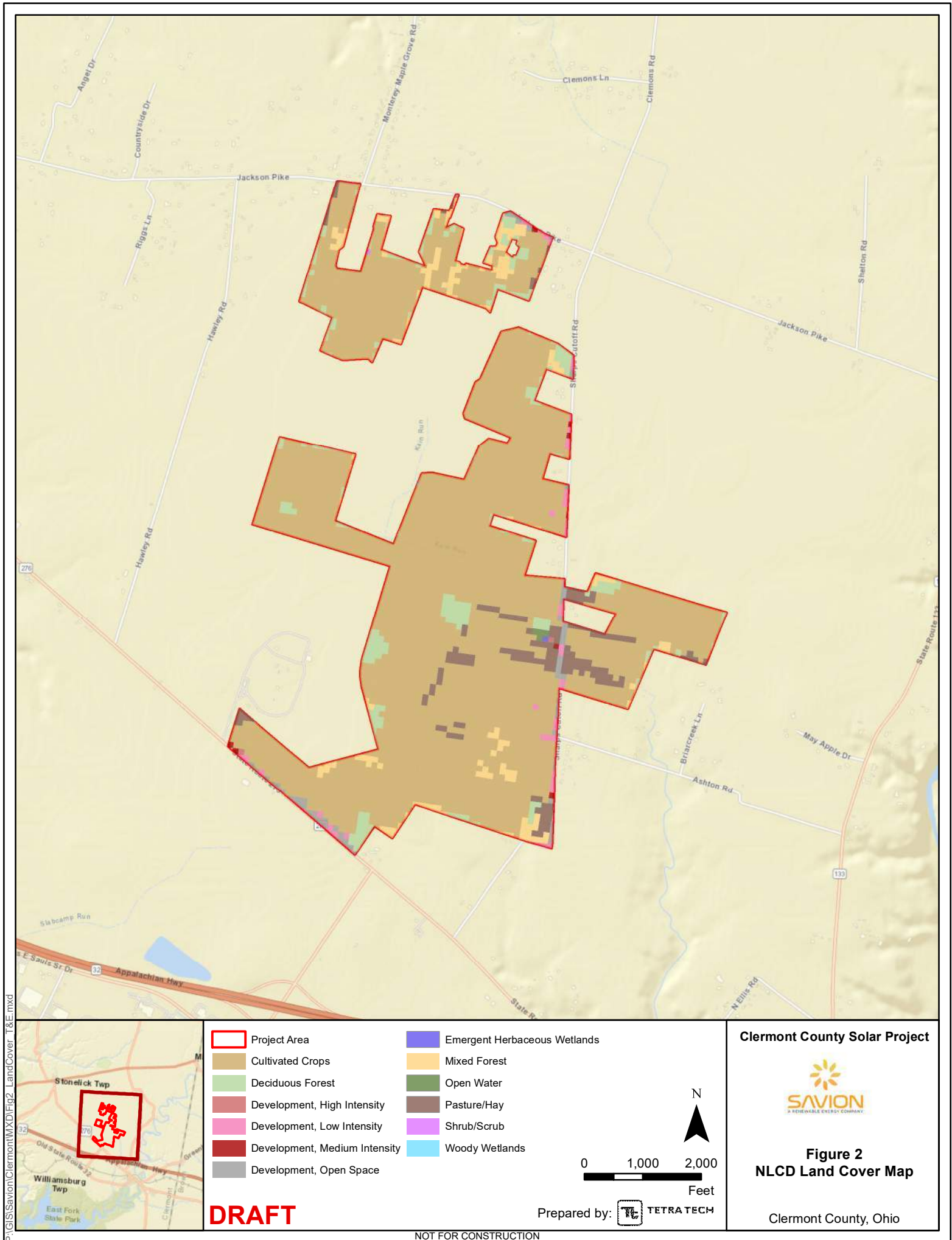
Prepared by:  TETRATECH

Clermont County Solar Project



**Figure 1**  
**USGS Project Location Map**

Clermont County, Ohio







## ATTACHMENT 2 – IPAC OFFICIAL SPECIES LIST





## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Ohio Ecological Services Field Office

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

Phone: (614) 416-8993 Fax: (614) 416-8994



In Reply Refer To:

March 15, 2021

Consultation Code: 03E15000-2021-SLI-0985

Event Code: 03E15000-2021-E-01367

Project Name: DRAFT Clermont County Solar Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

#### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <http://www.fws.gov/migratorybirds/RegulationsandPolicies.html>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/BirdHazards.html>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <http://www.fws.gov/migratorybirds/AboutUS.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

---



Attachment(s):

- Official Species List

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Ohio Ecological Services Field Office**

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

(614) 416-8993

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## Project Summary

Consultation Code: 03E15000-2021-SLI-0985

Event Code: 03E15000-2021-E-01367

Project Name: DRAFT Clermont County Solar Project

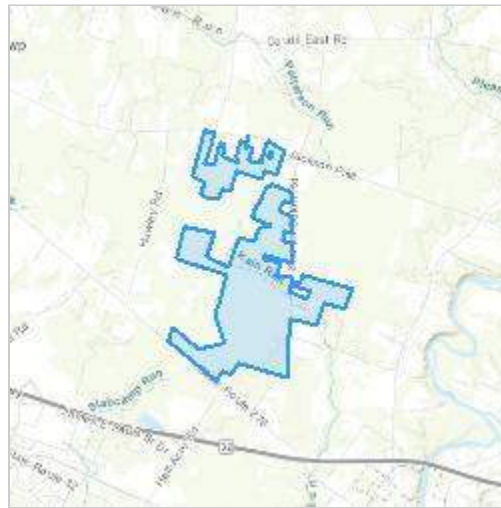
Project Type: POWER GENERATION

Project Description: Approximately 100-MW proposed solar project with 84-MW battery storage component in Clermont County, OH, east of Cincinnati, OH.

Project Location:

Approximate location of the project can be viewed in Google Maps: [https://](https://www.google.com/maps/@39.08964665,-84.07900859485903,14z)

[www.google.com/maps/@39.08964665,-84.07900859485903,14z](https://www.google.com/maps/@39.08964665,-84.07900859485903,14z)



Counties: Clermont County, Ohio

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## Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [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.

## Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> <li>Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at <a href="https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html">https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html</a></li> </ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

## Flowering Plants

NAME	STATUS
Running Buffalo Clover <i>Trifolium stoloniferum</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2529">https://ecos.fws.gov/ecp/species/2529</a>	Endangered

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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## McCluskey, Korey

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**From:** Ohio, FW3 <ohio@fws.gov>  
**Sent:** Tuesday, April 13, 2021 11:22 AM  
**To:** Cross, Alexandra  
**Cc:** nathan.reardon@dnr.state.oh.us; Parsons, Kate; Drane, Larry; Rowe, Victoria; McCluskey, Korey; Sean Flannery; Sara Mills; Joshua Crumpler  
**Subject:** Clermont Solar Project, Cass Township in Clermont County, Ohio  
**Attachments:** Ohio Solar Site Pollinator Habitat Planning and Assessment Form v.9 FINAL\_5\_3\_2018.pdf; solar panel installations.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

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



UNITED STATES DEPARTMENT OF THE INTERIOR  
U.S. Fish and Wildlife Service  
Ecological Services Office  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / Fax (614) 416-8994



TAILS# 03E15000-2021-TA-0985

Dear Ms. Cross,

The U.S Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees  $\geq 3$  inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

We recommend minimizing tree clearing to the maximum extent possible and avoiding clearing of any woodlots and we appreciate your commitment to preserving forested areas where possible and to clearing

unavoidable trees only between October 1 and March 31. However, at this time we are unable to fully assess the potential impact of the project on federally listed bats. Therefore, we recommend additional coordination with this office regarding project siting and the amount of proposed tree clearing in order for us to provide project-specific conservation recommendations for federally listed bats.

Section 7 Coordination: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus it is important to conserve the functions and values of the remaining wetlands in Ohio ([https://epa.ohio.gov/portals/47/facts/ohio\\_wetlands.pdf](https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf)). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at [mike.pettegrew@dnr.state.oh.us](mailto:mike.pettegrew@dnr.state.oh.us).

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or [ohio@fws.gov](mailto:ohio@fws.gov).

Sincerely,



Patrice M. Ashfield  
Ohio Field Office Supervisor



cc: Nathan Reardon, ODNR-DOW  
Kate Parsons, ODNR-DOW

The Service is working closely with our partners at Ohio Pollinator Habitat Initiative (OPHI) to create and enhance pollinator habitat at solar power installations. Attached for your use is the Ohio Solar Site Pollinator Habitat Planning and Assessment Form. This form was developed by the OPHI Solar Pollinator Program Advisory Team. We recommend that the areas between the solar panels be planted with legumes and wildflowers (i.e. forbs) that are beneficial to pollinators and other wildlife instead of non-native grass. Pollinators are beneficial to agricultural communities like the project area because they pollinate many varieties of fruits and vegetables. The recommended legumes and forbs are short (low-growing) so as not to cast shadows on the solar panels and would only require one to two mowings a year for maintenance, which should allow the project proponent to minimize maintenance costs. For other areas of the installation where vegetation does not have to be low-growing, alternative pollinator mixes are available with a more diverse array of flowering plants. This perennial vegetation will provide beneficial foraging habitat to songbirds and pollinators (e.g., monarch butterfly and the federally listed rusty patched bumblebee) while reducing storm water runoff, standing water, and erosion. Native plants can act as host plants for insect larva while flowering plants provide nectar sources for adult butterflies as well as other pollinators such as hummingbirds. Seeds from these plants can also provide food for a wide variety of bird species. Please contact the Ohio Pollinator Habitat Initiative ( <http://www.ophi.info/>, and specifically Mike Retterer [mretterer@pheasantsforever.org](mailto:mretterer@pheasantsforever.org)) for further information on solar power facility pollinator plantings.

Recommended low-growing grasses and forbs may include:

Little Bluestem	<i>Schizachyrium scoparium</i>
Sideoats Grama	<i>Bouteloua curtipendula</i>
Alfalfa	<i>Medicago spp.</i>
Alsike Clover	<i>Trifolium hybridum</i>
Brown-eyed Susan	<i>Rudbeckia triloba</i>
Butterfly Milkweed	<i>Asclepias tuberosa</i>
Lanceleaf Coreopsis	<i>Coreopsis lanceolata</i>
Partridge Pea	<i>Chamaecrista fasciculata</i>
Timothy	<i>Phleum pratense</i>
Orchardgrass	<i>Dactylis glomerata</i>
Crimson Clover	<i>Trifolium incarnatum</i>
Ladino or White Clover	<i>Trifolium repens</i>



# Ohio Solar Site Pollinator Habitat Planning and Assessment Form

1. Percent of total site planted with native or beneficial introduced flowering plants.

25-50%	10 points
51-75%	20 points
76-100%	30 points

2. Flowering plant diversity in site perimeter & buffer area (species with more than 1% cover).

9-12 species	5 points
13-16 species	10 points
17-20 species	15 points
20+ species	20 points
Site specific Milkweed included @2,000 pls/ac minimum	10 points

\* If no boxes were selected in questions 1 or 2 then your site does not meet criteria to be considered as an OPHI Solar Pollinator Habitat. However, OPHI can work with you on ways to increase the pollinator score of your site.

3. Flowering plant seed mixes and plantings to be used.

Native species local to the site are preferred; otherwise species native to Ohio are encouraged.

Includes only native plant species	15 points
Includes native and beneficial introduced plant species	10 points
Includes only beneficial introduced plant species	5 points

4. Flowering plant diversity in rows & under solar array.

4-6	5 points
7+	10 points
Site specific Milkweed included @2,000 pls/ac minimum	10 points

5. Seasons with at least 3 blooming species. Check all that apply.

Spring (April – May)	5 points
Summer (June – August)	5 points
Fall (September – October)	5 points

6. Available habitat components within ¼ mile of site.

Check all that apply.

Native grasses	2 points
Trees and shrubs	2 points
Forest edge habitat	2 points
Cavity nesting sites	2 points
Clean perennial water sources	2 points

7. Planned vegetative buffers adjacent to the solar site. Check all that apply.

Site has planned buffer adjacent to solar site	5 points
Buffer is at least 30 feet wide as measured from array fencing or edge of flower plantings	5 points
Buffer is at least 50 feet wide as measured from array fencing or edge of flower plantings	10 points
Buffer includes flowering Shrubs/trees and other shrubs/trees that provide food for wildlife	5 points

8. Habitat site preparation prior to implementation.

Measures taken to control weeds and invasive species prior to seeding/planting.	10 points
Appropriate soil preparation done to reduce erosion	
And enhance germination/growth	5 points
None	-10 points

9. Planned management practices for areas designated as part of the pollinator habitat site. Check all that apply.

Detailed establishment and management plan developed for site	10 points
Mowing Follows OPHI mowing schedule for monarchs each year	5 points
Mowing is staggered over a 2 week period	5 points
Signage indicating site is wildlife & pollinator-friendly	5 points
Creation of habitat features (e.g. boxes, pass-through tunnels, bee hotels)	5 points
Long-term monitoring plan developed that includes re-certification as Solar Site Pollinator Habitat	10 points

10. Insecticide risk. Check if applicable.

Communication with adjacent landowners about the project and possible impacts of their insecticide use is critical

Site is adjacent to land (within 120 ft.) where insecticides are used	-20 points
Planned on-site insecticide use (including pre-treated seeds/plants)	-40 points

**Total Points:** \_\_\_\_\_

**Provides High Quality Pollinator Habitat** > 85  
**Meets OPHI Solar Pollinator Habitat Standards** 70-84

**Site Owner/Operator:**

**Project Location:**

**Project Size (acres):**

**Planned Source of Seeds:**

**Planned Seeding Date:**

**Habitat & Vegetation Consultant:**

Refer to [www.ophi.info](http://www.ophi.info) for more information regarding solar pollinator habitat development.

Version 1 - March 2018

Developed by the OPHI Solar Pollinator Program Advisory Team



## ATTACHMENT 3 – IPAC OFFICIAL SPECIES LIST





## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Ohio Ecological Services Field Office

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

Phone: (614) 416-8993 Fax: (614) 416-8994



In Reply Refer To:

Project Code: 2022-0044443

Project Name: Clermont County Solar Project

May 18, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

#### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

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**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

---



Attachment(s):

- Official Species List

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Ohio Ecological Services Field Office**

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

(614) 416-8993

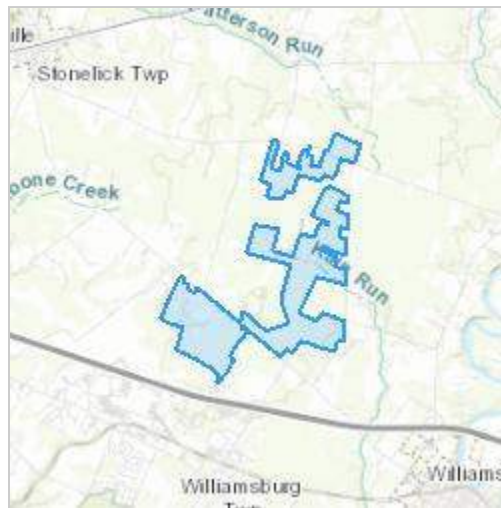
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## Project Summary

Project Code: 2022-0044443  
Event Code: None  
Project Name: Clermont County Solar Project  
Project Type: Power Gen - Solar  
Project Description: A new Solar Facility  
Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.0877512,-84.0857285628928,14z>



Counties: Clermont County, Ohio

---

## Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [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.

## Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> <li>Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at <a href="https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html">https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html</a></li> </ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

## Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

---



**IPaC User Contact Information**

Agency: Tetra Tech, Inc.  
Name: Korey McCluskey  
Address: 661 Andersen Drive,  
Address Line 2: Foster Plaza Bldg. #7, Suite 200  
City: Pittsburgh  
State: PA  
Zip: 15220  
Email: korey.mccluskey@tetrattech.com  
Phone: 4129218338

---

## ATTACHMENT 4 – HABITAT PHOTOGRAPHS



## Representative Photographs of Habitats



Managed Agricultural Fields (i.e. corn and soybeans)



Managed Agricultural Fields (i.e. corn and soybeans)

## Representative Photographs of Habitats



Managed Agricultural Fields (i.e. corn and soybeans)



Managed Agricultural Fields (i.e. corn and soybeans)



## Representative Photographs of Habitats



Managed Agricultural Fields (i.e. corn and soybeans)



Managed Agricultural Fields (i.e. corn and soybeans)



## Representative Photographs of Habitats



Palustrine Emergent Wetland



Palustrine Emergent Wetland



## Representative Photographs of Habitats



Palustrine Scrub-Shrub Wetland



Palustrine Scrub-Shrub Wetland



## Representative Photographs of Habitats



Palustrine Forested Wetland



Palustrine Forested Wetland



## Representative Photographs of Habitats



Palustrine Forested Wetland



Palustrine Forested Wetland



## Representative Photographs of Habitats



Open Waterbodies



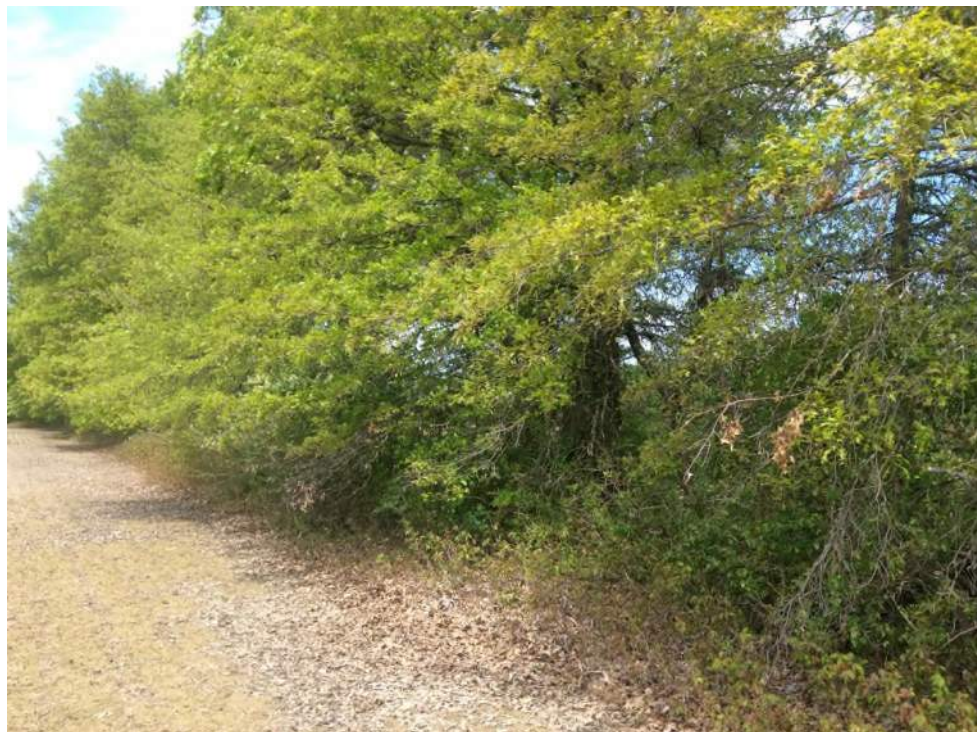
Open Waterbodies



## Representative Photographs of Habitats



Woodland Tree Lines



Woodland Tree Lines



## Representative Photographs of Habitats



Early Successional Mixed Deciduous Forest



Early Successional Mixed Deciduous Forest



## Pulver, Kevin

---

**From:** Ohio, FW3 <ohio@fws.gov>  
**Sent:** Tuesday, June 21, 2022 12:47 PM  
**To:** Cross, Alexandra  
**Cc:** nathan.reardon@dnr.state.oh.us; Wyza, Eileen; Drane, Larry; McCluskey, Korey; Sean Flannery  
**Subject:** Clermont County Solar Project, Cass Township, Clermont County, Ohio  
**Attachments:** Ohio Solar Site Pollinator Habitat Planning and Assessment Form v.9 FINAL\_5\_3\_2018.pdf

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



UNITED STATES DEPARTMENT OF THE INTERIOR  
U.S. Fish and Wildlife Service  
Ecological Services Office  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230  
(614) 416-8993 / Fax (614) 416-8994



Project Code #: 2022-0044443

Dear Ms. Cross,

The U.S. Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: Due to the project type, size, location, and the proposed implementation of seasonal tree cutting (clearing of trees  $\geq 3$  inches diameter at breast height between October 1 and March 31) to avoid impacts to the endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*), we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Pollinator Comments: The Service is working closely with our partners at Ohio Pollinator Habitat Initiative (OPHI) to create and enhance pollinator habitat at solar power installations. Attached for your use is the Ohio Solar Site Pollinator Habitat Planning and Assessment Form. This form was developed by the OPHI Solar Pollinator Program Advisory Team. We recommend that the areas between the solar panels be planted with legumes and wildflowers (i.e. forbs) that are beneficial to pollinators and other wildlife instead of non-native grass. Pollinators are beneficial to agricultural communities like the project area because they pollinate many varieties of fruits and vegetables. The recommended legumes and forbs are short (low-growing) so as not to cast shadows on the solar panels and would only require one to two mowings a year for maintenance, which should allow the project proponent to minimize maintenance costs. For other areas of the installation where vegetation does not have to be low-growing, alternative pollinator mixes are available with a more diverse array of flowering plants. This perennial vegetation will provide beneficial foraging habitat to songbirds and pollinators (e.g., monarch butterfly and the federally listed rusty patched bumblebee) while reducing storm

water runoff, standing water, and erosion. Native plants can act as host plants for insect larva while flowering plants provide nectar sources for adult butterflies as well as other pollinators such as hummingbirds. Seeds from these plants can also provide food for a wide variety of bird species. Please contact the Ohio Pollinator Habitat Initiative ( <http://www.ophi.info/>, and specifically Mike Retterer [mretterer@pheasantsforever.org](mailto:mretterer@pheasantsforever.org)) for further information on solar power facility pollinator plantings.

Recommended low-growing grasses and forbs may include:

Little Bluestem	<i>Schizachyrium scoparium</i>
Sideoats Grama	<i>Bouteloua curtipendula</i>
Alfalfa	<i>Medicago spp.</i>
Alsike Clover	<i>Trifolium hybridum</i>
Brown-eyed Susan	<i>Rudbeckia triloba</i>
Butterfly Milkweed	<i>Asclepias tuberosa</i>
Lanceleaf Coreopsis	<i>Coreopsis lanceolata</i>
Partridge Pea	<i>Chamaecrista fasciculata</i>
Timothy	<i>Phleum pratense</i>
Orchardgrass	<i>Dactylis glomerata</i>
Crimson Clover	<i>Trifolium incarnatum</i>
Ladino or White Clover	<i>Trifolium repens</i>

**Section 7 Coordination:** If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

**Stream and Wetland Avoidance:** Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio ([https://epa.ohio.gov/portals/47/facts/ohio\\_wetlands.pdf](https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf)). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Acting Environmental Services Administrator, at (614) 265-6387 or at [mike.pettegrew@dnr.state.oh.us](mailto:mike.pettegrew@dnr.state.oh.us).

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or [ohio@fws.gov](mailto:ohio@fws.gov).

Sincerely,



A handwritten signature in blue ink, appearing to read "Patrice Ashfield". The signature is fluid and cursive, with the first name "Patrice" and last name "Ashfield" clearly distinguishable.

Patrice Ashfield  
Field Office Supervisor

# Ohio Solar Site Pollinator Habitat Planning and Assessment Form

1. Percent of total site planted with native or beneficial introduced flowering plants.

25-50%	10 points
51-75%	20 points
76-100%	30 points

2. Flowering plant diversity in site perimeter & buffer area (species with more than 1% cover).

9-12 species	5 points
13-16 species	10 points
17-20 species	15 points
20+ species	20 points
Site specific Milkweed included @2,000 pls/ac minimum	10 points

\* If no boxes were selected in questions 1 or 2 then your site does not meet criteria to be considered as an OPHI Solar Pollinator Habitat. However, OPHI can work with you on ways to increase the pollinator score of your site.

3. Flowering plant seed mixes and plantings to be used.

Native species local to the site are preferred; otherwise species native to Ohio are encouraged.

Includes only native plant species	15 points
Includes native and beneficial introduced plant species	10 points
Includes only beneficial introduced plant species	5 points

4. Flowering plant diversity in rows & under solar array.

4-6	5 points
7+	10 points
Site specific Milkweed included @2,000 pls/ac minimum	10 points

5. Seasons with at least 3 blooming species. Check all that apply.

Spring (April – May)	5 points
Summer (June – August)	5 points
Fall (September – October)	5 points

6. Available habitat components within ¼ mile of site.

Check all that apply.

Native grasses	2 points
Trees and shrubs	2 points
Forest edge habitat	2 points
Cavity nesting sites	2 points
Clean perennial water sources	2 points

7. Planned vegetative buffers adjacent to the solar site. Check all that apply.

Site has planned buffer adjacent to solar site	5 points
Buffer is at least 30 feet wide as measured from array fencing or edge of flower plantings	5 points
Buffer is at least 50 feet wide as measured from array fencing or edge of flower plantings	10 points
Buffer includes flowering Shrubs/trees and other shrubs/trees that provide food for wildlife	5 points

8. Habitat site preparation prior to implementation.

Measures taken to control weeds and invasive species prior to seeding/planting.	10 points
Appropriate soil preparation done to reduce erosion	
And enhance germination/growth	5 points
None	-10 points

9. Planned management practices for areas designated as part of the pollinator habitat site. Check all that apply.

Detailed establishment and management plan developed for site	10 points
Mowing Follows OPHI mowing schedule for monarchs each year	5 points
Mowing is staggered over a 2 week period	5 points
Signage indicating site is wildlife & pollinator-friendly	5 points
Creation of habitat features (e.g. boxes, pass-through tunnels, bee hotels)	5 points
Long-term monitoring plan developed that includes re-certification as Solar Site Pollinator Habitat	10 points

10. Insecticide risk. Check if applicable.

Communication with adjacent landowners about the project and possible impacts of their insecticide use is critical

Site is adjacent to land (within 120 ft.) where insecticides are used	-20 points
Planned on-site insecticide use (including pre-treated seeds/plants)	-40 points

Total Points: \_\_\_\_\_

Provides High Quality Pollinator Habitat > 85  
Meets OPHI Solar Pollinator Habitat Standards 70-84

Site Owner/Operator:

Project Location:

Project Size (acres):

Planned Source of Seeds:

Planned Seeding Date:

Habitat & Vegetation Consultant:

Refer to [www.ophi.info](http://www.ophi.info) for more information regarding solar pollinator habitat development.

Version 1 - March 2018  
Developed by the OPHI Solar Pollinator Program Advisory Team





**Archived:** Tuesday, May 2, 2023 7:25:46 PM  
**From:** Cross, Alexandra  
**Sent:** Tue, 21 Jun 2022 15:15:51 +0000Authentication  
**To:** McCluskey, Korey  
**Subject:** FW: Clermont Solar Project; Clermont County, Ohio; Request for Information  
**Sensitivity:** Normal

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**Alexandra Cross** | Operations Manager  
Main (540) 325-2791 | Fax (804) 270-2739 | [Alexandra.Cross@tetrattech.com](mailto:Alexandra.Cross@tetrattech.com)

**Tetra Tech** | *Leading with Science*<sup>®</sup>  
4101 Cox Road, Suite 120 | Glen Allen, VA 23060 | [tetrattech.com](http://tetrattech.com)

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    Please consider the environment before printing. [Read more](#)



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**From:** Okajima, Jennifer Y <jennifer\_okajima@fws.gov>  
**Sent:** Thursday, June 16, 2022 12:32 PM  
**To:** Cross, Alexandra <Alexandra.Cross@tetrattech.com>  
**Subject:** RE: Clermont Solar Project; Clermont County, Ohio; Request for Information

You don't often get email from [jennifer\\_okajima@fws.gov](mailto:jennifer_okajima@fws.gov). [Learn why this is important](#)

\u9888 ? **CAUTION:** This email originated from an external sender. Verify the source before opening links or attachments. \u9888 ?

Hi Alexandra,

My name is Jennifer Okajima, I'm a biologist with the US Fish and Wildlife Service and am reviewing the project you submitted last week. I had a question about an additional parcel that has been added to the project footprint. There is a ~25 acre clump of woodlots in the southwest corner of the project footprint and I was wondering if there are current plan to clear that area or not. If that area can be preserved, then I would be comfortable with the seasonal clearing recommendations made in the previous letter you received from this office. However, if that area was to be cleared, I would recommend a summer mist-net survey to determine if it was being used by listed bat species. Please let me know so that I can send the correct updated letter!

Kind regards,  
~Jennifer



Jennifer Okajima  
Fish and Wildlife Biologist  
U.S. Fish & Wildlife Service  
4625 Morse Road, Suite 104  
Columbus, Ohio 43230



## ATTACHMENT 4 – IPAC OFFICIAL SPECIES LIST



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Ohio Ecological Services Field Office

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

Phone: (614) 416-8993 Fax: (614) 416-8994



In Reply Refer To:

Project Code: 2023-0072056

Project Name: Clear Mountain Solar Project

April 20, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological



evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

---

Attachment(s):

- Official Species List



## OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Ohio Ecological Services Field Office**

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

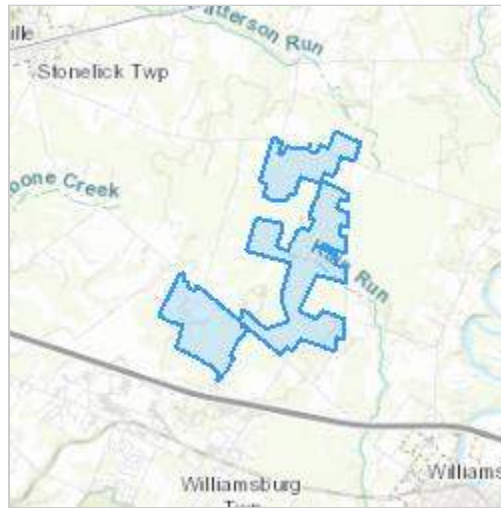
(614) 416-8993

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## PROJECT SUMMARY

Project Code: 2023-0072056  
Project Name: Clear Mountain Solar Project  
Project Type: Power Gen - Solar  
Project Description: New solar facility  
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.091448549999996,-84.0844501291561,14z>



Counties: Clermont County, Ohio

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## ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [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.

## MAMMALS

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	Proposed Endangered

## CLAMS

NAME	STATUS
Rayed Bean <i>Villosa fabalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5862">https://ecos.fws.gov/ecp/species/5862</a>	Endangered

## INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

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## **CRITICAL HABITATS**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



## **IPAC USER CONTACT INFORMATION**

Agency: Tetra Tech, Inc.

Name: Kevin Pulver

Address: 661 Andersen Dr Ste. 200

City: Pittsburgh

State: PA

Zip: 15220

Email [kevin.pulver@tetrattech.com](mailto:kevin.pulver@tetrattech.com)

Phone: 4129217090

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## **ATTACHMENT 5 – SUPPLEMENTAL HABITAT PHOTOGRAPHS**



## Supplemental Representative Photographs of Habitats



Palustrine Forested Wetland



Palustrine Forested Wetland



September 28, 2023

Ohio Department of Natural Resources  
Division of Wildlife  
Ohio Natural Heritage Program  
2045 Morse Road  
Columbus, OH 43229-6693

Subject: Updated Project Review Request  
Clear Mountain Energy Center Project  
Jackson and Williamsburg Townships, Clermont County, Ohio

To Whom It May Concern:

Tetra Tech, Inc. (Tetra Tech) is requesting updated information, a No Effect determination, and/or clearance from the Ohio Department of Natural Resources (ODNR) Office of Real Estate - Environmental Review Services Section regarding the potential presence of threatened or endangered species on or near a property located in Clermont County, Ohio (OH) as shown on the attached United States Geological Survey (USGS) Project Location Map (Attachment 1, Figure 1). Clear Mountain Energy Center Project, LLC (Clear Mountain Energy Center) is proposing to develop and operate the Clear Mountain Energy Center Project (Project), a new photovoltaic solar facility, an approximately 100-megawatt (MW) solar facility with an 84-MW battery storage component. The current Project study area now totals approximately 1,057 acres and is comprised of the preliminary Project study area (subsequently reduced to remove wooded acreage) and two additional survey areas adding approximately 502 acres to the initial study area. The Project will be the subject of an application for submittal to the Ohio Power Siting Board (OPSB).

