Clearview Solar I, LLC

Clearview Solar

Exhibit Q

Ecology Impact Assessment

Case No. 20-1362-EL-BGN

Ecology Impact Assessment

Clearview Solar I, LLC

Clearview Solar Project

December 2020

E318305307

Document Information

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Acronyms

DOW	Division of Wildlife
DWR	Division of Water
FSA	Farm Service Agency
IPaC	Information Planning and Consultation (tool)
MRLC	Multi-Resolution Land Characteristics Consortium
MW	megawatt
MWH	modified warm water habitat
NHD	National Hydrography Dataset
NLDC	National Land Cover Database
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
ODNR	Ohio Department of Natural Resources
Project	Clearview Solar Project
PV	photovoltaic
RTE	rare, threatened, and endangered (species)
SMS	solar meteorological stations
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States

1. Introduction

Clearview Solar I, LLC (Clearview) is proposing to construct and operate the Clearview Solar Project (Project) near Rosewood, Ohio, which is located approximately 36 miles north of Dayton. The Project is proposed as a 144 megawatt (MW) solar project within an area of approximately 1,186 acres (1.85 square miles) on leased private lands and easements (Project Area) in Adams Township, Champaign County, Ohio. An overview of the Project Area is shown in Figure 1.1 and location as Figure 1.2 below.

The basic infrastructure of the Project will include components such as solar panels mounted on metal racking affixed to metal posts driven into the ground ("arrays"), inverter pads supporting inverters that convert direct current (DC) electricity to alternating current (AC), buried collection lines transporting AC electricity to the project substation, a project substation including transformers and switchgear, a generation tie line connecting the project substation to a new utility substation, pyranometer station(s) used to measure solar irradiance and meteorological conditions, grass or gravel access roads, and temporary equipment laydown areas used for parking and temporary equipment staging during construction

The report is accompanied by Appendix A: Project Area Figures; Appendix B: Agency Coordination, and Appendix C: Project Impact Tables.

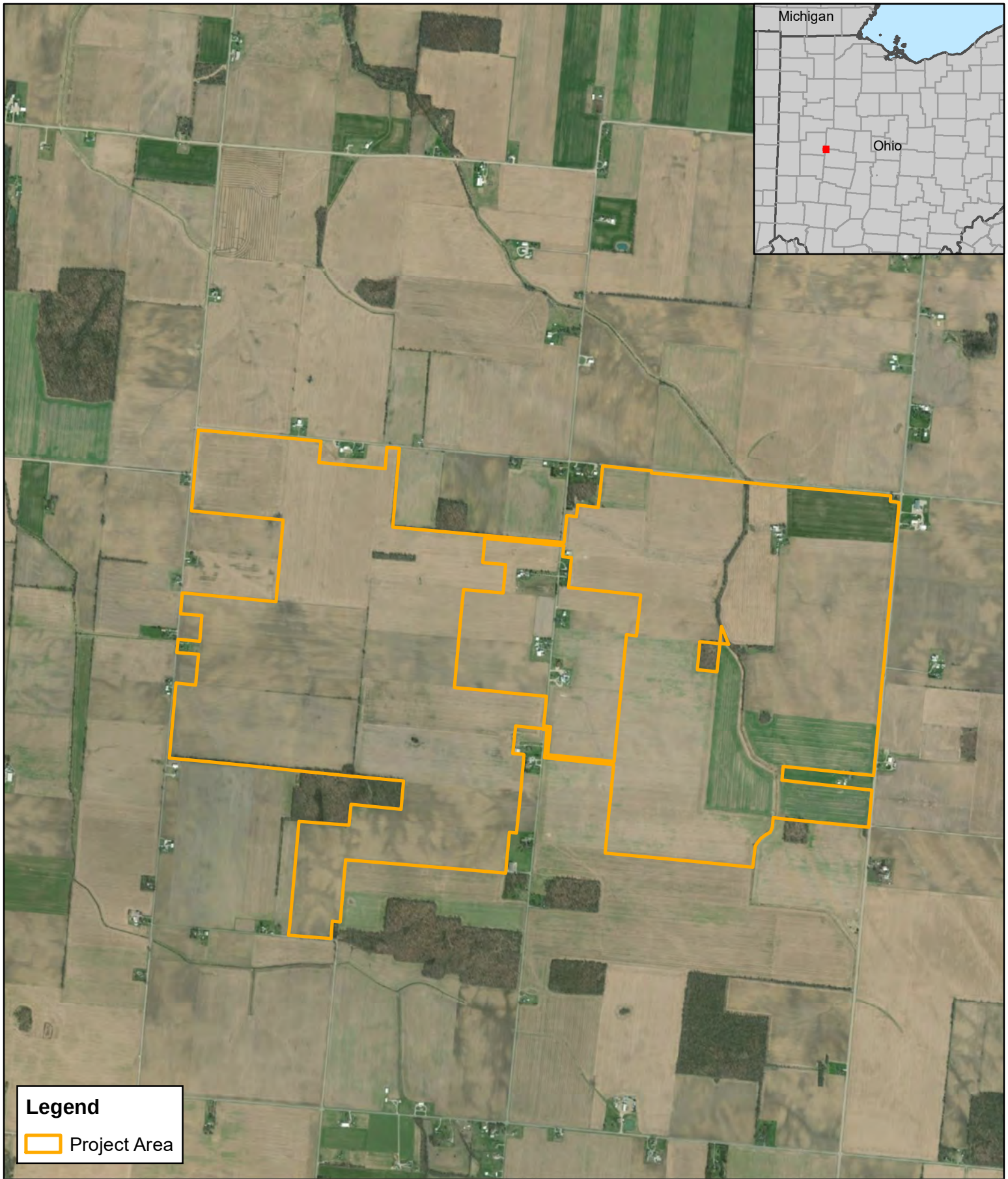

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Figure 1.1 - Aerial Overview

Clearview Solar Project
Champaign County, Ohio

0 1,000 2,000 3,000 4,000 5,000 Feet

0 300 600 900 1,200 1,500 Meters

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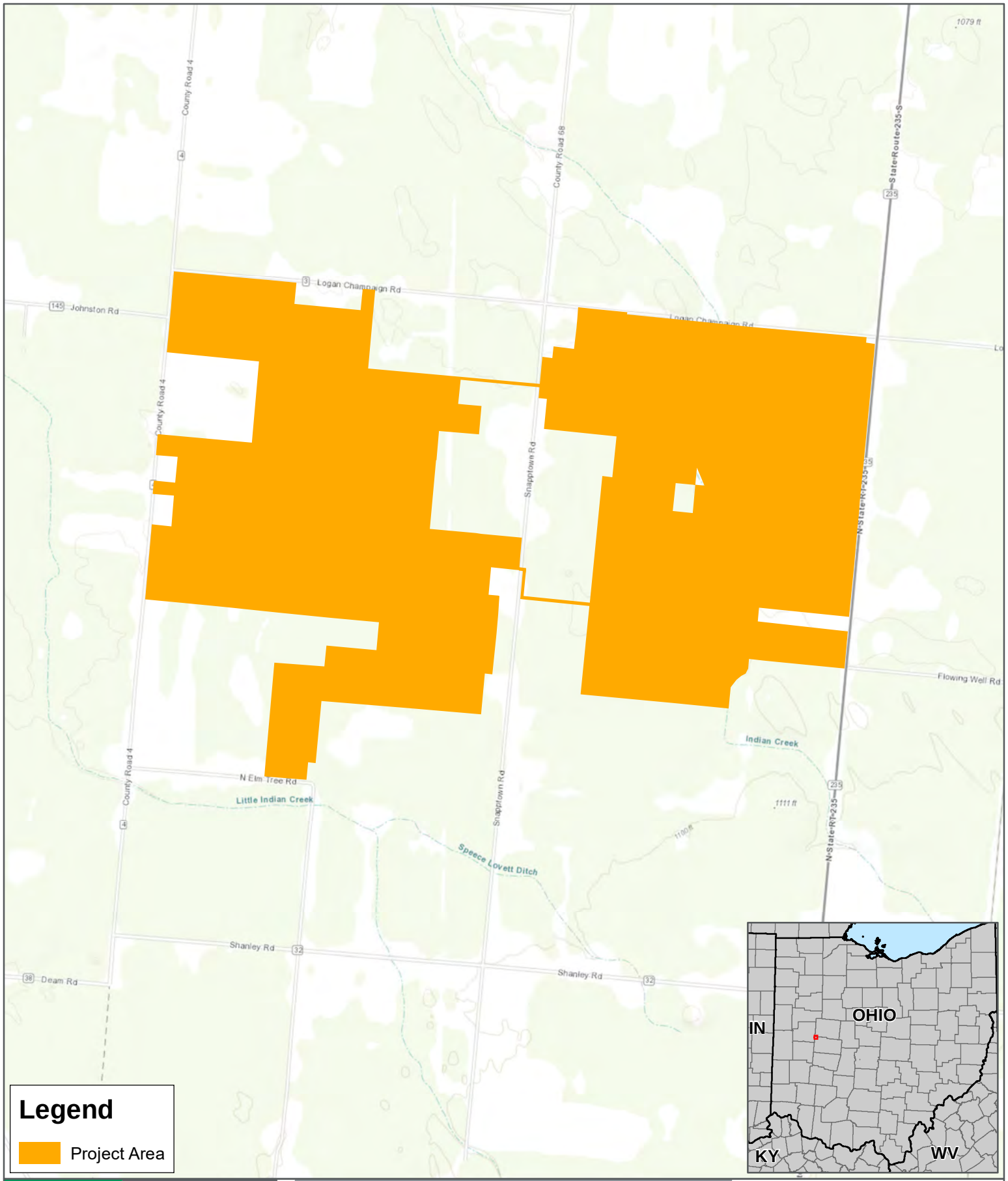
Date Created: 12/8/2020 Date Revised: 12/8/2020 File Path: S:\GIS\Open_Road_Renewables\Clearview_Solar_Farm\MXD\Ecological Assessment\Figure 1.1 - Aerial Overview.mxd
GIS Analyst: Peter.Marsey



