


# **Exhibit L**

## **Wetland and Waterbody Delineation Report**

The logo for SWCA is positioned vertically on the left side of the page. It consists of the letters 'S', 'W', 'C', and 'A' stacked vertically in a large, light blue, serif font. The 'S' and 'W' are slightly larger than the 'C' and 'A'.

# WETLAND AND WATERBODY DELINEATION REPORT FOR THE CADENCE SOLAR ENERGY CENTER, UNION COUNTY, OHIO

**JANUARY 2021**

PREPARED FOR  
**Cadence Solar Energy LLC**

PREPARED BY  
**SWCA Environmental Consultants**



**WETLAND AND WATERBODY DELINEATION REPORT FOR  
THE CADENCE SOLAR ENERGY CENTER,  
UNION COUNTY, OHIO**

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# 1 INTRODUCTION

On behalf of Cadence Solar Energy LLC (Cadence Solar), SWCA Environmental Consultants (SWCA) has prepared this Wetland and Waterbody Delineation Report for the Cadence Solar Energy Center (Project) located in Union County, Ohio (Figures 1 and 2). The Project is situated within approximately 4,943 acres of primarily cultivated, rotational cropland (Project Area). The land is privately owned and is located approximately 7.8 miles northwest of Marysville in Union County, Ohio (Figure 1).

The objectives of this survey were to identify and evaluate jurisdictional wetlands and other waters within the Project Area that may be subject to U.S. Army Corps of Engineers (USACE) and Ohio Environmental Protection Agency (OEPA) jurisdiction under Sections 404 and 401 of the Clean Water Act (CWA) and the Ohio Revised Code 6111 Water Pollution Control, which regulates fill in waters that are not under federal jurisdiction.

A delineation Survey Area was developed to encompass all land where field surveys were requested by Cadence Solar, and where field delineations were conducted (Figure 1). The Project Area includes parcels under consideration for development. Land that was not surveyed is not under consideration for development. The Survey Area is approximately 5,377 acres.

This report provides the methods, results, and conclusions of a wetland and waterbody delineation that SWCA conducted within the Project Area on December 10-16 and 26-27, 2019; January 8-10 and 14-15, and November 5-6 and 23, 2020. Fieldwork was performed and supervised by SWCA wetland ecologists, both trained and practicing delineators of the Midwest regional supplement.

# 2 METHODOLOGY

In accordance with USACE methodology outlined in the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Midwest Region* (USACE 2010), wetlands and other jurisdictional waters were identified and delineated through the combined use of existing publicly available baseline data (desktop analysis) and field investigations.

## 2.1 Desktop Analysis Methodology

The following publicly available data sources were used to complete a desktop analysis of the Project Area to assess the likelihood of wetlands and other jurisdictional waters to occur within the Project Area:

- Current and historical aerial imagery
- Federal Emergency Management Agency (FEMA) National Flood Hazard mapping
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS 2020)
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI; USFWS 2015) mapping
- U.S. Geological Survey (USGS) National Hydrography Dataset (NHD; USGS 2013)

The results of the desktop analysis were used to identify the likely locations of wetlands and waterbodies for field verification described below.



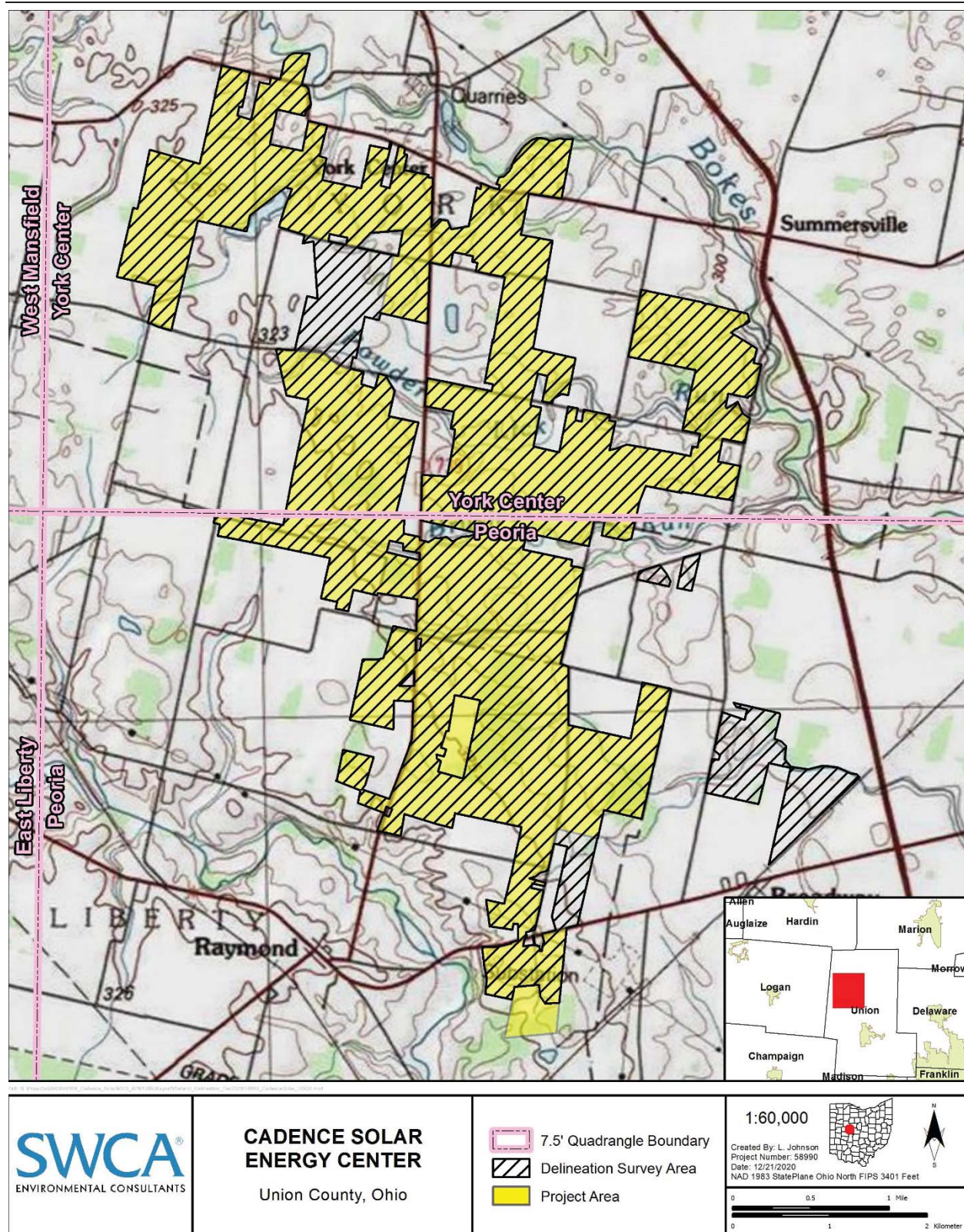


Figure 1. Location of the Cadence Solar Energy Center, Union County, Ohio, 2020.