The preliminary Project, totaling approximately 817 acres (subsequently reduced to remove wooded acreage), was originally located between OH-276 to the south, Hawley Road to the west, Sharps cutoff Road to the east, and Jackson Pike to the north, in Jackson and Williamsburg Townships, Clermont County, Ohio (Attachment 2 – Previous ODNR Coordination - 2021). Since initial coordination with ODNR the specific parcels utilized within the Project study area have been redefined and additional parcels have been added and surveyed. An additional approximately 399 acres were added to the Project study area, primarily just south of OH 276, as property became available, and the Project layout design progressed (Attachment 3 – Previous ODNR Coordination - 2022). An additional 103 acres were then added to the Project study area in December 2022, primarily within the north central portion of the study area. The additional acreage consists of mid-successional, mixed deciduous forest/woodland lots and a woodland tree line. The purpose of adding the 103 acres to the Project study area was to study those areas in order to identify the extent and location of any sensitive natural resources (i.e. wetlands or potentially suitable T&E habitat) that may lie adjacent to the proposed Project area for avoidance purposes. Project activities are not proposed in the 103 acres that were added to the Project study area. The current Project study area is



shown on the attached Project Location Map (Attachment 1, Figure 1). Tetra Tech performed field surveys for the additional acreage on December 5 and 6, 2022. Field surveys were performed by qualified wetland scientists that are experienced in the region. The last correspondence from ODNR, in July 2023, focused on the addition of the 103 acres to the Project study area that occurred after initial ODNR clearance was secured (Attachment 4 – Previous ODNR Coordination – 2023). Since the July 2023 correspondence updated anticipated Project impact information has been confirmed and is the focus of this updated coordination.

The United States Fish and Wildlife Service (USFWS) Information and Planning Consultation (IPaC) tool was used to determine the potential for any federal threatened and endangered species that may occur in the proposed Project location, and/or may be affected by the proposed activities. An IPaC Official Species List was first generated for the Project on March 15<sup>th</sup>, 2021, prior to onsite surveys, and was provided to USFWS and ODNR during initial agency consultation. All submittals and responses from initial consultation with ODNR are provided in Attachment 2 – Previous ODNR Coordination - 2021. A second updated IPaC Official Species List was generated for the Project on May 18<sup>th</sup>, 2022, identifying Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) as having the potential to occur within the Project area (Attachment 3). The updated list no longer lists the running buffalo clover (*Trifolium stoloniferum*) which was included in the original IPaC. Since the initial coordination for this Project occurred the USFWS has removed running buffalo clover from the Federal List of Endangered and Threatened Plants on the basis of recovery. All submittals and responses from the second consultation with ODNR are provided in Attachment. A third updated IPaC Official Species List (Attachment 5) was generated for the Project on April 20, 2023, identifying Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), Tri-colored Bat (*Perimyotis subflavus*), and ray bean (*Villosa fabalis*) as having the potential to occur within the Project area. The updated IPaC also listed the Monarch Butterfly (*Danaus plexippus*) as a candidate species, but no critical habitat has been designated for this species and it is not currently protected under the Endangered Species Act. According to the updated IPaC there are no critical habitats within the Project area under the jurisdiction of the USFWS.

Prior to the start of field surveys, an initial desktop analysis of the Project study area was conducted through a review of available Geographic Information Systems (GIS) resources. Information reviewed included the following:

- USGS topographic mapping (Attachment 1, Figure 1).
- National Land Cover Database (NLCD) Land Cover mapping.
- USFWS National Wetland Inventory (NWI) mapping and USGS National Hydrography Dataset (NHD) mapping (Attachment 1, Figure 3).

The ODNR Division of Wildlife (DOW) [March 2020] Clermont County State Listed Animal Species List (Attachment 6, Table 1) and the [July 2016] Clermont County State Listed Plant Species List (Attachment 6, Table 2) were utilized when determining the potential for any state threatened and endangered species that may occur in the proposed Project location, and/or may be affected by the proposed activities. Prior to conducting the habitat assessment of the Project study area a Species Conclusion Table (Attachment 6, Table 3) was generated combining all federal and state listed T&E that have may have the potential to occur in the proposed Project location, and/or may be affected by the proposed activities. Table 3 provides the common name, scientific name, federal/state status, and species habitat preferences.

After a review of the desktop analysis, species habitat preferences, and an on-site habitat assessment survey, a habitat evaluation and conclusion/recommendation were updated for each potential listed species in Table 3.

Onsite wetland delineation, stream identification, and habitat assessment surveys were performed between May 10, 2021 and December 10, 2022. The entire 1,057-acre Project study area has been surveyed for the aforementioned purposes and the details of habitat assessment findings are detailed below. Additionally, anticipated impacts and associated anticipated avoidance, minimization, and conservation measures are summarized below.

The Project study area is primarily rural agricultural land in private ownership. It is comprised almost entirely of agricultural fields managed for soybeans and/or hay, with a few intact portions of palustrine forested wetland and the occasional thin wooded tree line. While investigating the Project study area the following habitats were identified: managed agricultural fields (i.e. corn and soybeans), palustrine emergent wetland, palustrine scrub-shrub wetland, palustrine forested wetland, open waterbodies, woodland tree lines, and small patches of early successional mixed deciduous forest. The Habitat Assessment Map, provided as Figure 2 (Attachment 1), illustrates the locations of habitats identified during the onsite field habitat assessment. Non-native species such as Japanese stilt grass (*Microstegium vimineum*), Japanese Knotweed (*Reynoutria japonica*), autumn olive (*Elaeagnus umbellata*), Russian olive (*Elaeagnus angustifolia*), multiflora rose (*Rosa multiflora*), garlic mustard (*Alliaria petiolata*), and Tatarian honeysuckle (*Lonicera tatarica*) were identified within the Project study area. Supplemental photographs of the additional wooded habitat surveyed during the December 5 and 6, 2022 are provided in Attachment 7 - Supplemental Habitat Photographs.

Environmentally sensitive areas (i.e. intact forested areas and field delineated wetlands and waterbodies) identified during the initial desktop analysis and subsequent onsite aquatic resource delineations are being avoided to minimize environmental impacts to the maximum extent practicable. The streams and wetlands identified within the Project study area during onsite field delineations generally occur within actively managed agricultural fields and most of the streams have been historically channelized and heavily manipulated.

The majority of the Project study area is not wooded and lacks suitable bat habitat for the Indiana bat, NLEB, and tricolored bat. A few heavily wooded, mid-successional, mixed deciduous forested wetland habitats are located within the Project study area which may serve as roosting and/or foraging habitat for the Indiana bat, NLEB, and tricolored bat. Additionally, there are a number of narrow tree lines separating agricultural fields that could potentially provide roosting and/or foraging habitat. Trees located in these wooded areas generally consisted of Pin oak (*Quercus palustris*), red maple (*Acer rubrum*), sugar maple (*Acer saccharum*), shag-bark hickory (*Carya ovata*), and eastern cottonwood (*Populus deltoides*). Trees ranged from approximately 5-inch diameter at breast height (DBH) to 35-inches DBH. Supplemental photographs of the additional wooded habitat surveyed during the December 5 and 6, 2022 are provided in Attachment 7 - Supplemental Habitat Photographs. No caves, rock shelters, or abandoned underground mines were observed during the field survey of the study area. Though no bats were observed during the onsite habitat surveys, the Project study area does have potentially suitable habitat for the federally listed Indiana bat, NLEB, and tricolored bat; therefore, Indiana bat, NLEB, and tricolored bat have the potential to be present within the Project study area.

Clear Mountain Energy Center anticipates avoiding and minimizing tree clearing to the maximum extent practicable during the design and installation of the Project. After refining the Project design Clear Mountain Energy Center anticipates that approximately 8.34 acres of tree clearing will be required to execute the Project. Anticipated tree felling areas are depicted on the Impacts Map (Attachment 1, Figure 4), and illustrate that tree clearing is primarily limited to narrow tree lines separating agricultural fields, small, wooded tree patches located within agricultural fields, and wooded tree lines along the peripheral of the proposed Project. Clear Mountain Energy Center



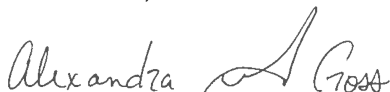
understands that the clearing required for the implementation of the Project should be conducted for trees greater than 3 inches diameter at breast height during the seasonal period between November 1 and March 31. Clear Mountain Energy Center is committed to adhering to the tree clearing time of year restrictions. If tree clearing can be avoided during the time of year restrictions, it is Clear Mountain Energy Center's understanding that no further restrictions related to these species will be required. If anticipated tree removal cannot be avoided during the time of year restrictions, Clear Mountain Energy Center will coordinate with qualified biologist(s) and/or ODNR and USFWS as appropriate concerning appropriate measures to ensure Indiana bat, NLEB, and tricolored bat are not adversely affected.

The majority of the Project study area has been historically and currently subject to disturbances associated with adjacent agricultural management. The streams identified on site have been historically modified for agricultural purposes and are not large enough nor contain adequate riffle-pool complexes to sustain the rayed bean (*Villosa fabalis*); therefore, no suitable habitat for the rayed bean is present within the Project study area. The Project design has been refined to avoid and minimize potential stream and wetland impacts to the maximum practicable extent, but anticipated project activities will involve the installation of permanent culverted crossings of three streams (Attachment 1, Figure 4). Of the three streams with anticipated impacts, only one (Kain Run) was classified during the delineations as a perennial stream. Clear Mountain Energy Center is committed to adhering to the time of year restrictions and will not conduct in-water work within perennial streams from March 15 through June 30.

The focus of this coordination is to outline the anticipated impacts and anticipated conservation measures that will be adhered to in order to minimize potential impacts to sensitive species and habitats and secure a No Effect determination and clearance from the agency. The attached PDF mapping (Attachment 1) and ArcGIS shapefiles (attached electronically) contain the Project study area, identified habitats, and delineated aquatic resources. If you have any questions or require additional information, please do not hesitate to contact me (540.325.2791; Alexandra.Cross@tetrattech.com). Thank you in advance for your assistance.

Sincerely,

Tetra Tech, Inc.

  
Alexandra Cross

Project Manager

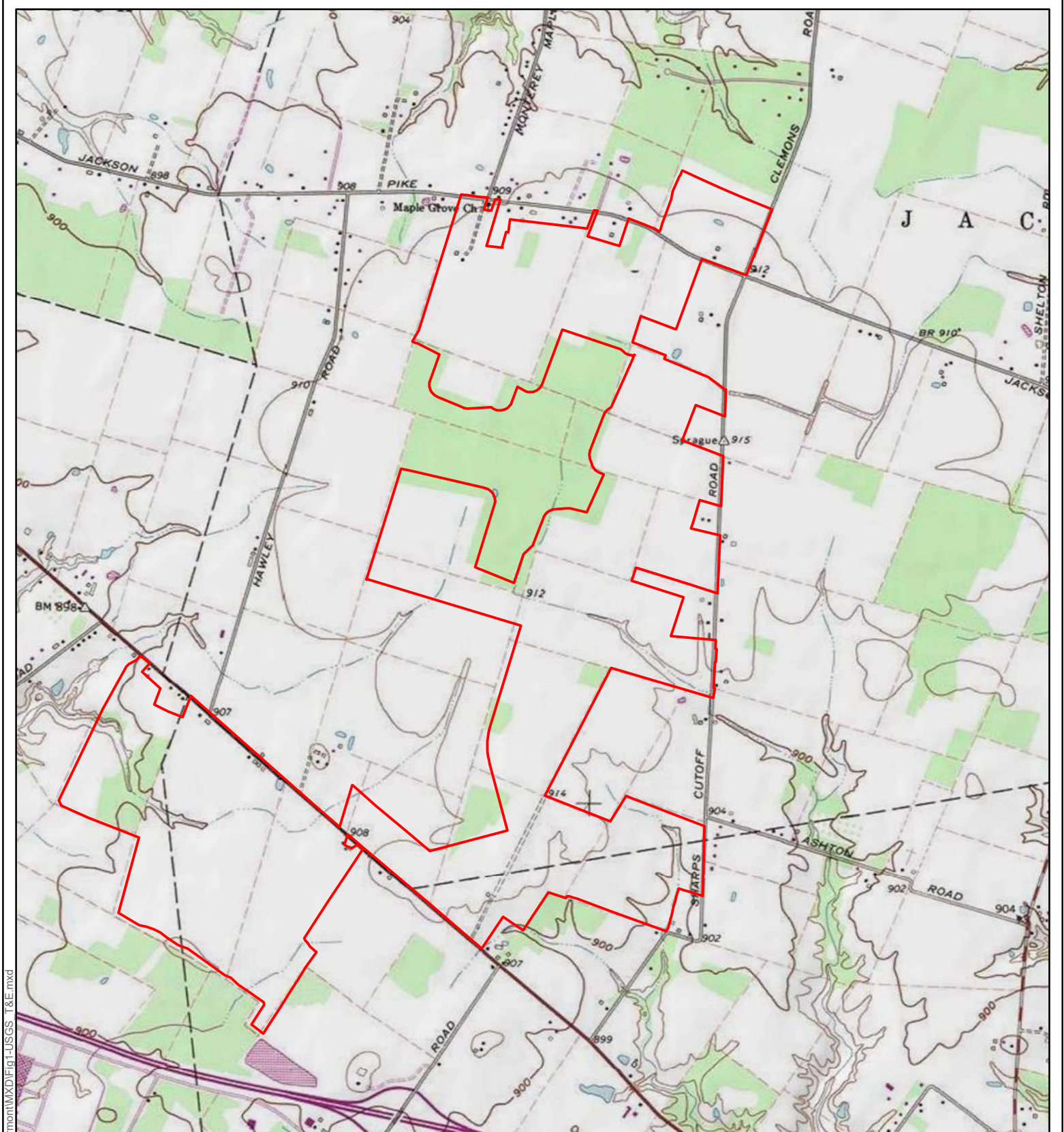
Attachments:

- Attachment 1 – Updated Figures
  - Figure 1 - USGS Project Location Map
  - Figure 2 - Habitat Assessment Map
  - Figure 3 - NWI Wetlands and NHD Stream Map
  - Figure 4 - Impacts Map
- Attachment 2 – Previous ODNR Coordination - 2021
- Attachment 3 – Previous ODNR Coordination – 2022
- Attachment 4 – Previous ODNR Coordination - 2023

- Attachment 5 – IPaC Official Species List
- Attachment 6 – Tables
  - Table 1 - Clermont County State Listed Animal Species List
  - Table 2 - Clermont County State Listed Plant Species List
  - Table 3 - Species Conclusion Table
- Attachment 7 – Supplemental Habitat Photographs
  
- ArcGIS Shapefiles (attached electronically)



## ATTACHMENT 1 – UPDATED FIGURES



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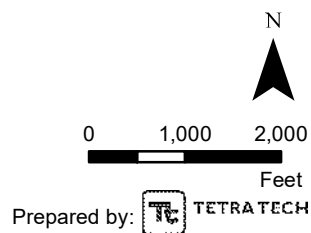
 Project Area

**Clear Mountain Energy Center**

**Clear Mountain  
Energy Center, LLC**

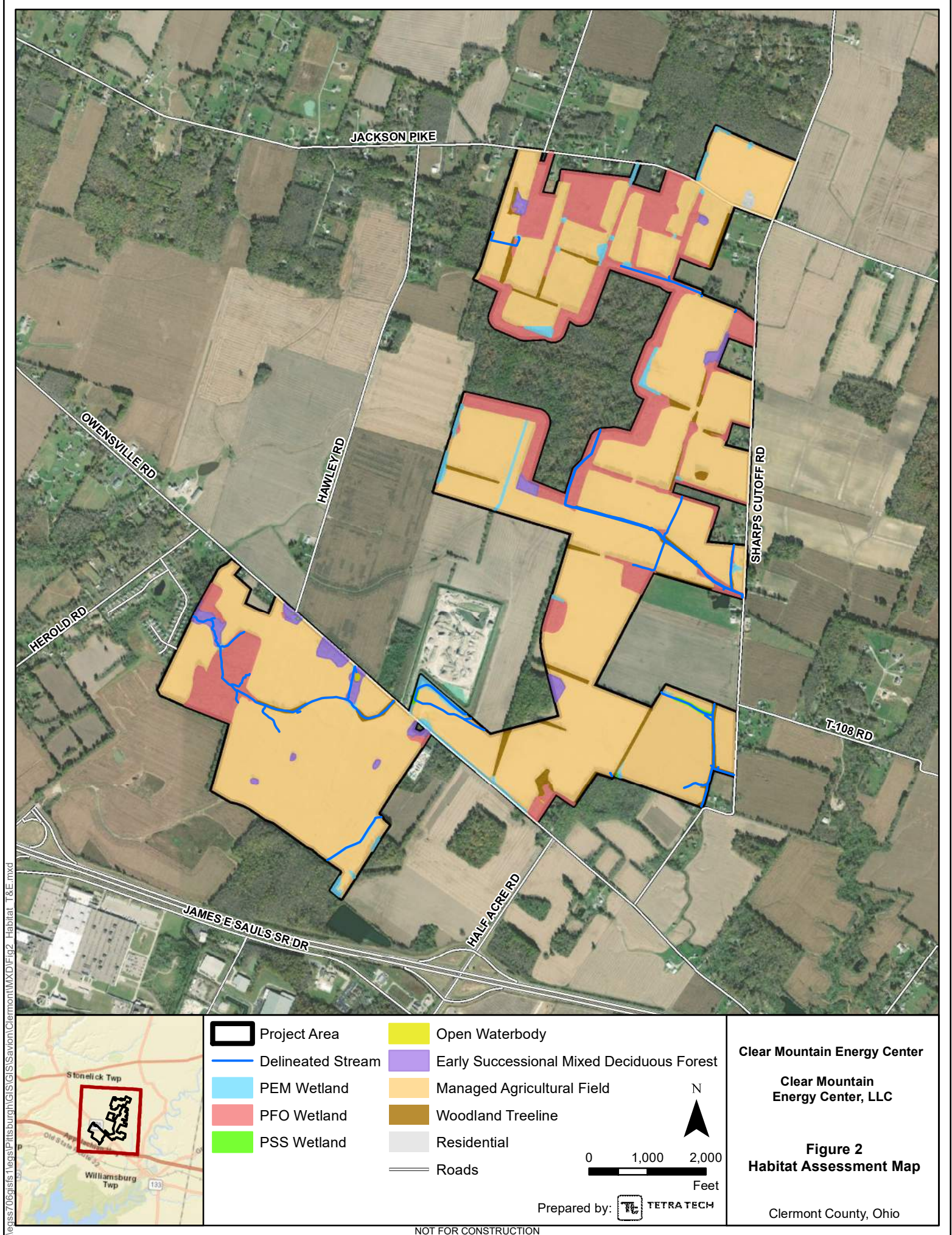
**Figure 1  
USGS Project Location Map**

Clermont County, Ohio

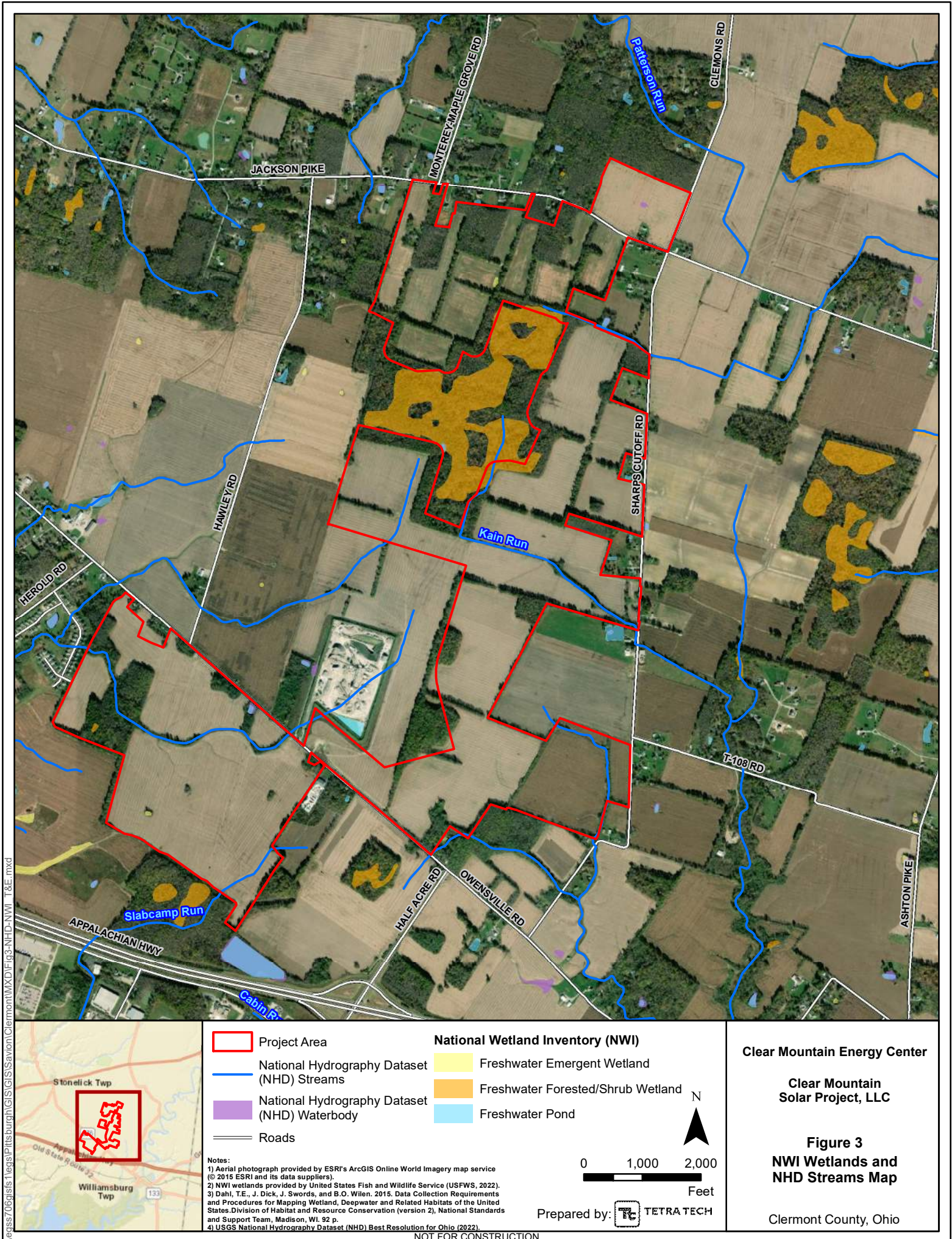


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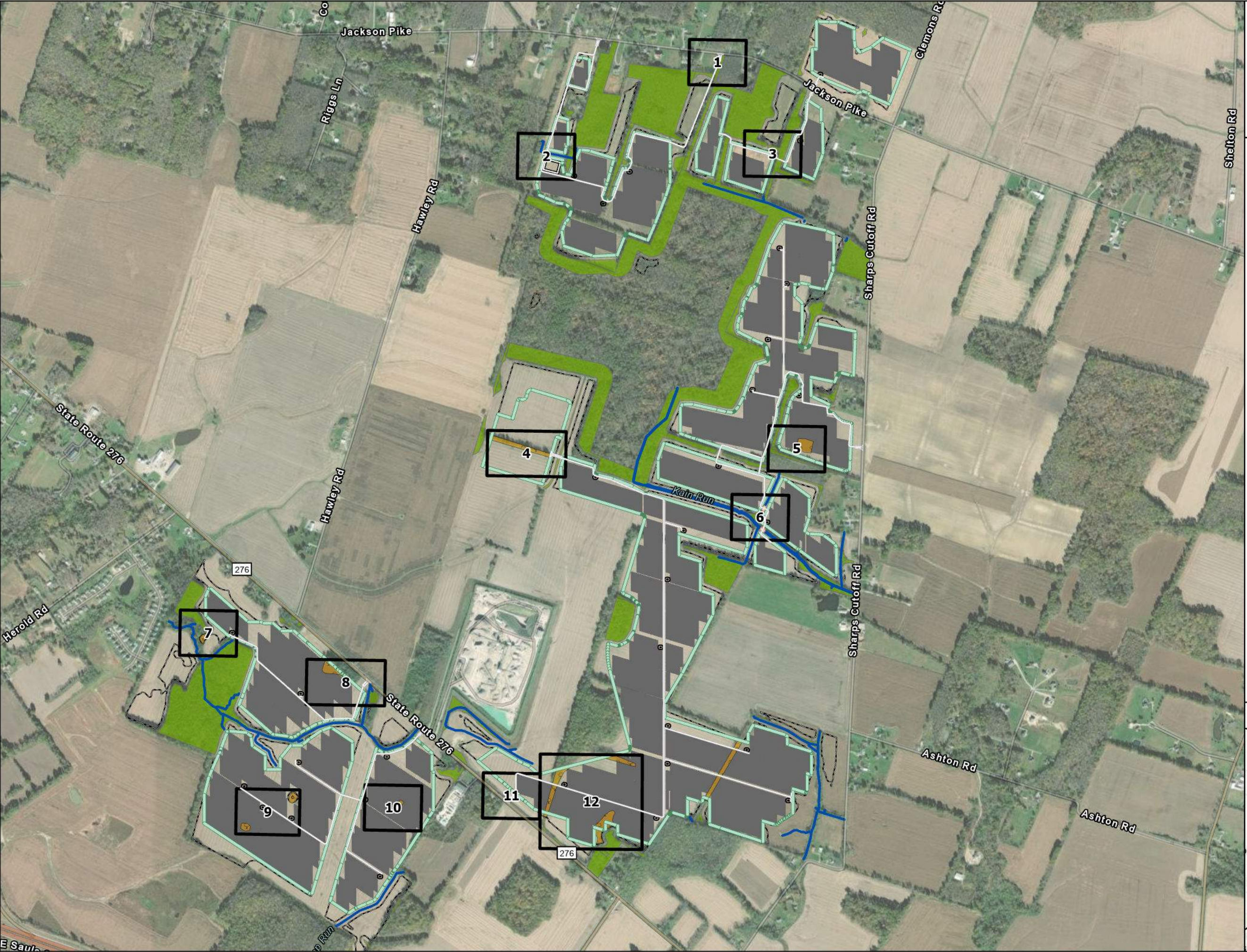












**Clear Mountain Solar Project**

Clear Mountain  
Energy Center, LLC

**Figure 4 - Index Impacts Map**

**LEGEND**

- Panels
- Buildable Area
- Fenceline
- Inverters
- Roads
- Facility Laydown Areas
- Inset Map Outlines

**Impacts**

- Stream
- Wetland
- Stream Impact Areas
- ▨ Wetland Impact Areas
- 🌳 Tree Felling Areas



0 1,000 2,000  
Feet

Note: Orthoimagery provided by Savion  
collected in June 2023



**NOT FOR CONSTRUCTION**



Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 1 of 12

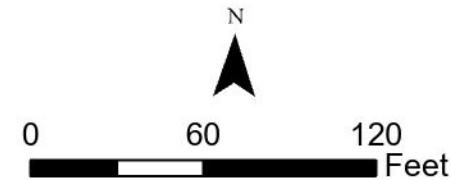
LEGEND

- Panels
- Fenceline
- Buildable Area
- Inverters
- Facility Laydown Areas

Impacts

- Stream
- Wetland
- Stream Impact Areas
- Wetland Impact Areas
- Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023





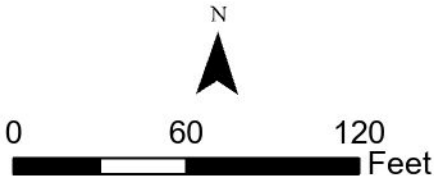
Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

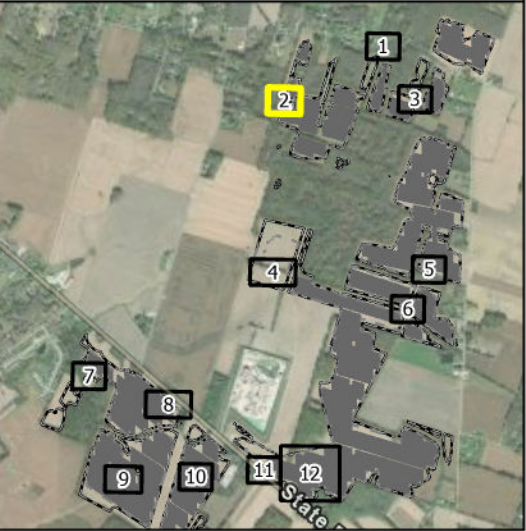
Figure 4 - Impacts Map  
Sheet 2 of 12

- LEGEND
- Panels
  - Fenceline
  - Buildable Area
  - Inverters
  - Facility Laydown Areas
- Impacts
- Stream
  - Wetland
  - Stream Impact Areas
  - Wetland Impact Areas
  - Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



NOT FOR CONSTRUCTION





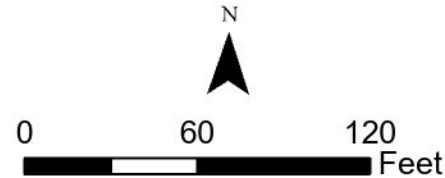
Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 3 of 12

- LEGEND
- Panels
  - Fenceline
  - Buildable Area
  - Inverters
  - Facility Laydown Areas
- Impacts
- Stream
  - Wetland
  - Stream Impact Areas
  - Wetland Impact Areas
  - Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



W-PZ02

W-JM01-PEM

W-JM01-PFO

Total Tree Felling Impact  
0.038 acres

1



W-JM05

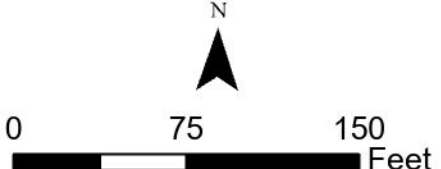
Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

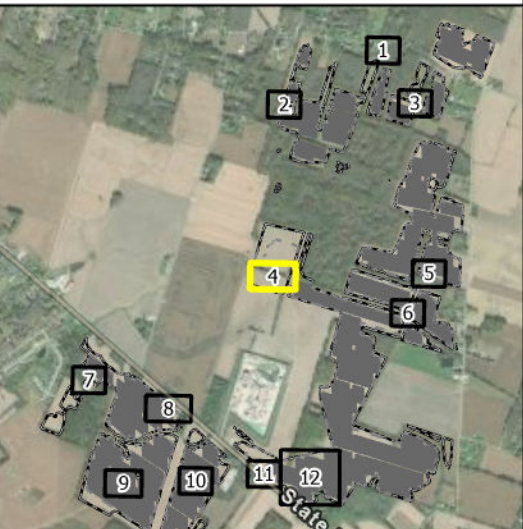
Figure 4 - Impacts Map  
Sheet 4 of 12

- LEGEND
- Panels
  - Fenceline
  - Buildable Area
  - Inverters
  - Facility Laydown Areas
- Impacts
- Stream
  - Wetland
  - Stream Impact Areas
  - Wetland Impact Areas
  - Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



Total Tree Felling Impact  
1.15 acres

3

W-JM03



Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 5 of 12

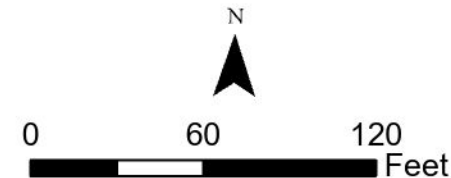
LEGEND

- Panels
- Fenceline
- Buildable Area
- Inverters
- Facility Laydown Areas

Impacts

- Stream
- Wetland
- Stream Impact Areas
- Wetland Impact Areas
- Tree Felling Areas