Legend

Project Area

N

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Figure 1.2 - Project Overview

Clearview Solar Project
Champaign County, Ohio

0 1,000 2,000 3,000 4,000 5,000 Feet

0 500 1,000 1,500 Meters

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Date Created: 12/8/2020 Date Revised: 12/8/2020 File Path: S:\GIS\Open_Road_Renewables\Clearview_Solar_Farm\MXD\Ecological Assessment\Figure 1.2 - Project Overview.mxd
GIS Analyst: Peter.Marsey

2. Site Conditions

2.1 Land Use

The land use types within the Project Area are based on data provided by the Multi-Resolution Land Characteristics Consortium (MRLC), from the 2011 National Land Cover Database, amended 2016 (NLCD 2016). The Project Area is dominated by Agricultural (cultivated crops), which accounts for approximately 98.9% (1,174.6 acres) of the total Project Area acreage. The second most prominent land use within the Project Area is classified as Developed, Open Space and mostly occurs as residential lawns, which account for approximately 1% (11.8 acres) of the Project Area. All other land use categories account for less than 1% of the total acreage in the Project Area. Table 1 identifies the complete land use categories within the Project Area, and is depicted on the Land Use Map (Figure A-1, in Appendix A – Project Figures).

Table 1. Land Use within the Project Area

Type	Project Area (acres)	Project Area (%)
Agriculture, Cultivated Crops	1,170.63	98.8%
Developed, Open Space	11.91	1.0%
Deciduous Forest	2.19	0.2%
Woody Wetlands	0.33	< 0.01%
Developed, Low Intensity	0.33	< 0.01%
Grassland/Herbaceous	0.06	< 0.01%
Total	1,185.45	**100.0%**

Source: Compiled from NLCD 2016

1.1.1 Agricultural Conversion Considerations

The Project Area currently is primarily used as active agricultural lands (99%). Upon construction of the proposed Project, most of the Project Area land will no longer be available for agricultural use, resulting in a temporary conversion to a commercial solar field.

The temporary conversion of agricultural fields to the Project is expected to have a negligible environmental impact. Agriculture fields provide minimal habitat for floral and faunal communities, and are disturbed on a seasonal and/or annual basis by farming activities such as planting and harvesting. Although the Project will similarly provide minimal habitat, it will not be intensely disturbed on a regular basis. The temporary conversion of land use could create a different species mix within the Project Area. Faunal species tolerant of an agricultural field could likely be tolerant of a solar field, as both are managed land. There is not expected to be a significant loss of vegetation in these open areas, as the solar fields will consist of low growing grasses between and underneath the solar arrays. It is our understanding that the Project's ground surface will be managed to be stable and maintained to create ground cover. This will result in less runoff and sedimentation to local waterbodies in comparison to the existing agricultural fields.

It is our understanding that Clearview Solar will implement a vegetation management plan for the Project to maintain the vegetation growth within the solar fields after construction. This plan would include invasive species management, clearing methods, and adherence to other industry standards for maintaining the grounds within the solar array fence line.

Outside the fence line, any large unused areas would be retained by the land owner for its continued use (likely agriculture), and in other areas (primarily too small to farm) lands may be used to support the Pollinator Habitat Initiative. The Pollinator Habitat Initiative works with the USDA (United States Department of Agriculture) Farm Service Agency (FSA) to develop and maintain CP42-Pollinator Habitat, which is maintained as part of the operation of solar projects in select locations. If Clearview Solar selectively uses pollinator habitat or similar low growing grasses to stabilize the sediment in these margins, such as those recommended by the Ohio Pollinator Habitat Scorecard, the Project will provide a diversity of pollinator-friendly wildflowers throughout the seasons.[1] Enrolling pollinator areas previously used for agriculture may result in a net benefit environmentally.

2.2 Soils

Project soil information was obtained from the Web Soil Survey, an application of the NRCS, and from the Soil Survey of Champaign County, Ohio. The dominant soil types were Brookston silty clay loam (0 to 2 percent slopes, fine textured 0 to 2 percent slopes and 2 to 6 percent slopes), accounting for 49% (588.2 acres) of the Project Area and Crosby silty clay loam (0 to 2 percent slopes and 2 to 6 percent slopes), accounting for 40% (369.7 acres) of the Project Area. The other remaining soils accounted for smaller portions of the Project Area. In general, the soils were considered prime farmland if drained properly, although poor drainage and permeability limits the use of subsurface drainage features (such as tiles). Soil series within the Project Area were identified as low slope, which matched topographic and aerial maps. Table 2 identifies a complete list of soils found within the Project Area, and is depicted on the Soils Map (Figure A-2, in Appendix A – Project Figures). A complete evaluation of soil conditions is provided as a separate Habitat Assessment Report, dated September 2020.

Table 2. Soils within the Project Area

Type	Map Unit Description	Hydric Rating	Acreage	Project Area (%)
BsA	Brookston silty clay loam, fine texture, 0 to 2 percent slopes	90	588.24	49.5%
CrA	Crosby silt loam, Southern Ohio Till Plain, 0 to 2 percent slopes	5	369.65	31.1%
CrB	Crosby silt loam, Southern Ohio Till Plain, 2 to 6 percent slopes	5	107.33	9.0%
CnB	Celina silt loam, 2 to 6 percent slopes	10	56.09	4.7%
MlB	Miami silt loam, 2 to 6 percent slopes	5	24.29	2.0%
MnB	Miamian silt loam, 2 to 6 percent slopes	5	13.48	1.1%
MlC2	Miami silt loam, 6 to 12 percent slopes, moderately eroded	5	11.25	0.9%
BsB	Brookston silty clay loam, 2 to 6 percent slopes	100	9.12	0.8%
MnC2	Miamian silt loam, 6 to 12 percent slopes, moderately eroded	0	3.41	0.3%
Sh	Shoals silt loam, 0 to 2 percent slopes, frequently flooded, brief duration	4	2.58	0.2%
CnC2	Celina silt loam, 6 to 12 percent slopes, moderately eroded	5	2.40	0.2%
Pa	Patton silty clay loam, 0 to 2 percent slopes	80	1.48	0.1%
Total			**1,189.36**	**100.0%**

[1] https://www.fsa.usda.gov/Internet/FSA_File/cp42_habitat.pdf

Type	Map Unit Description	Hydric Rating	Acreage	Project Area (%)

Source: Compiled from NLCD 2011, amended 2016

2.3 Listed Species Desktop Review

Information on the existing wildlife in the Project Area was obtained from a variety of sources, including publicly available data from Federal and State agencies. Federal and state species listing summaries are provided below, and a complete evaluation of the current vegetative communities and potential wildlife species and their habitat within the Project Area is provided as a separate report.