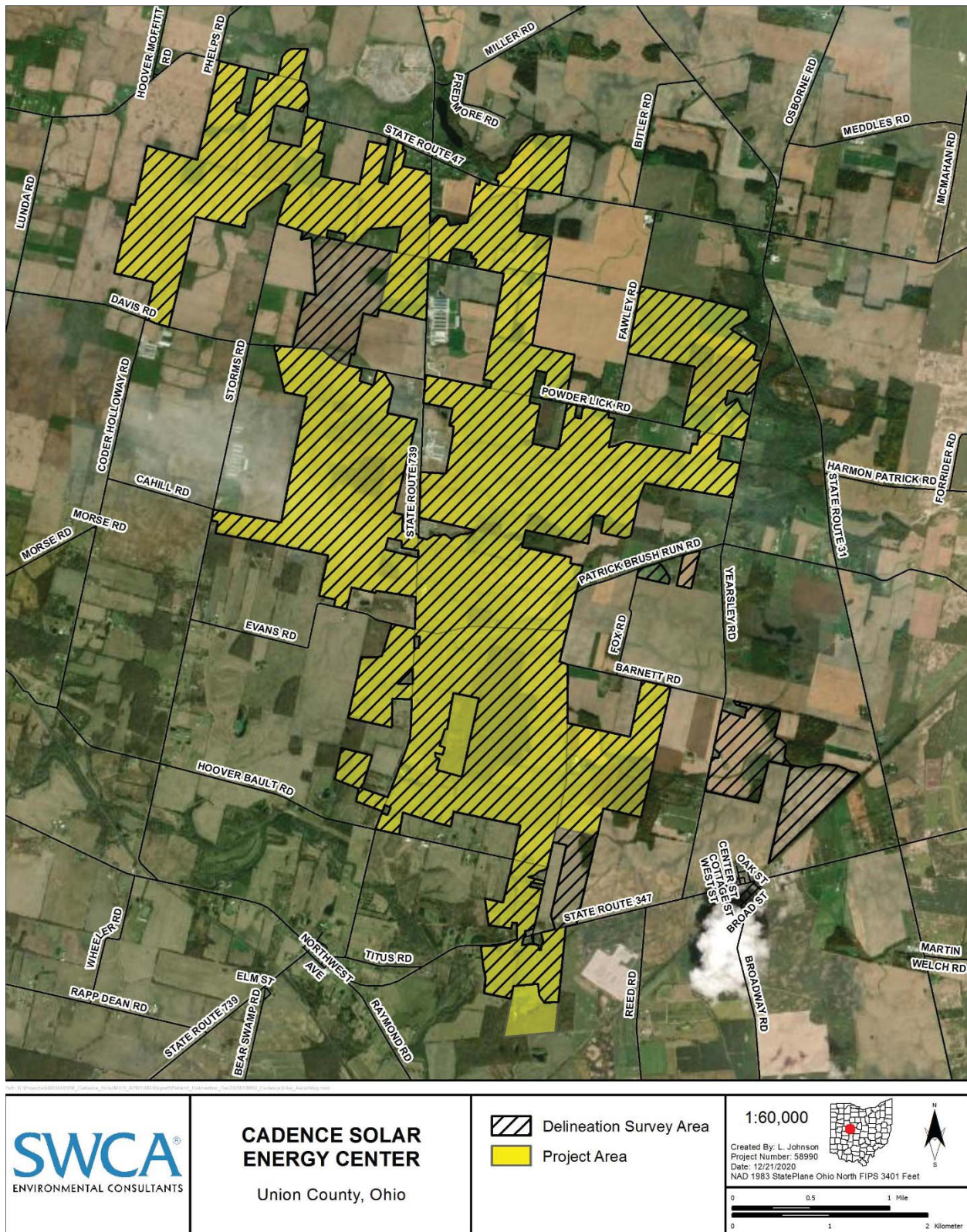


Figure 2. Aerial Location Map, Cadence Solar Energy Center, Union County, Ohio, 2020.

## 2.2 Field Methodology

Desktop data were synthesized and reviewed by field biologists. They were used to identify areas with higher likelihood of wetland and stream features in order to focus survey effort in those areas. The entire Survey Area was reviewed in the field, though the desktop data were used to prioritize areas that required more thorough analyses in the field.

SWCA conducted a field investigation to determine the likely presence or absence of wetlands and other jurisdictional waters in accordance with guidance and information available from the following sources:

- Corps of Engineers Wetlands Delineation Manual (USACE 1987)
- Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (USACE 2010)
- Field Indicators of Hydric Soils in the United States, Version 8.0 (NRCS 2016a)
- Revised (December 2, 2008) Guidance on Clean Water Act Jurisdiction following the Supreme Court Decision in *Rapanos v. U.S.* and *Carabell v. U.S.* (revision to the joint memorandum issued by the USACE and the U.S. Environmental Protection Agency [EPA] on June 5, 2007) (EPA 2008)
- Ohio Rapid Assessment Method for Wetlands, ORAM Version 5.0 (OEPA, 2001)
- Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams (HHEI) (OEPA, 2012)
- Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI) (Midwestern Biodiversity Institute (MBI) 2006)

### 2.2.1 Wetlands

The presence or absence of wetlands was determined in the field using routine determination methods outlined in the Corps of Engineers Wetlands Delineation Manual and Regional Supplement (USACE 1987, 2010). Wetlands were identified by positive indicators of hydrology, hydrophytic vegetation, and hydric soils. Under normal conditions, all three parameters must be present for an area to be considered a wetland in accordance with Section 404 of the CWA. Data collected at each feature were recorded on USACE Midwest wetland determination data forms. Wetland boundaries were recorded using GPS units with sub-meter accuracy.

Wetlands were then classified according to the Cowardin System, as described in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). This is a hierarchical system based on the topographic position and vegetation type of a wetland, which aids resource managers and others by providing uniformity of concepts and terms used to define wetlands according to hydrologic, geomorphologic, chemical, and biological factors.

Wetland hydrology was primarily determined in the field by considering the frequency and duration of inundation, visual observation of saturation in the upper 16 inches of the soil profile, and the presence of primary wetland hydrologic indicators (such as oxidized rhizospheres on living roots, water-stained leaves, water marks, sediment deposits, or algal matting). Secondary indicators used to determine wetland hydrology include, but are not limited to, surface soil cracks, crayfish burrows, geomorphic position, and drainage patterns. Evidence of these secondary indicators is present even during dry periods, and therefore they are useful indicators of a wetland. If the area sampled displayed one or more primary hydrologic indicators or two or more secondary hydrologic indicators as listed in the appropriate wetland delineation manual/supplement, a positive wetland hydrology determination was made.



Rainfall has the most substantial influence on maintaining wetland hydrology. During the summer months, evapotranspiration rates are at their highest, which often results in receding water tables. Therefore, it is important to accurately evaluate the normality of rainfall with respect to its influence on wetland hydrology. This was done by employing the Direct Antecedent Rainfall Evaluation Method (DAREM) (Sprecher and Warne 2000). Using the NRCS Wetland Evaluation Tables (WETs; NRCS 2016b) as a baseline of normal rainfall for a given month, the DAREM method assesses normal rainfall for each month by considering the 3-month period prior to the month being evaluated. Evaluation under these methods classifies the condition of the site at the time of the delineation as either drier than normal, normal, or wetter than normal.

Vegetation within each sampling plot was identified to the species level when possible to identify the plant communities present. Hydrophytic vegetation, which is one parameter of a jurisdictional wetland, is defined as a plant community with over 50 percent of the dominant plant species ranked as obligate wetland (OBL), facultative wetland (FACW), or facultative (FAC). The appropriate wetland indicator status, as recorded in the National Wetland Plant List: 2016 Wetland Ratings (Lichvar et al 2016), was assigned to each plant species. The absolute cover of each plant species within the plot area (2-m radius plot for herbaceous vegetation, 5-m radius for shrub/vine strata, 15-m radius for tree stratum) was visually estimated, and then the absolute percent cover (e.g., each species may be rated up to 100% and the total can be over 100% cover) was calculated. Then, either the rapid test (i.e., all dominant species across all strata are OBL or FACW), the dominance test (i.e., 50/20 test; > 50% of the total cover represented by plant species combined and including any species >20% of cover by itself, across all strata rated OBL, FACW, or FAC), or the prevalence index (i.e., average value of wetland indicator statuses [OBL=1...UPL=5] of all species in the plot, weighted by percent cover  $\leq 3.0$ ) was used to determine the presence or absence of hydrophytic vegetation.