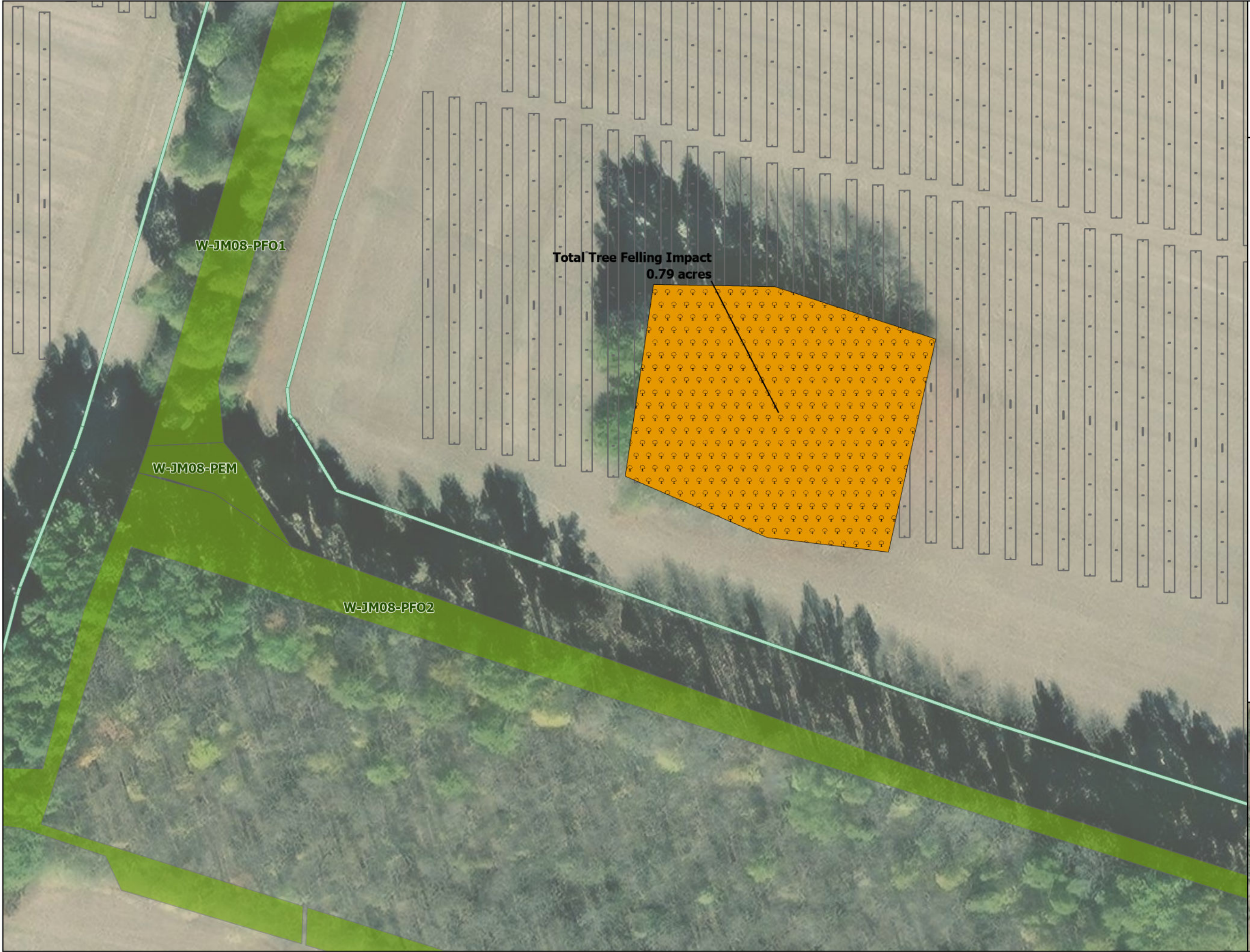
## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



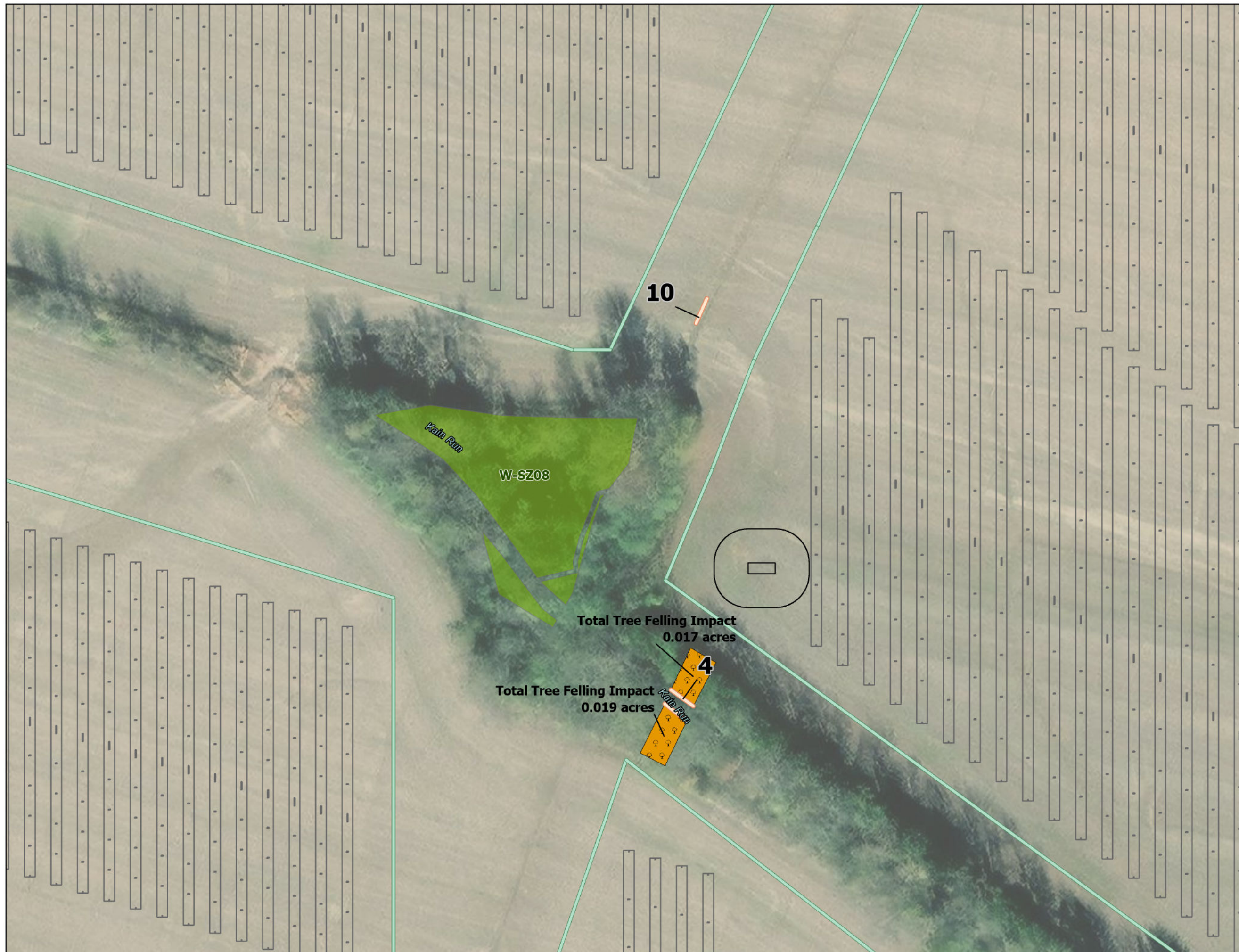
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Clear Mountain  
Energy Center, LLC

**NOT FOR CONSTRUCTION**





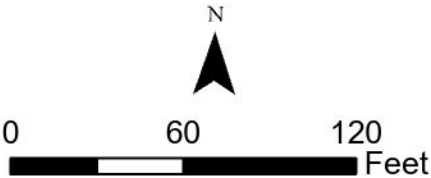
Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 7 of 12

- LEGEND
- Panels
  - Fenceline
  - Buildable Area
  - Inverters
  - Facility Laydown Areas
- Impacts
- Stream
  - Wetland
  - Stream Impact Areas
  - Wetland Impact Areas
  - Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023





Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 8 of 12

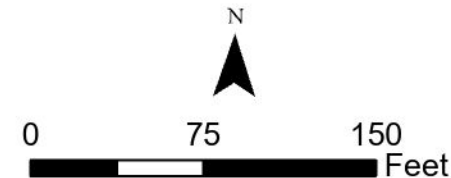
LEGEND

- Panels
- Fenceline
- Buildable Area
- Inverters
- Facility Laydown Areas

Impacts

- Stream
- Wetland
- Stream Impact Areas
- Wetland Impact Areas
- Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



Total Tree Felling Impact  
0.92 acres





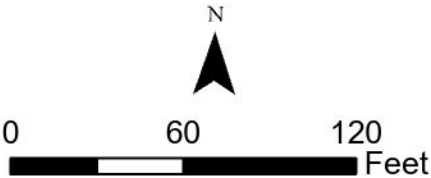
Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 9 of 12

- LEGEND
- Panels
  - Fenceline
  - Buildable Area
  - Inverters
  - Facility Laydown Areas
- Impacts
- Stream
  - Wetland
  - Stream Impact Areas
  - Wetland Impact Areas
  - Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



NOT FOR CONSTRUCTION





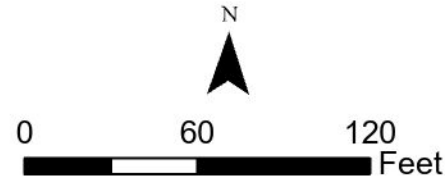
Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 10 of 12

- LEGEND
- Panels
  - Fenceline
  - Buildable Area
  - Inverters
  - Facility Laydown Areas
- Impacts
- Stream
  - Wetland
  - Stream Impact Areas
  - Wetland Impact Areas
  - Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023



NOT FOR CONSTRUCTION





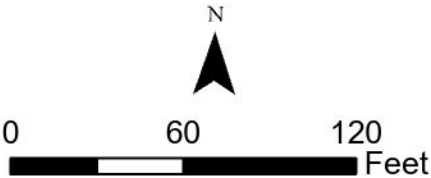
Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

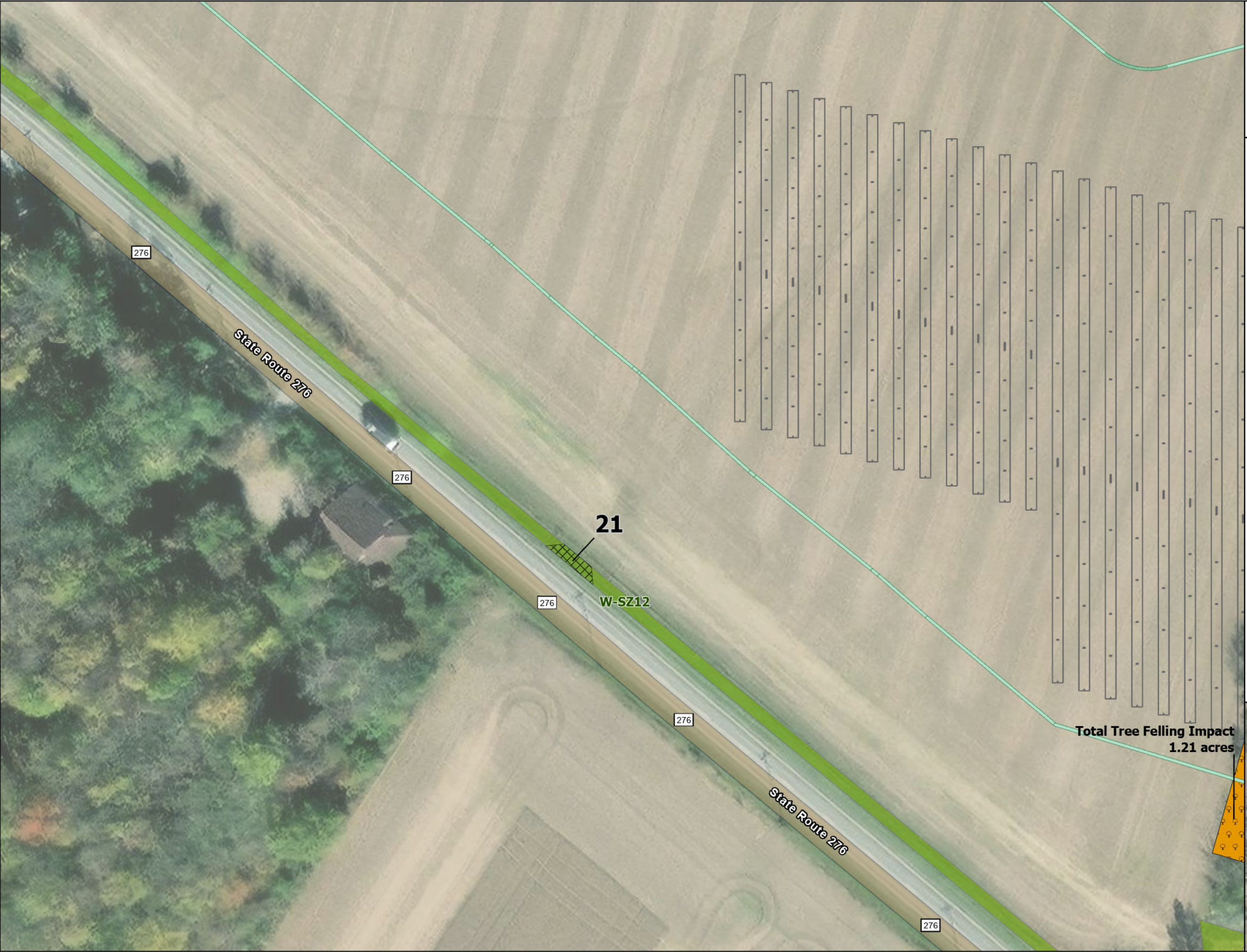
Figure 4 - Impacts Map  
Sheet 11 of 12

- LEGEND
- Panels
  - Fenceline
  - Buildable Area
  - Inverters
  - Facility Laydown Areas
- Impacts
- Stream
  - Wetland
  - Stream Impact Areas
  - Wetland Impact Areas
  - Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023





Clear Mountain Solar Project

Clear Mountain  
Energy Center, LLC

Figure 4 - Impacts Map  
Sheet 12 of 12

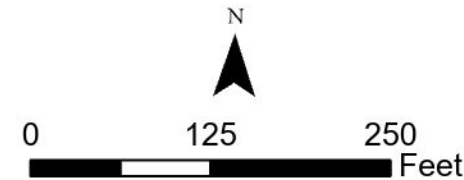
LEGEND

- Panels
- Fenceline
- Buildable Area
- Inverters
- Facility Laydown Areas

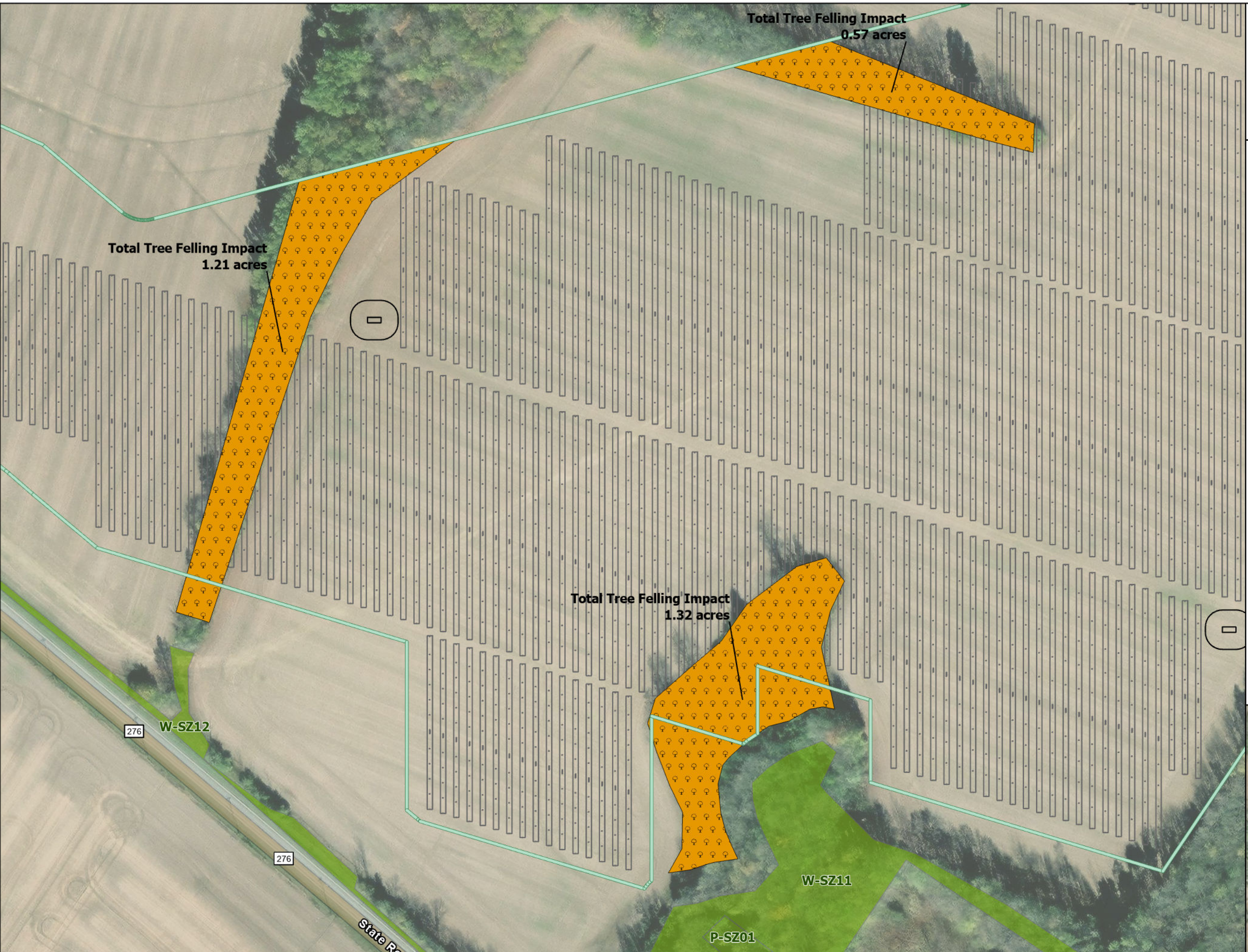
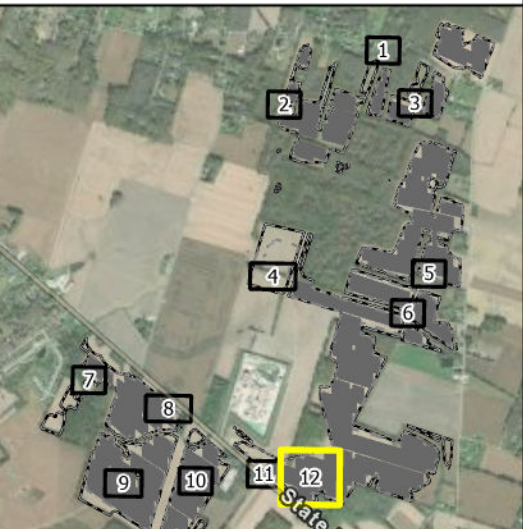
Impacts

- Stream
- Wetland
- Stream Impact Areas
- Wetland Impact Areas
- Tree Felling Areas

## Impact Resource Number



Note: Orthoimagery provided by Savion  
collected in June 2023





## **ATTACHMENT 2 – PREVIOUS ODNR COORDINATION - 2021**





April 6, 2021

Ohio Department of Natural Resources  
Division of Wildlife  
Ohio Natural Heritage Program  
2045 Morse Road  
Columbus, OH 43229-6693

**Subject: Project Review Request  
DRAFT Clermont County Solar Project  
Jackson and Williamsburg Townships, Clermont County, Ohio**

To Whom It May Concern:

Tetra Tech, Inc. is requesting information from the Ohio Department of Natural Resources (ODNR) Division of Wildlife (DOW) regarding the potential presence of threatened or endangered species on or near an approximately 817-acre property located in Clermont County, Ohio (OH) as shown on the attached United States Geological Survey (USGS) Project Location Map (Attachment 1, Figure 1). Clermont County Solar Project, LLC (Clermont County Solar) is proposing to develop and operate the Clermont County Solar Project (Project), an approximately 100-megawatt (MW) new photovoltaic solar facility. The preliminary Project area is generally located between OH-276 to the south, Hawley Road to the west, Sharps cutoff Road to the east, and Jackson Pike to the north, in Jackson and Williamsburg Townships, Clermont County, Ohio. The specific parcels utilized within the Project study area will be refined as the layout design progresses. The Project will be the subject of an application for submittal to the Ohio Power Siting Board (OPSB).

Prior to the start of field surveys, an initial desktop analysis of the Project study area was conducted through a review of available Geographic Information Systems (GIS) resources. Information reviewed included the following:

- USGS topographic mapping (Attachment 1, Figure 1)
- National Land Cover Database (NLCD) Land Cover mapping (Attachment 1, Figure 2)
- USFWS National Wetland Inventory (NWI) mapping and USGS National Hydrography Dataset (NHD) mapping (Attachment 1, Figure 3)

The Project study area is primarily rural agricultural land in private ownership. It is comprised almost entirely of agricultural fields managed for soybeans and/or hay, occasionally interrupted by thin wooded tree lines. Environmentally sensitive areas (i.e. intact forested areas and NWI-mapped wetlands) identified during preliminary site selection were avoided to minimize environmental impacts to the maximum extent practicable. The streams identified within the Project study area during desktop analysis generally occur within actively managed agricultural fields and have been historically channelized and manipulated.

The United States Fish and Wildlife Service (USFWS) Information and Planning Consultation (IPaC) tool was used to determine the potential for any federal threatened and endangered species that may occur in the proposed

Project location, and/or may be affected by the proposed activities. Attachment 2 contains the IPaC Official Species List generated for the Project. The IPaC identified Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), and running buffalo clover (*Trifolium stoloniferum*) as having the potential to occur within the Project area. No critical habitats were identified in the IPaC search for the Project (Attachment 2).

The ODNR DOW [March 2020] Clermont County State Listed Animal Species List (Attachment 3, Table 1) and the [July 2016] Clermont County State Listed Plant Species List (Attachment 3, Table 2) were utilized when determining the potential for any state threatened and endangered species that may occur in the proposed Project location, and/or may be affected by the proposed activities. Prior to conducting the habitat assessment of the Project study area, a Species Conclusion Table (Attachment 3, Table 3) was generated combining all federal and state listed T&E that have may have the potential to occur in the proposed Project location, and/or may be affected by the proposed activities. Table 3 provides the common name, scientific name, federal/state status, and species habitat preferences. After a review of the desktop analysis, available land cover mapping, and species habitat preferences, a preliminary habitat evaluation and preliminary conclusion/recommendation were provided for each potential listed species in Table 3.

We are requesting that the ODNR DOW provide any available information to indicate whether additional studies are required to determine the potential for protected species impacts within the Project study area prior to on-site delineation and habitat assessment field surveys. The attached PDF mapping (Attachment 1) and ArcGIS shapefiles (attached electronically) contain the Project study area. If you have any questions or require additional information, please do not hesitate to contact me at (540) 325-2791 or [Alexandra.Cross@tetrattech.com](mailto:Alexandra.Cross@tetrattech.com). Thank you in advance for your assistance.

Sincerely,

**Tetra Tech, Inc.**

A handwritten signature in black ink, appearing to read "Alexandra Cross", is written over a horizontal line.

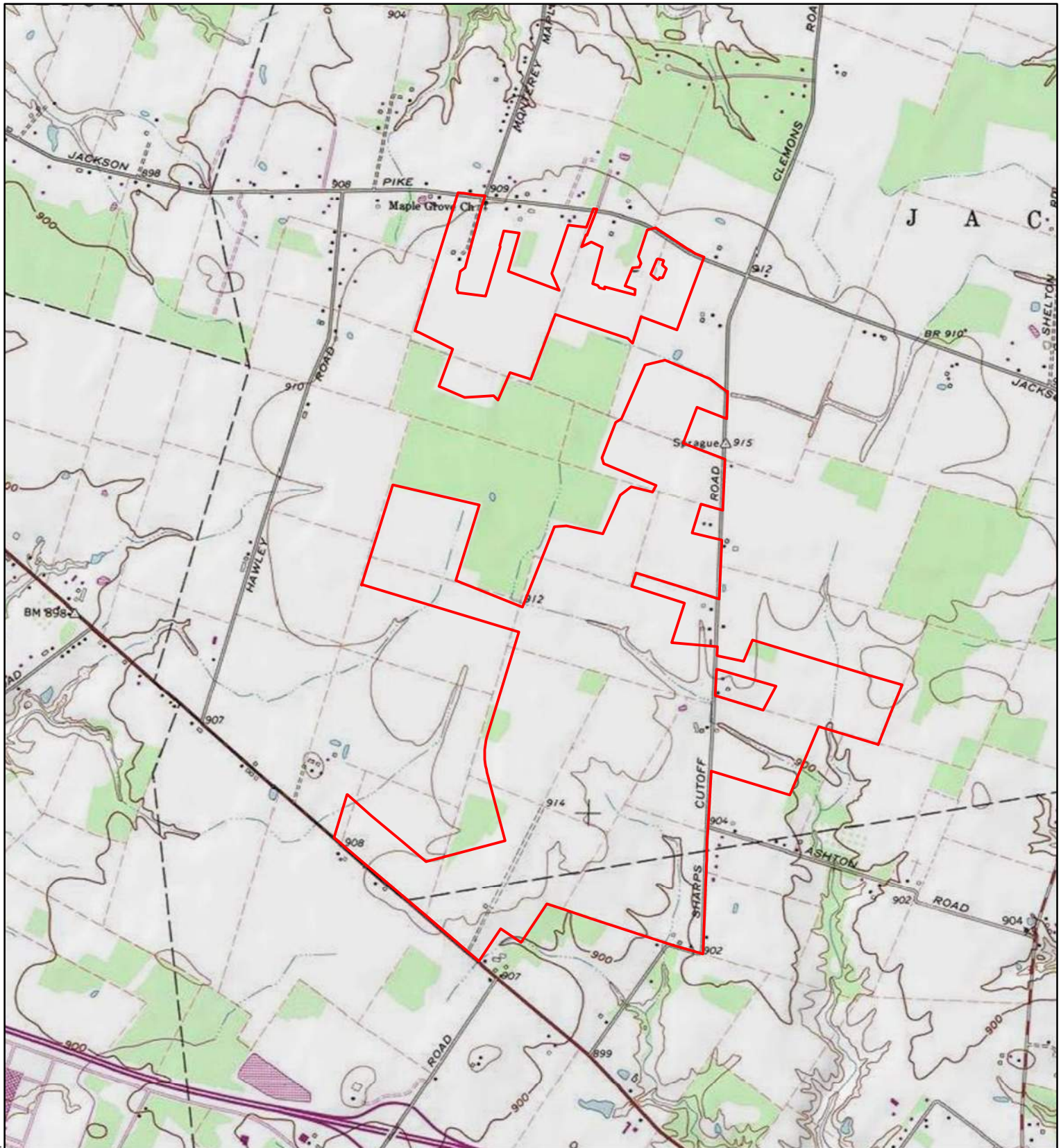
Alexandra Cross  
Project Manager

Attachments:

- Attachment 1 – Figures
  - Figure 1 DRAFT USGS Project Location Map
  - Figure 2 DRAFT NLCD Land Cover Map
  - Figure 3 DRAFT NWI Wetlands and NHD Stream Map
- Attachment 2 – IPaC Official Species List
- Attachment 3 – Tables
  - Table 1 - Clermont County State Listed Animal Species List
  - Table 2 - Clermont County State Listed Plant Species List
  - Table 3 - Species Conclusion Table
- ArcGIS Shapefiles (attached electronically)



## ATTACHMENT 1 – FIGURES



Project Area

**DRAFT**



0 1,000 2,000  
Feet

Prepared by: TETRA TECH

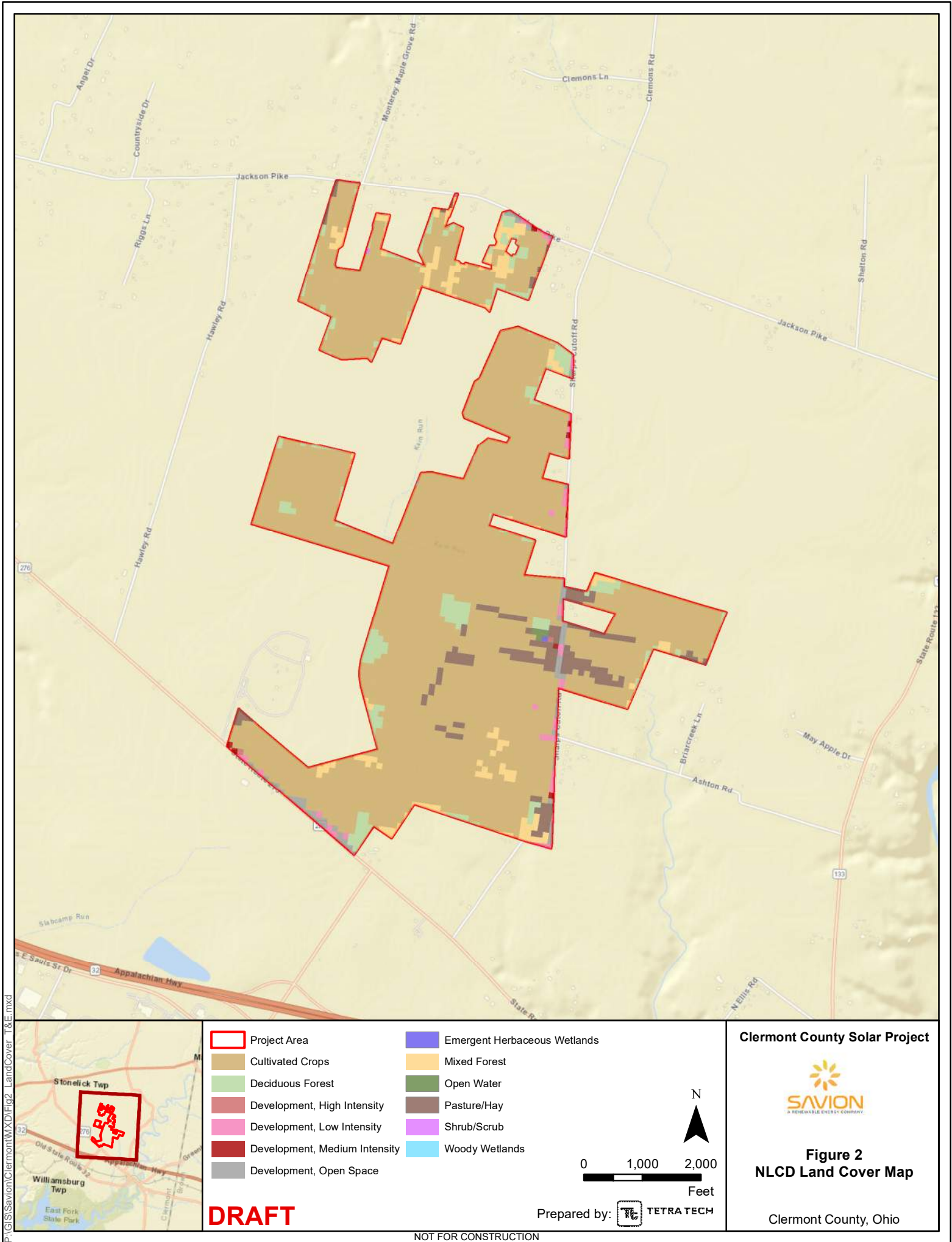
Clermont County Solar Project



**Figure 1**  
**USGS Project Location Map**

Clermont County, Ohio











## ATTACHMENT 2 – IPAC OFFICIAL SPECIES LIST



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Ohio Ecological Services Field Office

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

Phone: (614) 416-8993 Fax: (614) 416-8994



In Reply Refer To:

March 15, 2021

Consultation Code: 03E15000-2021-SLI-0985

Event Code: 03E15000-2021-E-01367

Project Name: DRAFT Clermont County Solar Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

#### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))



(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <http://www.fws.gov/migratorybirds/RegulationsandPolicies.html>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/BirdHazards.html>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <http://www.fws.gov/migratorybirds/AboutUS.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List



## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Ohio Ecological Services Field Office**

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

(614) 416-8993

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## Project Summary

Consultation Code: 03E15000-2021-SLI-0985

Event Code: 03E15000-2021-E-01367

Project Name: DRAFT Clermont County Solar Project

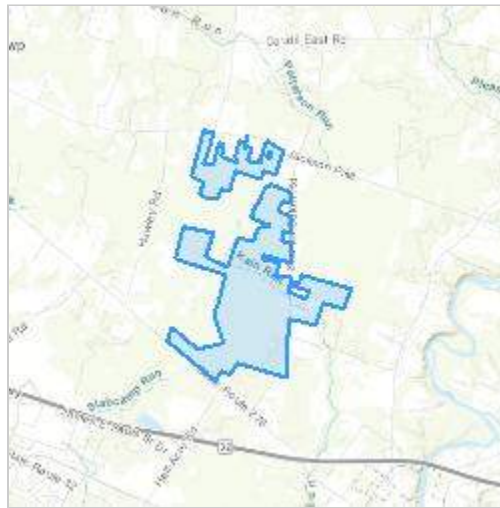
Project Type: POWER GENERATION

Project Description: Approximately 100-MW proposed solar project with 84-MW battery storage component in Clermont County, OH, east of Cincinnati, OH.

Project Location:

Approximate location of the project can be viewed in Google Maps: [https://](https://www.google.com/maps/@39.08964665,-84.07900859485903,14z)

[www.google.com/maps/@39.08964665,-84.07900859485903,14z](https://www.google.com/maps/@39.08964665,-84.07900859485903,14z)



Counties: Clermont County, Ohio

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## Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. [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.

## Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> <li>Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at <a href="https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html">https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html</a></li> </ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

## Flowering Plants

NAME	STATUS
Running Buffalo Clover <i>Trifolium stoloniferum</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2529">https://ecos.fws.gov/ecp/species/2529</a>	Endangered

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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## ATTACHMENT 3 – TABLES



# Clermont County State Listed Animal Species

Common Name	Scientific Name	Group	State Status	Federal Status
Northern Harrier	Circus hudsonius	Bird	Endangered	
Blue corporal	Ladona deplanata	Dragonfly	Endangered	
Goldeye	Hiodon alosoides	Fish	Endangered	
Shortnose Gar	Lepisosteus platostomus	Fish	Endangered	
Shoal chub	Macrhybopsis hyostoma	Fish	Endangered	
Bigeye Shiner	Notropis boops	Fish	Endangered	
Northern Madtom	Noturus stigmosus	Fish	Endangered	
Indiana Myotis	Myotis sodalis	Mammal	Endangered	Endangered
Wartyback	Cyclonaias nodulata	Mollusk	Endangered	
Butterfly	Ellipsaria lineolata	Mollusk	Endangered	
Elephant-ear	Elliptio crassidens	Mollusk	Endangered	
Snuffbox	Epioblasma triquetra	Mollusk	Endangered	Endangered
Pocketbook	Lampsilis ovata	Mollusk	Endangered	
Washboard	Megaloniaias nervosa	Mollusk	Endangered	
Sheepnose	Plethobasus cyphus	Mollusk	Endangered	Endangered
Ohio Pigtoe	Pleurobema cordatum	Mollusk	Endangered	
Ebonyshe	Reginaia ebenus	Mollusk	Endangered	
Monkeyface	Theliderma metanevra	Mollusk	Endangered	
Rayed Bean	Villosa fabalis	Mollusk	Endangered	Endangered
Little Spectaclecase	Villosa lienosa	Mollusk	Endangered	



Common Name	Scientific Name	Group	State Status	Federal Status
Black-crowned Night-Heron	Nycticorax nycticorax	Bird	Threatened	
American Eel	Anguilla rostrata	Fish	Threatened	
Blue Sucker	Cycleptus elongatus	Fish	Threatened	
Mountain Madtom	Noturus eleutherus	Fish	Threatened	
Channel Darter	Percina copelandi	Fish	Threatened	
River Darter	Percina shumardi	Fish	Threatened	
Paddlefish	Polyodon spathula	Fish	Threatened	
Northern Long-eared Bat	Myotis septentrionalis	Mammal	Threatened	Threatened
Black Sandshell	Ligumia recta	Mollusk	Threatened	
Threehorn Wartyback	Obliquaria reflexa	Mollusk	Threatened	
Fawnsfoot	Truncilla donaciformis	Mollusk	Threatened	
Kirtland's Snake	Clonophis kirtlandii	Reptile	Threatened	
Eastern Cricket Frog	Acris crepitans crepitans	Amphibian	Species of Concern	
Sharp-shinned Hawk	Accipiter striatus	Bird	Species of Concern	
Henslow's Sparrow	Ammodramus henslowii	Bird	Species of Concern	
Grasshopper Sparrow	Ammodramus savannarum	Bird	Species of Concern	
Great Egret	Ardea alba	Bird	Species of Concern	
Common Nighthawk	Chordeiles minor	Bird	Species of Concern	
Northern Bobwhite	Colinus virginianus	Bird	Species of Concern	
American Coot	Fulica americana	Bird	Species of Concern	
Common Gallinule	Gallinula galeata	Bird	Species of Concern	
Red-headed Woodpecker	Melanerpes erythrocephalus	Bird	Species of Concern	





Common Name	Scientific Name	Group	State Status	Federal Status
Prothonotary Warbler	<i>Protonotaria citrea</i>	Bird	Species of Concern	
Cerulean Warbler	<i>Setophaga cerulea</i>	Bird	Species of Concern	
Muskellunge	<i>Esox masquinongy</i>	Fish	Species of Concern	
Blue Catfish	<i>Ictalurus furcatus</i>	Fish	Species of Concern	
Big Brown Bat	<i>Eptesicus fuscus</i>	Mammal	Species of Concern	
Red Bat	<i>Lasiurus borealis</i>	Mammal	Species of Concern	
Hoary Bat	<i>Lasiurus cinereus</i>	Mammal	Species of Concern	
Woodland Vole	<i>Microtus pinetorum</i>	Mammal	Species of Concern	
Little Brown Bat	<i>Myotis lucifugus</i>	Mammal	Species of Concern	
Tri-colored Bat	<i>Perimyotis subflavus</i>	Mammal	Species of Concern	
Deer Mouse	<i>Peromyscus maniculatus</i>	Mammal	Species of Concern	
Southern Bog Lemming	<i>Synaptomys cooperi</i>	Mammal	Species of Concern	
Elktoe	<i>Alasmodonta marginata</i>	Mollusk	Species of Concern	
Purple Wartyback	<i>Cyclonaias tuberculata</i>	Mollusk	Species of Concern	
Wavy-rayed Lampmussel	<i>Lampsilis fasciola</i>	Mollusk	Species of Concern	
Round Pigtoe	<i>Pleurobema sintoxia</i>	Mollusk	Species of Concern	
Kidneyshell	<i>Ptychobranhus fasciolaris</i>	Mollusk	Species of Concern	
Salamander Mussel	<i>Simpsonaias ambigua</i>	Mollusk	Species of Concern	
Deertoe	<i>Truncilla truncata</i>	Mollusk	Species of Concern	
Eastern Hognose Snake	<i>Heterodon platirhinos</i>	Reptile	Species of Concern	
Eastern Box Turtle	<i>Terrapene carolina carolina</i>	Reptile	Species of Concern	
Evening Bat	<i>Nycticeius humeralis</i>	Mammal	Special Interest	



Common Name	Scientific Name	Group	State Status	Federal Status
Mucket	Actinonaias ligamentina ligamentina	Mollusk	Extirpated	
Hickorynut	Obovaria olivaria	Mollusk	Extirpated	
Ring Pink	Obovaria retusa	Mollusk	Extirpated	
White Wartyback	Plethobasus cicatricosus	Mollusk	Extirpated	
Leafshell	Epioblasma flexuosa	Mollusk	Extinct	







## Clermont County

Scientific Name	Common Name	Last Observed	State Status	Federal Status
<i>Agrostis elliottiana</i>	Elliott's Bent Grass	2012-05-19	E	
<i>Aronia arbutifolia</i>	Red Chokeberry	2003-11-15	E	
<i>Baptisia australis</i>	Blue False Indigo	2007-07-27	E	
<i>Bartonia paniculata</i>	Screw-stem	2011-10-05	T	
<i>Botrychium biternatum</i>	Sparse-lobed Grape Fern	1980-08-26	E	
<i>Celtis laevigata</i>	Sugarberry	2007-07-23	E	
<i>Corallorhiza wisteriana</i>	Spring Coral-root	2004-04-29	P	
<i>Krigia dandelion</i>	Potato-dandelion	2009-05-23	T	
<i>Luzula bulbosa</i>	Southern Woodrush	1990-06-16	P	
<i>Paspalum repens</i>	Riverbank Paspalum	2005-10-05	T	
<i>Phacelia bipinnatifida</i>	Fern-leaved Scorpion-weed	2007-04-02	P	
<i>Potamogeton natans</i>	Floating Pondweed	1991-07-31	P	
<i>Ranunculus pusillus</i>	Low Spearwort	2010-05-14	T	
<i>Ribes missouriense</i>	Missouri Gooseberry	2002-04-25	T	
<i>Rubus trivialis</i>	Southern Dewberry	2006-06-11	E	
<i>Salix caroliniana</i>	Carolina Willow	2004-08-21	P	
<i>Sida hermaphrodita</i>	Virginia-mallow	2009-09-03	P	
<i>Silene nivea</i>	Snowy Campion	2006-06-18	E	
<i>Solidago speciosa</i>	Showy Goldenrod	2012-10	P	
<i>Spermacoce glabra</i>	Smooth Buttonweed	2005-10-05	P	
<i>Trifolium stoloniferum</i>	Running Buffalo Clover	2000-05-29	E	FE
<i>Trillium recurvatum</i>	Prairie Wake-robin	2009-05-23	P	
<i>Viburnum rufidulum</i>	Southern Black-haw	1989-10-04	P	



## Clermont County

Scientific Name	Common Name	Last Observed	State Status	Federal Status
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Ohio Division of Wildlife  
Ohio Natural Heritage Database  
Date Accessed: March 6, 2015  
Status based on 2014-15 Rare Plant List.

### **Status:**

List Created: July 2016

*X = Extirpated*

*E = Endangered*

*T = Threatened*

*P = Potentially Threatened*



**Table 3.  
Species Conclusion Table**

Common Name	Scientific Name	Status <sup>1</sup>	Species Habitat Preference Notes <sup>2</sup>	Desktop Presence Determination	Preliminary Conclusion/Recommendation <sup>2</sup>
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BGEPA, MBTA	Bald eagles utilize estuaries, large lakes, reservoirs, and rivers. No estuaries, large lakes, or reservoirs occur within the Project Site or within several miles or Project Site.	Unlikely to Disturb Nesting Bald Eagles	No Effect, No Eagle Act permit required
Indiana Bat	<i>Myotis sodalis</i>	FE, SE	Forests and mature trees occur in the Project area, but in low abundance. Avoidance of these forested areas is recommended. If tree clearing is necessary it should be done in the winter months, outside TOYR from April 1 – October 15.	Potential Suitable Habitat Present	Avoid forested areas, Adhere to TOYR.
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST	Forests and mature trees occur in the Project area, but in low abundance. Avoidance of these forested areas is recommended. If tree clearing is necessary it should be done in the winter months, outside TOYR from April 15 – September 15.	Potential Suitable Habitat Present	Avoid forested areas, Adhere to TOYR.
Running Buffalo Clover	<i>Trifolium stoloniferum</i>	FE, SE	Mesic Forested habitats with partial to filtered sunlight including forested opening and paths, woodlands, wooded edges, and occasionally mowed lawns.	Potential Suitable Habitat Present	Potential impacts - further agency coordination recommended.
Northern Harrier	<i>Circus hudsonius</i>	SE	Northern harriers prefer sloughs, wet meadows, marshlands, swamps, prairies, plains, grasslands, and shrublands. They nest on the ground, usually near water, or in tall grass, open fields, clearings, or on the water. Slough, marshland, swamp, prairie, plain, grassland, and shrubland habitat is not present within the Project area.	Potential suitable habitat not present.	No Effect Likely
Blue Corporal	<i>Ladona deplanata</i>	SE	Blue corporals favor still, infertile waters of sandy-bottomed ponds, lakes and pits, and breed less frequently in streams than its close relatives do.	Potential Suitable Habitat Present	Avoid or minimize impacts to wetlands, ponds, and streams.
Goldeye	<i>Hiodon alosoides</i>	SE	In the U.S., the goldeye is most commonly found in larger river systems such as the Mississippi, Missouri, Ohio, and Red Rivers. It prefers turbid slower-moving waters of lakes and rivers.	Potential suitable habitat not present.	No Effect Likely
Shorthead Gar	<i>Lepisosteus platostomus</i>	SE	Open, slow, silty or clear-water rivers, wave-washed shoals of large lakes, quiet creek pools, and river backwaters.	Potential suitable habitat not present.	No Effect Likely
Shoal chub	<i>Machyobopsis hyostoma</i>	SE	Shoal chub preferred habitat is sand and gravel runs of small to large rivers.	Potential suitable habitat not present.	No Effect Likely
Bigeye Shiner	<i>Notropis boops</i>	ST	Flowing pools of moderately clear creeks and rivers with large permanent pools over bottoms of sand, gravel, or rock.	Potential suitable habitat not present.	No Effect Likely
Northern Madtom	<i>Noturus stigmosus</i>	SE	Large creeks and small rivers with clear to turbid water and moderate current.	Potential suitable habitat not present.	No Effect Likely
Wartyback	<i>Quadrula nodulata</i>	SE	Medium to large rivers with sand and mud substrate.	Potential suitable habitat not present.	No Effect Likely
Butterfly Mussel	<i>Ellipsaria lineolata</i>	SE	This species reaches its greatest abundance in large rivers in stretches with pronounced current and a substrate of coarse sand and gravel. Streams with all of these characteristics are not likely in the Project area. The streams that occur within the Project area are likely channelized and characterized by heavily silted substrates from agricultural runoff.	Potential suitable habitat not present.	No Effect Likely
Elephant-ear	<i>Elliptio crassidens crassidens</i>	SE	Large creeks to rivers with moderate to swift currents primarily on sand, limestone, or rock substrates.	Potential suitable habitat not present.	No Effect Likely
Snuffbox	<i>Epioblasma triquetra</i>	FE, SE	Riffles of small and medium creeks, in large rivers, and in shoals and wave-washed shores of lakes. Sand, gravel, or cobble substrates.	Potential suitable habitat not present.	No Effect Likely
Pocketbook	<i>Lampsilis ovata</i>	SE	Pocketbook may be found in large rivers and reservoirs at depths of 15 to 20 feet and in small streams in less than two feet of water. The most suitable substrate consists of a mixture of gravel and coarse sand mixed with some silt or mud. Though streams that occur within the Project area may provide with some of these habitat characteristics, these streams are likely not preferred habitat due to channelization and siltation within in them.	Potential suitable habitat not present.	No Effect Likely
Washboard	<i>Megalania nervosa</i>	SE	Large rivers with a slow current and muddy to gravel substrates.	Potential suitable habitat not present.	No Effect Likely
Sheepnose	<i>Plethobasus cyphus</i>	FE, SE	Riffles with gravel/cobble substrates, but typically deep water with swift currents and mud, sand, or gravel bottoms.	Potential suitable habitat not present.	No Effect Likely
Ohio Pigtoe	<i>Pleurobema cordatum</i>	SE	Medium to large rivers with gravel, cobble, or boulder substrates.	Potential suitable habitat not present.	No Effect Likely
Ebonysnail	<i>Fusconaia ebena</i>	SE	Large rivers with swift currents and gravel or sand substrates.	Potential suitable habitat not present.	No Effect Likely
Monkeyface	<i>Quadrula metanevra</i>	SE	Medium to large rivers in gravel or mixed sand and gravel.	Potential suitable habitat not present.	No Effect Likely
Rayed Bean	<i>Villosa fabalis</i>	FE, SE	Small creeks to large rivers in or near riffle areas with gravel or sand substrates.	Potential suitable habitat not present.	No Effect Likely
Little Spectaclecase	<i>Villosa lienosa</i>	SE	Small creeks to medium-sized rivers, usually along the banks in slower currents with sand or mud substrates.	Potential suitable habitat not present.	No Effect Likely
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	ST	Night herons nest in colonies on platforms of sticks in a group of trees, or on the ground in protected locations such as islands or reed beds. They stand at the water's edge, and wait to ambush prey, mainly at night. They primarily eat small fish, crustaceans, frogs, aquatic insects, and small mammals. During the day they rest in trees or bushes.	Potential suitable habitat not present.	No Effect Likely
American Eel	<i>Anguilla rostrata</i>	ST	American Eel prefers to live in streams with continuous flow or in muddy, silt bottomed lakes. While small eels tend to be found in faster flowing water, larger eels are associated with slow, deep, and muddy habitats. Streams with all of these characteristics are unlikely to occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
Blue Sucker	<i>Cycoreus elongatus</i>	ST	Blues frequent the thalweg of large river systems, in heavy current. Found over cobble and/or bedrock substrates; adults occupy deep riffles (typically 1-2 m depth) in areas of very swift flow.	Potential suitable habitat not present.	No Effect Likely
Mountain Madtom	<i>Noturus eleutherus</i>	ST	Small to large rivers, in fast-flowing, clear water sections over sand, gravel, and rubble.	Potential suitable habitat not present.	No Effect Likely
Channel Darter	<i>Percina copelandi</i>	ST	The Channel Darter inhabits rivers and large creeks in areas of moderate current over sand and gravel substrates. It also occurs in wave swept nearshore areas of lakes Huron and Erie in coarse-sand, fine-gravel beach and sandbar habitats. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
River Darter	<i>Percina shumardi</i>	ST	River Darters inhabit large rivers and lower parts of tributaries; deep chutes and riffles where current is swift and bottom is coarse gravel or rock. Smaller individuals generally occur in slower water than do larger ones. Adults generally at depth of 3 feet or more. May typically spawn at depths of 1.5 feet or a little more in areas of strong current, scattered rubble, and associated clean gravel. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely

**Table 3.**  
**Species Conclusion Table**

Common Name	Scientific Name	Status <sup>1</sup>	Species Habitat Preference Notes <sup>2</sup>	Desktop Presence Determination	Preliminary Conclusion/Recommendation <sup>2</sup>
Paddlefish	<i>Polyodon spathula</i>	ST	American paddlefish are highly mobile and well adapted to living in rivers. They inhabit many types of riverine habitats throughout much of the Mississippi Valley and adjacent Gulf slope drainages. They occur most frequently in deeper, low current areas such as side channels, oxbows, backwater lakes, bayous, and tailwaters below dams.	Potential suitable habitat not present.	No Effect Likely
Black Sandshell	<i>Ligumia recta</i>	ST	Black Sandshell is typically found in medium-sized to large rivers in locations with strong current and substrates of coarse sand and gravel with cobbles in water depths from several inches to six feet or more. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
Threehorn Wartyback	<i>Obliquaria reflexa</i>	ST	Threehorn Wartyback prefer medium to large rivers, in slackwater conditions to swift currents, and substrates of gravel to muddy sand. No medium to large rivers are present within the study area. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
Fawnsfoot	<i>Truncilla donaciformis</i>	ST	Medium to large rivers with sand and mud substrates.	Potential suitable habitat not present.	No Effect Likely
Kirtland's Snake	<i>Clonophis kirtlandii</i>	ST	Kirtland's Snakes are usually found in open wetlands such as wet prairies, prairie fens, wet meadows and marshes, but they also occur in openings or along the edges of forested wetlands and floodplains (e.g., grass/sedge openings in tamarack swamps). These habitats generally have loose, organic rich soil which is well-suited for the fossorial nature of the Kirtland's Snake. This species also has been found in suitable open habitats in or near urban centers or large metropolitan areas such as open, grassy areas in parks, cemeteries, and vacant lots. Kirtland's Snakes are frequently found in burrows or under leaf litter, logs, boards, rocks or other cover objects within their habitats. They hibernate in crayfish or other animal burrows.	<b>Potential suitable habitat present.</b>	Avoid or minimize impacts to wetlands and streams.
Blue FalseIndigo	<i>Baptisia australis</i>	SE	Semi-shaded to open habitats along the Ohio River; usually in rocky, gravelly or sandy soil; rich woods, alluvial thickets, bluffs, and rocky ledges	Potential suitable habitat not present.	No Effect Likely
Elliott's Bent Grass	<i>Agrostis elliotiana</i>	SE	Dry, open waste areas, sterile soil, fields.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Red Chokeberry	<i>Aronia arbutifolia</i>	SE	Wet and dry shrubby thickets.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Snowy Campion	<i>Silene nivea</i>	SE	Rich woods and alluvium, disturbed floodplains and streambanks.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Southern Dewberry	<i>Rubus trivialis</i>	SE	Old fields and floodplains.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Sparse-lobed Grape Fern	<i>Botrychium bitematum</i>	SE	Bottoms, ravines, mesic woods and thickets.	Potential suitable habitat not present.	No Effect Likely
Sugarberry	<i>Celtis laevigata</i>	SE	Rich, alluvial soils of floodplains, poorly-drained bottomlands and mesic woods.	Potential suitable habitat not present.	No Effect Likely
Low Spearwort	<i>Ranunculus pusillus</i>	ST	Low spearwort grows in wet habitat, where it is semi-aquatic growing partially submerged or terrestrially on muddy substrates.	<b>Potential suitable habitat present.</b>	Avoid or minimize impacts to wetlands, ponds, and streams.
Missouri Gooseberry	<i>Ribes missouriense</i>	ST	Moist or dry, open to semi-open situations: upland woods, woods borders, thickets, fencerows, and on bluffs of streams.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Potato-dandelion	<i>Krigia dandelion</i>	ST	Open oak woods and prairies, usually in moist sandy soils.	Potential suitable habitat not present.	No Effect Likely
Riverbank Paspalum	<i>Paspalum repens</i>	ST	Shallow water or wet muddy soils; margins of temporary pools, riverbanks and riverine woodlands.	<b>Potential suitable habitat present.</b>	Avoid or minimize impacts to wetlands and streams.
Screw-stem	<i>Bartonia paniculata</i>	ST	Meadows with acidic seepage.	Potential suitable habitat not present.	No Effect Likely

Notes:

- 1 - BCC = Bird of Conservation Concern  
- BGEPA = Bald and Golden Eagle Protection Act  
- MBTA = Migratory Bird Treaty Act  
- FE = Federal Endangered  
- FT = Federal Threatened  
- SE = State Endangered  
- ST = State Threatened  
- SP = State Potentially Threatened
- 2 - TOYR = Time of Year Restrictions





# Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

## Office of Real Estate

*John Kessler, Chief*

2045 Morse Road – Bldg. E-2

Columbus, OH 43229

Phone: (614) 265-6621

Fax: (614) 267-4764

June 8, 2021

Alexandra Cross  
Tetra Tech  
4101 Cox Road, Suite 120  
Glen Allen, VA 23060

**Re:** 21-0365; Clermont Solar Project; Clermont County, Ohio

**Project:** The proposed project involves the construction of an approximate 100-MW photovoltaic solar facility.

**Location:** The proposed project is located in Jackson and Williamsburg Townships, Clermont County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

**Natural Heritage Database:** The Natural Heritage Database has no records at or within a one-mile radius of the project area.

A review of the Ohio Natural Heritage Database indicates there are no other records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species. In addition, we are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within the project area. The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

**Fish and Wildlife:** The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The Division of Wildlife is working closely with our partners at Ohio Pollinator Habitat Initiative (OPHI) to create and enhance pollinator habitat at solar power installations. The OPHI Solar Pollinator Program Advisory Team has developed the Ohio Solar Site Pollinator Habitat Planning and Assessment Form and is available for your use. The form can be found at the following: <http://nebula.wsimg.com/7cf0240c398d5819e3e6ff011f0ba456?AccessKeyId=570E4FC7FCD2ED2F0C1A&disposition=0&alloworigin=1>. We recommend that the areas between and around the solar panels be planted with legumes and wildflowers (i.e. forbs) that are beneficial to pollinators and other wildlife and reduce use of non-native grass and gravel. The recommended legumes and forbs listed below are low-growing so as not to cast shadows on the solar panels and would only require one to two mowings a year for maintenance, which should minimize maintenance costs. For other areas of the installation where vegetation does not have to be low-growing, alternative pollinator mixes are available with a more diverse array of flowering plants. This perennial vegetation will provide beneficial foraging habitat to songbirds and pollinators while reducing storm water runoff, standing water, and erosion. Please contact the Ohio Pollinator Habitat Initiative <http://www.ophi.info/>, and specifically Mike Retterer [mretterer@pheasantsforever.org](mailto:mretterer@pheasantsforever.org) for further information on solar power facility pollinator plantings.

Recommended low-growing grasses and forbs may include:

Little Bluestem	<i>Schizachyrium scoparium</i>
Sideoats Grama	<i>Bouteloua curtipendula</i>
Alfalfa	<i>Medicago spp.</i>
Alsike Clover	<i>Trifolium hybridum</i>
Brown-eyed Susan	<i>Rudbeckia triloba</i>
Butterfly Milkweed	<i>Asclepias tuberosa</i>
Lanceleaf Coreopsis	<i>Coreopsis lanceolata</i>
Partridge Pea	<i>Chamaecrista fasciculata</i>
Timothy	<i>Phleum pratense</i>
Orchardgrass	<i>Dactylis glomerata</i>
Crimson Clover	<i>Trifolium incarnatum</i>
Ladino or White Clover	<i>Trifolium repens</i>

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH  $\geq 20$  if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of



the “OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING”. If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31, however, limited summer tree cutting may be acceptable after consultation with DOW (contact Sarah Stankavich, [sarah.stankavich@dnr.state.oh.us](mailto:sarah.stankavich@dnr.state.oh.us)).

The DOW also recommends that a desktop habitat assessment, followed by a field assessment if needed, is conducted to determine if there are potential hibernaculum(a) present within the project area. Information about how to conduct habitat assessments can be found in the current USFWS “Range-wide Indiana Bat Survey Guidelines.” If a habitat assessment finds that potential hibernacula are present within 0.25 miles of the project area, please send this information to Sarah Stankavich, [sarah.stankavich@dnr.state.oh.us](mailto:sarah.stankavich@dnr.state.oh.us) for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the following listed mussel species:

Federally Endangered

rayed bean (*Villosa fabalis*)  
sheepnose (*Plethobasus cyphus*)  
fanshell (*Cyprogenia stegaria*)  
pink mucket (*Lampsilis orbiculata*)  
snuffbox (*Epioblasma triquetra*)

State Endangered

butterfly (*Ellipsaria lineolata*)  
ebonyshell (*Fusconaia ebena*)  
elephant-ear (*Elliptio crassidens crassidens*)  
little spectaclecase (*Villosa lienosa*)  
monkey face (*Quadrula metanevra*)  
Ohio pigtoe (*Pleurobema cordatum*)  
wartyback (*Quadrula nodulata*)  
washboard (*Megaloniaias nervosa*)

State Threatened

fawnsfoot (*Truncilla donaciformis*)  
threehorn wartyback (*Obliquaria reflexa*)

Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact these species.

The project is within the range of the following listed mussel species:

State Endangered

bigeye shiner (*Notropis boops*)  
goldeye (*Hiodon alosoides*)  
northern madtom (*Noturus stigmosus*)  
shoal chub (*Macrhybopsis hyostoma*)  
shortnose gar (*Lepisosteus platostomus*)  
shovelnose sturgeon (*Scaphirhynchus platyrhynchus*)

#### State Threatened

American eel (*Anguilla rostrata*)  
blue sucker (*Cycleptus elongatus*)  
channel darter (*Percina copelandi*)  
mountain madtom (*Noturus eleutherus*)  
paddlefish (*Polyodon spathula*)  
river darter (*Percina shumardi*)

The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species. This secretive species prefers wet fields and meadows. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the black-crowned night-heron (*Nycticorax nycticorax*), a state-threatened bird. Night-herons are so named because they are nocturnal, conducting most of their foraging in the evening hours or at night, and roost in trees near wetlands and waterbodies during the day. Night herons are migratory and are typically found in Ohio from April 1 through December 1 but can be found in more urbanized areas with reliable food sources year-round. Black-crowned night-herons primarily forage in wetlands and other shallow aquatic habitats, and roost in trees nearby. These night-herons nest in small trees, saplings, shrubs, or sometimes on the ground, near bodies of water and wetlands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the U.S. Fish & Wildlife Service.

**Geological Survey:** The Division of Geological Survey has the following comments:

#### **Physiographic Region**

The proposed project area is in Jackson Township and Williamsburg Township, Clermont County. This area is in the Illinoian Till Plain physiographic region. This region is characterized by rolling ground moraine composed of older till. This area typically lacks ice-constructional features such as moraines, kames, and eskers. Many buried valleys are associated with this area. Modern valleys alternate between broad floodplains and bedrock gorges. A silt-loam, high-lime Illinoian-age till covers Ordovician age bedrock. This till is frequently capped by loess (Ohio Department of Natural Resources, Division of Geological Survey, 1998).



### **Surficial/Glacial Geology**

The project area lies within the glaciated margin of the state and includes several Illinoian-age glacial features. The Project area is covered by the silty loam and loess of the Illinoian ground moraine (Pavey et al, 1999). Glacial drift throughout most of the project area is less than 12 feet thick except for the underlying buried valleys. Drift is thinnest in the southeastern portion of the project area (Powers and Swinford, 2004).

### **Bedrock Geology**

The uppermost bedrock unit in the project area is the Arnheim Formation. This unit is Ordovician-age and consists of gray to bluish gray interbedded shale and limestone. This unit underlies the northeastern portion of the project area. Underlying the Arnheim Formation is the Ordovician-age Grant Lake Formation and Grant Lake Limestone Undifferentiated. This unit is characterized by gray to bluish gray shale and limestone with thin to medium, wavy, planar and nodular bedding. It should be noted that bedrock is covered by a thin layer of glacial drift and not exposed at the surface within the boundaries of the project area (Slucher et al, 2006).

### **Oil, Gas and Mining**

ODNR has record of one oil and gas wells within one mile of the proposed project area. This well is listed as a historical production well (Ohio Department of Natural Resources, Division of Oil and Gas, Ohio Oil and Gas Wells Locator).

ODNR does not have record of any mining operations within the project area. There nearest mine to the study area is an active sand and gravel quarry operated by Kipp's Gravel Company Inc. The mine is located 5.5 miles to the west of the project area (Ohio Department of Natural Resources, Division of Mineral Resources, Mines of Ohio).

### **Seismic Activity**

Several small earthquakes have historically been recorded near the site. The three events closest to the site are listed in the chart below (Ohio Department of Natural Resources, Division of Geological Survey, Ohio Earthquake Epicenters):

Date	Magnitude	Distance to Site Boundary	County	Township
May 5, 1804	2.9	4.6 miles	Clermont	Stonelick
1864	2.5	5.6 miles	Clermont	Batavia
September, 1859	2.5	6.5 miles	Clermont	Batavia

### **Karst**

Karst features usually form in areas that are covered by thin or no glacial drift and the bedrock is limestone or dolomite. The nearest verified sinkhole to the project area is located five miles to the south. Although there are no sinkholes in the project area the underlying Arnheim, Grant Lake Formation, and Grant Lake Limestone are susceptible to the formation of sinkholes and other karst features (Ohio Department of Natural Resources, Division of Geological Survey, Ohio Karst).

### **Soils**

According to the USDA Web Soil Survey, the project area consists primarily of soils derived from glacial till and loess. Clermont and Westboro are the most common soil series found within the boundaries of the project area. Together these soils cover over 95% of the project area and have a silt loam soil texture (USDA Web Soil Survey).

There is a moderate risk of shrink-swell potential in these soils. The Clermont soil which makes up more than 63% of the project area is hydric and frequently ponded. Slopes are low, and rarely exceed 6% grade. Steepest slopes are along stream valleys (Lerch et al, 1975 and USDA Web Soil Survey).

### **Groundwater**

Groundwater resources are limited throughout the project area. Wells developed in bedrock are likely to yield less than five gallons per minute. (Walker, 1986 and Ohio Department of Natural Resources, Division of Water, Bedrock Aquifer Map, 2000). Glacial cover is thin and consists largely of clay. Limited yields are available in lenses of sand and gravel. Wells developed in glacial material are likely to yield less than gallons per minute (Ohio Department of Natural Resources, Division of Water, Statewide Unconsolidated Aquifer Map, 2000).

ODNR has record of 14 water wells drilled within one mile of the project area. These wells range in depth from 20 to 144 feet deep, with an average depth of 71 feet. The most common aquifer listed is limestone and shale. Ten of the water wells are completed in the interbedded limestone and shale bedrock. The remaining wells are completed in clay or sand and gravel. There is no sustainable yield data on wells within one mile of the project area (Ohio Department of Natural Resources, Division of Geological Survey, Ohio Water Wells). Yield estimates taken from the Clermont County Groundwater Resources Map is expected to be less than three gallons per minute (Walker, 1986).

**Water Resources:** The Division of Water Resources has the following comment.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

[http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List\\_8\\_16.pdf](http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf)

ODNR appreciates the opportunity to provide these comments. Please contact Sarah Tebbe, Environmental Specialist, at Sarah.Tebbe@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew  
Environmental Services Administrator (Acting)



## References

- Lerch, N.K., Hale, W.F., and Milliron, E.L. (1975) Soil Survey of Clermont County, Ohio. United States Department of Agriculture, Natural Resources Conservation Service. Retrieved from [nrcs.usda.gov](https://nrcs.usda.gov)
- Ohio Department of Natural Resources, Division of Geological Survey, Ohio Earthquake Epicenters, online interactive map, <https://gis.ohiodnr.gov/MapView/?config=earthquakes>
- Ohio Department of Natural Resources, Division of Geological Survey, Ohio Karst, online interactive map, [https://gis.ohiodnr.gov/website/dgs/karst\\_interactivemap/](https://gis.ohiodnr.gov/website/dgs/karst_interactivemap/)
- Ohio Department of Natural Resources, Division of Geological Survey, (1998). Physiographic Regions of Ohio. Ohio Department of Natural Resources, Ohio Department of Natural Resources, Division of Geological Survey, map with text, 2 p., scale 1:2,100,000.
- Ohio Department of Natural Resources, Division of Geological Survey, (In progress). Statewide Surficial Geology Map. GIS coverage.
- Ohio Department of Natural Resources, Division of Mineral Resources, Mines of Ohio, online interactive map, <https://gis.ohiodnr.gov/MapView/?config=OhioMines>.
- Ohio Department of Natural Resources, Division of Oil and Gas, Ohio Oil and Gas Wells Locator, online interactive map, <https://gis.ohiodnr.gov/MapView/?config=oilgaswells>.
- Ohio Department of Natural Resources, Division of Geological Survey, Ohio Water Wells, online interactive map, <https://gis.ohiodnr.gov/MapView/?config=waterwells>.
- Ohio Department of Natural Resources, Division of Water, (2000). Statewide Bedrock Aquifer Map, GIS coverage.
- Ohio Department of Natural Resources, Division of Water, (2000). Statewide Unconsolidated Aquifer Map, GIS coverage.
- Pavey, R., Goldthwait, R., Brockman, C.S. Hull, D., Swinford, E.M., and Van Horn, R. (1999). Quaternary Geology of Ohio, Ohio Department of Natural Resources, Division of Geological Survey, map, scale 1:500,000.
- Powers, D.M., and Swinford, E.M. (2004). Shaded drift-thickness map of Ohio, Ohio Department of Natural Resources, Division of Geological Survey, map, scale 1:500,000
- Slucher, E., Swinford, E., Larsen, G., Schumacher, G., Shrake, D., Rice, C., Caudill, M., Rea, R. and Powers, D. (2006). Bedrock Geologic Map of Ohio, Ohio Department of Natural Resources, Division of Geological Survey, map, scale 1:500,000.
- USDA Web Soil Survey, (Last modified 2019). Web Soil Survey Interactive Map, United States Department of Agriculture, National Resources Conservation Service, online interactive map, <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>.
- Walker, A.C. (1986). Groundwater Resources of Clermont County, Ohio Department of Natural Resources, Division of Geological Survey, map, scale 1:62,500.