2.3.1 Federal Listings

The Endangered Species Act and Ohio Department of Natural Resources (ODNR) regulations protect species that are listed as threatened or endangered. Significant changes to the habitats of these species, or projects that will result in "take," would require special permitting from the United States Fish and Wildlife Service (USFWS). The USFWS lists Federally-listed species by County (USFWS, 2018). The lists for Champaign County, Ohio include the Indiana bat (*Myotis sodalis*), eastern massasauga (*Sistrurus catenatus*), and the northern long-eared bat (*Myotis septentrionalis*). USFWS's Information Planning and Consultation tool states that there are no identified critical habitats for sensitive species in the Project Area. The IPaC report also provides a list of seven migratory birds that could potentially be affected by activities in the Project Area, although it is unlikely that any species will be affected by this Project.

Cardno conducted a desktop evaluation for potential available bat habitat in the Project Area. This included a review of habitat-based variables such as the amount of suitable foraging and roosting habitat, number of natural areas, number of perennial streams, and number of human developments.

2.3.2 State Listings

Cardno reviewed the available ODNR Division of Wildlife (DOW) State species listings from two sources: ODNR DOW's Ohio's Listed Species report, updated July 2018 (ODNR, 2018) and ODNR's State-Listed Plant and Wildlife Species by County, updated March 2020 (ODNR 2020), for Champaign County. State threatened and endangered species include a variety of amphibian, insect, bird, fish, reptile, mammal, and mussel species.

The majority of the State-listed species that may occur in the Project Area are expected to inhabit wetlands and streams. The relative narrowness of the woodlots and fragmentation of wooded habitats by roads, residential land use, and farm fields reduces the likelihood of significant wildlife occurring in the Project Area. It is unlikely that the habitats are well-developed enough within the Project Area due to constant disturbance and existing habitat fragmentation. The Project could minimize any potential impacts to the habitats that may support significant wildlife by avoiding the majority of woodlots and surface disturbance of the one stream in the Project Area. Where possible, micro-siting of the Project infrastructure can be further used to reduce or avoid potential impacts.

3. Agency Consultation

3.1 U.S. Fish and Wildlife Service

On behalf of Clearview Solar, Cardno submitted an Environmental Review request to the USFWS on March 4, 2020. The USFWS responded on March 20, 2020. The USFWS stated that there are no federal wildlife areas, wildlife refuges or critical species habitats located in or around the Project Area. It addressed the potential for the presence of the federally endangered Indiana Bat (*myotis sodalis*) and the federally

threatened Northern Long-eared Bat (*myotis septentrionalis*) in the Project Area. The USFWS recommends that, if a substantial amount of forest clearing is undertaken as part of the Project, summer surveys be conducted to identify the presence or absence of this species.

No other adverse effects to federally endangered, threatened, or sensitive species are anticipated by USFWS. USFWS recommends minimizing any impacts to waterbodies or wetlands. It is our understanding that Clearview Solar intends to minimize tree clearing where possible and adhere to seasonal restrictions on tree clearing (e.g., cutting trees only between October and March) to avoid any potential effect on the Indiana bat, or as conditions specify.

3.2 Ohio Department of Natural Resources

On behalf of Clearview Solar, Cardno also submitted an Environmental Review request to the ODNR on February 28, 2020. ODNR provided a response dated April 3, 2020. ODNR's response was based an inter-disciplinary review, including input from the Ohio Natural Heritage Database (ONHD), DOW, and the Division of Water Resources (DWR). ONHD databases have no records of sensitive species at or within a one-mile radius of the Project Area.

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 (BMPs) be utilized to minimize erosion and sedimentation. The DOW also commented that the Project is within range of the Indiana bat. The DOW recommends that if suitable habitat is located in the Project Area, Indiana bat roost trees be conserved. The DOW recommends that, if suitable habitat occurs within the Project Area and cutting of such suitable habitat is necessary, then any cutting occur between October 1 and March 31. If tree removal is to occur during the summer months, the DOW recommends net surveys be conducted prior to cutting.

The DOW notes that the Project Area is within range of two state endangered mussel species: the Rayed bean (*Villosa fabalis*) and the clubshell (*Pleurobema clava*). Due to the lack of perennial streams of sufficient size within the Project Area, impacts to these species are not likely.

It also advises that the Project Area is within the range of two state threatened fish species: the Lake chubsucker (*Erimyzon sucetta*) and the Tonguetied minnow (*Exoglossum laurae*). The DOW recommends that there be no in-water work in any perennial steams from April 15 through June 30 to reduce any potential impacts to these species. If no in-water work is planned to perennial streams, impacts to these species are not likely.

According to the DOW, the Project Area is within the range of the Eastern massasauga (*Sistrurus catenatus*), a state endangered and federally threatened snake species. Due to the Project location and type of habitat existing in the area, impacts to this species are not likely.

It notes that the Project Area also is within the range of the Spotted turtle (*Clemmys guttata*), a state threatened species. Due to the Project location and type of habitat existing in the area, impacts to this species are not likely.

Per the DOW, the Project Area is within the range of the Kirtland's snake (*Clonophis kirtlandii*), a state threatened species. Due to the Project location and type of habitat existing in the area, impacts to this species from the Project are not likely.

Finally, the DOW advises that the Project is within the range of the Upland sandpiper (*Bartramia longicauda*), a state endangered bird. This species nests in areas of dry grasslands, pastures and hayfields and so it is advisable that if these types of habitat are to be impacted, construction be avoided between April 15 and July 31. These types of habitats do not exist in the Project Area, and so impacts to this species are not likely.

The DWR recommended contacting the local floodplain administrator concerning the possible need for any floodplain permits or approvals for this Project.

Agency Correspondence is provided as Appendix B.

4. Pre-Construction Surveys

4.1 Wetland and Surface Water Resources

Prior to the field surveys, the Project Area was screened using the USFWS National Wetlands Inventory (NWI), United States Geological Survey (USGS) National Hydrography Dataset (NHD), and ODNR remote data for potential wetlands and surface waters in the Project Area. The NWI data shows remotely identified wetlands, which may be based on previous aerial imagery interpretation and soils surveys, while the NHD uses digital stream information to identify potential waterways. Details describing the wetland and waterbody desktop review, field delineation methods, and field delineation results have been provided in a separate report, the results of are briefly summarized below.

One stream was identified in the Project Area during field surveys in the fall of 2019. This singular, perennial waterbody was identified as a portion of Indian Creek and is considered a jurisdictional feature due to its hydrological connectivity to a potential Waters of the U.S. (WOTUS). It was considered to have a moderate potential for RTE habitat and is classified as a modified warm water habitat (MWH). Details of the delineated waterbody is found in Table 3.

During field efforts, only two wetlands (both palustrine forested wetlands) were identified in the Project Area, and these were delineated to be a total of 0.66 acres. Both of these wetlands were considered Category 2, with one of them anticipated to be jurisdictional due to potential connectivity to a WOTUS. One is a small forested wetland next to Indian Creek and the other is an isolated forest wetland that extended outside the Project area. Details of the delineated wetlands are found in Table 4.

4.2 Habitat Assessment

Wildlife within the Project Area could potentially use the area for foraging, migratory stopover, breeding and/or shelter. Based on the current land use, species present in the vicinity of the Project Area are primarily associated with agricultural fields, minimal windrows and isolated wooded lots, and potential wetland areas. The agricultural crops consist primarily of corn and soy. The outskirts of the Project Area have isolated wood lots and windrows existing between agricultural areas. The windrows consist of narrow forested strips between cultivated areas, ranging in width from 30 to 75 feet. Wood lots within the Project Area were often much deeper, but surrounded by cultivated areas. The remaining land was disturbed and developed, mostly associated with residences, manicured lawns, and both paved and unpaved roadways.