The requirement for meeting all three parameters may be waived in “problematic sites” or if “normal circumstances” are not met, a common scenario in an agricultural landscape where natural vegetation communities have been cleared for row-crop production. The USACE provides that “...wetland determinations on difficult or problematic sites must be based on the best information available to the field inspector, interpreted in light of his or her professional experience and knowledge of the ecology of wetlands in the region” (USACE 2014). In situations where one or more of the three criteria were deemed problematic, atypical, or disturbed, SWCA applied their professional judgement and on-site experience to extrapolate the presumed conditions under normal circumstances.

For each data point recorded, a soil test pit was dug to determine the presence or absence of hydric conditions. As defined by the National Technical Committee of Hydric Soils, a hydric soil is a “soil that formed under the conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part” (NRCS 2015). Common indicators for these non-sandy soils as per the USACE’s manuals (1987, 2010) include the presence of organic soils, histic epipedon, hydrogen sulfide odor, reduced soil conditions, gleyed soils, or listing on the hydric soils lists. Hydric soil determinations were made according to criteria listed in the appropriate wetland delineation manual/supplement and *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils, Version 7.0* (NRCS 2016a).

An assessment of wetland function and quality was performed for each wetland feature identified. The methodology followed the Ohio Rapid Assessment Method (ORAM) developed by the OEPA (Mack 2001). Wetlands were scored based on hydrology, upland buffer, habitat alteration, special wetland communities, and vegetation communities. Each of these subject areas is further divided into subcategories resulting in a score that describes the wetland using a range from 0 (low quality and high disturbance) to 100 (high quality and low disturbance). The wetlands are then grouped into the following categories.



- Category 1: wetlands scoring from 0 to 29.9
- Modified Category 2: wetlands scoring from 35 to 44.9
- Category 2: wetlands scoring from 45 to 59.9
- Category 3: wetlands scoring from 60 to 100

Transitional zones exist between Categories 1 and 2 from 30 to 34.9 and between Categories 2 and 3 from 60 to 64.9. However, according to the OEPA, if the wetland score falls into the transitional range, it must be given the higher Category unless scientific data can prove it should be in a lower Category (Mack 2001).

### **2.2.2      *Streams***

Streams were identified by the presence of a bed, bank, and ordinary high-water mark (OHWM), which is usually identifiable by indicators such as the level of water present, scouring of the channel, or a vegetation line within the channel. The OHWM is a defining element for identifying the lateral limits of non-wetland waters. SWCA biologists recorded the OHWMs or center line of water bodies encountered during the wetland delineation using GPS units capable of sub-meter accuracy. The OHWM was used to delineate both banks for streams greater than 6 feet in width. The centerline was used to delineate streams less than 6 feet in width. Streams were further classified as perennial, intermittent, or ephemeral based on field observations.

The OEPA has developed a method for categorizing Primary Headwater Habitat (PHWH) streams in Ohio. PHWH streams, as defined by Ohio Administrative Code (OAC) 3745-1, are streams with drainage areas less than 1 square mile. The Headwater Habitat Evaluation Index is a method for quantifying such streams by examining three principal metrics: substrate (type and quality), maximum pool depth, and bank full width (OEPA 2012). The sum of these metrics will preliminarily classify a PHWH stream as Class I, II, or III. Class I streams are typically ephemeral streams; they have little or no aquatic life potential, except seasonally when flowing water is present for short time periods following precipitation or snow melt. Class II streams are generally intermittent but may have perennial flow. They exhibit moderate community diversity of warm water adapted native fauna present either seasonally or year-round. Class III PHWH streams are perennial streams in which the prevailing flow and temperature conditions are influenced by groundwater. They exhibit moderately diverse to highly diverse communities of cold water adapted native fauna present year-round.

The Qualitative Habitat Evaluation Index (QHEI) methodology is used to categorize larger streams in Ohio; those streams with a drainage area greater than 1 square mile or the predominant pools are greater than 40 cm in depth, regardless of watershed size (Midwest Biodiversity Institute 2006). The QHEI evaluates a stream based on six metrics: substrate, instream cover, channel morphology, bank erosion and riparian zone, pool/glide and riffle/run quality, and gradient/drainage area. The sum of these metrics will assign the stream into a narrative range that is used to communicate habitat quality to the general public. These narrative ranges are very poor, poor, fair, good, and excellent.

### **2.2.3      *Assessment of Jurisdictional Status***

The 2020 Navigable Waters Protection Rule (NWPR) dictates which waters are under the jurisdiction of USACE (i.e., waters of the U.S.) under section 404 of the CWA (Federal Register 2020). The NWPR provides for four categories of waters of the U.S.: territorial seas and traditional navigable waters (TNW); tributaries; lakes and ponds, and impoundments of jurisdictional waters; and adjacent wetlands. TNW

include waters that have been or can be used for interstate commerce. Tributaries include perennial and intermittent naturally occurring surface water channels that contribute surface flow to a territorial sea or TNW directly or via another tributary. Ephemeral tributaries are not considered a water of the U.S. under the NWPR. Lakes and ponds, and impoundments of jurisdictional waters include standing bodies of open water that contribute surface water flow to TNW in a typical year either directly or through one or more tributary(ies). A lake, pond, or impoundment is also a water of the U.S. if it is inundated by flooding from another jurisdictional water. Adjacent wetlands are those that immediately abut another jurisdictional, non-wetland water; are inundated by flooding from another jurisdictional, non-wetland water; are physically separated from another jurisdictional, non-wetland water; are physically separated from other jurisdictional, non-wetland waters only by a natural berm, bank, dune, or similar natural feature; or are physically separated from other jurisdictional non-wetland waters only by an artificial dike, barrier, or similar structure so long as that structure allows for a direct hydrologic surface connection in a typical year through an artificial feature (e.g., culvert).

ORC 6111 claims jurisdiction over all waters in the state that do not fall under the jurisdiction of USACE. The OEPA administers section 401 of the CWA in addition to ORC 6111, and in that capacity has jurisdiction over all waters of the U.S. and state.

SWCA biologists reviewed the requirements for jurisdiction under USACE and/or OEPA and made an assessment of status using data collected during desktop and field review. Final determination of jurisdictional status is under the purview of the USACE and OEPA.

### **3 RESULTS**

SWCA wetland ecologists performed delineations of potentially jurisdictional waters in the Project Area on December 10-16 and 26-27, 2019; January 8-10 and 14-15, and November 5-6 and 23, 2020. The following sections summarize the vegetative communities, soils, wetlands, and water bodies within the Project Area. The following sections summarize the vegetative communities, soils, wetlands, and water bodies within the Project Area; results for the field studies on adjacent parcels are briefly summarized, where relevant.

#### **3.1 Desktop Analysis**

##### **3.1.1 Landscape Setting**

Topography within the Project Area is relatively flat, with the elevation ranging from approximately 989 to 1,087 feet above mean sea level. A review of the FEMA National Flood Hazard Layer (Figure 4) showed that 60.28 acres of the Project Area is located within Zone A (areas subject to inundation by the 1-percent-annual-chance flood event) of the 100-year floodplain (FEMA 2020).