## **ATTACHMENT 3 – PREVIOUS ODNR COORDINATION - 2022**





June 10, 2022

Ohio Department of Natural Resources  
Division of Wildlife  
Ohio Natural Heritage Program  
2045 Morse Road  
Columbus, OH 43229-6693

Subject: Updated Project Review Request  
Clermont County Solar Project  
Jackson and Williamsburg Townships, Clermont County, Ohio

To Whom It May Concern:

Tetra Tech, Inc. is requesting information from the Ohio Department of Natural Resources (ODNR) Office of Real Estate - Environmental Review Services Section regarding the potential presence of threatened or endangered species on or near a property located in Clermont County, Ohio (OH) as shown on the attached United States Geological Survey (USGS) Project Location Map (Attachment 1, Figure 1). Clermont County Solar Project, LLC (Clermont County Solar) is proposing to develop and operate the Clermont County Solar Project (Project), a new photovoltaic solar facility, an approximately 100-megawatt (MW) solar facility with an 84-MW battery storage component. The preliminary Project, totaling approximately 817 acres, was originally located between OH-276 to the south, Hawley Road to the west, Sharps cutoff Road to the east, and Jackson Pike to the north, in Jackson and Williamsburg Townships, Clermont County, Ohio. Since initial coordination with ODNR the specific parcels utilized within the Project study area have been redefined and additional parcels have been added and surveyed. An additional approximately 399 acres were added to the Project study area, primarily just south of OH 276, as property became available, and the Project layout design progressed. The current Project study area is shown on the attached Project Location Map (Attachment 1, Figure1). The Project will be the subject of an application for submittal to the Ohio Power Siting Board (OPSB).

The United States Fish and Wildlife Service (USFWS) Information and Planning Consultation (IPaC) tool was used to determine the potential for any federal threatened and endangered species that may occur in the proposed Project location, and/or may be affected by the proposed activities. An IPaC Official Species List was first generated for the Project on March 15<sup>th</sup>, 2021, prior to onsite surveys, and was provided to USFWS and ODNR during initial agency consultation. All submittals and responses from initial consultation with ODNR are provided in Attachment 2 – Previous Agency Coordination. An updated IPaC Official Species List was generated for the Project on May 18<sup>th</sup>, 2022, identifying Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) as having the potential to occur within the Project area (Attachment 3). The updated list no longer lists the running buffalo clover (*Trifolium stoloniferum*) which was included in the original IPaC. Since the initial coordination for this Project occurred the USFWS has removed running buffalo clover from the Federal List of Endangered and Threatened

Plants on the basis of recovery. The updated IPaC did list the Monarch Butterfly (*Danaus plexippus*) as a candidate species, but no critical habitat has been designated for this species and it is not currently protected under the Endangered Species Act. According to the updated IPaC there are no critical habitats within the Project area under the jurisdiction of the USFWS.

Prior to the start of field surveys, an initial desktop analysis of the Project study area was conducted through a review of available Geographic Information Systems (GIS) resources. Information reviewed included the following:

- USGS topographic mapping (Attachment 1, Figure 1).
- National Land Cover Database (NLCD) Land Cover mapping (Attachment 2, Figure 2).
- USFWS National Wetland Inventory (NWI) mapping and USGS National Hydrography Dataset (NHD) mapping (Attachment 1, Figure 3).

The Project study area is primarily rural agricultural land in private ownership. It is comprised almost entirely of agricultural fields managed for soybeans and/or hay, with a few intact portions of palustrine forested wetland and the occasional thin wooded tree line. While investigating the Project study area the following habitats were identified: managed agricultural fields (i.e. corn and soybeans), palustrine emergent wetland, palustrine scrub-shrub wetland, palustrine forested wetland, open waterbodies, woodland tree lines, and small patches of early successional mixed deciduous forest. The Habitat Assessment Map, provided as Figure 2 (Attachment 1), illustrates the locations of habitats identified during the onsite field habitat assessment. Non-native species such as Japanese stilt grass (*Microstegium vimineum*), Japanese Knotweed (*Reynoutria japonica*), autumn olive (*Elaeagnus umbellata*), Russian olive (*Elaeagnus angustifolia*), multiflora rose (*Rosa multiflora*), garlic mustard (*Alliaria petiolata*), and Tatarian honeysuckle (*Lonicera tatarica*) were identified within the Project study area.

Environmentally sensitive areas (i.e. intact forested areas, NWI-mapped wetlands, and field delineated wetlands and waterbodies) identified during the initial desktop analysis and subsequent onsite aquatic resource delineations are being avoided to minimize environmental impacts to the maximum extent practicable. The streams and wetlands identified within the Project study area during onsite field delineations generally occur within actively managed agricultural fields and most of the streams have been historically channelized and heavily manipulated.

The ODNr Division of Wildlife (DOW) [March 2020] Clermont County State Listed Animal Species List (Attachment 4, Table 1) and the [July 2016] Clermont County State Listed Plant Species List (Attachment 4, Table 2) were utilized when determining the potential for any state threatened and endangered species that may occur in the proposed Project location, and/or may be affected by the proposed activities. Prior to conducting the habitat assessment of the Project study area a Species Conclusion Table (Attachment 4, Table 3) was generated combining all federal and state listed T&E that have may have the potential to occur in the proposed Project location, and/or may be affected by the proposed activities. Table 3 provides the common name, scientific name, federal/state status, and species habitat preferences. After a review of the desktop analysis, species habitat preferences, and an on-site habitat assessment survey, a habitat evaluation and conclusion/recommendation were updated for each potential listed species in Table 3.

We are requesting ODNr provide any updated information to indicate whether additional studies are required to determine the potential for protected species impacts within the Project study area prior to on-site delineation and habitat assessment field surveys. The attached PDF mapping (Attachment 1) and ArcGIS shapefiles (attached electronically) contain the Project study area, identified habitats, and delineated aquatic resources. If you have any



questions or require additional information, please do not hesitate to contact me (540.325.2791; Alexandra.Cross@tetrattech.com). Thank you in advance for your assistance.

Sincerely,

Tetra Tech, Inc.

A handwritten signature in cursive script that reads "Alexandra Cross". The signature is written in dark ink and is positioned above the printed name.

Alexandra Cross

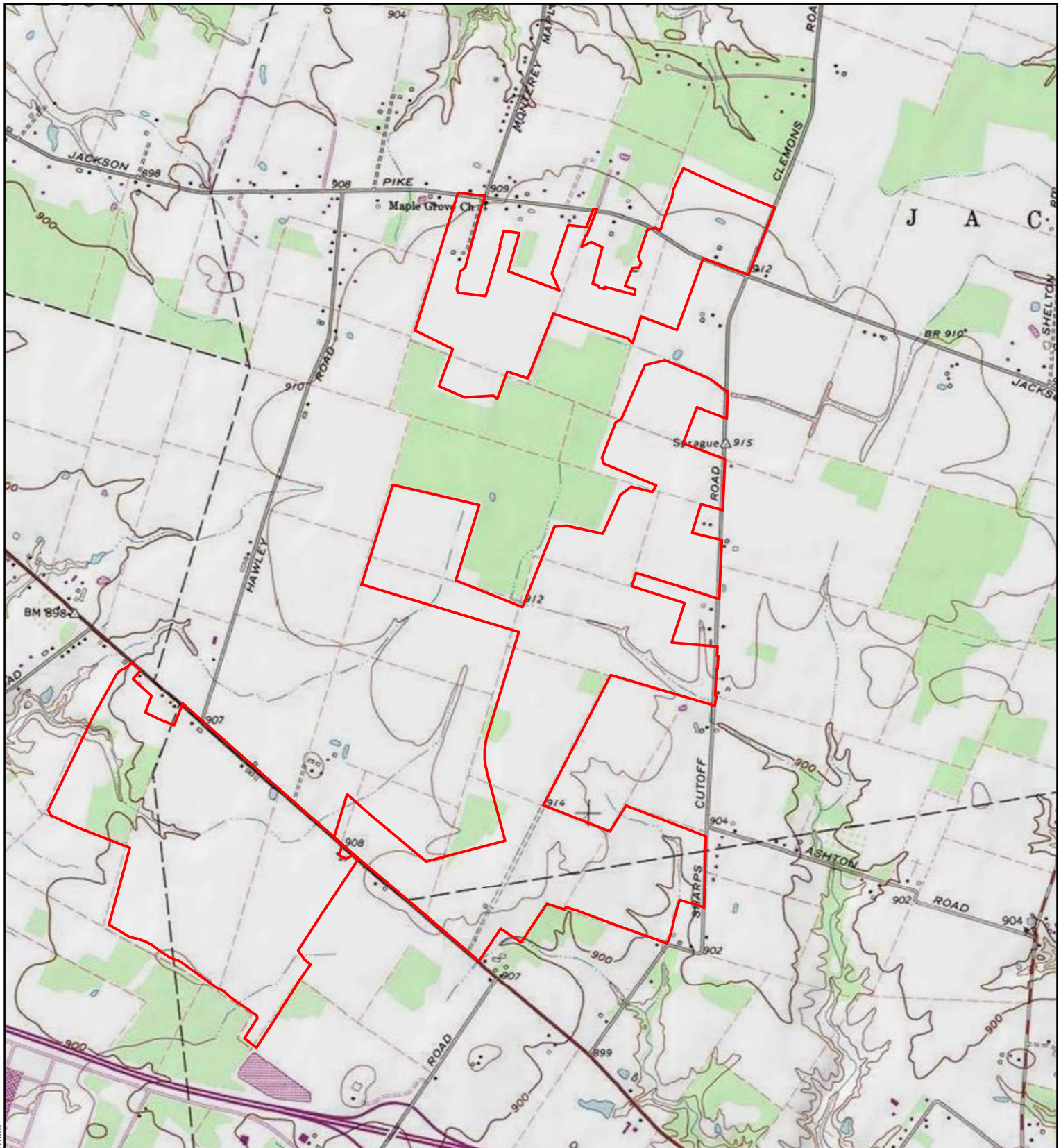
Project Manager

Attachments:

- Attachment 1 – Figures
  - Figure 1 - USGS Project Location Map
  - Figure 2 - Habitat Assessment Map
  - Figure 3 - NWI Wetlands and NHD Stream Map
- Attachment 2 – Previous Agency Coordination
- Attachment 3 – IPAC Official Species List
- Attachment 4 – Tables
  - Table 1 - Clermont County State Listed Animal Species List
  - Table 2 - Clermont County State Listed Plant Species List
  - Table 3 - Species Conclusion Table
- Attachment 5 – Habitat Photographs
- ArcGIS Shapefiles (attached electronically)

## ATTACHMENT 1 – FIGURES





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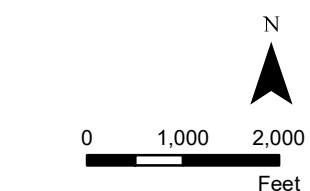


Survey Area

**Clermont County Solar Project**  
**Clermont County Solar Project, LLC**

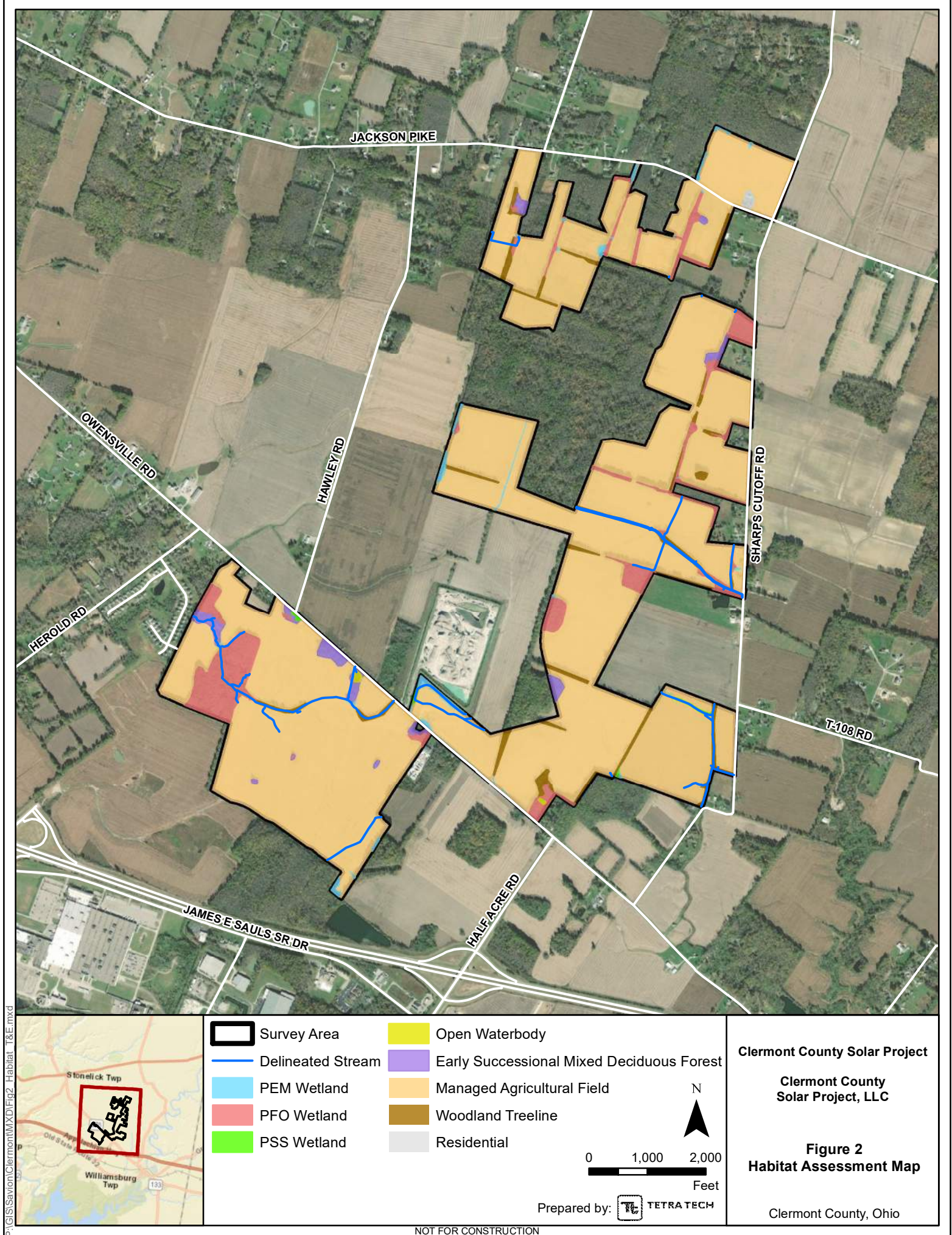
**Figure 1**  
**USGS Project Location Map**

Clermont County, Ohio



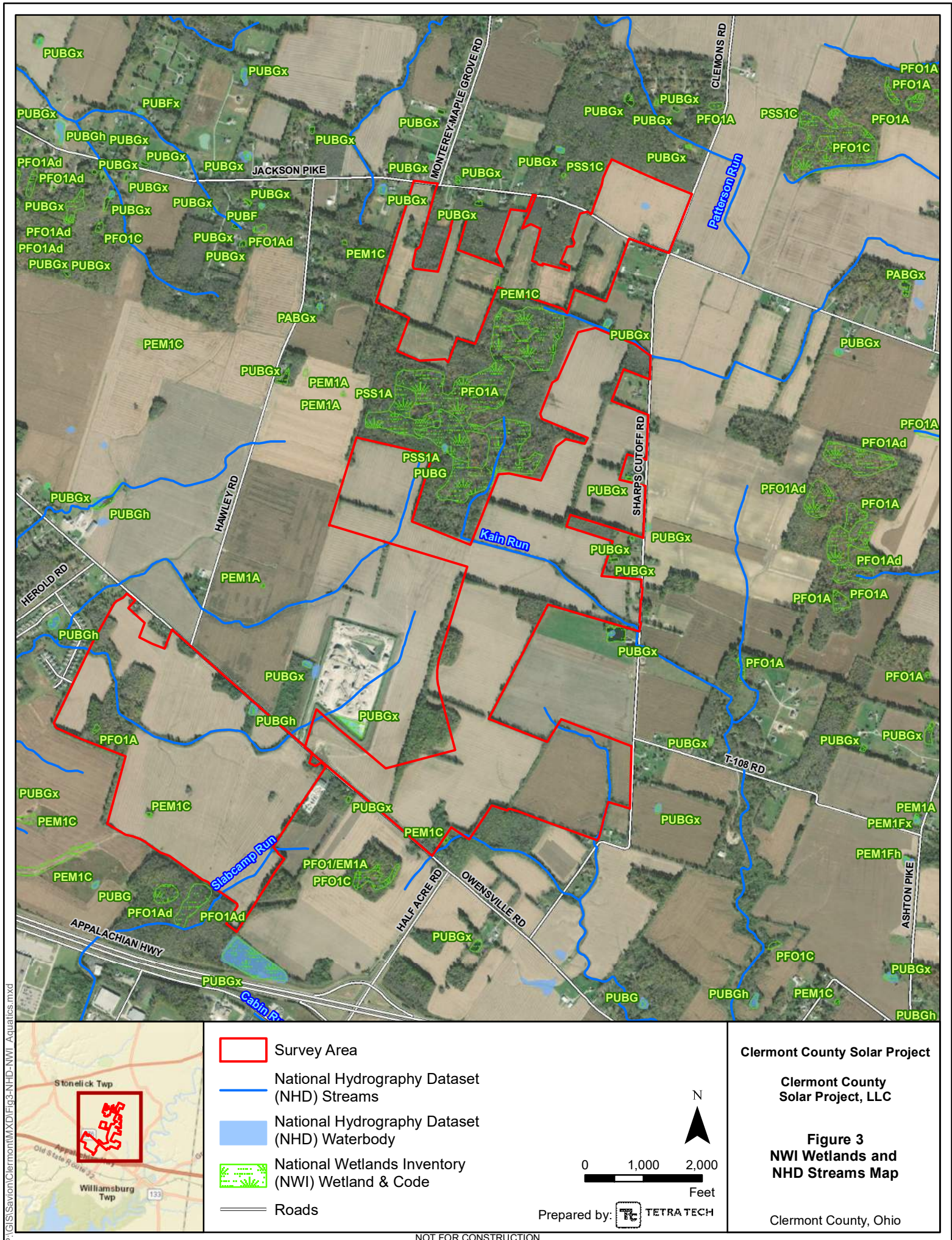
Prepared by: **TETRA TECH**





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## **ATTACHMENT 2 – PREVIOUS AGENCY COORDINATION**





April 6, 2021

Ohio Department of Natural Resources  
Division of Wildlife  
Ohio Natural Heritage Program  
2045 Morse Road  
Columbus, OH 43229-6693

**Subject: Project Review Request  
DRAFT Clermont County Solar Project  
Jackson and Williamsburg Townships, Clermont County, Ohio**

To Whom It May Concern:

Tetra Tech, Inc. is requesting information from the Ohio Department of Natural Resources (ODNR) Division of Wildlife (DOW) regarding the potential presence of threatened or endangered species on or near an approximately 817-acre property located in Clermont County, Ohio (OH) as shown on the attached United States Geological Survey (USGS) Project Location Map (Attachment 1, Figure 1). Clermont County Solar Project, LLC (Clermont County Solar) is proposing to develop and operate the Clermont County Solar Project (Project), an approximately 100-megawatt (MW) new photovoltaic solar facility. The preliminary Project area is generally located between OH-276 to the south, Hawley Road to the west, Sharps cutoff Road to the east, and Jackson Pike to the north, in Jackson and Williamsburg Townships, Clermont County, Ohio. The specific parcels utilized within the Project study area will be refined as the layout design progresses. The Project will be the subject of an application for submittal to the Ohio Power Siting Board (OPSB).

Prior to the start of field surveys, an initial desktop analysis of the Project study area was conducted through a review of available Geographic Information Systems (GIS) resources. Information reviewed included the following:

- USGS topographic mapping (Attachment 1, Figure 1)
- National Land Cover Database (NLCD) Land Cover mapping (Attachment 1, Figure 2)
- USFWS National Wetland Inventory (NWI) mapping and USGS National Hydrography Dataset (NHD) mapping (Attachment 1, Figure 3)

The Project study area is primarily rural agricultural land in private ownership. It is comprised almost entirely of agricultural fields managed for soybeans and/or hay, occasionally interrupted by thin wooded tree lines. Environmentally sensitive areas (i.e. intact forested areas and NWI-mapped wetlands) identified during preliminary site selection were avoided to minimize environmental impacts to the maximum extent practicable. The streams identified within the Project study area during desktop analysis generally occur within actively managed agricultural fields and have been historically channelized and manipulated.

The United States Fish and Wildlife Service (USFWS) Information and Planning Consultation (IPaC) tool was used to determine the potential for any federal threatened and endangered species that may occur in the proposed

Project location, and/or may be affected by the proposed activities. Attachment 2 contains the IPaC Official Species List generated for the Project. The IPaC identified Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), and running buffalo clover (*Trifolium stoloniferum*) as having the potential to occur within the Project area. No critical habitats were identified in the IPaC search for the Project (Attachment 2).

The ODNR DOW [March 2020] Clermont County State Listed Animal Species List (Attachment 3, Table 1) and the [July 2016] Clermont County State Listed Plant Species List (Attachment 3, Table 2) were utilized when determining the potential for any state threatened and endangered species that may occur in the proposed Project location, and/or may be affected by the proposed activities. Prior to conducting the habitat assessment of the Project study area, a Species Conclusion Table (Attachment 3, Table 3) was generated combining all federal and state listed T&E that have may have the potential to occur in the proposed Project location, and/or may be affected by the proposed activities. Table 3 provides the common name, scientific name, federal/state status, and species habitat preferences. After a review of the desktop analysis, available land cover mapping, and species habitat preferences, a preliminary habitat evaluation and preliminary conclusion/recommendation were provided for each potential listed species in Table 3.

We are requesting that the ODNR DOW provide any available information to indicate whether additional studies are required to determine the potential for protected species impacts within the Project study area prior to on-site delineation and habitat assessment field surveys. The attached PDF mapping (Attachment 1) and ArcGIS shapefiles (attached electronically) contain the Project study area. If you have any questions or require additional information, please do not hesitate to contact me at (540) 325-2791 or [Alexandra.Cross@tetrattech.com](mailto:Alexandra.Cross@tetrattech.com). Thank you in advance for your assistance.

Sincerely,

**Tetra Tech, Inc.**

A handwritten signature in black ink, appearing to read "Alexandra Cross", is written over a horizontal line.

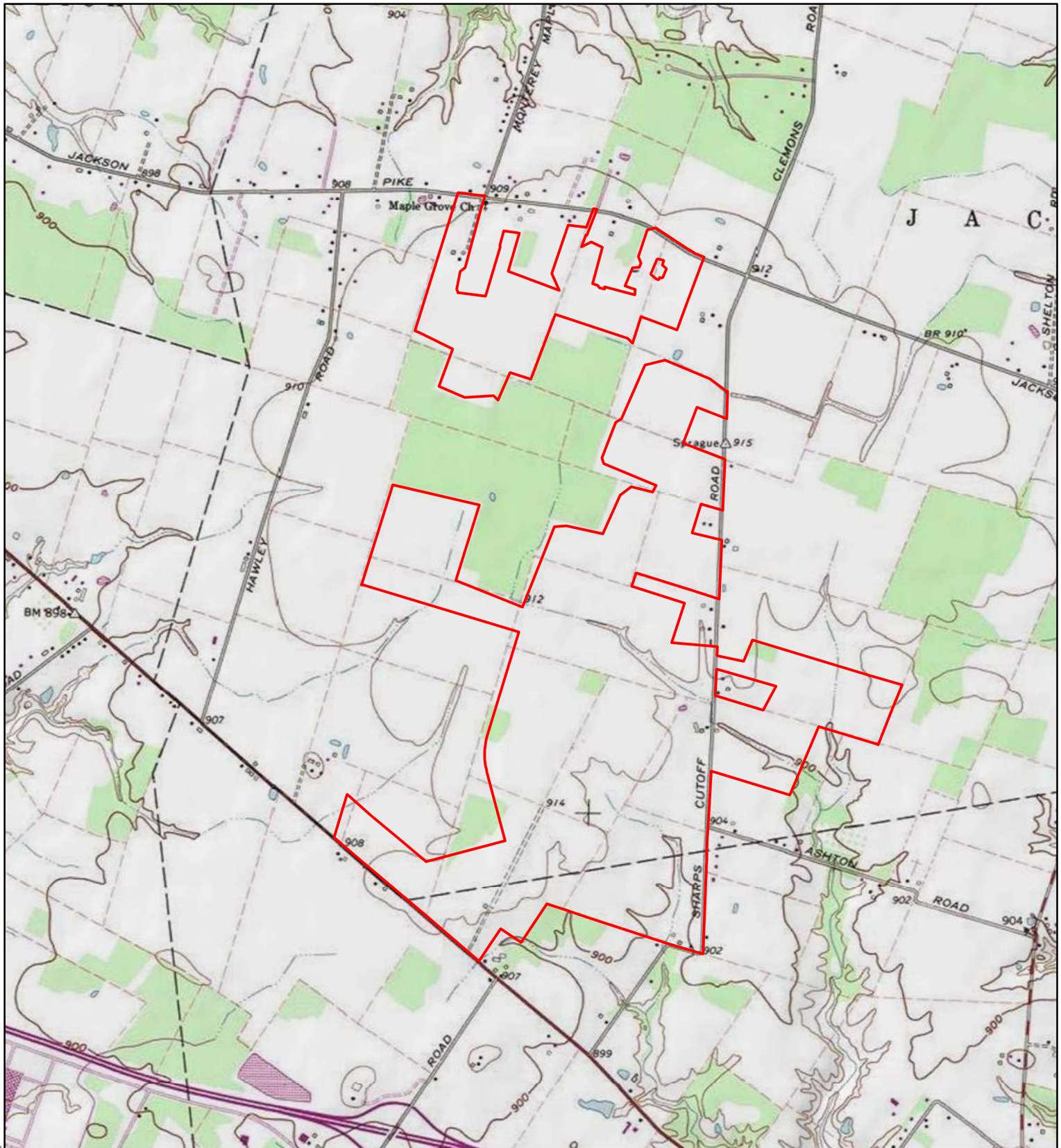
Alexandra Cross  
Project Manager

Attachments:

- Attachment 1 – Figures
  - Figure 1 DRAFT USGS Project Location Map
  - Figure 2 DRAFT NLCD Land Cover Map
  - Figure 3 DRAFT NWI Wetlands and NHD Stream Map
- Attachment 2 – IPaC Official Species List
- Attachment 3 – Tables
  - Table 1 - Clermont County State Listed Animal Species List
  - Table 2 - Clermont County State Listed Plant Species List
  - Table 3 - Species Conclusion Table
- ArcGIS Shapefiles (attached electronically)



## ATTACHMENT 1 – FIGURES



 Project Area

**DRAFT**



0 1,000 2,000  
Feet

Prepared by:  TETRA TECH

Clermont County Solar Project

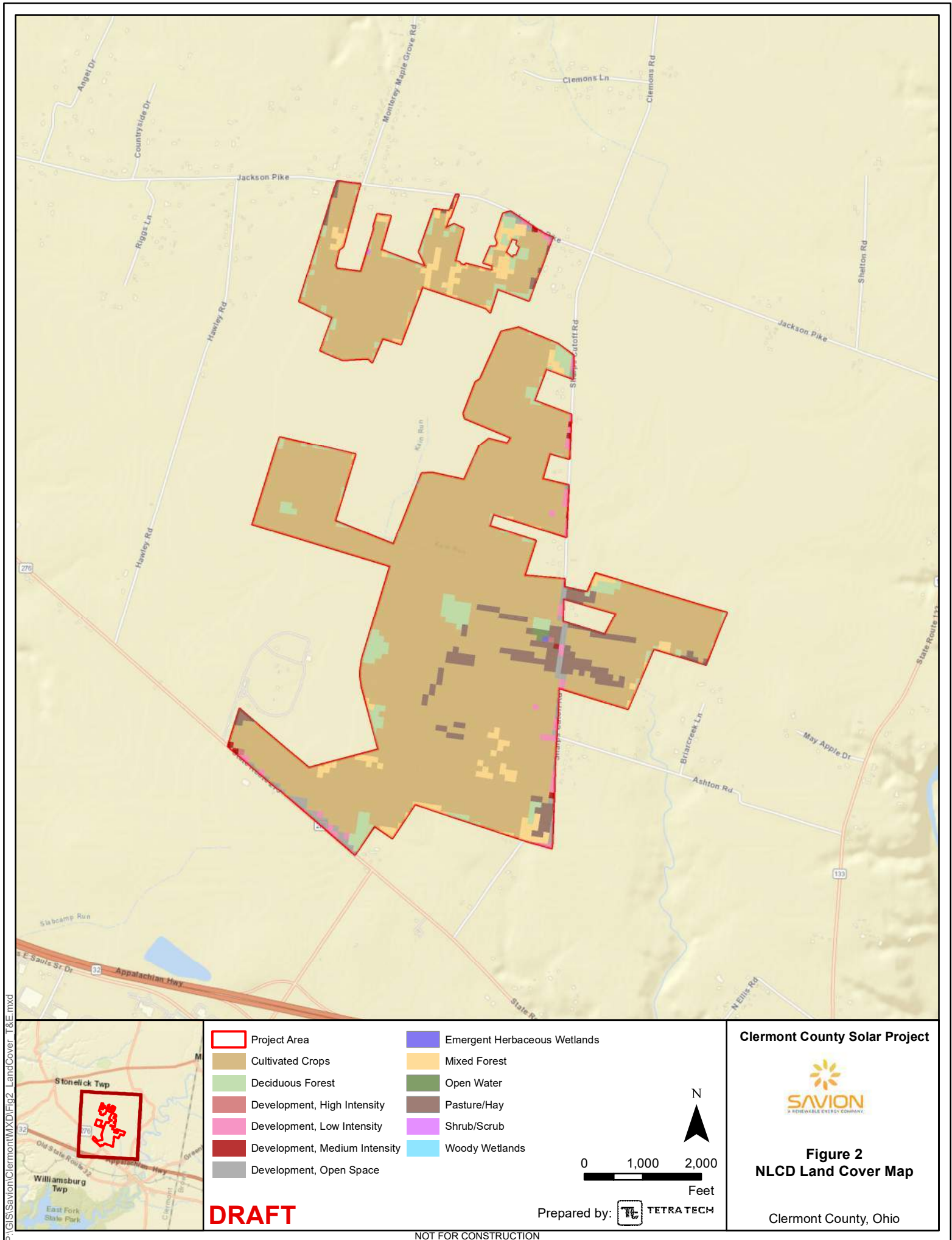


**Figure 1**  
**USGS Project Location Map**

Clermont County, Ohio

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## ATTACHMENT 2 – IPAC OFFICIAL SPECIES LIST



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Ohio Ecological Services Field Office

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

Phone: (614) 416-8993 Fax: (614) 416-8994



In Reply Refer To:

March 15, 2021

Consultation Code: 03E15000-2021-SLI-0985

Event Code: 03E15000-2021-E-01367

Project Name: DRAFT Clermont County Solar Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

#### To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))



(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <http://www.fws.gov/migratorybirds/RegulationsandPolicies.html>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/BirdHazards.html>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <http://www.fws.gov/migratorybirds/AboutUS.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List



## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Ohio Ecological Services Field Office**

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

(614) 416-8993

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## Project Summary

Consultation Code: 03E15000-2021-SLI-0985

Event Code: 03E15000-2021-E-01367

Project Name: DRAFT Clermont County Solar Project

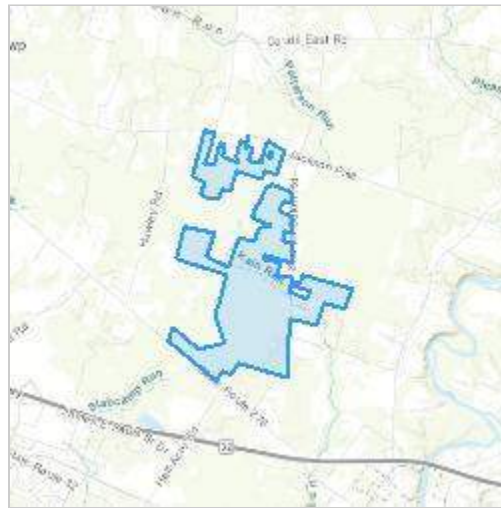
Project Type: POWER GENERATION

Project Description: Approximately 100-MW proposed solar project with 84-MW battery storage component in Clermont County, OH, east of Cincinnati, OH.