Cardno observed no evidence of bat activity during the field surveys. Additionally, there are no publicly available records of known bat habitat in the Project Area or its ¼-mile buffer. The small number of woodlots in the Project Corridor provide limited roosting habitat for bats. However, the actual utilization of available habitat could not be determined by Cardno field staff as surveys were conducted during daylight hours when bats are generally not active.

Additionally, the Cardno team conducted presence/absence surveys of freshwater mussels within the field-delineated streams. Only one stream was identified and delineated in the Project Area. Field teams rate the field-delineated streams for their potential for RTE habitat as low, moderate or high. The identified stream, S01, was considered to be of moderate quality and appeared to have a slightly higher potential for providing habitat for mussel or snake species. This stream was observed to be a part of the agricultural drainage systems in the area and exhibited maintained stream banks that are unlikely to provide suitable habitat for rare fish and freshwater mussels. Mussels prefer streams with well-developed banks and forested buffer areas that provide ample locations for the mussels to adhere. No mussel populations were observed in the single stream that exists in the Project Area. If the Project includes surface crossings of

this stream, a professional mussel surveyor could be retained to provide a targeted assessment of the potentially impacted area.

Table 3. Waterbody Delineation Results within the Project Area

Stream ID	Type	Linear Feet	HHEI Score	QHEI Score	PHWH Class	Flow Regime	Drainage Basin	Stream Name	Anticipated Jurisd.	Pot. RTE Habitat	Mussels	SRW	WWH	EWH	MWH	SSH	CWH	LRW	PWS	AWS	IWS	BW	PCR	SCR
S01	Stream	8,051	47.50	N/A	N/A	Perennial	Indian Creek	Indian Creek	Yes	No	No				X					X	X		X	
Total Linear Feet		**8,051**																						

Table 4. Wetland Delineation Results within the Project Area

Wetland ID	Latitude of Center Point	Longitude of Center Point	Acres	Wetland Type	ORAM Score	Wetland Category	Anticipated Jurisdictional	Drainage Basin
W01	40.263863	-84.983421	0.05	PFO	32	2	Yes	Indian Creek
W02	40.258408	-84.005570	0.61	PFO	59	2	No	Indian Creek
		Total Acreage	**0.66**					

PEM – Palustrine Forested Wetland
ORAM – Ohio Rapid Assessment Method

5. Estimated Project Impacts

5.1 Project Infrastructure Summary

The proposed Project infrastructure will consist of the fence line, photovoltaic (PV) panel arrays, electrical collection lines, inverters, access roads, a substation and laydown yards. The Project is anticipated to temporarily impact up to 38 acres during construction and permanently impact up to 28 acres during operation, of up to 964 acres of solar infrastructure. The total acres of permanent impact may be reduced with revised Project siting and micro-siting of facilities to further minimize or avoid potential impacts.

The Clearview Solar will generally consist of the following infrastructure:

- Solar Panels
    - PV panels will be mounted on racking that is either fixed tilt or single-axis tracking, with a maximum operational height of up to 15 feet high at highest point
    - Panels will be grouped into a series of circuits (strings or rows)
    - Panel support piles less than 1 square foot (s.f.) of surface impact each, directly driven 5 to 10 feet below ground surface (up to 72,360 piles, or up to 1.5 acre total spread across 864-acre array area)
    - 20 to 30 feet of open space between rows
- Project Substation and Support Facilities:
    - Up to 9.0 acre permanent impacts for the Project Substation, O&M, parking areas and other supporting infrastructure. There are no anticipated temporary impacts
    - Up to 14.14 miles of security fencing and access gates, enclosing an area of approximately 964.1 acres
- Inverters
    - There are 61 proposed central inverters, each to be located within an up to 2800 s.f. gravel area, some of which may include one of six on-site solar meteorological stations (SMSs or pyranometer), which would consist of irradiance (solar energy) meters as well as air temperature and wind meters
    - Up to approximately 3.3 acres of permanent impacts
- Collection and Communication Lines
    - Up to 9.84 miles of linear impacts for burying cable, 40-foot wide temporary work area (34.84 acres)
    - MV and DC lines buried according to National Electric Code standards
- Access Roads
    - Up to 8.5 miles of access road
    - Access roads will have an impact width of up to 25 feet during construction to accommodate locations requiring cut and fill or clearance for two delivery vehicles. Permanent impacts from access roads will consist of a maintained 16 feet wide access roads post-construction.

    - Approximately 8.9 acres of temporary impacts and 16.2 acres of permanent impacts from access roads

- Equipment Laydown Areas
    - These staging areas may be covered with timber matting, gravel with an under lay of geosynthetic fabric, or other suitable material to separate the native soil from the construction materials.
    - Approximately 10.3 acres of temporary impacts and up-to 10.3 acres of permanent impacts if laydown areas are retained for operations and maintenance activities.

Table 5-1 provides a summary of the reviewed and proposed infrastructure.

Table 5-1 Summary of Proposed Clearview Solar Project Permanent Infrastructure

Features	Maximum Values
Project Generation Capacity	144 MW
Project Area	1,185 acres
Solar Arrays	864 acres
Solar Array Piles	1.47 acre
Supporting Facilities**	10.0 acres
Collection Lines (buried)	0 acres (all buried) (9.84 miles)
Permanent Access Roads (gravel-covered)	16.5 acres (8.5 miles)

*Project impact acres have been rounded up to the nearest 10th of an acre

** Supporting facilities include Project substation, SCADA structure, transmission infrastructure, and parking

5.2 Natural Resources Impacts Summary

Overall, the Clearview Solar Project will likely have limited environmental impacts, in part due to the minimization of potential impacts to habitats that may support significant wildlife by avoiding all woodlots. Impacts to trees are limited to windrows and other isolated woody vegetation. No high quality streams are anticipated to be impacted. The Project is proposed to be primarily built on land that has already been disturbed seasonally/annually for agriculture with limited identified habitat of significant value to RTE species and other wildlife. The Project's most significant ground disturbance will come from the temporary conversion of agricultural land to land to be used for the solar panel arrays (up to 864 acres) and associated infrastructure.

The temporary conversion of agricultural field to solar panels is expected to have a negligible environmental impact. Agriculture fields provide minimal habitat for floral and faunal communities, and are disturbed on a seasonal and/or annual basis by farming activities such as plowing, planting, and harvesting. Solar projects would similarly provide minimal habitat, but would not be intensely disturbed on a regular basis. A temporary conversion of land use could create different species mix within the Project Area. Faunal species tolerant of an agricultural field could likely be tolerant of a solar field, as both are managed land. This is not expected to cause significant loss of vegetation in these open areas, as the solar fields will consist of low growing grasses between and underneath the solar arrays. Generally, ground surface under the solar panels is managed to be stable and maintained to create ground cover, which will have less runoff and sedimentation to local waterbodies in comparison to an agricultural field. Solar fields are also managed to stabilize the surrounding area to reduce soiling of the solar PV panels, which can come from dust, snow, and other particles that can settle on the array

The Project has been designed to avoid and minimize impacts to wetlands, waterbodies, woodlots, and aquatic and terrestrial wildlife species where possible. When the proposed Project is decommissioned, the landscape can be returned to its previous agricultural condition.

A summary of potential impacts to existing environmental features within the Project Area are presented in Tables 5-2 and 5-3. These anticipated impacts are based on current up to 964-acre design layout. This design layout has minimized impacts to resources, has minimized tree clearing, and has avoided all permanent impacts to wetlands and waterbodies within the Project Area.