##### **3.1.2 Vegetation**

Land cover types within the Project Area were field verified to confirm National Land Cover Database data (Yang et al. 2018). Land cover within the Project Area consisted primarily of cultivated crops, with the predominant crops being soybeans (*Glycine max*) and corn (*Zea mays*). The next most dominant land cover type is deciduous forest; however, this accounts for less than 10 percent of the Project Area.

### 3.1.3 Soils

Thirty mapped soil types are present within the Project Area according to the USDA NRCS (2020; Table 1). Figure 4 shows geographic extent of hydric soil map units. Hydric soils are those that formed under conditions of flooding, saturation, or ponding for a long enough period during the growing season, developing anaerobic conditions (Federal Register 1994). These soils are saturated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation and have distinctive color patterns within the upper layers. Presence of hydric soils is one of the three parameters required to make a wetland determination in a given location. However, the designation of “hydric” for a given soil map unit assigned by NRCS (Table 1) does not satisfy the hydric soil parameter requirement under the routine USACE wetland determination methods; documentation of hydric soil indicators in the field is necessary to confirm hydric soils for the purposes of wetland delineation.

**Table 1. Mapped NRCS Soil Types within the Cadence Solar Energy Project Area, Union County, Ohio**

Soil Name (Map Unit)	Hydric	Drainage Class	Frequency of Flooding/Ponding	Depth to Water Table (inches)	Acreage within Project Area	Percent within Project Area
Blount silt loam, ground moraine, 0 to 2 percent slopes (Blg1A1)	No	Somewhat poorly drained	None/None	6 to 12	1,384.2	28.00%
Blount silt loam, ground moraine, 2 to 4 percent slopes (Blg1B1)	No	Somewhat poorly drained	None/None	6 to 12	807.6	16.30%
Blount silt loam, end moraine, 2 to 4 percent slopes (Blc1B1)	No	Somewhat poorly drained	None/None	6 to 12	707.3	14.30%
Wetzel silty clay loam (We)	Yes	Poorly drained	None/Frequent	0 to 6	674.3	13.60%
Blount silt loam, end moraine, 0 to 2 percent slopes (Blc1A1)	No	Somewhat poorly drained	None/None	6 to 12	439.2	8.90%
Glynwood silt loam, ground moraine, 2 to 6 percent slopes (Gwg1B1)	No	Moderately well drained	None/None	12 to 24	357.9	7.20%
Pewamo silty clay loam, 0 to 1 percent slopes (Pk)	Yes	Very poorly drained	None/Frequent	0 to 12	147.0	3.00%
Glynwood silt loam, end moraine, 2 to 6 percent slopes (Gwe1B1)	No	Moderately well drained	None/None	12 to 24	98.5	2.00%
Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded (Gwg5C2)	No	Moderately well drained	None/None	12 to 24	86.3	1.70%
Blount silt loam, 2 to 6 percent slopes, eroded (BoB2)	No	Somewhat poorly drained	None/None	6 to 12	28.6	0.60%
Glynwood clay loam, 6 to 12 percent slopes, eroded (Gwd5C2)	No	Moderately well drained	None/None	12 to 24	27.9	0.60%
Homer silt loam (Ho)	No	Somewhat poorly drained	None/None	6 to 18	24.7	0.50%
Genesee silt loam (Gn)	No	Well drained	Occasional/None	>80	19.0	0.40%
Fox silt loam, till plain, 0 to 2 percent slopes (FoA)	No	Well drained	None/None	>80	17.9	0.40%
Glynwood silt loam, end moraine, 2 to 6 percent slopes, eroded (Gwe1B2)	No	Moderately well drained	None/None	12 to 24	17.8	0.40%

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<b>Soil Name (Map Unit)</b>	<b>Hydric</b>	<b>Drainage Class</b>	<b>Frequency of Flooding/Ponding</b>	<b>Depth to Water Table (inches)</b>	<b>Acreage within Project Area</b>	<b>Percent within Project Area</b>
Shoals silt loam, 0 to 2 percent slopes, occasionally flooded (Sh)	No	Somewhat poorly drained	Occasional/None	6 to 18	15.5	0.30%
Glynwood silt loam, ground moraine, 2 to 6 percent slopes, eroded (Gwg1B2)	No	Moderately well drained	None/None	12 to 24	14.8	0.30%
Fox silt loam, till plain, 2 to 6 percent slopes (FoB)	No	Well drained	None/None	>80	13.4	0.30%
Glynwood silt loam, ground moraine, 6 to 12 percent slopes (Gwg1C1)	No	Moderately well drained	None/None	12 to 24	13.4	0.30%
Saranac silty clay loam, 0 to 1 percent slopes, frequently flooded (Sac3AF)	Yes	Very poorly drained	Frequent/Occasional	0 to 12	12.5	0.30%
Morley silt loam, 12 to 18 percent slopes, eroded (MrD2)	No	Moderately well drained	None/None	24 to 42	9.4	0.20%
Eel silt loam (Ee)	No	Moderately well drained	Occasional/None	12 to 36	7.8	0.20%
Henshaw silt loam, 0 to 2 percent slopes (HeA)	No	Somewhat poorly drained	None/None	6 to 18	5.3	0.10%
Sloan silty clay loam, 0 to 1 percent slopes, frequently flooded (So)	Yes	Very poorly drained	Frequent/Occasional	0 to 6	5.2	0.10%
Kendallville silt loam, 2 to 6 percent slopes (KeB)	No	Well drained	None/None	>80	4.9	0.10%
Westland silty clay loam (Wc)	Yes	Very poorly drained	None/Frequent	0 to 6	2.6	0.10%
Sleeth silt loam, 0 to 2 percent slopes (SIA)	No	Somewhat poorly drained	None/None	6 to 12	0.9	0.00%
Morley silt loam, 18 to 25 percent slopes, eroded (MrE2)	No	Moderately well drained	None/None	24 to 42	0.4	0.00%
Water (W)	N/A	N/A	N/A	N/A	0.2	0.00%
Lippincott silty clay loam, 0 to 2 percent slopes (Lc)	Yes	Very poorly drained	None/Frequent	0 to 6	<0.01	0.00%

Source: NRCS (2020)