Project Location:

Approximate location of the project can be viewed in Google Maps: [https://](https://www.google.com/maps/@39.08964665,-84.07900859485903,14z)

[www.google.com/maps/@39.08964665,-84.07900859485903,14z](https://www.google.com/maps/@39.08964665,-84.07900859485903,14z)



Counties: Clermont County, Ohio

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## Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [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.

## Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> <li>Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at <a href="https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html">https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html</a></li> </ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

## Flowering Plants

NAME	STATUS
Running Buffalo Clover <i>Trifolium stoloniferum</i> Population: No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2529">https://ecos.fws.gov/ecp/species/2529</a>	Endangered

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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## ATTACHMENT 3 – TABLES



# Clermont County State Listed Animal Species

Common Name	Scientific Name	Group	State Status	Federal Status
Northern Harrier	Circus hudsonius	Bird	Endangered	
Blue corporal	Ladona deplanata	Dragonfly	Endangered	
Goldeye	Hiodon alosoides	Fish	Endangered	
Shortnose Gar	Lepisosteus platostomus	Fish	Endangered	
Shoal chub	Macrhybopsis hyostoma	Fish	Endangered	
Bigeye Shiner	Notropis boops	Fish	Endangered	
Northern Madtom	Noturus stigmosus	Fish	Endangered	
Indiana Myotis	Myotis sodalis	Mammal	Endangered	Endangered
Wartyback	Cyclonaias nodulata	Mollusk	Endangered	
Butterfly	Ellipsaria lineolata	Mollusk	Endangered	
Elephant-ear	Elliptio crassidens	Mollusk	Endangered	
Snuffbox	Epioblasma triquetra	Mollusk	Endangered	Endangered
Pocketbook	Lampsilis ovata	Mollusk	Endangered	
Washboard	Megaloniaias nervosa	Mollusk	Endangered	
Sheepnose	Plethobasus cyphus	Mollusk	Endangered	Endangered
Ohio Pigtoe	Pleurobema cordatum	Mollusk	Endangered	
EbonysheIl	Reginaia ebenus	Mollusk	Endangered	
Monkeyface	Theliderma metanevra	Mollusk	Endangered	
Rayed Bean	Villosa fabalis	Mollusk	Endangered	Endangered
Little Spectaclecase	Villosa lienosa	Mollusk	Endangered	



Common Name	Scientific Name	Group	State Status	Federal Status
Black-crowned Night-Heron	Nycticorax nycticorax	Bird	Threatened	
American Eel	Anguilla rostrata	Fish	Threatened	
Blue Sucker	Cycleptus elongatus	Fish	Threatened	
Mountain Madtom	Noturus eleutherus	Fish	Threatened	
Channel Darter	Percina copelandi	Fish	Threatened	
River Darter	Percina shumardi	Fish	Threatened	
Paddlefish	Polyodon spathula	Fish	Threatened	
Northern Long-eared Bat	Myotis septentrionalis	Mammal	Threatened	Threatened
Black Sandshell	Ligumia recta	Mollusk	Threatened	
Threehorn Wartyback	Obliquaria reflexa	Mollusk	Threatened	
Fawnsfoot	Truncilla donaciformis	Mollusk	Threatened	
Kirtland's Snake	Clonophis kirtlandii	Reptile	Threatened	
Eastern Cricket Frog	Acris crepitans crepitans	Amphibian	Species of Concern	
Sharp-shinned Hawk	Accipiter striatus	Bird	Species of Concern	
Henslow's Sparrow	Ammodramus henslowii	Bird	Species of Concern	
Grasshopper Sparrow	Ammodramus savannarum	Bird	Species of Concern	
Great Egret	Ardea alba	Bird	Species of Concern	
Common Nighthawk	Chordeiles minor	Bird	Species of Concern	
Northern Bobwhite	Colinus virginianus	Bird	Species of Concern	
American Coot	Fulica americana	Bird	Species of Concern	
Common Gallinule	Gallinula galeata	Bird	Species of Concern	
Red-headed Woodpecker	Melanerpes erythrocephalus	Bird	Species of Concern	





Common Name	Scientific Name	Group	State Status	Federal Status
Prothonotary Warbler	Protonotaria citrea	Bird	Species of Concern	
Cerulean Warbler	Setophaga cerulea	Bird	Species of Concern	
Muskellunge	Esox masquinongy	Fish	Species of Concern	
Blue Catfish	Ictalurus furcatus	Fish	Species of Concern	
Big Brown Bat	Eptesicus fuscus	Mammal	Species of Concern	
Red Bat	Lasiurus borealis	Mammal	Species of Concern	
Hoary Bat	Lasiurus cinereus	Mammal	Species of Concern	
Woodland Vole	Microtus pinetorum	Mammal	Species of Concern	
Little Brown Bat	Myotis lucifugus	Mammal	Species of Concern	
Tri-colored Bat	Perimyotis subflavus	Mammal	Species of Concern	
Deer Mouse	Peromyscus maniculatus	Mammal	Species of Concern	
Southern Bog Lemming	Synaptomys cooperi	Mammal	Species of Concern	
Elktoe	Alasmodonta marginata	Mollusk	Species of Concern	
Purple Wartyback	Cyclonaias tuberculata	Mollusk	Species of Concern	
Wavy-rayed Lampmussel	Lampsilis fasciola	Mollusk	Species of Concern	
Round Pigtoe	Pleurobema sintoxia	Mollusk	Species of Concern	
Kidneyshell	Ptychobranhus fasciolaris	Mollusk	Species of Concern	
Salamander Mussel	Simpsonaias ambigua	Mollusk	Species of Concern	
Deertoe	Truncilla truncata	Mollusk	Species of Concern	
Eastern Hognose Snake	Heterodon platirhinos	Reptile	Species of Concern	
Eastern Box Turtle	Terrapene carolina carolina	Reptile	Species of Concern	
Evening Bat	Nycticeius humeralis	Mammal	Special Interest	



Common Name	Scientific Name	Group	State Status	Federal Status
Mucket	Actinonaias ligamentina ligamentina	Mollusk	Extirpated	
Hickorynut	Obovaria olivaria	Mollusk	Extirpated	
Ring Pink	Obovaria retusa	Mollusk	Extirpated	
White Wartyback	Plethobasus cicatricosus	Mollusk	Extirpated	
Leafshell	Epioblasma flexuosa	Mollusk	Extinct	







## Clermont County

Scientific Name	Common Name	Last Observed	State Status	Federal Status
<i>Agrostis elliottiana</i>	Elliott's Bent Grass	2012-05-19	E	
<i>Aronia arbutifolia</i>	Red Chokeberry	2003-11-15	E	
<i>Baptisia australis</i>	Blue False Indigo	2007-07-27	E	
<i>Bartonia paniculata</i>	Screw-stem	2011-10-05	T	
<i>Botrychium biternatum</i>	Sparse-lobed Grape Fern	1980-08-26	E	
<i>Celtis laevigata</i>	Sugarberry	2007-07-23	E	
<i>Corallorhiza wisteriana</i>	Spring Coral-root	2004-04-29	P	
<i>Krigia dandelion</i>	Potato-dandelion	2009-05-23	T	
<i>Luzula bulbosa</i>	Southern Woodrush	1990-06-16	P	
<i>Paspalum repens</i>	Riverbank Paspalum	2005-10-05	T	
<i>Phacelia bipinnatifida</i>	Fern-leaved Scorpion-weed	2007-04-02	P	
<i>Potamogeton natans</i>	Floating Pondweed	1991-07-31	P	
<i>Ranunculus pusillus</i>	Low Spearwort	2010-05-14	T	
<i>Ribes missouriense</i>	Missouri Gooseberry	2002-04-25	T	
<i>Rubus trivialis</i>	Southern Dewberry	2006-06-11	E	
<i>Salix caroliniana</i>	Carolina Willow	2004-08-21	P	
<i>Sida hermaphrodita</i>	Virginia-mallow	2009-09-03	P	
<i>Silene nivea</i>	Snowy Campion	2006-06-18	E	
<i>Solidago speciosa</i>	Showy Goldenrod	2012-10	P	
<i>Spermacoce glabra</i>	Smooth Buttonweed	2005-10-05	P	
<i>Trifolium stoloniferum</i>	Running Buffalo Clover	2000-05-29	E	FE
<i>Trillium recurvatum</i>	Prairie Wake-robin	2009-05-23	P	
<i>Viburnum rufidulum</i>	Southern Black-haw	1989-10-04	P	



## Clermont County

Scientific Name	Common Name	Last Observed	State Status	Federal Status
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Ohio Division of Wildlife  
Ohio Natural Heritage Database  
Date Accessed: March 6, 2015  
Status based on 2014-15 Rare Plant List.

### **Status:**

List Created: July 2016

*X = Extirpated*

*E = Endangered*

*T = Threatened*

*P = Potentially Threatened*



**Table 3.**  
**Species Conclusion Table**

Common Name	Scientific Name	Status <sup>1</sup>	Species Habitat Preference Notes <sup>2</sup>	Desktop Presence Determination	Preliminary Conclusion/Recommendation <sup>2</sup>
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BGEPA, MBTA	Bald eagles utilize estuaries, large lakes, reservoirs, and rivers. No estuaries, large lakes, or reservoirs occur within the Project Site or within several miles or Project Site.	Unlikely to Disturb Nesting Bald Eagles	No Effect, No Eagle Act permit required
Indiana Bat	<i>Myotis sodalis</i>	FE, SE	Forests and mature trees occur in the Project area, but in low abundance. Avoidance of these forested areas is recommended. If tree clearing is necessary it should be done in the winter months, outside TOYR from April 1 – October 15.	Potential Suitable Habitat Present	Avoid forested areas, Adhere to TOYR.
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST	Forests and mature trees occur in the Project area, but in low abundance. Avoidance of these forested areas is recommended. If tree clearing is necessary it should be done in the winter months, outside TOYR from April 15 – September 15.	Potential Suitable Habitat Present	Avoid forested areas, Adhere to TOYR.
Running Buffalo Clover	<i>Trifolium stoloniferum</i>	FE, SE	Mesic Forested habitats with partial to filtered sunlight including forested opening and paths, woodlands, wooded edges, and occasionally mowed lawns.	Potential Suitable Habitat Present	Potential impacts - further agency coordination recommended.
Northern Harrier	<i>Circus hudsonius</i>	SE	Northern harriers prefer sloughs, wet meadows, marshlands, swamps, prairies, plains, grasslands, and shrublands. They nest on the ground, usually near water, or in tall grass, open fields, clearings, or on the water. Slough, marshland, swamp, prairie, plain, grassland, and shrubland habitat is not present within the Project area.	Potential suitable habitat not present.	No Effect Likely
Blue Corporal	<i>Ladona deplanata</i>	SE	Blue corporals favor still, infertile waters of sandy-bottomed ponds, lakes and pits, and breed less frequently in streams than its close relatives do.	Potential Suitable Habitat Present	Avoid or minimize impacts to wetlands, ponds, and streams.
Goldeye	<i>Hiodon alosoides</i>	SE	In the U.S., the goldeye is most commonly found in larger river systems such as the Mississippi, Missouri, Ohio, and Red Rivers. It prefers turbid slower-moving waters of lakes and rivers.	Potential suitable habitat not present.	No Effect Likely
Shorthead Gar	<i>Lepisosteus platostomus</i>	SE	Open, slow, silty or clear-water rivers, wave-washed shoals of large lakes, quiet creek pools, and river backwaters.	Potential suitable habitat not present.	No Effect Likely
Shoal chub	<i>Machyobopsis hyostoma</i>	SE	Shoal chub preferred habitat is sand and gravel runs of small to large rivers.	Potential suitable habitat not present.	No Effect Likely
Bigeye Shiner	<i>Notropis boops</i>	ST	Flowing pools of moderately clear creeks and rivers with large permanent pools over bottoms of sand, gravel, or rock.	Potential suitable habitat not present.	No Effect Likely
Northern Madtom	<i>Noturus stigmosus</i>	SE	Large creeks and small rivers with clear to turbid water and moderate current.	Potential suitable habitat not present.	No Effect Likely
Wartyback	<i>Quadrula nodulata</i>	SE	Medium to large rivers with sand and mud substrate.	Potential suitable habitat not present.	No Effect Likely
Butterfly Mussel	<i>Ellipsaria lineolata</i>	SE	This species reaches its greatest abundance in large rivers in stretches with pronounced current and a substrate of coarse sand and gravel. Streams with all of these characteristics are not likely in the Project area. The streams that occur within the Project area are likely channelized and characterized by heavily silted substrates from agricultural runoff.	Potential suitable habitat not present.	No Effect Likely
Elephant-ear	<i>Elliptio crassidens crassidens</i>	SE	Large creeks to rivers with moderate to swift currents primarily on sand, limestone, or rock substrates.	Potential suitable habitat not present.	No Effect Likely
Snuffbox	<i>Epioblasma triquetra</i>	FE, SE	Riffles of small and medium creeks, in large rivers, and in shoals and wave-washed shores of lakes. Sand, gravel, or cobble substrates.	Potential suitable habitat not present.	No Effect Likely
Pocketbook	<i>Lampsilis ovata</i>	SE	Pocketbook may be found in large rivers and reservoirs at depths of 15 to 20 feet and in small streams in less than two feet of water. The most suitable substrate consists of a mixture of gravel and coarse sand mixed with some silt or mud. Though streams that occur within the Project area may provide with some of these habitat characteristics, these streams are likely not preferred habitat due to channelization and siltation within in them.	Potential suitable habitat not present.	No Effect Likely
Washboard	<i>Megalania nervosa</i>	SE	Large rivers with a slow current and muddy to gravel substrates.	Potential suitable habitat not present.	No Effect Likely
Sheepnose	<i>Plethobasus cyphus</i>	FE, SE	Riffles with gravel/cobble substrates, but typically deep water with swift currents and mud, sand, or gravel bottoms.	Potential suitable habitat not present.	No Effect Likely
Ohio Pigtoe	<i>Pleurobema cordatum</i>	SE	Medium to large rivers with gravel, cobble, or boulder substrates.	Potential suitable habitat not present.	No Effect Likely
Ebonysnail	<i>Fusconaia ebena</i>	SE	Large rivers with swift currents and gravel or sand substrates.	Potential suitable habitat not present.	No Effect Likely
Monkeyface	<i>Quadrula metanevra</i>	SE	Medium to large rivers in gravel or mixed sand and gravel.	Potential suitable habitat not present.	No Effect Likely
Rayed Bean	<i>Villosa fabalis</i>	FE, SE	Small creeks to large rivers in or near riffle areas with gravel or sand substrates.	Potential suitable habitat not present.	No Effect Likely
Little Spectaclecase	<i>Villosa lienosa</i>	SE	Small creeks to medium-sized rivers, usually along the banks in slower currents with sand or mud substrates.	Potential suitable habitat not present.	No Effect Likely
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	ST	Night herons nest in colonies on platforms of sticks in a group of trees, or on the ground in protected locations such as islands or reed beds. They stand at the water's edge, and wait to ambush prey, mainly at night. They primarily eat small fish, crustaceans, frogs, aquatic insects, and small mammals. During the day they rest in trees or bushes.	Potential suitable habitat not present.	No Effect Likely
American Eel	<i>Anguilla rostrata</i>	ST	American Eel prefers to live in streams with continuous flow or in muddy, silt bottomed lakes. While small eels tend to be found in faster flowing water, larger eels are associated with slow, deep, and muddy habitats. Streams with all of these characteristics are unlikely to occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
Blue Sucker	<i>Cyprinus elongatus</i>	ST	Blues frequent the thalweg of large river systems, in heavy current. Found over cobble and/or bedrock substrates; adults occupy deep riffles (typically 1-2 m depth) in areas of very swift flow.	Potential suitable habitat not present.	No Effect Likely
Mountain Madtom	<i>Noturus eleutherus</i>	ST	Small to large rivers, in fast-flowing, clear water sections over sand, gravel, and rubble.	Potential suitable habitat not present.	No Effect Likely
Channel Darter	<i>Percina copelandi</i>	ST	The Channel Darter inhabits rivers and large creeks in areas of moderate current over sand and gravel substrates. It also occurs in wave swept nearshore areas of lakes Huron and Erie in coarse-sand, fine-gravel beach and sandbar habitats. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
River Darter	<i>Percina shumardi</i>	ST	River Darters inhabit large rivers and lower parts of tributaries; deep chutes and riffles where current is swift and bottom is coarse gravel or rock. Smaller individuals generally occur in slower water than do larger ones. Adults generally at depth of 3 feet or more. May typically spawn at depths of 1.5 feet or a little more in areas of strong current, scattered rubble, and associated clean gravel. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely

**Table 3.**  
**Species Conclusion Table**

Common Name	Scientific Name	Status <sup>1</sup>	Species Habitat Preference Notes <sup>2</sup>	Desktop Presence Determination	Preliminary Conclusion/Recommendation <sup>2</sup>
Paddlefish	<i>Polyodon spathula</i>	ST	American paddlefish are highly mobile and well adapted to living in rivers. They inhabit many types of riverine habitats throughout much of the Mississippi Valley and adjacent Gulf slope drainages. They occur most frequently in deeper, low current areas such as side channels, oxbows, backwater lakes, bayous, and tailwaters below dams.	Potential suitable habitat not present.	No Effect Likely
Black Sandshell	<i>Ligumia recta</i>	ST	Black Sandshell is typically found in medium-sized to large rivers in locations with strong current and substrates of coarse sand and gravel with cobbles in water depths from several inches to six feet or more. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
Threehorn Wartyback	<i>Obliquaria reflexa</i>	ST	Threehorn Wartyback prefer medium to large rivers, in slackwater conditions to swift currents, and substrates of gravel to muddy sand. No medium to large rivers are present within the study area. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
Fawnsfoot	<i>Truncilla donaciformis</i>	ST	Medium to large rivers with sand and mud substrates.	Potential suitable habitat not present.	No Effect Likely
Kirtland's Snake	<i>Clonophis kirtlandii</i>	ST	Kirtland's Snakes are usually found in open wetlands such as wet prairies, prairie fens, wet meadows and marshes, but they also occur in openings or along the edges of forested wetlands and floodplains (e.g., grass/sedge openings in tamarack swamps). These habitats generally have loose, organic rich soil which is well-suited for the fossorial nature of the Kirtland's Snake. This species also has been found in suitable open habitats in or near urban centers or large metropolitan areas such as open, grassy areas in parks, cemeteries, and vacant lots. Kirtland's Snakes are frequently found in burrows or under leaf litter, logs, boards, rocks or other cover objects within their habitats. They hibernate in crayfish or other animal burrows.	<b>Potential suitable habitat present.</b>	Avoid or minimize impacts to wetlands and streams.
Blue FalseIndigo	<i>Baptisia australis</i>	SE	Semi-shaded to open habitats along the Ohio River; usually in rocky, gravelly or sandy soil; rich woods, alluvial thickets, bluffs, and rocky ledges	Potential suitable habitat not present.	No Effect Likely
Elliott's Bent Grass	<i>Agrostis elliotiana</i>	SE	Dry, open waste areas, sterile soil, fields.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Red Chokeberry	<i>Aronia arbutifolia</i>	SE	Wet and dry shrubby thickets.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Snowy Campion	<i>Silene nivea</i>	SE	Rich woods and alluvium, disturbed floodplains and streambanks.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Southern Dewberry	<i>Rubus trivialis</i>	SE	Old fields and floodplains.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Sparse-lobed Grape Fern	<i>Botrychium bitematum</i>	SE	Bottoms, ravines, mesic woods and thickets.	Potential suitable habitat not present.	No Effect Likely
Sugarberry	<i>Celtis laevigata</i>	SE	Rich, alluvial soils of floodplains, poorly-drained bottomlands and mesic woods.	Potential suitable habitat not present.	No Effect Likely
Low Spearwort	<i>Ranunculus pusillus</i>	ST	Low spearwort grows in wet habitat, where it is semi-aquatic growing partially submerged or terrestrially on muddy substrates.	<b>Potential suitable habitat present.</b>	Avoid or minimize impacts to wetlands, ponds, and streams.
Missouri Gooseberry	<i>Ribes missouriense</i>	ST	Moist or dry, open to semi-open situations: upland woods, woods borders, thickets, fencerows, and on bluffs of streams.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Potato-dandelion	<i>Krigia dandelion</i>	ST	Open oak woods and prairies, usually in moist sandy soils.	Potential suitable habitat not present.	No Effect Likely
Riverbank Paspalum	<i>Paspalum repens</i>	ST	Shallow water or wet muddy soils; margins of temporary pools, riverbanks and riverine woodlands.	<b>Potential suitable habitat present.</b>	Avoid or minimize impacts to wetlands and streams.
Screw-stem	<i>Bartonia paniculata</i>	ST	Meadows with acidic seepage.	Potential suitable habitat not present.	No Effect Likely

Notes:

- 1 - BCC = Bird of Conservation Concern  
- BGEPA = Bald and Golden Eagle Protection Act  
- MBTA = Migratory Bird Treaty Act  
- FE = Federal Endangered  
- FT = Federal Threatened  
- SE = State Endangered  
- ST = State Threatened  
- SP = State Potentially Threatened
- 2 - TOYR = Time of Year Restrictions





# Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

## Office of Real Estate

*John Kessler, Chief*

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June 8, 2021

Alexandra Cross  
Tetra Tech  
4101 Cox Road, Suite 120  
Glen Allen, VA 23060

**Re:** 21-0365; Clermont Solar Project; Clermont County, Ohio

**Project:** The proposed project involves the construction of an approximate 100-MW photovoltaic solar facility.

**Location:** The proposed project is located in Jackson and Williamsburg Townships, Clermont County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

**Natural Heritage Database:** The Natural Heritage Database has no records at or within a one-mile radius of the project area.

A review of the Ohio Natural Heritage Database indicates there are no other records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species. In addition, we are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within the project area. The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

**Fish and Wildlife:** The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The Division of Wildlife is working closely with our partners at Ohio Pollinator Habitat Initiative (OPHI) to create and enhance pollinator habitat at solar power installations. The OPHI Solar Pollinator Program Advisory Team has developed the Ohio Solar Site Pollinator Habitat Planning and Assessment Form and is available for your use. The form can be found at the following: <http://nebula.wsimg.com/7cf0240c398d5819e3e6ff011f0ba456?AccessKeyId=570E4FC7FCD2ED2F0C1A&disposition=0&alloworigin=1>. We recommend that the areas between and around the solar panels be planted with legumes and wildflowers (i.e. forbs) that are beneficial to pollinators and other wildlife and reduce use of non-native grass and gravel. The recommended legumes and forbs listed below are low-growing so as not to cast shadows on the solar panels and would only require one to two mowings a year for maintenance, which should minimize maintenance costs. For other areas of the installation where vegetation does not have to be low-growing, alternative pollinator mixes are available with a more diverse array of flowering plants. This perennial vegetation will provide beneficial foraging habitat to songbirds and pollinators while reducing storm water runoff, standing water, and erosion. Please contact the Ohio Pollinator Habitat Initiative <http://www.ophi.info/>, and specifically Mike Retterer [mretterer@pheasantsforever.org](mailto:mretterer@pheasantsforever.org) for further information on solar power facility pollinator plantings.

Recommended low-growing grasses and forbs may include:

Little Bluestem	<i>Schizachyrium scoparium</i>
Sideoats Grama	<i>Bouteloua curtipendula</i>
Alfalfa	<i>Medicago spp.</i>
Alsike Clover	<i>Trifolium hybridum</i>
Brown-eyed Susan	<i>Rudbeckia triloba</i>
Butterfly Milkweed	<i>Asclepias tuberosa</i>
Lanceleaf Coreopsis	<i>Coreopsis lanceolata</i>
Partridge Pea	<i>Chamaecrista fasciculata</i>
Timothy	<i>Phleum pratense</i>
Orchardgrass	<i>Dactylis glomerata</i>
Crimson Clover	<i>Trifolium incarnatum</i>
Ladino or White Clover	<i>Trifolium repens</i>

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH  $\geq 20$  if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of



the “OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING”. If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31, however, limited summer tree cutting may be acceptable after consultation with DOW (contact Sarah Stankavich, [sarah.stankavich@dnr.state.oh.us](mailto:sarah.stankavich@dnr.state.oh.us)).

The DOW also recommends that a desktop habitat assessment, followed by a field assessment if needed, is conducted to determine if there are potential hibernaculum(a) present within the project area. Information about how to conduct habitat assessments can be found in the current USFWS “Range-wide Indiana Bat Survey Guidelines.” If a habitat assessment finds that potential hibernacula are present within 0.25 miles of the project area, please send this information to Sarah Stankavich, [sarah.stankavich@dnr.state.oh.us](mailto:sarah.stankavich@dnr.state.oh.us) for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the following listed mussel species:

Federally Endangered

rayed bean (*Villosa fabalis*)  
sheepnose (*Plethobasus cyphus*)  
fanshell (*Cyprogenia stegaria*)  
pink mucket (*Lampsilis orbiculata*)  
snuffbox (*Epioblasma triquetra*)

State Endangered

butterfly (*Ellipsaria lineolata*)  
ebonyshell (*Fusconaia ebena*)  
elephant-ear (*Elliptio crassidens crassidens*)  
little spectaclecase (*Villosa lienosa*)  
monkey face (*Quadrula metanevra*)  
Ohio pigtoe (*Pleurobema cordatum*)  
wartyback (*Quadrula nodulata*)  
washboard (*Megaloniaias nervosa*)

State Threatened

fawnsfoot (*Truncilla donaciformis*)  
threehorn wartyback (*Obliquaria reflexa*)

Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact these species.

The project is within the range of the following listed mussel species:

State Endangered

bigeye shiner (*Notropis boops*)  
goldeye (*Hiodon alosoides*)  
northern madtom (*Noturus stigmosus*)  
shoal chub (*Macrhybopsis hyostoma*)  
shortnose gar (*Lepisosteus platostomus*)  
shovelnose sturgeon (*Scaphirhynchus platyrhynchus*)

#### State Threatened

American eel (*Anguilla rostrata*)  
blue sucker (*Cycleptus elongatus*)  
channel darter (*Percina copelandi*)  
mountain madtom (*Noturus eleutherus*)  
paddlefish (*Polyodon spathula*)  
river darter (*Percina shumardi*)

The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species. This secretive species prefers wet fields and meadows. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the black-crowned night-heron (*Nycticorax nycticorax*), a state-threatened bird. Night-herons are so named because they are nocturnal, conducting most of their foraging in the evening hours or at night, and roost in trees near wetlands and waterbodies during the day. Night herons are migratory and are typically found in Ohio from April 1 through December 1 but can be found in more urbanized areas with reliable food sources year-round. Black-crowned night-herons primarily forage in wetlands and other shallow aquatic habitats, and roost in trees nearby. These night-herons nest in small trees, saplings, shrubs, or sometimes on the ground, near bodies of water and wetlands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the U.S. Fish & Wildlife Service.

**Geological Survey:** The Division of Geological Survey has the following comments:

#### **Physiographic Region**

The proposed project area is in Jackson Township and Williamsburg Township, Clermont County. This area is in the Illinoian Till Plain physiographic region. This region is characterized by rolling ground moraine composed of older till. This area typically lacks ice-constructional features such as moraines, kames, and eskers. Many buried valleys are associated with this area. Modern valleys alternate between broad floodplains and bedrock gorges. A silt-loam, high-lime Illinoian-age till covers Ordovician age bedrock. This till is frequently capped by loess (Ohio Department of Natural Resources, Division of Geological Survey, 1998).



### **Surficial/Glacial Geology**

The project area lies within the glaciated margin of the state and includes several Illinoian-age glacial features. The Project area is covered by the silty loam and loess of the Illinoian ground moraine (Pavey et al, 1999). Glacial drift throughout most of the project area is less than 12 feet thick except for the underlying buried valleys. Drift is thinnest in the southeastern portion of the project area (Powers and Swinford, 2004).

### **Bedrock Geology**

The uppermost bedrock unit in the project area is the Arnheim Formation. This unit is Ordovician-age and consists of gray to bluish gray interbedded shale and limestone. This unit underlies the northeastern portion of the project area. Underlying the Arnheim Formation is the Ordovician-age Grant Lake Formation and Grant Lake Limestone Undifferentiated. This unit is characterized by gray to bluish gray shale and limestone with thin to medium, wavy, planar and nodular bedding. It should be noted that bedrock is covered by a thin layer of glacial drift and not exposed at the surface within the boundaries of the project area (Slucher et al, 2006).

### **Oil, Gas and Mining**

ODNR has record of one oil and gas wells within one mile of the proposed project area. This well is listed as a historical production well (Ohio Department of Natural Resources, Division of Oil and Gas, Ohio Oil and Gas Wells Locator).

ODNR does not have record of any mining operations within the project area. There nearest mine to the study area is an active sand and gravel quarry operated by Kipp's Gravel Company Inc. The mine is located 5.5 miles to the west of the project area (Ohio Department of Natural Resources, Division of Mineral Resources, Mines of Ohio).

### **Seismic Activity**

Several small earthquakes have historically been recorded near the site. The three events closest to the site are listed in the chart below (Ohio Department of Natural Resources, Division of Geological Survey, Ohio Earthquake Epicenters):

Date	Magnitude	Distance to Site Boundary	County	Township
May 5, 1804	2.9	4.6 miles	Clermont	Stonelick
1864	2.5	5.6 miles	Clermont	Batavia
September, 1859	2.5	6.5 miles	Clermont	Batavia

### **Karst**

Karst features usually form in areas that are covered by thin or no glacial drift and the bedrock is limestone or dolomite. The nearest verified sinkhole to the project area is located five miles to the south. Although there are no sinkholes in the project area the underlying Arnheim, Grant Lake Formation, and Grant Lake Limestone are susceptible to the formation of sinkholes and other karst features (Ohio Department of Natural Resources, Division of Geological Survey, Ohio Karst).

### **Soils**

According to the USDA Web Soil Survey, the project area consists primarily of soils derived from glacial till and loess. Clermont and Westboro are the most common soil series found within the boundaries of the project area. Together these soils cover over 95% of the project area and have a silt loam soil texture (USDA Web Soil Survey).

There is a moderate risk of shrink-swell potential in these soils. The Clermont soil which makes up more than 63% of the project area is hydric and frequently ponded. Slopes are low, and rarely exceed 6% grade. Steepest slopes are along stream valleys (Lerch et al, 1975 and USDA Web Soil Survey).

### **Groundwater**

Groundwater resources are limited throughout the project area. Wells developed in bedrock are likely to yield less than five gallons per minute. (Walker, 1986 and Ohio Department of Natural Resources, Division of Water, Bedrock Aquifer Map, 2000). Glacial cover is thin and consists largely of clay. Limited yields are available in lenses of sand and gravel. Wells developed in glacial material are likely to yield less than gallons per minute (Ohio Department of Natural Resources, Division of Water, Statewide Unconsolidated Aquifer Map, 2000).

ODNR has record of 14 water wells drilled within one mile of the project area. These wells range in depth from 20 to 144 feet deep, with an average depth of 71 feet. The most common aquifer listed is limestone and shale. Ten of the water wells are completed in the interbedded limestone and shale bedrock. The remaining wells are completed in clay or sand and gravel. There is no sustainable yield data on wells within one mile of the project area (Ohio Department of Natural Resources, Division of Geological Survey, Ohio Water Wells). Yield estimates taken from the Clermont County Groundwater Resources Map is expected to be less than three gallons per minute (Walker, 1986).