Table 5-2 Summary of Proposed Clearview Solar Project Temporary Impacts

Impact Type	Upland Soil (acres)	Forested Uplands (Tree Clearing) (acres)	Wetland (acres)	Streams (acres)	Streams (linear feet)	Ponds (acres)
Access Roads	8.84	0.00	0.00	0.000	0	0
Collection Line	34.84	0.09	0.00	0.01	40	0
Equipment Lay Down Area	10.22	0	0	0	0	0
Substation	0.00	0	0	0	0	0
Array Pilings	0	0	0	0	0	0
Inverter Pads	0	0	0	0		0
Gen-Tie Line	0	0	0	0		0
Totals	***53.90***	***0.95***	***0.00***	***0.01***	***40***	***0***

Table 5-3 Summary of Proposed Clearview Solar Project Permanent Impacts

Impact Type	Upland Soil (acres)	Forested Uplands (Tree Clearing) (acres)	Wetland (acres)	Streams (acres)	Streams (linear feet)	Ponds (acres)
Access Roads	16.17	0.00	0.00	0.00	0	0
Collection Line	0	0	0	0	0	0
Equipment Lay Down Area	0	0	0	0		0
Substation	8.99	0	0	0	0	0
Array Pilings	1.5	0	0	0		0
Inverter Pads	0.92	0	0	0		0
Gen-Tie Line	0	0	0	0		0
Totals	***27.58***	***0.00***	***0.00***	***0.00***		***0***

5.2.1 Land Use

The Project Area primarily consists of active agricultural lands (98.8%), developed, open space (1.0%) with the wooded areas of the Project Area occurring as isolated woodlots, windrows between crop areas and along roads (0.2%). The most significant impact will come from the temporary conversion of agricultural land to accommodate solar panel arrays. The temporary conversion from agricultural lands to solar project is expected to have a negligible environmental impact because agriculture fields provide minimal habitat for floral and faunal communities. Additionally, the proposed row spacing, elevation of the solar panels above the ground, and low-impact pilings will allow for managed vegetation beneath the array for erosion control, simultaneously providing a habitat similar to planted agricultural fields.

5.2.2 Uplands

Solar projects require significant areas of land for the solar panel arrays and associated infrastructure. This Project will locate almost all the infrastructure on uplands, minimizing impacts to surface waters. Impacts to upland soils and tree clearing are discussed below.

5.2.2.1 Soil

The majority of impacts to the Project Area will occur as a result of upland soil disturbance for construction of supporting infrastructure, both temporary (53.9 acres) and permanent (27.6 acres). Solar panels are supported by pilings in the ground. Each support will be directly driven 5 to 10 feet below the ground, with a footprint of less than 1 s.f. each. Approximately 72,360 pilings will total 1.5 acres, spread across the 864 acres of panel arrays. Support infrastructure, including up to 6 pyranometer stations (1 s.f. each, 6 s.f. total), inverter pads (up to 61 total, up to 3.3 acre total), access roads (16.2 acre) and a Project Substation with supporting infrastructure (9.0 acre) are all included as maximum permanent upland soil impacts.

5.2.2.2 Forested Uplands/Tree Clearing

Forested areas within the Project Area will be preserved where possible, however, Clearview Solar anticipates the need to clear select windrows and other woody vegetation in order to construct and operate the Project. Less than 1 acre of woody vegetation is anticipated to be cleared for the installation of collection lines. The windrows within the Project Area provide minimal habitat and were used as historical property boundaries.

Clearview Solar is committed to minimizing tree clearing and observing seasonal tree clearing restrictions designed to protect Indiana bat (e.g., cutting trees only between October 1 and March 31). Timber and other vegetative debris may be chipped for use as erosion control, mulch or otherwise disposed of, in accordance with applicable local regulations and landowner preferences.

5.2.3 Wetlands and Waterbodies

Cardno delineated two wetlands during field surveys, for a total of 0.59 acres of wetlands within the Project Area, both categorized as forested. One wetland (W01) was categorized as potentially jurisdiction and scored as lower quality wetlands on the ORAM. The current Project layout causes no impacts to wetlands.

One waterbody was delineated within the Project Area. Based on desktop analysis, the waterbody identified was expected to be highly impacted by the surrounding land use. Due to the modification and disturbance present in the surrounding area, the waterbody is not likely to serve as habitat for any RTE species. Frequently a waterbody may be able to provide physical habitat, but lack suitable water chemistry due to intensive land use in the upland areas. The current Project layout aims to minimize impacts to the waterbody, requiring less than 0.01 acres of temporary impact for installation of collection lines.

Through careful design and avoidance measures, Clearview Solar anticipates minimal permanent impacts to delineated wetlands or waterbodies within the Project Area, with up to 0.01 acres of impact for collection lines. Detailed tables of anticipated wetland and waterbody impacts, and proposed construction methods

are provided in Appendix C, Wetland and Waterbody Impact Tables, and illustrated in Figure A-4, Impact Figures.

Final array and layout designs are not finalized, but based on preliminary work, up to 8.4 miles of new permanent gravel roads will be installed for construction, operation, and maintenance of the Project, and are not anticipated to impact any wetlands or waterbodies.

In addition to the above-mentioned measures, Clearview will obtain coverage under the NPDES CGP for construction activities over 1 acre, to prevent adverse effects from construction-related stormwater runoff. Additionally, Clearview will prepare a SWP3 incorporating the most appropriate SESC measures and BMPs to ensure surface waters in proximity to Project disturbance areas are not impacted. Surface waters within the Project Area will not be used during or for construction of the Project; however, water may be brought to the Project Area or groundwater wells may be used if needed. Clearview plans to restore all disturbed waterbodies from construction to pre-construction conditions.

As construction and operation of the Project does not require the withdrawal of local source water, there are no expected impacts to water users anticipated as a result of Project.

5.2.4 Aquatic and Wildlife Resources

The Project would not significantly impact wildlife or wildlife habitat. Information on the existing wildlife in the Project Area was obtained from a variety of sources, including observations during site surveys and publicly available data from Federal and State agencies. Wildlife within the Project Area could potentially utilize the site habitat for foraging, migratory stopover, breeding, and/or shelter. Based on the current land use, species present in the Project vicinity are primarily associated with agricultural fields, pasture grasslands, isolated wooded lots, and wetland areas. Typical wildlife species observed during the field delineations included evidence of white-tailed deer and common woodland and grassland songbirds.

Typical construction-related impacts to wildlife include incidental injury and mortality of juvenile and/or slow moving animals (e.g., salamanders, turtles, etc.) due to construction activity and vehicular movement; construction-related silt and sedimentation impacts on aquatic organisms; habitat disturbance/loss associated with clearing and earthmoving activities; and displacement of wildlife due to increased noise and human activities. However, the Project has been sited to avoid and/or minimize such impacts. The Project has been designed to locate the majority of infrastructure within active agricultural land, which only provides habitat for a limited number of wildlife species. The few birds and mammals that may forage within these fields should be able to vacate areas that are being disturbed by construction. On a landscape scale, there is abundant availability of similar agricultural fields within the vicinity of the Project Area.

5.2.5 Threatened and Endangered Species

The Project Area and ¼-mile buffer are not known to provide permanent habitat for sensitive bird, bat, or freshwater mussel species.

Due to the lack of adequate habitat in the immediate Project Area, it is likely many of the individuals would opt for higher quality habitat nearby such as Wildlife Areas or State Parks for roosting, foraging and breeding. Clearview has prioritized avoidance measures for sensitive habitats, such as minimizing habitat fragmentation, siting infrastructure in uplands rather than wetlands, and minimizing perennial stream crossings. Based on current Project designs, significant impacts to these habitats are not anticipated.

5.2.6 Disposal of Plant-Generated Wastes

The storage and use of fuel, lubricants, and other fluids could create a potential contamination hazard during Project construction. The impact of leaks and spills will be minimized or avoided by restricting the location of refueling activities and by requiring immediate cleanup of spills and leaks of hazardous materials. Construction equipment will be maintained regularly, and the source of any leaks will be identified and

repaired immediately. Any soil contaminated by fuel or oil spills would be removed and disposed of at an approved disposal site.

Temporary portable sanitary facilities would be installed during construction and sanitary wastes would be disposed of by a contractor.

Project construction will generate some solid waste, primarily plastic, wood, cardboard and metal packing/packaging materials, construction scrap, and general refuse. Construction waste will be collected and disposed of in dumpsters located at the laydown areas. The dumpsters will be emptied on an as needed basis and dispose materials at a licensed solid waste disposal facility. Waste volumes are expected to be minimal and will not affect local waste disposal facilities.

As indicated above, staff will monitor Project operations from an off-site location, and conduct periodic cleaning and on-site maintenance procedures, as needed. The minimal wastes generated from these activities will be removed from the Project site and disposed of in accordance with federal, state, and local regulations.