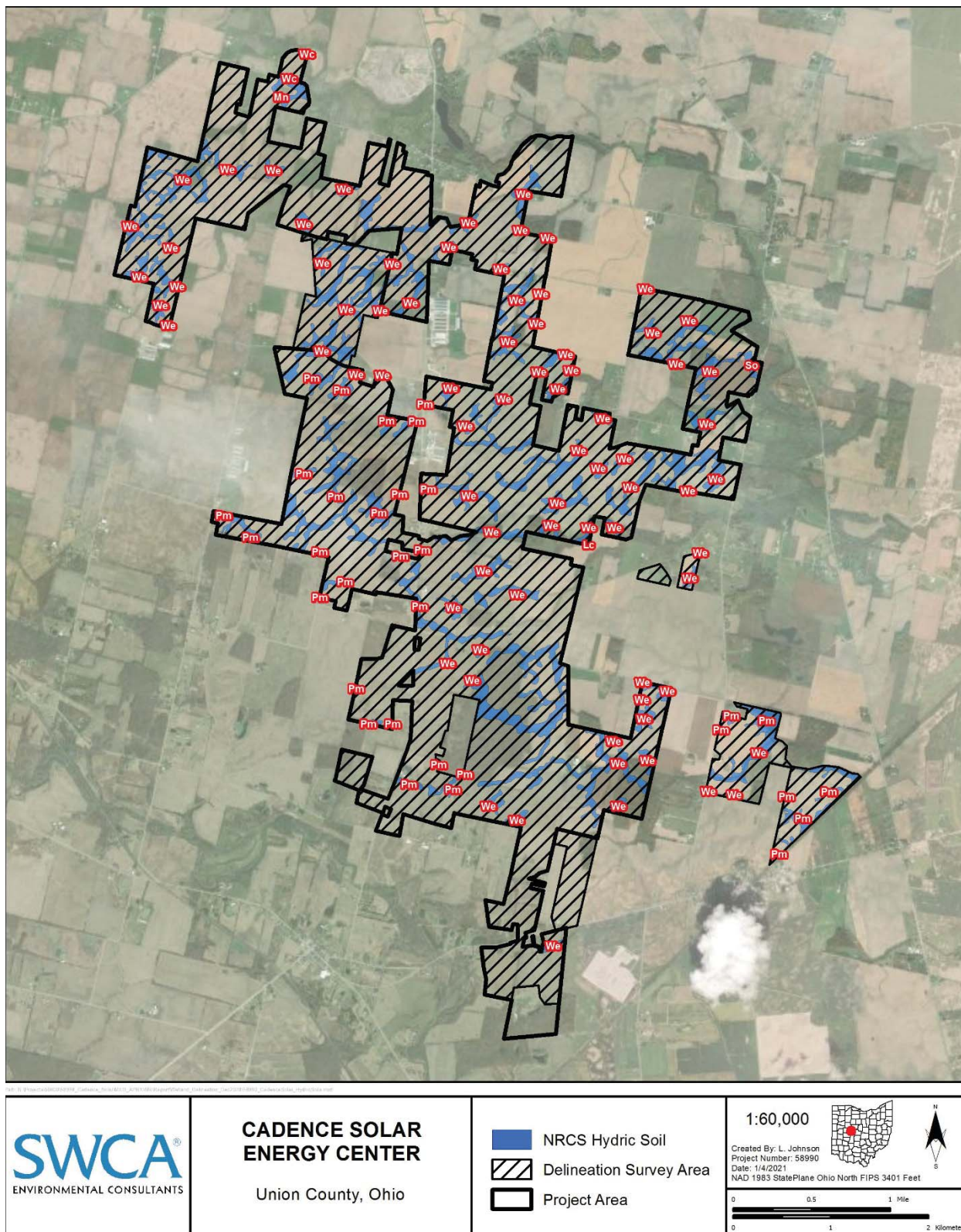


Figure 3. Soil Map Units within the Cadence Solar Energy Center, Union County, Ohio, 2020.

### 3.1.4 Hydrology

Precipitation data from the National Weather Service’s Marysville, Ohio station, which is approximately 8 miles southeast of the Project Area, was used to determine the normality of rainfall over the Project Area (NRCS 2016b and Deters 2020). This was compared with the DAREM calculations data for Union County, Ohio, for the three months prior to field surveys. The DAREM calculations for the three months prior to each survey were calculated using observed rainfall data and comparative WETS data (Table 2). Based upon these calculations, conditions prior to survey were drier than normal during December 2019, and normal in January and November 2020.

**Table 2. Rainfall Summary – Union County, Ohio (Marysville, Ohio)**

Prior Month	WETS Rainfall Percentile (inches)		Measured Rainfall (inches)	Condition <sup>a</sup>	Month Weight <sup>b</sup>	Score <sup>c</sup>
	30th	70th				
Evaluation Month: December 2019						
November	1.88	3.59	1.63	1	3	3
October	1.83	3.16	2.65	2	2	4
September	1.76	3.77	1.43	1	1	1
Sum:						8
Description <sup>d</sup> :				Drier than Normal		
Evaluation Month: January 2020						
December	2.10	3.39	2.27	2	3	6
November	1.88	3.59	1.63	1	2	2
October	1.83	3.16	2.65	2	1	2
Sum:						10
Description <sup>d</sup> :				Normal		
Evaluation Month: November 2020						
October	1.60	2.90	4.86	3	3	9
September	1.65	4.36	4.30	2	2	4
August	2.10	3.99	1.24	1	1	1
Sum:						14
Description <sup>d</sup> :				Normal		

<sup>a</sup> Condition values are 1 for <30th percentile, 2 for between 30th and 70th percentile, 3 for > 70th percentile

<sup>b</sup> Month weight is 3 for the most recent month, 2 for the previous month, and so on

<sup>c</sup> Score is the product of the condition and month weight

<sup>d</sup> Description: Drier than normal (sum is 6–9), normal (sum is 10–14), wetter than normal (sum is 15–18)

### 3.1.5 National Wetlands Inventory

SWCA reviewed the USFWS National Wetlands Inventory (NWI) mapping data to determine the potential presence of wetland features within the Project Area (Table 3; see Figure 4). NWI wetlands are classified according to the Cowardin System, as described in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). This is a hierarchical system based on the topographic position and vegetation type of a wetland, which aids resource managers and others by

providing uniformity of concepts and terms used to define wetlands according to hydrologic, geomorphologic, chemical, and biological factors. The locations of these wetlands within the Project Area are depicted in Figure 4.

**Table 3. NWI Wetlands by Cowardin Classification within the Cadence Solar Energy Center Project Area, Union County, Ohio**

Cowardin Classification	Wetland Type	Number	Acreage
R23, R4, R5	Riverine Upper Perennial, Riverine Intermittent	20	31.53
PFO/PSS	Freshwater Forested/Scrub-Shrub Wetland	27	23.75
PEM	Palustrine Emergent Wetland	33	9.86
PUB	Freshwater Pond	15	7.13
<b>Total Wetland Acreage</b>			<b>72.27</b>

### 3.1.6 National Hydrography Dataset

SWCA reviewed USGS National Hydrography Dataset (NHD) mapping to determine the potential presence of streams and waterbodies within the Project Area (see Table 4, Figure 4). NHD suggests the presence of 27 stream reaches totaling 70,702 linear feet and 8 waterbodies totaling 0.02 acres within the Project area. The NHD defines their Canal/Ditch category as an artificial open waterway constructed to transport water, to irrigate or drain land, to connect two or more bodies of water, or to serve as a waterway for watercraft. This may include natural features that have been modified, and/or named waterways. The NHD defines their Stream/River category as a stream that normally has water in its channel at all times.