**Water Resources:** The Division of Water Resources has the following comment.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

[http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List\\_8\\_16.pdf](http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf)

ODNR appreciates the opportunity to provide these comments. Please contact Sarah Tebbe, Environmental Specialist, at Sarah.Tebbe@dnr.ohio.gov if you have questions about these comments or need additional information.

Mike Pettegrew  
Environmental Services Administrator (Acting)



## References

- Lerch, N.K., Hale, W.F., and Milliron, E.L. (1975) Soil Survey of Clermont County, Ohio. United States Department of Agriculture, Natural Resources Conservation Science. Retrieved from [nrcs.usda.gov](https://nrcs.usda.gov)
- Ohio Department of Natural Resources, Division of Geological Survey, Ohio Earthquake Epicenters, online interactive map, <https://gis.ohiodnr.gov/MapView/?config=earthquakes>
- Ohio Department of Natural Resources, Division of Geological Survey, Ohio Karst, online interactive map, [https://gis.ohiodnr.gov/website/dgs/karst\\_interactivemap/](https://gis.ohiodnr.gov/website/dgs/karst_interactivemap/)
- Ohio Department of Natural Resources, Division of Geological Survey, (1998). Physiographic Regions of Ohio. Ohio Department of Natural Resources, Ohio Department of Natural Resources, Division of Geological Survey, map with text, 2 p., scale 1:2,100,000.
- Ohio Department of Natural Resources, Division of Geological Survey, (In progress). Statewide Surficial Geology Map. GIS coverage.
- Ohio Department of Natural Resources, Division of Mineral Resources, Mines of Ohio, online interactive map, <https://gis.ohiodnr.gov/MapView/?config=OhioMines>.
- Ohio Department of Natural Resources, Division of Oil and Gas, Ohio Oil and Gas Wells Locator, online interactive map, <https://gis.ohiodnr.gov/MapView/?config=oilgaswells>.
- Ohio Department of Natural Resources, Division of Geological Survey, Ohio Water Wells, online interactive map, <https://gis.ohiodnr.gov/MapView/?config=waterwells>.
- Ohio Department of Natural Resources, Division of Water, (2000). Statewide Bedrock Aquifer Map, GIS coverage.
- Ohio Department of Natural Resources, Division of Water, (2000). Statewide Unconsolidated Aquifer Map, GIS coverage.
- Pavey, R., Goldthwait, R., Brockman, C.S. Hull, D., Swinford, E.M., and Van Horn, R. (1999). Quaternary Geology of Ohio, Ohio Department of Natural Resources, Division of Geological Survey, map, scale 1:500,000.
- Powers, D.M., and Swinford, E.M. (2004). Shaded drift-thickness map of Ohio, Ohio Department of Natural Resources, Division of Geological Survey, map, scale 1:500,000
- Slucher, E., Swinford, E., Larsen, G., Schumacher, G., Shrake, D., Rice, C., Caudill, M., Rea, R. and Powers, D. (2006). Bedrock Geologic Map of Ohio, Ohio Department of Natural Resources, Division of Geological Survey, map, scale 1:500,000.
- USDA Web Soil Survey, (Last modified 2019). Web Soil Survey Interactive Map, United States Department of Agriculture, National Resources Conservation Service, online interactive map, <https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>.
- Walker, A.C. (1986). Groundwater Resources of Clermont County, Ohio Department of Natural Resources, Division of Geological Survey, map, scale 1:62,500.

## ATTACHMENT 3 – IPAC OFFICIAL SPECIES LIST





## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Ohio Ecological Services Field Office

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

Phone: (614) 416-8993 Fax: (614) 416-8994



In Reply Refer To:

Project Code: 2022-0044443

Project Name: Clermont County Solar Project

May 18, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Ohio Ecological Services Field Office**

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

(614) 416-8993

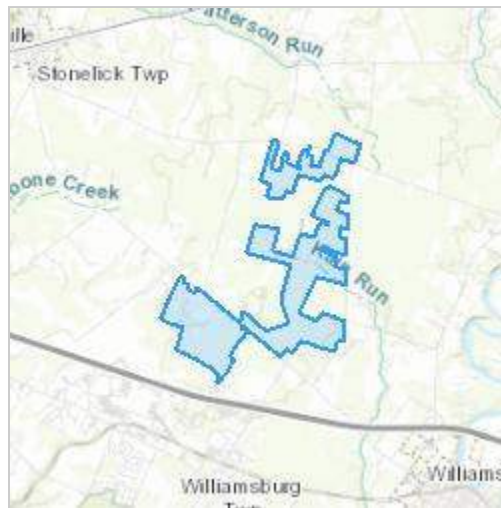
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## Project Summary

Project Code: 2022-0044443  
Event Code: None  
Project Name: Clermont County Solar Project  
Project Type: Power Gen - Solar  
Project Description: A new Solar Facility  
Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.0877512,-84.0857285628928,14z>



Counties: Clermont County, Ohio

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## Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [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.

## Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. The location of the critical habitat is not available. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> <li>Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at <a href="https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html">https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html</a></li> </ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

## Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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**IPaC User Contact Information**

Agency: Tetra Tech, Inc.  
Name: Korey McCluskey  
Address: 661 Andersen Drive,  
Address Line 2: Foster Plaza Bldg. #7, Suite 200  
City: Pittsburgh  
State: PA  
Zip: 15220  
Email: korey.mccluskey@tetrattech.com  
Phone: 4129218338

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## ATTACHMENT 4 – TABLES

## Table 1 - Clermont County State Listed Animal Species

Common Name	Scientific Name	Group	State Status	Federal Status
Northern Harrier	Circus hudsonius	Bird	Endangered	
Blue corporal	Ladona deplanata	Dragonfly	Endangered	
Goldeye	Hiodon alosoides	Fish	Endangered	
Shortnose Gar	Lepisosteus platostomus	Fish	Endangered	
Shoal chub	Macrhybopsis hyostoma	Fish	Endangered	
Bigeye Shiner	Notropis boops	Fish	Endangered	
Northern Madtom	Noturus stigmosus	Fish	Endangered	
Indiana Myotis	Myotis sodalis	Mammal	Endangered	Endangered
Wartyback	Cyclonaias nodulata	Mollusk	Endangered	
Butterfly	Ellipsaria lineolata	Mollusk	Endangered	
Elephant-ear	Elliptio crassidens	Mollusk	Endangered	
Snuffbox	Epioblasma triquetra	Mollusk	Endangered	Endangered
Pocketbook	Lampsilis ovata	Mollusk	Endangered	
Washboard	Megaloniaias nervosa	Mollusk	Endangered	
Sheepnose	Plethobasus cyphus	Mollusk	Endangered	Endangered
Ohio Pigtoe	Pleurobema cordatum	Mollusk	Endangered	
Ebonysheell	Reginaia ebenus	Mollusk	Endangered	
Monkeyface	Theliderma metanevra	Mollusk	Endangered	
Rayed Bean	Villosa fabalis	Mollusk	Endangered	Endangered
Little Spectaclecase	Villosa lienosa	Mollusk	Endangered	



Common Name	Scientific Name	Group	State Status	Federal Status
Black-crowned Night-Heron	Nycticorax nycticorax	Bird	Threatened	
American Eel	Anguilla rostrata	Fish	Threatened	
Blue Sucker	Cycleptus elongatus	Fish	Threatened	
Mountain Madtom	Noturus eleutherus	Fish	Threatened	
Channel Darter	Percina copelandi	Fish	Threatened	
River Darter	Percina shumardi	Fish	Threatened	
Paddlefish	Polyodon spathula	Fish	Threatened	
Northern Long-eared Bat	Myotis septentrionalis	Mammal	Threatened	Threatened
Black Sandshell	Ligumia recta	Mollusk	Threatened	
Threehorn Wartyback	Obliquaria reflexa	Mollusk	Threatened	
Fawnsfoot	Truncilla donaciformis	Mollusk	Threatened	
Kirtland's Snake	Clonophis kirtlandii	Reptile	Threatened	
Eastern Cricket Frog	Acris crepitans crepitans	Amphibian	Species of Concern	
Sharp-shinned Hawk	Accipiter striatus	Bird	Species of Concern	
Henslow's Sparrow	Ammodramus henslowii	Bird	Species of Concern	
Grasshopper Sparrow	Ammodramus savannarum	Bird	Species of Concern	
Great Egret	Ardea alba	Bird	Species of Concern	
Common Nighthawk	Chordeiles minor	Bird	Species of Concern	
Northern Bobwhite	Colinus virginianus	Bird	Species of Concern	
American Coot	Fulica americana	Bird	Species of Concern	
Common Gallinule	Gallinula galeata	Bird	Species of Concern	
Red-headed Woodpecker	Melanerpes erythrocephalus	Bird	Species of Concern	





Common Name	Scientific Name	Group	State Status	Federal Status
Prothonotary Warbler	Protonotaria citrea	Bird	Species of Concern	
Cerulean Warbler	Setophaga cerulea	Bird	Species of Concern	
Muskellunge	Esox masquinongy	Fish	Species of Concern	
Blue Catfish	Ictalurus furcatus	Fish	Species of Concern	
Big Brown Bat	Eptesicus fuscus	Mammal	Species of Concern	
Red Bat	Lasiurus borealis	Mammal	Species of Concern	
Hoary Bat	Lasiurus cinereus	Mammal	Species of Concern	
Woodland Vole	Microtus pinetorum	Mammal	Species of Concern	
Little Brown Bat	Myotis lucifugus	Mammal	Species of Concern	
Tri-colored Bat	Perimyotis subflavus	Mammal	Species of Concern	
Deer Mouse	Peromyscus maniculatus	Mammal	Species of Concern	
Southern Bog Lemming	Synaptomys cooperi	Mammal	Species of Concern	
Elktoe	Alasmodonta marginata	Mollusk	Species of Concern	
Purple Wartyback	Cyclonaias tuberculata	Mollusk	Species of Concern	
Wavy-rayed Lampmussel	Lampsilis fasciola	Mollusk	Species of Concern	
Round Pigtoe	Pleurobema sintoxia	Mollusk	Species of Concern	
Kidneyshell	Ptychobranhus fasciolaris	Mollusk	Species of Concern	
Salamander Mussel	Simpsonaias ambigua	Mollusk	Species of Concern	
Deertoe	Truncilla truncata	Mollusk	Species of Concern	
Eastern Hognose Snake	Heterodon platirhinos	Reptile	Species of Concern	
Eastern Box Turtle	Terrapene carolina carolina	Reptile	Species of Concern	
Evening Bat	Nycticeius humeralis	Mammal	Special Interest	



Common Name	Scientific Name	Group	State Status	Federal Status
Mucket	Actinonaias ligamentina ligamentina	Mollusk	Extirpated	
Hickorynut	Obovaria olivaria	Mollusk	Extirpated	
Ring Pink	Obovaria retusa	Mollusk	Extirpated	
White Wartyback	Plethobasus cicatricosus	Mollusk	Extirpated	
Leafshell	Epioblasma flexuosa	Mollusk	Extinct	





**Table 2 - Clermont County State Listed Plant Species**

Scientific Name	Common Name	Last Observed	State Status	Federal Status
<i>Agrostis eliottiana</i>	Elliott's Bent Grass	2012-05-19	E	
<i>Aronia arbutifolia</i>	Red Chokeberry	2003-11-15	E	
<i>Baptisia australis</i>	Blue False Indigo	2007-07-27	E	
<i>Bartonia paniculata</i>	Screw-stem	2011-10-05	T	
<i>Botrychium biternatum</i>	Sparse-lobed Grape Fern	1980-08-26	E	
<i>Celtis laevigata</i>	Sugarberry	2007-07-23	E	
<i>Corallorhiza wisteriana</i>	Spring Coral-root	2004-04-29	P	
<i>Krigia dandelion</i>	Potato-dandelion	2009-05-23	T	
<i>Luzula bulbosa</i>	Southern Woodrush	1990-06-16	P	
<i>Paspalum repens</i>	Riverbank Paspalum	2005-10-05	T	
<i>Phacelia bipinnatifida</i>	Fern-leaved Scorpion-weed	2007-04-02	P	
<i>Potamogeton natans</i>	Floating Pondweed	1991-07-31	P	
<i>Ranunculus pusillus</i>	Low Spearwort	2010-05-14	T	
<i>Ribes missouriense</i>	Missouri Gooseberry	2002-04-25	T	
<i>Rubus trivialis</i>	Southern Dewberry	2006-06-11	E	
<i>Salix caroliniana</i>	Carolina Willow	2004-08-21	P	
<i>Sida hermaphrodita</i>	Virginia-mallow	2009-09-03	P	
<i>Silene nivea</i>	Snowy Campion	2006-06-18	E	
<i>Solidago speciosa</i>	Showy Goldenrod	2012-10	P	
<i>Spermacoce glabra</i>	Smooth Buttonweed	2005-10-05	P	
<i>Trifolium stoloniferum</i>	Running Buffalo Clover	2000-05-29	E	FE
<i>Trillium recurvatum</i>	Prairie Wake-robin	2009-05-23	P	
<i>Viburnum rufidulum</i>	Southern Black-haw	1989-10-04	P	





## Clermont County

Scientific Name	Common Name	Last Observed	State Status	Federal Status
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Ohio Division of Wildlife  
Ohio Natural Heritage Database  
Date Accessed: March 6, 2015  
Status based on 2014-15 Rare Plant List.

### **Status:**

List Created: July 2016

*X = Extirpated*

*E = Endangered*

*T = Threatened*

*P = Potentially Threatened*

**Table 3.  
Species Conclusion Table**

Common Name	Scientific Name	Status <sup>1</sup>	Species Habitat Preference Notes <sup>2</sup>	Desktop Presence Determination	Preliminary Conclusion/Recommendation <sup>2</sup>
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BGEPA, MBTA	Bald eagles utilize estuaries, large lakes, reservoirs, and rivers. No estuaries, large lakes, or reservoirs occur within the Project Site or within several miles or Project Site.	Unlikely to Disturb Nesting Bald Eagles	No Effect, No Eagle Act permit required
Indiana Bat	<i>Myotis sodalis</i>	FE, SE	Forests and mature trees occur in the Project area, but in low abundance. Avoidance of these forested areas is recommended. If tree clearing is necessary it should be done in the winter months, outside TOYR from April 1 – October 15.	Potential Suitable Habitat Present	Avoid forested areas, Adhere to TOYR.
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FT, ST	Forests and mature trees occur in the Project area, but in low abundance. Avoidance of these forested areas is recommended. If tree clearing is necessary it should be done in the winter months, outside TOYR from April 15 – September 15.	Potential Suitable Habitat Present	Avoid forested areas, Adhere to TOYR.
Running Buffalo Clover	<i>Trifolium stoloniferum</i>	SE <sup>3</sup>	Mesic Forested habitats with partial to filtered sunlight including forested opening and paths, woodlands, wooded edges, and occasionally mowed lawns.	Potential Suitable Habitat Present	Potential impacts - further agency coordination recommended. The U.S. Fish and Wildlife Service (USFWS) has removed running buffalo clover ( <i>Trifolium stoloniferum</i> ) from the Federal List of Endangered and Threatened Plants on the basis of recovery since the initial coordination for this Project occurred.
Northern Harrier	<i>Circus hudsonius</i>	SE	Northern harriers prefer sloughs, wet meadows, marshlands, swamps, prairies, plains, grasslands, and shrublands. They nest on the ground, usually near water, or in tall grass, open fields, clearings, or on the water. Slough, marshland, swamp, prairie, plain, grassland, and shrubland habitat is not present within the Project area.	Potential suitable habitat not present.	No Effect Likely
Blue Corporal	<i>Ladona deplanata</i>	SE	Blue corporals favor still, infertile waters of sandy-bottomed ponds, lakes and pits, and breed less frequently in streams than its close relatives do.	Potential Suitable Habitat Present	Avoid or minimize impacts to wetlands, ponds, and streams.
Goldeye	<i>Hiodon alosoides</i>	SE	In the U.S., the goldeye is most commonly found in larger river systems such as the Mississippi, Missouri, Ohio, and Red Rivers. It prefers turbid slower-moving waters of lakes and rivers.	Potential suitable habitat not present.	No Effect Likely
Shortnose Gar	<i>Lepisosteus platostomus</i>	SE	Open, slow, silty or clear-water rivers, wave-washed shoals of large lakes, quiet creek pools, and river backwaters.	Potential suitable habitat not present.	No Effect Likely
Shoal chub	<i>Machyobopsis hyostoma</i>	SE	Shoal chub preferred habitat is sand and gravel runs of small to large rivers.	Potential suitable habitat not present.	No Effect Likely
Bigeye Shiner	<i>Notropis boops</i>	ST	Flowing pools of moderately clear creeks and rivers with large permanent pools over bottoms of sand, gravel, or rock.	Potential suitable habitat not present.	No Effect Likely
Northern Madtom	<i>Noturus stigmoseus</i>	SE	Large creeks and small rivers with clear to turbid water and moderate current.	Potential suitable habitat not present.	No Effect Likely
Wartyback	<i>Quadrula nodulata</i>	SE	Medium to large rivers with sand and mud substrate.	Potential suitable habitat not present.	No Effect Likely
Butterfly Mussel	<i>Ellipsaria lineolata</i>	SE	This species reaches its greatest abundance in large rivers in stretches with pronounced current and a substrate of coarse sand and gravel. Streams with all of these characteristics are not likely in the Project area. The streams that occur within the Project area are likely channelized and characterized by heavily silted substrates from agricultural runoff.	Potential suitable habitat not present.	No Effect Likely
Elephant-ear	<i>Elliptio crassidens crassidens</i>	SE	Large creeks to rivers with moderate to swift currents primarily on sand, limestone, or rock substrates.	Potential suitable habitat not present.	No Effect Likely
Snuffbox	<i>Epioblasma triquetra</i>	FE, SE	Riffles of small and medium creeks, in large rivers, and in shoals and wave-washed shores of lakes. Sand, gravel, or cobble substrates.	Potential suitable habitat not present.	No Effect Likely
Pocketbook	<i>Lampsilis ovata</i>	SE	Pocketbook may be found in large rivers and reservoirs at depths of 15 to 20 feet and in small streams in less than two feet of water. The most suitable substrate consists of a mixture of gravel and coarse sand mixed with some silt or mud. Though streams that occur within the Project area may provide with some of these habitat characteristics, these streams are likely not preferred habitat due to channelization and siltation within in them.	Potential suitable habitat not present.	No Effect Likely
Washboard	<i>Megalaniais nervosa</i>	SE	Large rivers with a slow current and muddy to gravel substrates.	Potential suitable habitat not present.	No Effect Likely
Sheepnose	<i>Plethobasus cyphus</i>	FE, SE	Riffles with gravel/cobble substrates, but typically deep water with swift currents and mud, sand, or gravel bottoms.	Potential suitable habitat not present.	No Effect Likely
Ohio Pigtoe	<i>Pleurobema cordatum</i>	SE	Medium to large rivers with gravel, cobble, or boulder substrates.	Potential suitable habitat not present.	No Effect Likely
Ebonysnail	<i>Fusconaia ebena</i>	SE	Large rivers with swift currents and gravel or sand substrates.	Potential suitable habitat not present.	No Effect Likely
Monkeyface	<i>Quadrula metanevra</i>	SE	Medium to large rivers in gravel or mixed sand and gravel.	Potential suitable habitat not present.	No Effect Likely
Rayed Bean	<i>Villosa fabalis</i>	FE, SE	Small creeks to large rivers in or near riffle areas with gravel or sand substrates.	Potential suitable habitat not present.	No Effect Likely
Little Spectaclecase	<i>Villosa lienosa</i>	SE	Small creeks to medium-sized rivers, usually along the banks in slower currents with sand or mud substrates.	Potential suitable habitat not present.	No Effect Likely
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	ST	Night herons nest in colonies on platforms of sticks in a group of trees, or on the ground in protected locations such as islands or reed beds. They stand at the water's edge, and wait to ambush prey, mainly at night. They primarily eat small fish, crustaceans, frogs, aquatic insects, and small mammals. During the day they rest in trees or bushes.	Potential suitable habitat not present.	No Effect Likely
American Eel	<i>Anguilla rostrata</i>	ST	American Eel prefers to live in streams with continuous flow or in muddy, silt bottomed lakes. While small eels tend to be found in faster flowing water, larger eels are associated with slow, deep, and muddy habitats. Streams with all of these characteristics are unlikely to occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
Blue Sucker	<i>Cyprinus elongatus</i>	ST	Blues frequent the thalweg of large river systems, in heavy current. Found over cobble and/or bedrock substrates; adults occupy deep riffles (typically 1-2 m depth) in areas of very swift flow.	Potential suitable habitat not present.	No Effect Likely
Mountain Madtom	<i>Noturus eleutherus</i>	ST	Small to large rivers, in fast-flowing, clear water sections over sand, gravel, and rubble.	Potential suitable habitat not present.	No Effect Likely
Channel Darter	<i>Percina copelandi</i>	ST	The Channel Darter inhabits rivers and large creeks in areas of moderate current over sand and gravel substrates. It also occurs in wave swept nearshore areas of lakes Huron and Erie in coarse-sand, fine-gravel beach and sandbar habitats. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
River Darter	<i>Percina shumardi</i>	ST	River Darters inhabit large rivers and lower parts of tributaries; deep chutes and riffles where current is swift and bottom is coarse gravel or rock. Smaller individuals generally occur in slower water than do larger ones. Adults generally at depth of 3 feet or more. May typically spawn at depths of 1.5 feet or a little more in areas of strong current, scattered rubble, and associated clean gravel. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely

**Table 3.**  
**Species Conclusion Table**

Common Name	Scientific Name	Status <sup>1</sup>	Species Habitat Preference Notes <sup>2</sup>	Desktop Presence Determination	Preliminary Conclusion/Recommendation <sup>3</sup>
Paddlefish	<i>Polyodon spathula</i>	ST	American paddlefish are highly mobile and well adapted to living in rivers. They inhabit many types of riverine habitats throughout much of the Mississippi Valley and adjacent Gulf slope drainages. They occur most frequently in deeper, low current areas such as side channels, oxbows, backwater lakes, bayous, and tailwaters below dams.	Potential suitable habitat not present.	No Effect Likely
Black Sandshell	<i>Ligumia recta</i>	ST	Black Sandshell is typically found in medium-sized to large rivers in locations with strong currents, and substrates of coarse sand and gravel with cobbles in water depths from several inches to six feet or more. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
Threehorn Wartyback	<i>Obliquaria reflexa</i>	ST	Threehorn Wartyback prefer medium to large rivers, in slackwater conditions to swift currents, and substrates of gravel to muddy sand. No medium to large rivers are present within the study area. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
Fawnsfoot	<i>Truncilla donaciformis</i>	ST	Medium to large rivers with sand and mud substrates.	Potential suitable habitat not present.	No Effect Likely
Kirtland's Snake	<i>Clonophis kirtlandii</i>	ST	Kirtland's Snakes are usually found in open wetlands such as wet prairies, prairie fens, wet meadows and marshes, but they also occur in openings or along the edges of forested wetlands and floodplains (e.g., grass/sedge openings in tamarack swamps). These habitats generally have loose, organic rich soil which is well-suited for the fossorial nature of the Kirtland's Snake. This species also has been found in suitable open habitats in or near urban centers or large metropolitan areas such as open, grassy areas in parks, cemeteries, and vacant lots. Kirtland's Snakes are frequently found in burrows or under leaf litter, logs, boards, rocks or other cover objects within their habitats. They hibernate in crayfish or other animal burrows.	<b>Potential suitable habitat present.</b>	Avoid or minimize impacts to wetlands and streams.
Blue FalseIndigo	<i>Baptisia australis</i>	SE	Semi-shaded to open habitats along the Ohio River; usually in rocky, gravelly or sandy soil: rich woods, alluvial thickets, bluffs, and rocky ledges	Potential suitable habitat not present.	No Effect Likely
Elliott's Bent Grass	<i>Agrostis eliottiana</i>	SE	Dry, open waste areas, sterile soil, fields.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Red Chokeberry	<i>Aronia arbutifolia</i>	SE	Wet and dry shrubby thickets.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Snowy Campion	<i>Silene nivea</i>	SE	Rich woods and alluvium, disturbed floodplains and streambanks.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Southern Dewberry	<i>Rubus trivialis</i>	SE	Old fields and floodplains.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Sparse-lobed Grape Fem	<i>Botrychium biternatum</i>	SE	Bottoms, ravines, mesic woods and thickets.	Potential suitable habitat not present.	No Effect Likely
Sugarberry	<i>Celtis laevigata</i>	SE	Rich, alluvial soils of floodplains, poorly-drained bottomlands and mesic woods.	Potential suitable habitat not present.	No Effect Likely
Low Spearwort	<i>Ranunculus pusillus</i>	ST	Low spearwort grows in wet habitat, where it is semi-aquatic growing partially submerged or terrestrially on muddy substrates.	<b>Potential suitable habitat present.</b>	Avoid or minimize impacts to wetlands, ponds, and streams.
Missouri Gooseberry	<i>Ribes missouriense</i>	ST	Moist or dry, open to semi-open situations: upland woods, woods borders, thickets, fencerows, and on bluffs of streams.	<b>Potential suitable habitat present.</b>	Potential impacts - further agency coordination recommended.
Potato-dandelion	<i>Krigia dandelion</i>	ST	Open oak woods and prairies, usually in moist sandy soils.	Potential suitable habitat not present.	No Effect Likely
Riverbank Paspalum	<i>Paspalum repens</i>	ST	Shallow water or wet muddy soils; margins of temporary pools, riverbanks and riverine woodlands.	<b>Potential suitable habitat present.</b>	Avoid or minimize impacts to wetlands and streams.
Screw-stem	<i>Bartonia paniculata</i>	ST	Meadows with acidic seepage.	Potential suitable habitat not present.	No Effect Likely

Notes:

- 1 - BCC = Bird of Conservation Concern  
- BGEPA = Bald and Golden Eagle Protection Act  
- MBTA = Migratory Bird Treaty Act  
- FE = Federal Endangered  
- FT = Federal Threatened  
- SE = State Endangered  
- ST = State Threatened  
- SP = State Potentially Threatened

2 - TOYR = Time of Year Restrictions

3 - The U.S. Fish and Wildlife Service (USFWS) has removed running buffalo clover (*Trifolium stoloniferum*) from the Federal List of Endangered and Threatened Plants on the basis of recovery since the initial coordination for this Project occurred.



## ATTACHMENT 5 – HABITAT PHOTOGRAPHS

## Representative Photographs of Habitats



Managed Agricultural Fields (i.e. corn and soybeans)



Managed Agricultural Fields (i.e. corn and soybeans)

## Representative Photographs of Habitats



Managed Agricultural Fields (i.e. corn and soybeans)



Managed Agricultural Fields (i.e. corn and soybeans)



## Representative Photographs of Habitats



Managed Agricultural Fields (i.e. corn and soybeans)



Managed Agricultural Fields (i.e. corn and soybeans)



## Representative Photographs of Habitats



Palustrine Emergent Wetland



Palustrine Emergent Wetland



## Representative Photographs of Habitats



Palustrine Scrub-Shrub Wetland



Palustrine Scrub-Shrub Wetland



## Representative Photographs of Habitats



Palustrine Forested Wetland



Palustrine Forested Wetland



## Representative Photographs of Habitats



Palustrine Forested Wetland



Palustrine Forested Wetland



## Representative Photographs of Habitats



Open Waterbodies



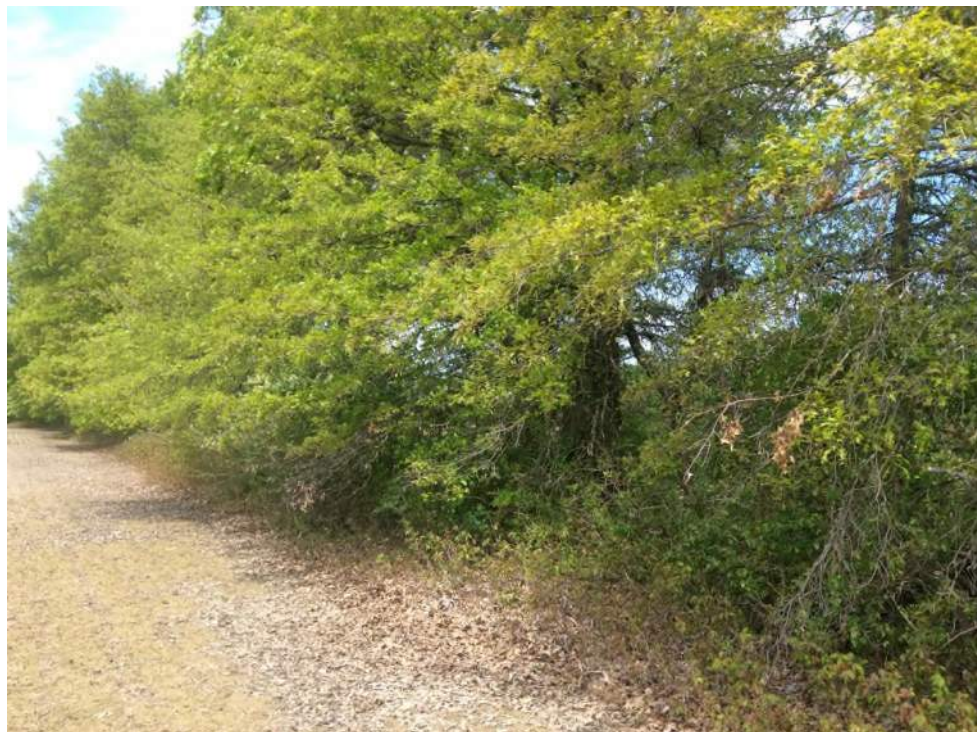
Open Waterbodies



## Representative Photographs of Habitats



Woodland Tree Lines



Woodland Tree Lines



## Representative Photographs of Habitats



Early Successional Mixed Deciduous Forest



Early Successional Mixed Deciduous Forest

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**From:** Nathan.Reardon@dnr.ohio.gov <Nathan.Reardon@dnr.ohio.gov>  
**Sent:** Tuesday, June 14, 2022 4:30 PM  
**To:** sarah.tebbe@dnr.ohio.gov; Cross, Alexandra <Alexandra.Cross@tetrattech.com>  
**Cc:** Drane, Larry <Larry.Drane@tetrattech.com>; McCluskey, Korey <Korey.McCluskey@tetrattech.com>;  
sflannery@savionenergy.com  
**Subject:** RE: Clermont Solar Project; Clermont County, Ohio; Request for Information

You don't often get email from [nathan.reardon@dnr.ohio.gov](mailto:nathan.reardon@dnr.ohio.gov). [Learn why this is important](#)

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

Alexandra,

After review of the revised project area, there are no additional studies beyond what was in the original ODNR comment letter 21-0365. If you have any questions, please let me know.

Thank you,  
Nathan



**Nathan Reardon**  
Compliance Coordinator  
ODNR Division of Wildlife  
2045 Morse Road  
Columbus, OH 43229  
Phone: 614-265-6741  
Email: [nathan.reardon@dnr.ohio.gov](mailto:nathan.reardon@dnr.ohio.gov)



## **ATTACHMENT 4 – PREVIOUS ODNR COORDINATION - 2023**



# Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

## Office of Real Estate

*Tara Paciorek, Chief*  
2045 Morse Road – Bldg. E-2  
Columbus, OH 43229  
Phone: (614) 265-6661  
Fax: (614) 267-4764

July 3, 2023

Alexandra Cross  
Tetra Tech  
4101 Cox Road, Suite 120  
Glen Allen, Virginia 23060

**Re:** 23-0640; Clear Mountain Energy Center

**Project:** The proposed project involves construction of Clear Mountain Energy Center Project, an approximately 100-megawatt (MW) solar facility with an 84-MW battery storage component.

**Location:** The proposed project is located in Jackson & Williamsburg townships, Clermont County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

**Real Estate and Land Management:** The Office of Real Estate and Land Management (REALM) has the following comments.

The [Ohio Department of Natural Resources \(ODNR\) Guidance for Proposed Solar Energy Facilities in Ohio](#) should be incorporated into the project design and site development plan. This guidance document was developed by multiple Divisions within the Ohio Department of Natural Resources. The guidance document is non-exhaustive and project recommendations are made on a site-specific basis and may include additional considerations. The incorporation of these conditions will help ensure that the project will result in the minimum adverse environmental impact.

**Natural Heritage Database:** The Natural Heritage Database has the following data within one mile of the project area:

Northern Rough Greensnake (*Opheodrys aestivus*), state species of concern

The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. The species listed above is not recorded within the specified project area boundaries. Please note that Ohio has not been completely surveyed and we rely on

receiving information from many sources. Therefore, a lack of records for an area is not a statement that rare species or unique features are absent from that area.

**Fish and Wildlife:** The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.

The entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these species of bats predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. If trees are present within the project area, and trees must be cut, the DOW recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH  $\geq 20$  if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the “[OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING](#)”. If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Eileen Wyza at [Eileen.Wyza@dnr.ohio.gov](mailto:Eileen.Wyza@dnr.ohio.gov)).