6. References

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Clearview Solar Project

APPENDIX A

PROJECT FIGURES

Data Source(s): Open Road (2019)
County Boundaries, Railroads:
ESRI Data and Maps (2014)
Township and City Boundaries
Ohio DOT (2010)
Land Use: National Land Cover
Database (2011, 2014)
Roads: U.S. Census Bureau Tiger
Files (2018)

Figure A-1 - Land Use

Clearview Solar Project
Champaign County, Ohio

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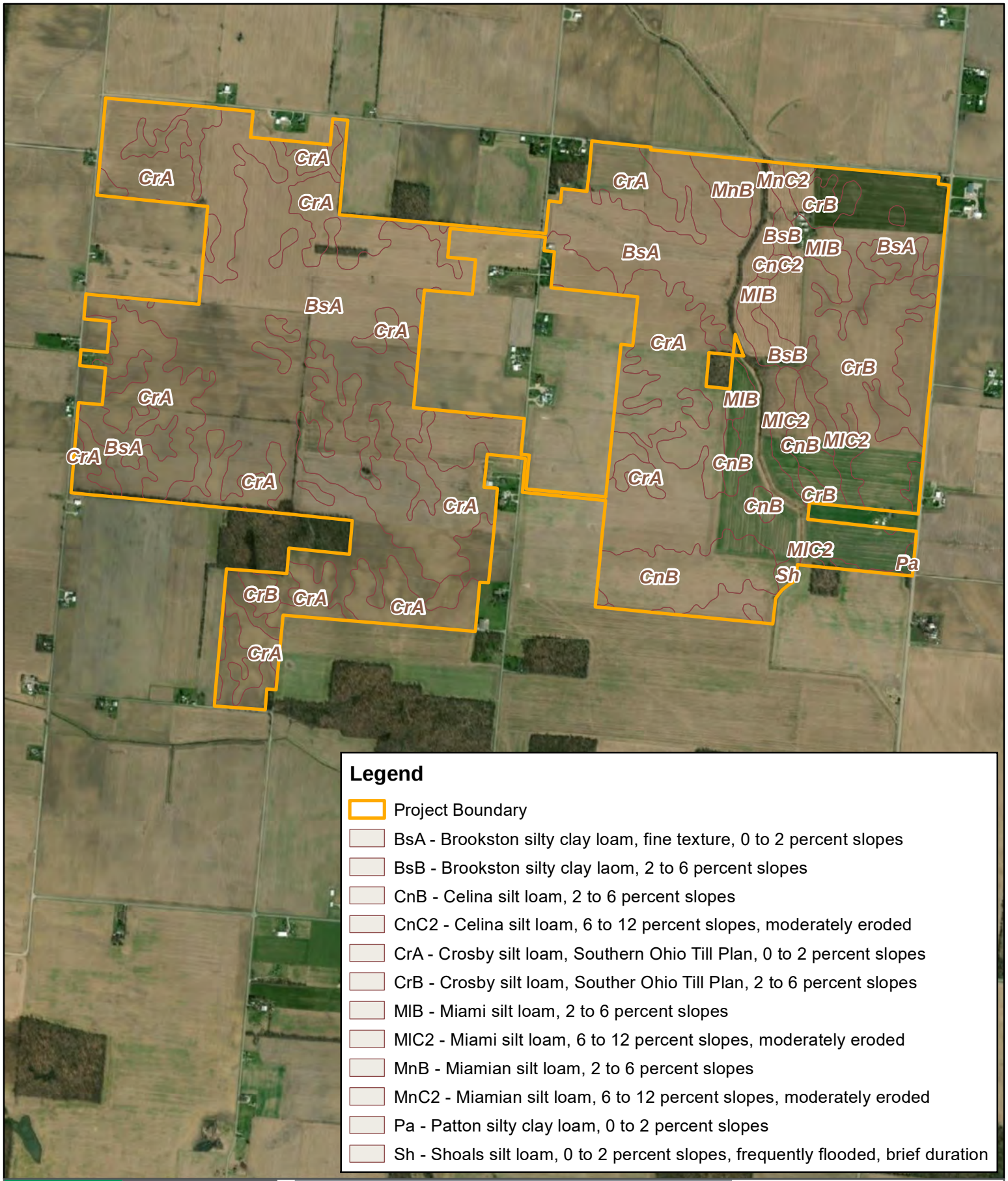
Date Created: 12/8/2020 Date Revised: 12/8/2020 File Path: S:\GIS\Open_Road_Renewables\Clearview_Solar_Farm\MXD\Ecological Assessment\Figure A-1 - Land Use.mxd
GIS Analyst: Peter.Marsey



Legend

- Project Boundary
- BsA - Brookston silty clay loam, fine texture, 0 to 2 percent slopes
- BsB - Brookston silty clay laom, 2 to 6 percent slopes
- CnB - Celina silt loam, 2 to 6 percent slopes
- CnC2 - Celina silt loam, 6 to 12 percent slopes, moderately eroded
- CrA - Crosby silt loam, Southern Ohio Till Plan, 0 to 2 percent slopes
- CrB - Crosby silt loam, Souther Ohio Till Plan, 2 to 6 percent slopes
- MlB - Miami silt loam, 2 to 6 percent slopes
- MlC2 - Miami silt loam, 6 to 12 percent slopes, moderately eroded
- MnB - Miamian silt loam, 2 to 6 percent slopes
- MnC2 - Miamian silt loam, 6 to 12 percent slopes, moderately eroded
- Pa - Patton silty clay loam, 0 to 2 percent slopes
- Sh - Shoals silt loam, 0 to 2 percent slopes, frequently flooded, brief duration

N

Figure A-2 - Soils

Clearview Solar Project
Champaign County, Ohio

0 1,000 2,000 3,000 Feet
0 200 400 600 800 1,000 Meters

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GIS Analyst: Peter.Marsey

MIAMI TOWNSHIP
PERRY TOWNSHIP
ADAMS TOWNSHIP
Logan-Shelby Rd
Co Rd 4
Co Hwy 68
Champaign-Logan Rd
Logan Champaign
Johnston Rd
Co Hwy 145
Co Rd 3
235
Champaign Logan Shelby Rd
Co Rd 5
W-01
S-01
W-02
Twp Hwy 40
Snaptown Rd
Twp Hwy 21
N Elm Tree Rd
Twp Hwy 41
Flowing Well Rd

Legend

- Project Area
- Field Delineated Waterbody
- Field Delineated Wetland
- NWI Wetlands
- ODNR Wetlands
- Township Boundary
- County Boundary
- Existing Railroad
- Local Road
- State Road
- US Highway

Image: 2017

Data Source(s): Open Road (2019)
County Boundaries, Railroads:
ESRI Data and Maps (2014)
Township and City Boundaries
Ohio DOT (2010)
Roads: U.S. Census Bureau Tiger
Files (2018)

0 1,000 2,000 3,000 Feet
0 200 400 600 800 Meters

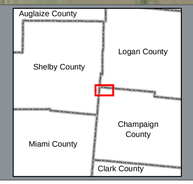

Figure A-3 - Wetlands

Clearview Solar Project
Champaign County, Ohio

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GIS Analyst: Peter.Marsey

MIAMI TOWNSHIP

OWNSHIP

ADAMS TOWNSHIP

WNSHIP

1

2

3

4

Legend

- Project Area
- Field Delineated Waterbodies
- Field Delineated Wetlands
- Fence
- Access Road - Permanent
- Access Road - Temporary
- Collection - Temporary
- Inverter - Permanent
- Laydown Yard - Temporary
- Substation - Permanent
- No Build Area

NWI Wetland Type

- Lakes
- Freshwater Pond
- Freshwater Emergent wetland
- Freshwater - Forested and Shrub wetland
- Riverine
- ODNR Wetlands
- County Boundary
- Township Boundary
- Local Road
- State Road
- US Highway
- Existing Railroad