**Table 4. National Hydrology Dataset watercourses within the Cadence Solar Energy Center Project Area, Union County, Ohio**

Feature Type	Length (feet)	Acreage
Stream/River Perennial	70,709	NA
Canal/Ditch	568	NA
Waterbody	N/A	0.02
<b>Total</b>	<b>71,277</b>	<b>0.02</b>



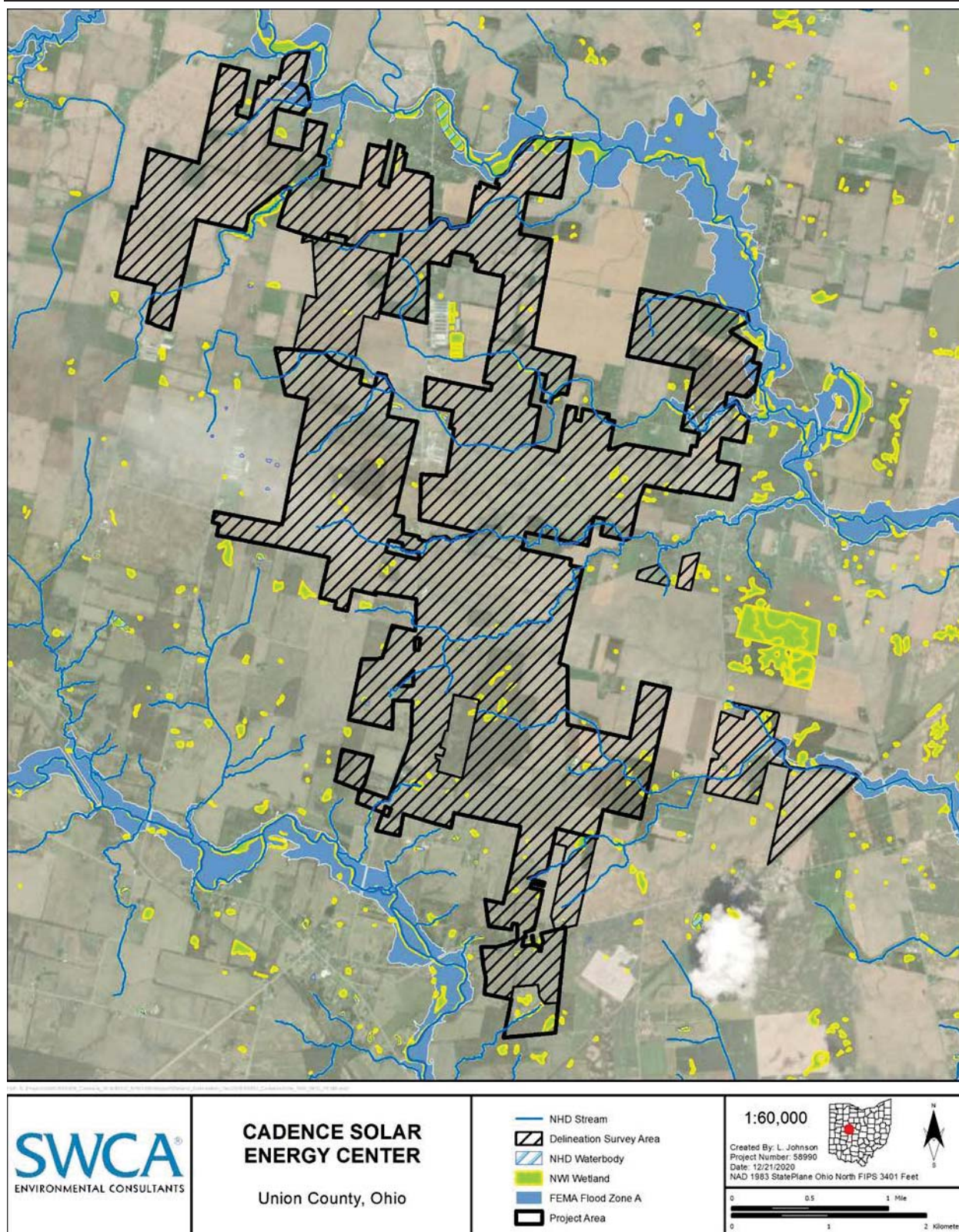


Figure 4. National Wetlands Inventory, National Hydrography Dataset, and Flood Zone map of the Cadence Solar Energy Center, Union County, Ohio, 2020.



## 3.2 Field Investigations

SWCA conducted a field investigation on December 10-16 and 26-27, 2019; January 8-10 and 14-15, and November 5-6 and 23, 2020, to assess the general site characteristics, ground-truth any mapped features identified during the desktop analysis and delineate the boundaries of all features determined to be present based on the field survey (Appendix A; Tables 5 and 6). The maps in Appendix A show the Delineation Survey Area and the delineated aquatic features. Data point data sheets are provided in Appendix B. Photographs for delineated aquatic feature types are provided in Appendix C.

### 3.2.1 Wetlands

SWCA delineated 87 distinct wetland areas totaling 65.41 acres within the Project Area. Of these 87 wetlands, 43 were palustrine emergent (PEM), 1 were palustrine scrub/shrub (PSS), 23 were palustrine forested (PFO), 18 were palustrine unconsolidated bottom (PUB), 1 was PEM/PSS, and 1 was PEM/PFO. All features are depicted in Appendix A and detailed below in Table 5.

**Table 5. Wetlands Identified during Field Survey for the Cadence Solar Energy Center, Union County, Ohio**

Feature ID	Survey Date	Location	Jurisdictional Status*	Classification	Acreage within Project Area	Map Book Page
WA01	12/10/2019	40.404600 -83.472530	USACE, OEPA	PEM/PSS	0.1	1
WA02	12/10/2019	40.406230 -83.468290	USACE, OEPA	PFO	3.64	1
WA03	12/10/2019	40.414490 -83.477700	OEPA	PEM	0.59	1
WA04	12/10/2019	40.413030 -83.469970	OEPA	PEM	0.36	1
WA05	12/11/2019	40.364330 -83.455430	OEPA	PEM	0.03	3
WA06	12/11/2019	40.361300 -83.460310	OEPA	PFO	0.18	3
WA07	12/27/2019	40.394230 -83.456210	OEPA	PEM	0.64	1
WA08	12/27/2019	40.396530 -83.458130	OEPA	PEM	0.06	1
WA09	12/27/2019	40.361290 -83.442640	OEPA	PFO	0.57	4
WA10	12/27/2019	40.361960 -83.444450	OEPA	PFO	1.20	4
WA11	12/27/2019	40.360250 -83.444390	OEPA	PFO	1.14	4
WA12	12/27/2019	40.360080 -83.442820	OEPA	PFO	0.49	4
WA13	12/27/2019	40.358100 -83.446390	OEPA	PFO	1.42	4
WA14	12/27/2019	40.356530 -83.443930	USACE, OEPA	PFO	9.67	4, 7
WA15	12/27/2019	40.352450 -83.444660	USACE, OEPA	PFO	4.28	4, 7
WA16	12/27/2019	40.352720 -83.446760	OEPA	PFO	1.47	1
WA17	1/14/2020	40.393820 -83.463100	OEPA	PEM	0.36	1
WA18	1/14/2020	40.394680 -83.462580	OEPA	PEM	0.05	1
WA19	1/14/2020	40.395210 -83.462940	OEPA	PEM	0.08	1
WA20	1/14/2020	40.395760 -83.462680	OEPA	PEM	0.22	1
WA21	1/14/2020	40.392620 -83.461610	OEPA	PEM	0.15	1
WA22	1/14/2020	40.393980 -83.459530	OEPA	PEM	0.21	1
WA23	1/14/2020	40.394990 -83.459460	OEPA	PEM	0.16	1
WA24	1/14/2020	40.396270 -83.458990	OEPA	PFO	0.57	1

*Wetland and Waterbody Delineation Report for the  
Cadence Solar Energy Center  
January 2021*