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS “[RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED BAT SURVEY GUIDELINES](#).” If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the following listed mussel species.

Federally Endangered

rayed bean (*Villosa fabalis*)  
sheepnose (*Plethobasus cyphus*)  
fanshell (*Cyprogenia stegaria*)  
pink mucket (*Lampsilis orbiculata*)  
snuffbox (*Epioblasma triquetra*)

State Endangered

butterfly (*Ellipsaria lineolata*)  
ebonyshell (*Fusconaia ebena*)  
elephant-ear (*Elliptio crassidens crassidens*)  
little spectaclecase (*Villosa lienosa*)



monkey face (*Quadrula metanevra*)  
Ohio pigtoe (*Pleurobema cordatum*)  
wartyback (*Quadrula nodulata*)  
washboard (*Megalonaias nervosa*)

State Threatened

Salamander Mussel (*Simpsonaias ambigua*)

Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact these species.

The project is within the range of the following listed fish species.

State Endangered

bigeye shiner (*Notropis boops*)  
goldeye (*Hiodon alosoides*)  
northern madtom (*Noturus stigmosus*)  
shoal chub (*Macrhybopsis hyostoma*)  
shortnose gar (*Lepisosteus platostomus*)  
shovelnose sturgeon (*Scaphirhynchus platyrhynchus*)

State Threatened

American eel (*Anguilla rostrata*)  
blue sucker (*Cycleptus elongatus*)  
channel darter (*Percina copelandi*)  
mountain madtom (*Noturus eleutherus*)  
paddlefish (*Polyodon spathula*)  
river darter (*Percina shumardi*)

The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species. This secretive species prefers wet fields and meadows. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

**Geological Survey:** The Division of Geological Survey has the following comments.

Impacts on Public and Private Water Supplies

The proposed project is in Jackson, Batavia, and Williamsburg Townships, Clermont County. The construction of the facility is not expected to have significant impacts on private well yields. The Groundwater Vulnerability Index for this project area is 119 (Nelson and Others, 2022), which equates to a moderate groundwater vulnerability (OEPA, 2014). The construction of the facility is not expected to pose a significant groundwater contamination risk.

#### Groundwater Inventory

Groundwater Resources are poor throughout the project area. Wells developed in bedrock are only likely to yield up to 5 gallons per minute (Walker, 1986; and Ohio Department of Natural Resources, Division of Water, Bedrock Aquifer Map, 2000). Wells developed in glacial material are also only likely to yield up to 5 gallons per minute. Wells may be developed in sand-and-gravel lenses within the Blanchester Thin Upland Aquifer (Ohio Department of Natural Resources, Division of Water, Statewide Unconsolidated Aquifer Map, 2000). ODNR has record of 23 water wells drilled within one mile of the project area. Fifteen of the wells are completed in the limestone, three are completed in shale, and five are completed in unconsolidated material (Ohio Department of Natural Resources, Division of Geological Survey, Ohio Water Wells).

#### Oil, Gas and Mining

ODNR has record of one oil and gas well within one mile of the proposed project area. This well is listed as a historical production well. This well is not located within the bounds of the project area (Ohio Department of Natural Resources, Division of Oil and Gas, Ohio Oil and Gas Wells Locator).

ODNR does not have record of any mining operations within one mile of the proposed project area. The nearest mine to the project area is a sand and gravel mine located 5 miles to the west. This mine is owned by Kipp's Gravel Company Inc., and the status is listed as released (Ohio Department of Natural Resources, Division of Mineral Resources, Mines of Ohio).

#### Geohazards

ODNR has record of three earthquakes within 15-miles of the site. Details regarding these events are listed in the chart (Ohio Department of Natural Resources, Division of Geological Survey, Ohio Earthquake Epicenters):

Date	Magnitude	Distance to Site Boundary	County	Township
May 5, 1804	2.9	3.96 miles	Clermont	Stonelick
1864	2.5	4.87 miles	Clermont	Batavia
September, 1859	2.5	5.70 miles	Clermont	Batavia

#### Karst

Karst features usually form in areas that are covered by thin or no glacial drift and the bedrock is limestone or dolomite. The nearest verified sinkhole to the project area is located five miles to the south. Although there are no sinkholes in the project area, the underlying Arnheim Formation, Grant Lake Formation, and Grant Lake Limestone Undifferentiated are susceptible to the formation of sinkholes and other karst features (Ohio Department of Natural Resources, Division of Geological Survey, Ohio Karst).

#### Drift Thickness and Bedrock Geology

Drift thickness in the project area ranges from 2 to 39 feet. Drift is thickest to the north in Jackson Township and thinnest to the south and west in Williamsburg and Batavia Townships (Powers and Swinford, 2004). The uppermost bedrock unit within the project area is the Arnheim Formation. Additionally, in the northern portion of the project area bedrock consists of the Grant Lake Formation and Grant Lake Limestone Undifferentiated.

### Soils

The project area consists primarily of soils derived from alluvium, till, and loess. Clermont, Jonesboro, and Westboro are the most common soil series found within the boundaries of the project area. These soils have a silt loam texture and together cover over 98% of the project area. The Clermont Soil which makes up approximately 63% of the project area is a hydric soil and is frequently ponded from December through May. Shrink-swell potential is moderate in each of these soils (USDA Web Soil Survey).

**Water Resources:** The Division of Water Resources has the following comment.

The [local floodplain administrator](#) should be contacted concerning the possible need for any floodplain permits or approvals for this project.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at [mike.pettegrew@dnr.ohio.gov](mailto:mike.pettegrew@dnr.ohio.gov) if you have questions about these comments or need additional information.

Mike Pettegrew  
Environmental Services Administrator



## **ATTACHMENT 5 – IPAC OFFICIAL SPECIES LIST**



## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Ohio Ecological Services Field Office

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

Phone: (614) 416-8993 Fax: (614) 416-8994



In Reply Refer To:

Project Code: 2023-0072056

Project Name: Clear Mountain Solar Project

April 20, 2023

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List

## OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Ohio Ecological Services Field Office**

4625 Morse Road, Suite 104

Columbus, OH 43230-8355

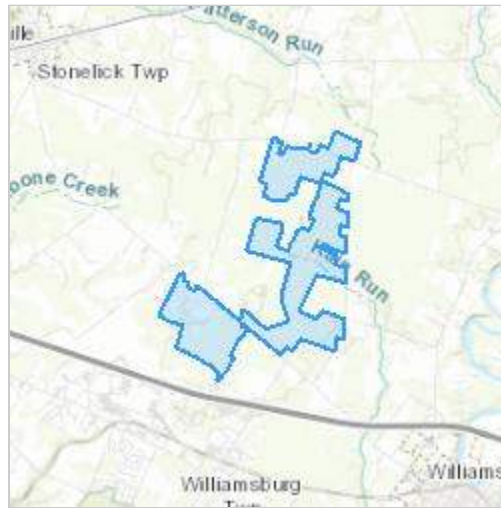
(614) 416-8993

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## PROJECT SUMMARY

Project Code: 2023-0072056  
Project Name: Clear Mountain Solar Project  
Project Type: Power Gen - Solar  
Project Description: New solar facility  
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@39.091448549999996,-84.0844501291561,14z>



Counties: Clermont County, Ohio

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## ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [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.

## MAMMALS

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5949">https://ecos.fws.gov/ecp/species/5949</a>	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/10515">https://ecos.fws.gov/ecp/species/10515</a>	Proposed Endangered

## CLAMS

NAME	STATUS
Rayed Bean <i>Villosa fabalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5862">https://ecos.fws.gov/ecp/species/5862</a>	Endangered

## INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

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## **CRITICAL HABITATS**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

## **IPAC USER CONTACT INFORMATION**

Agency: Tetra Tech, Inc.

Name: Kevin Pulver

Address: 661 Andersen Dr Ste. 200

City: Pittsburgh

State: PA

Zip: 15220

Email: kevin.pulver@tetrattech.com

Phone: 4129217090

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## ATTACHMENT 6 – TABLES

## Table 1 - Clermont County State Listed Animal Species

Common Name	Scientific Name	Group	State Status	Federal Status
Northern Harrier	Circus hudsonius	Bird	Endangered	
Blue corporal	Ladona deplanata	Dragonfly	Endangered	
Goldeye	Hiodon alosoides	Fish	Endangered	
Shortnose Gar	Lepisosteus platostomus	Fish	Endangered	
Shoal chub	Macrhybopsis hyostoma	Fish	Endangered	
Bigeye Shiner	Notropis boops	Fish	Endangered	
Northern Madtom	Noturus stigmosus	Fish	Endangered	
Indiana Myotis	Myotis sodalis	Mammal	Endangered	Endangered
Wartyback	Cyclonaias nodulata	Mollusk	Endangered	
Butterfly	Ellipsaria lineolata	Mollusk	Endangered	
Elephant-ear	Elliptio crassidens	Mollusk	Endangered	
Snuffbox	Epioblasma triquetra	Mollusk	Endangered	Endangered
Pocketbook	Lampsilis ovata	Mollusk	Endangered	
Washboard	Megaloniaias nervosa	Mollusk	Endangered	
Sheepnose	Plethobasus cyphus	Mollusk	Endangered	Endangered
Ohio Pigtoe	Pleurobema cordatum	Mollusk	Endangered	
EbonysheIl	Reginaia ebenus	Mollusk	Endangered	
Monkeyface	Theliderma metanevra	Mollusk	Endangered	
Rayed Bean	Villosa fabalis	Mollusk	Endangered	Endangered
Little Spectaclecase	Villosa lienosa	Mollusk	Endangered	



Common Name	Scientific Name	Group	State Status	Federal Status
Black-crowned Night-Heron	Nycticorax nycticorax	Bird	Threatened	
American Eel	Anguilla rostrata	Fish	Threatened	
Blue Sucker	Cycleptus elongatus	Fish	Threatened	
Mountain Madtom	Noturus eleutherus	Fish	Threatened	
Channel Darter	Percina copelandi	Fish	Threatened	
River Darter	Percina shumardi	Fish	Threatened	
Paddlefish	Polyodon spathula	Fish	Threatened	
Northern Long-eared Bat	Myotis septentrionalis	Mammal	Threatened	Threatened
Black Sandshell	Ligumia recta	Mollusk	Threatened	
Threehorn Wartyback	Obliquaria reflexa	Mollusk	Threatened	
Fawnsfoot	Truncilla donaciformis	Mollusk	Threatened	
Kirtland's Snake	Clonophis kirtlandii	Reptile	Threatened	
Eastern Cricket Frog	Acris crepitans crepitans	Amphibian	Species of Concern	
Sharp-shinned Hawk	Accipiter striatus	Bird	Species of Concern	
Henslow's Sparrow	Ammodramus henslowii	Bird	Species of Concern	
Grasshopper Sparrow	Ammodramus savannarum	Bird	Species of Concern	
Great Egret	Ardea alba	Bird	Species of Concern	
Common Nighthawk	Chordeiles minor	Bird	Species of Concern	
Northern Bobwhite	Colinus virginianus	Bird	Species of Concern	
American Coot	Fulica americana	Bird	Species of Concern	
Common Gallinule	Gallinula galeata	Bird	Species of Concern	
Red-headed Woodpecker	Melanerpes erythrocephalus	Bird	Species of Concern	





Common Name	Scientific Name	Group	State Status	Federal Status
Prothonotary Warbler	<i>Protonotaria citrea</i>	Bird	Species of Concern	
Cerulean Warbler	<i>Setophaga cerulea</i>	Bird	Species of Concern	
Muskellunge	<i>Esox masquinongy</i>	Fish	Species of Concern	
Blue Catfish	<i>Ictalurus furcatus</i>	Fish	Species of Concern	
Big Brown Bat	<i>Eptesicus fuscus</i>	Mammal	Species of Concern	
Red Bat	<i>Lasiurus borealis</i>	Mammal	Species of Concern	
Hoary Bat	<i>Lasiurus cinereus</i>	Mammal	Species of Concern	
Woodland Vole	<i>Microtus pinetorum</i>	Mammal	Species of Concern	
Little Brown Bat	<i>Myotis lucifugus</i>	Mammal	Species of Concern	
Tri-colored Bat	<i>Perimyotis subflavus</i>	Mammal	Species of Concern	
Deer Mouse	<i>Peromyscus maniculatus</i>	Mammal	Species of Concern	
Southern Bog Lemming	<i>Synaptomys cooperi</i>	Mammal	Species of Concern	
Elktoe	<i>Alasmodonta marginata</i>	Mollusk	Species of Concern	
Purple Wartyback	<i>Cyclonaias tuberculata</i>	Mollusk	Species of Concern	
Wavy-rayed Lampmussel	<i>Lampsilis fasciola</i>	Mollusk	Species of Concern	
Round Pigtoe	<i>Pleurobema sintoxia</i>	Mollusk	Species of Concern	
Kidneyshell	<i>Ptychobranhus fasciolaris</i>	Mollusk	Species of Concern	
Salamander Mussel	<i>Simpsonaias ambigua</i>	Mollusk	Species of Concern	
Deertoe	<i>Truncilla truncata</i>	Mollusk	Species of Concern	
Eastern Hognose Snake	<i>Heterodon platirhinos</i>	Reptile	Species of Concern	
Eastern Box Turtle	<i>Terrapene carolina carolina</i>	Reptile	Species of Concern	
Evening Bat	<i>Nycticeius humeralis</i>	Mammal	Special Interest	



Common Name	Scientific Name	Group	State Status	Federal Status
Mucket	Actinonaias ligamentina ligamentina	Mollusk	Extirpated	
Hickorynut	Obovaria olivaria	Mollusk	Extirpated	
Ring Pink	Obovaria retusa	Mollusk	Extirpated	
White Wartyback	Plethobasus cicatricosus	Mollusk	Extirpated	
Leafshell	Epioblasma flexuosa	Mollusk	Extinct	





**Table 2 - Clermont County State Listed Plant Species**

Scientific Name	Common Name	Last Observed	State Status	Federal Status
<i>Agrostis elliottiana</i>	Elliott's Bent Grass	2012-05-19	E	
<i>Aronia arbutifolia</i>	Red Chokeberry	2003-11-15	E	
<i>Baptisia australis</i>	Blue False Indigo	2007-07-27	E	
<i>Bartonia paniculata</i>	Screw-stem	2011-10-05	T	
<i>Botrychium biternatum</i>	Sparse-lobed Grape Fern	1980-08-26	E	
<i>Celtis laevigata</i>	Sugarberry	2007-07-23	E	
<i>Corallorhiza wisteriana</i>	Spring Coral-root	2004-04-29	P	
<i>Krigia dandelion</i>	Potato-dandelion	2009-05-23	T	
<i>Luzula bulbosa</i>	Southern Woodrush	1990-06-16	P	
<i>Paspalum repens</i>	Riverbank Paspalum	2005-10-05	T	
<i>Phacelia bipinnatifida</i>	Fern-leaved Scorpion-weed	2007-04-02	P	
<i>Potamogeton natans</i>	Floating Pondweed	1991-07-31	P	
<i>Ranunculus pusillus</i>	Low Spearwort	2010-05-14	T	
<i>Ribes missouriense</i>	Missouri Gooseberry	2002-04-25	T	
<i>Rubus trivialis</i>	Southern Dewberry	2006-06-11	E	
<i>Salix caroliniana</i>	Carolina Willow	2004-08-21	P	
<i>Sida hermaphrodita</i>	Virginia-mallow	2009-09-03	P	
<i>Silene nivea</i>	Snowy Campion	2006-06-18	E	
<i>Solidago speciosa</i>	Showy Goldenrod	2012-10	P	
<i>Spermacoce glabra</i>	Smooth Buttonweed	2005-10-05	P	
<i>Trifolium stoloniferum</i>	Running Buffalo Clover	2000-05-29	E	FE
<i>Trillium recurvatum</i>	Prairie Wake-robin	2009-05-23	P	
<i>Viburnum rufidulum</i>	Southern Black-haw	1989-10-04	P	





## Clermont County

Scientific Name	Common Name	Last Observed	State Status	Federal Status
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Ohio Division of Wildlife  
Ohio Natural Heritage Database  
Date Accessed: March 6, 2015  
Status based on 2014-15 Rare Plant List.

### **Status:**

List Created: July 2016

*X = Extirpated*

*E = Endangered*

*T = Threatened*

*P = Potentially Threatened*

**Table 3.**  
**Species Conclusion Table**

Common Name	Scientific Name	Status <sup>1</sup>	Species Habitat Preference Notes <sup>2</sup>	Desktop Presence Determination	Preliminary Conclusion/Recommendation <sup>2</sup>
Bald Eagle	<i>Haliaeetus leucocephalus</i>	BGEPA, MBTA	Bald eagles utilize estuaries, large lakes, reservoirs, and rivers. No estuaries, large lakes, or reservoirs occur within the Project Site or within several miles or Project Site.	Unlikely to Disturb Nesting Bald Eagles	No Effect, No Eagle Act permit required
Indiana Bat	<i>Myotis sodalis</i>	FE, SE	Forests and mature trees occur in the Project area, but in low abundance. Avoidance of these forested areas is recommended. If tree clearing is necessary it should be done in the winter months, outside TOYR from April 1 – October 15.	Potential Suitable Habitat Present	Avoid forested areas, Adhere to TOYR. <b>Clear Mountain Energy Center LLC will adhere to the TOYR, therefore No Effect Likely.</b>
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	FE, SE	Forests and mature trees occur in the Project area, but in low abundance. Avoidance of these forested areas is recommended. If tree clearing is necessary it should be done in the winter months, outside TOYR from April 15 – September 15.	Potential Suitable Habitat Present	Avoid forested areas, Adhere to TOYR. <b>Clear Mountain Energy Center LLC will adhere to the TOYR, therefore No Effect Likely.</b>
Tri-colored Bat	<i>Perimyotis subflavus</i>	PFE	Forests and mature trees occur in the Project area, but in low abundance. Avoidance of these forested areas is recommended. If tree clearing is necessary it should be done in the winter months, outside TOYR from April 15 – September 15.	Potential Suitable Habitat Present	Avoid forested areas, Adhere to TOYR. <b>Clear Mountain Energy Center LLC will adhere to the TOYR, therefore No Effect Likely.</b>
Monarch Butterfly	<i>Danaus plexippus</i>	C	Open country with the presence of milkweed ( <i>Asclepias</i> ) species in abundance. Requires dense tree cover for overwintering.	Potential suitable habitat not present.	No Effect Likely
Running Buffalo Clover	<i>Trifolium stoloniferum</i>	SE <sup>3</sup>	Mesic Forested habitats with partial to filtered sunlight including forested opening and paths, woodlands, wooded edges, and occasionally mowed lawns.	Potential Suitable Habitat Present	Potential impacts - further agency coordination recommended. The U.S. Fish and Wildlife Service (USFWS) has removed running buffalo clover ( <i>Trifolium stoloniferum</i> ) from the Federal List of Endangered and Threatened Plants on the basis of recovery since the initial coordination for this Project occurred.
Northern Harrier	<i>Circus hudsonius</i>	SE	Northern harriers prefer sloughs, wet meadows, marshlands, swamps, prairies, plains, grasslands, and shrublands. They nest on the ground, usually near water, or in tall grass, open fields, clearings, or on the water. Slough, marshland, swamp, prairie, plain, grassland, and shrubland habitat is not present within the Project area.	Potential suitable habitat not present.	No Effect Likely
Blue Corporal	<i>Ladona deplanata</i>	SE	Blue corporals favor still, infertile waters of sandy-bottomed ponds, lakes and pits, and breed less frequently in streams than its close relatives do.	Potential Suitable Habitat Present	Avoid or minimize impacts to wetlands, ponds, and streams.
Goldeye	<i>Hiodon alosoides</i>	SE	In the U.S., the goldeye is most commonly found in larger river systems such as the Mississippi, Missouri, Ohio, and Red Rivers. It prefers turbid slower-moving waters of lakes and rivers.	Potential suitable habitat not present.	No Effect Likely; <b>Clear Mountain Energy Center LLC will adhere to the TOYR and will not conduct in-water work within perennial streams from March 15 through June 30.</b>
Shorthead Gar	<i>Lepisosteus platostomus</i>	SE	Open, slow, silty or clear-water rivers, wave-washed shoals of large lakes, quiet creek pools, and river backwaters.	Potential suitable habitat not present.	No Effect Likely; <b>Clear Mountain Energy Center LLC will adhere to the TOYR and will not conduct in-water work within perennial streams from March 15 through June 30.</b>
Shoal chub	<i>Machyropsis hyostoma</i>	SE	Shoal chub preferred habitat is sand and gravel runs of small to large rivers.	Potential suitable habitat not present.	No Effect Likely; <b>Clear Mountain Energy Center LLC will adhere to the TOYR and will not conduct in-water work within perennial streams from March 15 through June 30.</b>
Bigeye Shiner	<i>Notropis boops</i>	ST	Flowing pools of moderately clear creeks and rivers with large permanent pools over bottoms of sand, gravel, or rock.	Potential suitable habitat not present.	No Effect Likely; <b>Clear Mountain Energy Center LLC will adhere to the TOYR and will not conduct in-water work within perennial streams from March 15 through June 30.</b>
Northern Madtom	<i>Noturus stigmosus</i>	SE	Large creeks and small rivers with clear to turbid water and moderate current.	Potential suitable habitat not present.	No Effect Likely; <b>Clear Mountain Energy Center LLC will adhere to the TOYR and will not conduct in-water work within perennial streams from March 15 through June 30.</b>
Wartyback	<i>Quadrula nodulata</i>	SE	Medium to large rivers with sand and mud substrate.	Potential suitable habitat not present.	No Effect Likely
Butterfly Mussel	<i>Ellipsaria lineolata</i>	SE	This species reaches its greatest abundance in large rivers in stretches with pronounced current and a substrate of coarse sand and gravel. Streams with all of these characteristics are not likely in the Project area. The streams that occur within the Project area are likely channelized and characterized by heavily silted substrates from agricultural runoff.	Potential suitable habitat not present.	No Effect Likely
Elephant-ear	<i>Elliptio crassidens crassidens</i>	SE	Large creeks to rivers with moderate to swift currents primarily on sand, limestone, or rock substrates.	Potential suitable habitat not present.	No Effect Likely
Snuffbox	<i>Epioblasma triquetra</i>	FE, SE	Riffles of small and medium creeks, in large rivers, and in shoals and wave-washed shores of lakes. Sand, gravel, or cobble substrates.	Potential suitable habitat not present.	No Effect Likely
Pocketbook	<i>Lampsilis ovata</i>	SE	Pocketbook may be found in large rivers and reservoirs at depths of 15 to 20 feet and in small streams in less than two feet of water. The most suitable substrate consists of a mixture of gravel and coarse sand mixed with some silt or mud. Though streams that occur within the Project area may provide with some of these habitat characteristics, these streams are likely not preferred habitat due to channelization and siltation within in them.	Potential suitable habitat not present.	No Effect Likely
Washboard	<i>Megalaniais nervosa</i>	SE	Large rivers with a slow current and muddy to gravel substrates.	Potential suitable habitat not present.	No Effect Likely
Sheepnose	<i>Plethobasus cyphus</i>	FE, SE	Riffles with gravel/cobble substrates, but typically deep water with swift currents and mud, sand, or gravel bottoms.	Potential suitable habitat not present.	No Effect Likely
Ohio Pigtoe	<i>Pleuroberma cordatum</i>	SE	Medium to large rivers with gravel, cobble, or boulder substrates.	Potential suitable habitat not present.	No Effect Likely
Ebonysnail	<i>Fusconaia ebena</i>	SE	Large rivers with swift currents and gravel or sand substrates.	Potential suitable habitat not present.	No Effect Likely
Monkeyface	<i>Quadrula metanevra</i>	SE	Medium to large rivers in gravel or mixed sand and gravel.	Potential suitable habitat not present.	No Effect Likely
Rayed Bean	<i>Villosa fabalis</i>	FE, SE	Small creeks to large rivers in or near riffle areas with gravel or sand substrates.	Potential suitable habitat not present.	No Effect Likely
Little Spectaclecase	<i>Villosa lienosa</i>	SE	Small creeks to medium-sized rivers, usually along the banks in slower currents with sand or mud substrates.	Potential suitable habitat not present.	No Effect Likely
Black-crowned Night-Heron	<i>Nycticorax nycticorax</i>	ST	Night herons nest in colonies on platforms of sticks in a group of trees, or on the ground in protected locations such as islands or reed beds. They stand at the water's edge, and wait to ambush prey, mainly at night. They primarily eat small fish, crustaceans, frogs, aquatic insects, and small mammals. During the day they rest in trees or bushes.	Potential suitable habitat not present.	No Effect Likely
American Eel	<i>Anguilla rostrata</i>	ST	American Eel prefers to live in streams with continuous flow or in muddy, silt bottomed lakes. While small eels tend to be found in faster flowing water, larger eels are associated with slow, deep, and muddy habitats. Streams with all of these characteristics are unlikely to occur in the Project area.	Potential suitable habitat not present.	No Effect Likely; <b>Clear Mountain Energy Center LLC will adhere to the TOYR and will not conduct in-water work within perennial streams from March 15 through June 30.</b>

**Table 3.**  
**Species Conclusion Table**

Common Name	Scientific Name	Status <sup>1</sup>	Species Habitat Preference Notes <sup>2</sup>	Desktop Presence Determination	Preliminary Conclusion/Recommendation <sup>2</sup>
Blue Sucker	<i>Cycoreptus elongatus</i>	ST	Blues frequent the thalweg of large river systems, in heavy current. Found over cobble and/or bedrock substrates; adults occupy deep riffles (typically 1-2 m depth) in areas of very swift flow.	Potential suitable habitat not present.	No Effect Likely;  Clear Mountain Energy Center LLC will adhere to the TOYR and will not conduct in-water work within perennial streams from March 15 through June 30.
MountainMadtom	<i>Noturus eleutherus</i>	ST	Small to large rivers, in fast-flowing, clear water sections over sand, gravel, and rubble.	Potential suitable habitat not present.	No Effect Likely;  Clear Mountain Energy Center LLC will adhere to the TOYR and will not conduct in-water work within perennial streams from March 15 through June 30.
Channel Darter	<i>Percina copelandi</i>	ST	The Channel Darter inhabits rivers and large creeks in areas of moderate current over sand and gravel substrates. It also occurs in wave swept nearshore areas of lakes Huron and Erie in coarse-sand, fine-gravel beach and sandbar habitats. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely;  Clear Mountain Energy Center LLC will adhere to the TOYR and will not conduct in-water work within perennial streams from March 15 through June 30.
River Darter	<i>Percina shumardi</i>	ST	River Darters inhabit large rivers and lower parts of tributaries; deep chutes and riffles where current is swift and bottom is coarse gravel or rock. Smaller individuals generally occur in slower water than do larger ones. Adults generally at depth of 3 feet or more. May typically spawn at depths of 1.5 feet or a little more in areas of strong current, scattered rubble, and associated clean gravel. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely;  Clear Mountain Energy Center LLC will adhere to the TOYR and will not conduct in-water work within perennial streams from March 15 through June 30.
Paddlefish	<i>Polyodon spathula</i>	ST	American paddlefish are highly mobile and well adapted to living in rivers. They inhabit many types of riverine habitats throughout much of the Mississippi Valley and adjacent Gulf slope drainages. They occur most frequently in deeper, low current areas such as side channels, oxbows, backwater lakes, bayous, and tailwaters below dams.	Potential suitable habitat not present.	No Effect Likely;  Clear Mountain Energy Center LLC will adhere to the TOYR and will not conduct in-water work within perennial streams from March 15 through June 30.
Black Sandshell	<i>Ligumia recta</i>	ST	Black Sandshell is typically found in medium-sized to large rivers in locations with strong current and substrates of coarse sand and gravel with cobbles in water depths from several inches to six feet or more. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
Threehorn Wartyback	<i>Oblivaria reflexa</i>	ST	Threehorn Wartyback prefer medium to large rivers, in slackwater conditions to swift currents, and substrates of gravel to muddy sand. No medium to large rivers are present within the study area. Streams with all of these characteristics do not occur in the Project area.	Potential suitable habitat not present.	No Effect Likely
Fawnfoot	<i>Truncilla donaciformis</i>	ST	Medium to large rivers with sand and mud substrates.	Potential suitable habitat not present.	No Effect Likely
Kirtland's Snake	<i>Clonophis kirtlandii</i>	ST	Kirtland's Snakes are usually found in open wetlands such as wet prairies, prairie fens, wet meadows and marshes, but they also occur in openings or along the edges of forested wetlands and floodplains (e.g., grass/sedge openings in tamarack swamps). These habitats generally have loose, organic rich soil which is well-suited for the fossorial nature of the Kirtland's Snake. This species also has been found in suitable open habitats in or near urban centers or large metropolitan areas such as open, grassy areas in parks, cemeteries, and vacant lots. Kirtland's Snakes are frequently found in burrows or under leaf litter, logs, boards, rocks or other cover objects within their habitats. They hibernate in crayfish or other animal burrows.	Potential suitable habitat present.	Avoid or minimize impacts to wetlands and streams.
Blue Falseindigo	<i>Baptisia australis</i>	SE	Semi-shaded to open habitats along the Ohio River; usually in rocky, gravelly or sandy soil; rich woods, alluvial thickets, bluffs, and rocky ledges	Potential suitable habitat not present.	No Effect Likely
Elliott's Bent Grass	<i>Agrostis elliottiana</i>	SE	Dry, open waste areas, sterile soil, fields.	Potential suitable habitat present.	Potential impacts - further agency coordination recommended.
Red Chokeberry	<i>Aronia arbutifolia</i>	SE	Wet and dry shrubby thickets.	Potential suitable habitat present.	Potential impacts - further agency coordination recommended.
Snowy Campion	<i>Silene nivea</i>	SE	Rich woods and alluvium, disturbed floodplains and streambanks.	Potential suitable habitat present.	Potential impacts - further agency coordination recommended.
Southern Dewberry	<i>Rubus trivialis</i>	SE	Old fields and floodplains.	Potential suitable habitat present.	Potential impacts - further agency coordination recommended.
Sparse-lobed Grape Fern	<i>Botrychium biternatum</i>	SE	Bottoms, ravines, mesic woods and thickets.	Potential suitable habitat not present.	No Effect Likely
Sugarberry	<i>Celtis laevigata</i>	SE	Rich, alluvial soils of floodplains, poorly-drained bottomlands and mesic woods.	Potential suitable habitat not present.	No Effect Likely
Low Spearwort	<i>Ranunculus pusillus</i>	ST	Low spearwort grows in wet habitat, where it is semi-aquatic growing partially submerged or terrestrially on muddy substrates.	Potential suitable habitat present.	Avoid or minimize impacts to wetlands, ponds, and streams.
Missouri Gooseberry	<i>Ribes missouriense</i>	ST	Moist or dry, open to semi-open situations: upland woods, woods borders, thickets, fencerows, and on bluffs of streams.	Potential suitable habitat present.	Potential impacts - further agency coordination recommended.
Potato-dandelion	<i>Krigia dandelion</i>	ST	Open oak woods and prairies, usually in moist sandy soils.	Potential suitable habitat not present.	No Effect Likely
Riverbank Paspalum	<i>Paspalum repens</i>	ST	Shallow water or wet muddy soils; margins of temporary pools, riverbanks and riverine woodlands.	Potential suitable habitat present.	Avoid or minimize impacts to wetlands and streams.
Screw-stem	<i>Bartonia paniculata</i>	ST	Meadows with acidic seepage.	Potential suitable habitat not present.	No Effect Likely

Notes:

- 1
  - BCC = Bird of Conservation Concern
  - BGEPA = Bald and Golden Eagle Protection Act
  - MBTA = Migratory Bird Treaty Act
  - FE = Federal Endangered
  - FT = Federal Threatened
  - C = Federal Candidate
  - PFE = Proposed Federal Endangered
  - SE = State Endangered
  - ST = State Threatened
  - SP = State Potentially Threatened
- 2
  - TOYR = Time of Year Restrictions
- 3
  - The U.S. Fish and Wildlife Service (USFWS) has removed running buffalo clover (*Trifolium stoloniferum*) from the Federal List of Endangered and Threatened Plants on the basis of recovery since the initial coordination for this Project occurred.



## **ATTACHMENT 7 – SUPPLEMENTAL HABITAT PHOTOGRAPHS**

## Supplemental Representative Photographs of Habitats



Palustrine Forested Wetland



Palustrine Forested Wetland

**This foregoing document was electronically filed with the Public Utilities  
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**in**

**Case No(s). 23-0045-EL-BGN**

Summary: Application Exhibit D – Vegetation Management Plan electronically filed  
by Teresa Orahod on behalf of Herrnstein, Kara.