N

0 500 1,000 1,500 2,000 2,500 Feet

0 200 400 600 800 Meters

Figure A-4 - Proposed Project Layout - Overview

Clearview Solar Project
Champaign County, Ohio

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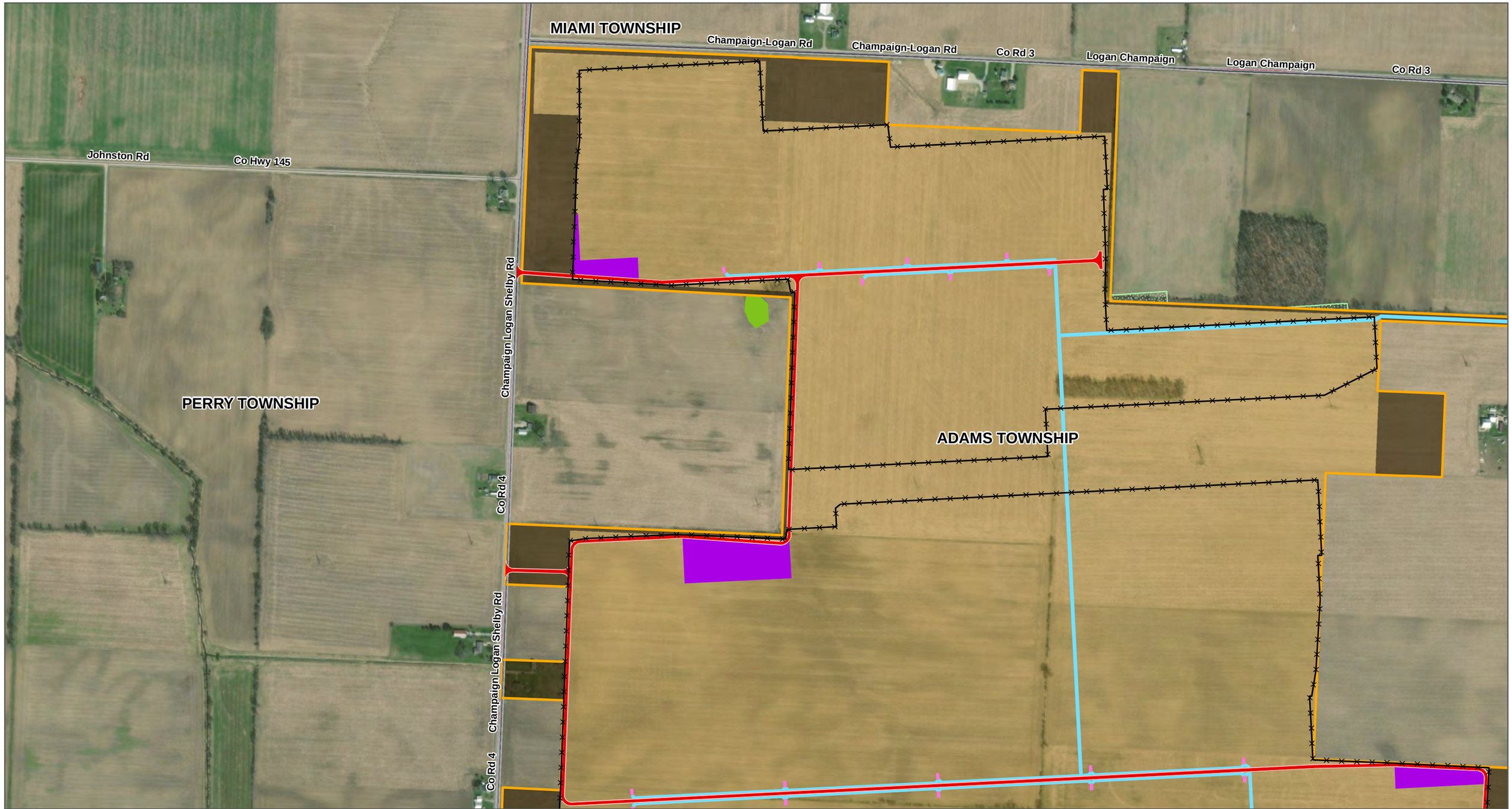
GIS Analyst: Peter.Marsey



N

0 200 400 600 800 1,000 Feet

0 50 100 150 200 250 300 Meters

- Project Area
- Access Road - Permanent
- Access Road - Temporary
- Collection - Temporary
- Inverter - Permanent
- Laydown Yard - Temporary
- Substation - Permanent
- Fence
- Field Delineated Waterbodies
- Field Delineated Wetlands

Figure A4 - Proposed Project Layout (Sheet 1 of 4)

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Champaign County, Ohio

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GIS Analyst: Peter.Marsey

MIAMI TOWNSHIP

Co Hwy 68

Co Rd 3

Co Rd 3

Champaign-Logan Rd

Logan Champaign

Logan Champaign

Champaign-Logan Rd

235

Snapptown Rd

ADAMS TOWNSHIP

Temporary - 0.01AC

235

Twp Hwy 40

S-01

N

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0 200 400 600 800 1,000 Feet

0 50 100 150 200 250 300 Meters

- Project Area
- Access Road - Permanent
- Access Road - Temporary
- Collection - Temporary
- Inverter - Permanent
- Laydown Yard - Temporary
- Substation - Permanent
- Fence
- Field Delineated Waterbodies
- Field Delineated Wetlands

Appendix E
Proposed Project Layout (Sheet 2 of 4)

Clearview Solar Project
Champaign County, Ohio

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0 200 400 600 800 1,000 Feet

0 50 100 150 200 250 300 Meters

- Project Area
- Access Road - Permanent
- Access Road - Temporary
- Collection - Temporary
- Inverter - Permanent
- Laydown Yard - Temporary
- Substation - Permanent
- Fence
- Field Delineated Waterbodies
- Field Delineated Wetlands

Appendix E
Proposed Project Layout (Sheet 3 of 4)

Clearview Solar Project
Champaign County, Ohio

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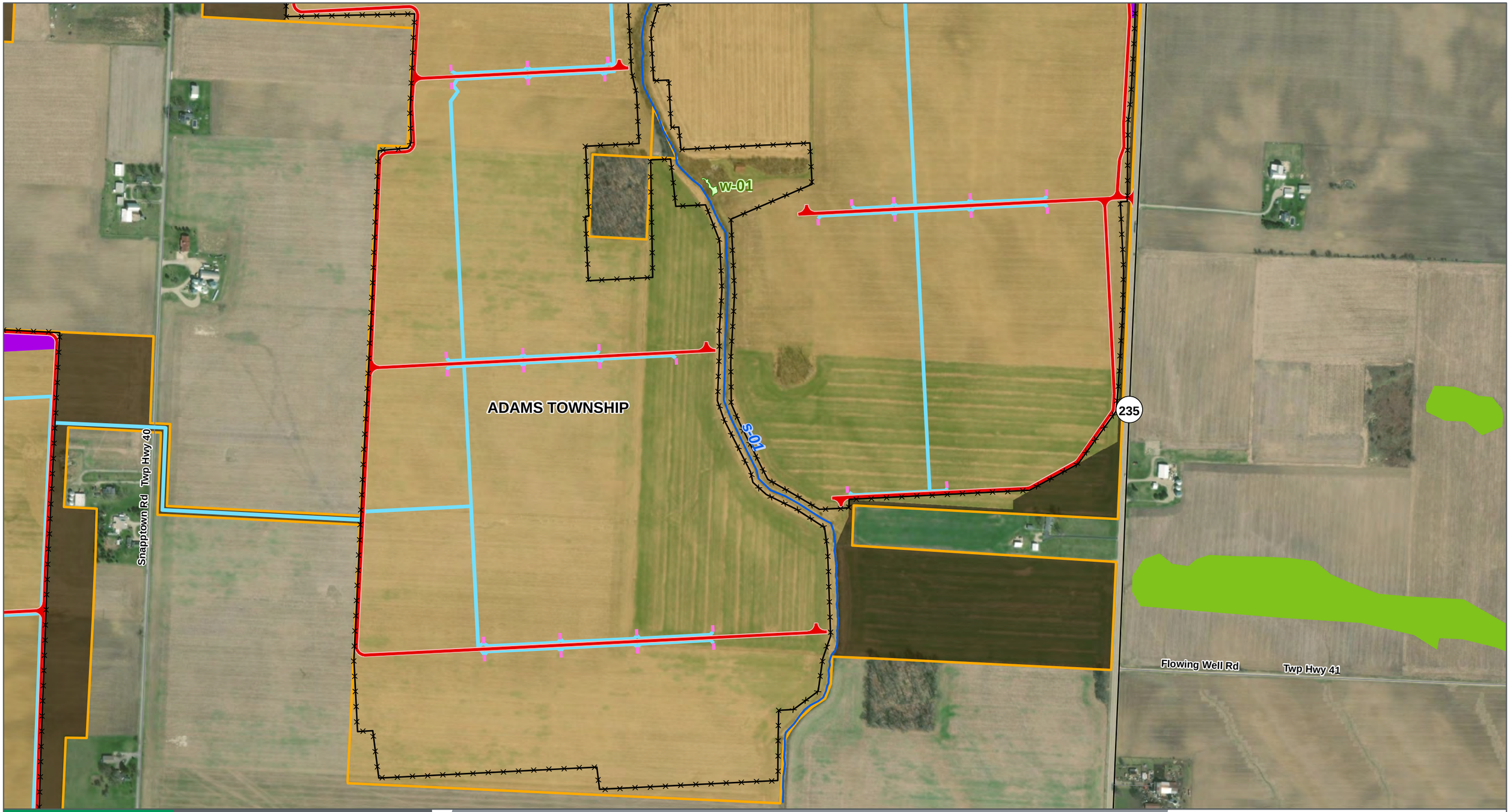
GIS Analyst: Peter.Marsey