Feature ID	Survey Date	Location		Jurisdictional Status*	Classification	Acreage within Project Area	Map Book Page
WA25	1/14/2020	40.397220	-83.460240	OEPA	PFO	0.92	1
WA26	1/14/2020	40.395160	-83.466190	OEPA	PEM	0.59	1
WA27	1/14/2020	40.394090	-83.466700	OEPA	PEM	0.03	2
WA28	1/15/2020	40.393900	-83.420620	OEPA	PEM	0.02	2
WA29	1/15/2020	40.392980	-83.421980	OEPA	PEM	0.02	2
WA30	1/15/2020	40.389660	-83.424350	OEPA	PEM	0.30	2
WA31	1/15/2020	40.390020	-83.426110	OEPA	PEM	0.13	2
WA32	1/15/2020	40.389960	-83.427290	OEPA	PEM	0.10	2
WA33	1/15/2020	40.393310	-83.444520	OEPA	PEM	0.55	2
WA34	1/15/2020	40.395210	-83.443380	OEPA	PEM	0.19	2
WA35	11/5/2020	40.349127	-83.457124	OEPA	PEM	1.43	6
WA36	11/23/2020	40.348686	-83.454536	OEPA	PEM	0.30	6
WA37	11/23/2020	40.348558	-83.451274	OEPA	PFO	0.13	7
WA38	11/5/2020	40.347913	-83.450610	OEPA	PEM	0.04	7
WA39	11/5/2020	40.340338	-83.442041	OEPA	PFO	0.16	7
WA40	11/5/2020	40.340460	-83.440524	OEPA	PEM	0.05	7
WA41	11/6/2020	40.340212	-83.439723	OEPA	PFO	0.15	7
WA42	11/6/2020	40.338200	-83.439495	OEPA	PEM	0.21	7
WA43	11/5/2020	40.338081	-83.441277	OEPA	PEM	0.05	7
WA44	11/6/2020	40.336706	-83.439890	OEPA	PEM	0.03	7
WA45	11/6/2020	40.334856	-83.443911	OEPA	PUB	0.21	7
WA46	11/23/2020	40.336583	-83.441674	OEPA	PEM	0.08	7
WA47	11/6/2020	40.334480	-83.441996	OEPA	PUB	0.77	7
WA48	11/23/2020	40.334622	-83.439479	OEPA	PEM	0.18	7
WA49	11/23/2020	40.335182	-83.437463	USACE, OEPA	PEM	0.28	7
PNDA01	12/11/2019	40.384420	-83.415570	USACE, OEPA	PUB	1.36	1
PNDA02	12/26/2019	40.397170	-83.454310	OEPA	PUB	0.19	1
WB02	12/12/2019	40.409179	-83.442191	USACE, OEPA	PFO	4.94	2
WB03	12/13/2019	40.394487	-83.417086	USACE, OEPA	PFO	0.30	2
WB04	12/13/2019	40.393443	-83.415446	OEPA	PEM	0.37	2
WB05	12/13/2019	40.394521	-83.441616	OEPA	PEM	1.30	4
WB06	12/13/2019	40.384051	-83.432392	USACE, OEPA	PEM	0.08	2
WB07	12/14/2019	40.387661	-83.436337	USACE, OEPA	PFO	0.16	4
WB08	12/14/2019	40.381601	-83.448159	USACE, OEPA	PEM	3.05	4
WB09	12/15/2019	40.369015	-83.438529	OEPA	PEM	0.14	8
PNDB01	12/13/2019	40.383487	-83.432521	OEPA	PUB	0.54	1
PNDB02	12/15/2019	40.362750	-83.449236	OEPA	PUB	0.73	1
WC01	1/8/2020	40.351990	-83.411830	OEPA	PUB	0.05	8
WC02	1/8/2020	40.347860	-83.409770	OEPA	PEM	0.14	8

Feature ID	Survey Date	Location		Jurisdictional Status*	Classification	Acreage within Project Area	Map Book Page
WC03	1/8/2020	40.345350	-83.410530	OEPA	PEM	0.54	8
WC04	1/8/2020	40.343500	-83.410870	OEPA	PEM	0.31	5
WC05	1/9/2020	40.356310	-83.411640	USACE, OEPA	PFO	1.92	3
WC06	1/9/2020	40.357620	-83.454040	OEPA	PFO	0.41	6
WC07	1/9/2020	40.351690	-83.452300	OEPA	PUB	0.29	7
WC08	1/9/2020	40.350690	-83.451440	OEPA	PUB	0.87	7
WC09	1/9/2020	40.350280	-83.449780	OEPA	PUB	0.75	6
WC10	1/9/2020	40.350830	-83.452640	OEPA	PEM	0.48	6
WC11	1/9/2020	40.350160	-83.454060	OEPA	PSS	0.47	3
WC12	1/9/2020	40.358350	-83.458340	USACE, OEPA	PEM	0.98	3
WC13	1/9/2020	40.356900	-83.461480	OEPA	PEM	0.15	7
WC14	1/10/2020	40.344990	-83.433420	OEPA	PFO	0.73	7
WC15	1/10/2020	40.349380	-83.426720	USACE, OEPA	PFO	0.18	3
WC16	1/10/2020	40.378500	-83.462160	OEPA	PEM	0.09	3
WC17	1/10/2020	40.378600	-83.463780	OEPA	PFO	2.39	3
WC18	1/10/2020	40.377990	-83.461910	OEPA	PEM/PFO	0.38	1
PNDC01	1/8/2020	40.351888	-83.416771	OEPA	PUB	0.46	4
PNDC02	1/9/2020	40.352210	-83.451650	OEPA	PUB	0.21	2
PNDC03	1/9/2020	40.350140	-83.454320	OEPA	PUB	0.10	1, 3
PNDC04	1/9/2020	40.351350	-83.455180	OEPA	PUB	1.90	1
PNDC05	1/9/2020	40.357680	-83.460410	OEPA	PUB	0.66	1
PNDC06	1/9/2020	40.337320	-83.435980	OEPA	PUB	0.58	1, 2
PNDC07	1/10/2020	40.351840	-83.433480	OEPA	PUB	0.88	1
PNDC08	1/10/2020	40.379590	-83.462020	OEPA	PUB	1.77	2
<b>Total PEM</b>	-	-	-	-	<b>PEM</b>	<b>15.12</b>	-
<b>Total PSS</b>	-	-	-	-	<b>PSS</b>	<b>0.47</b>	-
<b>Total PFO</b>	-	-	-	-	<b>PFO</b>	<b>37.02</b>	-
<b>Total PEM/PSS</b>	-	-	-	-	<b>PEM/PSS</b>	<b>0.10</b>	-
<b>Total PEM/PFO</b>	-	-	-	-	<b>PEM/PFO</b>	<b>0.38</b>	-
<b>Total PUB</b>	-	-	-	-	<b>PUB</b>	<b>12.32</b>	-
<b>Total</b>	-	-	-	-	-	<b>65.41</b>	-

\* This determination is SWCA's professional opinion of USACE and OEPA jurisdictional status of each feature under Section 404 of the CWA.

### 3.2.1.1 FEATURE DESCRIPTIONS

#### Wetland WA01

WA01 is a depressional wetland with portions dominated by scrub/shrub vegetation stratum and portions dominated by herbaceous vegetation stratum. This wetland is along the fringe of a large lake that is outside of the Project Area. The lake was formed by impounding stream SA01. SWCA has determined, using the ORAM methodology, that WA01 is a Category 2 wetland.

#### Wetland WA02

WA02 is a forested wetland that sits on the terrace of stream SA01. The surrounding forest is primarily young and disturbed, with individual large, mature trees scattered throughout. SWCA has determined, using the ORAM methodology, that WA02 is a Category 2 wetland.

#### Wetland WA03

WA03 is a linear depressional wetland along a swale in an agricultural field. It was unclear if it was subtended by a drain tile system. WA02 drains into a culvert onto an inaccessible property, though topographic mapping indicates that it ultimately flows into stream SA04, which connects to a drain tile system. Because it is dominated by invasive reed canary grass (*Phalaris arundinacea*), WA03 is a Category 1 wetland.