N

0 200 400 600 800 1,000 Feet

0 50 100 150 200 250 300 Meters

- Project Area
- Access Road - Permanent
- Access Road - Temporary
- Collection - Temporary
- Inverter - Permanent
- Laydown Yard - Temporary
- Substation - Permanent
- Fence
- Field Delineated Waterbodies
- Field Delineated Wetlands

Appendix E
Proposed Project Layout (Sheet 4 of 4)

Clearview Solar Project
Champaign County, Ohio

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GIS Analyst: Peter.Marsey

Clearview Solar Project

APPENDIX B

AGENCY COORDINATION

Office of Real Estate
John Kessler, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6649
Fax: (614) 267-4764

April 23, 2020

Megan McLaughlin
Cardno
11121 Canal Road
Cincinnati, Ohio 45241

Re: 20-271; Clearview Solar Farm

Project: The proposed project involves the construction of a 100-megawatt photovoltaic solar farm.

Location: The proposed project is located in Logan, Shelby, and Champaign Counties, 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. 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 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 for further information on solar power facility pollinator plantings.

Recommended low-growing grasses and forbs may include:

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

The project is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees to include: shagbark hickory (*Carya ovata*), shellbark hickory (*Carya laciniosa*), bitternut hickory (*Carya cordiformis*), black ash (*Fraxinus nigra*), green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), shingle oak (*Quercus imbricaria*), northern red oak (*Quercus rubra*), slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), eastern cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), sassafras (*Sassafras albidum*), post oak (*Quercus stellata*), and white oak (*Quercus alba*). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on

the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the rayed bean (*Villosa fabalis*), a state endangered and federally endangered mussel, and the clubshell (*Pleurobema clava*), a state endangered and federally endangered mussel. 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 lake chubsucker (*Erimyzon sucetta*) a state threatened fish, and the tonguetied minnow (*Exoglossum laurae*) a state threatened fish. The DOW recommends no in-water work in perennial streams from April 15 to 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 eastern massasauga (*Sistrurus catenatus*), a state endangered and federally threatened snake species. The eastern massasauga uses a range of habitats including wet prairies, fens, and other wetlands, as well as drier upland habitat. Due to the location, and the type of habitat present at the project site and within the vicinity of the project area, this project is not likely to impact this species.

The project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but is also known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, and the type of habitat present at the project site and within the vicinity of the project area, this project is not likely to impact this 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, and the type of habitat present at the project site and within the vicinity of the project area, this project is not likely to impact this species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 to July 31. If this type of 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.

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

ODNR appreciates the opportunity to provide these comments. Please contact Sarah Tebbe, Environmental Specialist, at (614) 265-6397 or Sarah.Tebbe@dnr.state.oh.us if you have questions about these comments or need additional information.

Mike Pettegrew
Environmental Services Administrator (Acting)

Megan McLaughlin

From: Boyer, Angela <angela_boyer@fws.gov>
Sent: Friday, March 20, 2020 11:31 AM
To: Megan McLaughlin
Cc: Ohio, FW3; nathan.reardon@dnr.state.oh.us; Kate Parsons
Subject: Open Road Renewable's Proposed Clearview Solar Farm Project

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# 03E15000-2020-1016

Dear Ms. McLaughlin:

We have received your recent correspondence requesting information about the subject proposal. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The following comments and recommendations will assist you in fulfilling the requirements for consultation under section 7 of the Endangered Species Act of 1973, as amended (ESA).

The U.S. Fish and Wildlife Service (Service) recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the 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. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

FEDERALLY LISTED SPECIES COMMENTS: All projects in the State of Ohio lie within the range of the federally endangered Indiana bat (*Myotis sodalis*) and the federally threatened northern long-eared bat (*Myotis septentrionalis*). In Ohio, presence of the Indiana bat and northern long-eared bat is assumed 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 travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) 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 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 in order for us to provide project-specific conservation recommendations for federally listed bats.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no portion of the project should be initiated until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend that 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.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, proposed, or candidate species. Should the project design change, or during the term of this action, 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, consultation with the Service should be initiated to assess any potential impacts.

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). 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.

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 ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact Angela Boyer at this office at (614) 416-8993, ext. 122 or angela_boyer@fws.gov.

Sincerely,

Patrice Ashfield
Field Office Supervisor

Clearview Solar Project

APPENDIX C

IMPACT TABLES

Table C-1. Wetlands/Ponds within the Clearview Solar Project Area

Wetland ID	County	Latitude of Center Point	Longitude of Center Point	Acres within Project Area	Wetland Type	ORAM Score	Wetland Category	Anticipated Jurisdictional	Drainage Basin	Crossed (Yes/No)
W-01	Champaign	40.26453	-83.98506	0.05	PFO	32	2	Yes	Indian Creek	No
W-02	Champaign	40.25869	-84.00658	0.54	PFO	59	2	No	Indian Creek	No
Wetland Totals				***0.59***						***0***

Table C-2. Proposed Impacts to Wetlands the Clearview Solar Project Area

Wetland ID	ACCESS ROADS				COLLECTION LINES			
	TEMPORARY IMPACTS		PERMANENT IMPACTS		TEMPORARY IMPACTS		PERMANENT IMPACTS	
	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres
W-01	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
W-02	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Wetland Totals	***0***	***0.00***	***0***	***0.00***	***0.00***	***0.00***	***0***	***0.00***

Table C-3. Waterbodies (Streams) within the Clearview Solar Project Area

Feature ID	County	Linear Feet in Project Area	Flow Regime	Type	Drainage Basin	Anticipated Jurisidictional (Yes/No)	Crossed (Yes/No)
S-01	Champaign	2,059	Perennial	Stream	Indian Creek	Yes	Yes
Stream Totals		***2,059***				***1***	***1***

Table C-4. Proposed Waterbody (Stream) Crossing Methods and Impacts for the Clerview Solar Project

Waterbody ID	ACCESS ROADS						COLLECTION LINES					
	Number of Crossings	Crossing Method	TEMPORARY IMPACTS		PERMANENT IMPACTS		Number of Crossings	Crossing Method	TEMPORARY IMPACTS		PERMANENT IMPACTS	
			Square Feet	Acres	Square Feet	Acres			Square Feet	Acres	Square Feet	Acres
S-01	n/a	n/a	n/a	n/a	n/a	n/a	1	Open Cut	40.3	0.01	0	0
Stream Totals	***0***	***n/a***	***0***	***0.00***	***0***	***0.00***	***1***	***Open Cut***	***40.3***	***0.01***	***0***	***0.00***

Summary: Application - Part 21 of 31 Ex. Q Ecology Impact Assessment electronically filed by Christine M.T. Pirik on behalf of Clearview Solar I, LLC