#### Wetland WA04

WA04 is a linear, depressional wetland along a swale in an agricultural field. A small channel has formed in portions of it; however, the channel does not have a continuous OHWM. This wetland receives hydrology from overland sheet flow and the outflow of a drain tile system which is fed by stream SA02. This wetland drains into a roadside ditch which ultimately flows to Bokes Creek. SWCA has determined, using the ORAM methodology, that WA05 is a Category 1 wetland.

#### Wetland WA05

WA05 is a depressional wetland at the confluence of a drainage swale and a roadside ditch. It appears that a broken drain tile system provides the hydrology for this wetland. SWCA has determined, using the ORAM methodology, that WA05 is a Category 1 wetland.

#### Wetland WA06

WA06 is a depressional wetland in an isolated woodlot. Portions of the isolated woodlot are on an inaccessible property; however, aerial imagery suggests that there is connectivity between this wetland and a roadside ditch to the north. SWCA has determined, using the ORAM methodology, that WA05 is a Category 2 wetland.

#### Wetland WA07

WA07 is a linear, depressional wetland along a swale in an agricultural field. A small channel has formed in portions of it; however, the channel does not have a continuous OHWM. There was evidence that this swale receives regular maintenance and dredging. This wetland receives hydrology from overland sheet flow and the outflow of a drain tile system. Water drains south to north through this wetland, but ultimately into a drain tile system. SWCA has determined, using the ORAM methodology, that WA07 is a Category 1 wetland.

#### Wetland WA08

WA08 is a linear, depressional wetland that receives hydrology from a nearby forested wetland. Water is collected from the forested wetland and funneled towards a drain tile system. SWCA has determined, using the ORAM methodology, that WA08 is a Category 1 wetland.

#### Wetlands WA09 – WA12

WA09, WA10, WA11, and WA12 are four mature, forested wetlands located in a large (i.e. > 100 acre) woodlot. These wetlands present similar characteristics, including hydrology, dominant plant species, and soil types. All four wetlands appear to be isolated. The surrounding upland forest is mature and limited invasive species were observed, indicating that it serves as a high-quality buffer around these wetlands. SWCA has determined, using the ORAM methodology, that these wetlands fall in the Category 2 – 3 “gray zone”, and thus default to Category 3.

#### Wetland WA13

WA13 is a forested wetland in the same woodlot as WA09 – WA12. It shares similar characteristics with WA09 – WA12, with the exception that a portion of this wetland is dominated by buttonbush (*Cephalanthus occidentalis*), indicating that this area likely stays inundated for longer periods of time during the growing season. SWCA has determined, using the ORAM methodology, that this wetland qualifies as a Category 3 wetland.

#### Wetland WA14

WA14 is forested wetland complex that includes portions of the terrace of stream SB16 and other low-lying areas upslope. This wetland is in the same woodlot as wetlands WA09 – WA13. There is a discontinuous channel within the lowest areas in the middle of WA14 which eventually becomes incised and continuous, forming the headwaters of stream SB16, an unnamed tributary to Blues Creek. SWCA has determined, using the ORAM methodology, that this wetland qualifies as a Category 3 wetland.

#### Wetland WA15

WA15 is a linear, depressional wetland within the same woodlot as Wetlands WA09 – WA14. However, the portions of the woodlot that are south of WA14 and SB16 appeared to be younger, with a denser understory. Field crews observed evidence that a drain tile system, likely in disrepair, subtends this wetland, likely altering natural hydrology. A discontinuous channel runs through the center of this wetland as well. This wetland drains into Streams SB16 and SB18. SWCA has determined, using the ORAM methodology, that this wetland qualifies as a Category 2 wetland.

#### Wetland WA16

WA16 is a depressional wetland in the same woodlot as Wetlands WA09 – WA15. The surrounding upland forest appeared to be younger with a denser understory. SWCA has determined, using the ORAM methodology, that this wetland qualifies as Category 2 wetland.

#### Wetlands WA17 – WA23, WA26 – WA 27

Wetlands WA17 – WA23 and WA26 – WA27 are all located within the same actively cultivated agricultural field. Aerial imagery suggests that this field has a less robust drain tile system than surrounding fields within the Project Area. Further, evidence in the field indicated that the drain tile system has fallen into disrepair in some areas. This may have led to altered and unnatural hydrologic conditions. These nine wetlands share vegetation, soil, and hydrologic characteristics. SWCA has determined, using the ORAM methodology, that these wetlands qualify as Category 1 wetlands.

*Wetlands WA24 and WA25*

WA24 and WA25 are two forested wetlands located in a woodlot surrounded by the agricultural field that contains Wetlands WA17 – WA23 and WA26 – WA27. At the time of survey, it appeared that the upland portions of the woodlot had been selectively cut for timber. However, cutting within the wetlands was limited or avoided. SWCA has determined, using the ORAM methodology, that these wetlands qualify as Category 2 wetlands.

*Wetlands WA28 – WA32*

Wetlands WA28 – WA32 are all located within the same actively cultivated agricultural field. These five wetlands all share similar vegetation, soil, and hydrologic characteristics. They are actively farmed depressions that appear to hold water during the growing season. SWCA has determined, using the ORAM methodology, that these wetlands qualify as Category 1 wetlands.

*Wetlands WA33 and WA34*

WA33 and WA34 are located within the same actively cultivated agricultural field, and share the same vegetation, soil, and hydrologic characteristics. There was evidence that a drain tile system has been installed, however it is either in disrepair or insufficient to remove hydrology from these areas. SWCA has determined, using the ORAM methodology, that these wetlands qualify as Category 1 wetlands.

*Wetland WA35*

Wetland WA35 is a depressional PEM wetland surrounded by a fallow field and agricultural land. It is bisected by an upland farm access road OH 739, though there are culverts that connect the wetland under each road. SWCA has determined, using the ORAM methodology, that WA35 is a Category 1 wetland.

*Wetland WA36*

Wetland WA36 is depressional PEM wetland located within an actively cultivated agricultural field. SWCA has determined, using the ORAM methodology, that WA36 is a Category 1 wetland.

*Wetland WA37*

Wetland WA37 is a forested, depressional wetland located in a woodlot surrounded by the agricultural field that contains Wetlands WA36 and WA38. SWCA has determined, using the ORAM methodology, that WA37 is a Category 2 wetland.

*Wetland WA38*

Wetland WA38 is a depressional PEM wetland located within the same actively cultivated agricultural field that also contains wetlands WA36 and WA37. SWCA has determined, using the ORAM methodology, that WA38 is a Category 1 wetland.

*Wetland WA39*

Wetland WA39 is a forested wetland located in a woodlot surrounded by the agricultural field that contains Wetlands WA40 and WA41. SWCA has determined, using the ORAM methodology, that WA39 is a Category 2 wetland.

*Wetland WA40*

Wetland WA40 is a depressional PEM wetland located an actively cultivated agricultural field. SWCA has determined, using the ORAM methodology, that WA40 is a Category 1 wetland.

*Wetland WA41*

Wetland WA41 is a forested wetland located in a woodlot surrounded by the agricultural field that contains Wetlands WA39. SWCA has determined, using the ORAM methodology, that WA39 is a Category 2 wetland.

*Wetland WA42 – WA44*

Wetlands WA42-WA44 are depressional PEM wetlands located within an actively cultivated agricultural field. SWCA has determined, using the ORAM methodology, that these wetlands are Category 1 wetlands.

*Wetland WA45*

Wetland WA45 is a PUB and appears to have been constructed in an upland area. A historic use was not evident, though remnants of barbed wire fence surrounding it were observed. Understory surrounding the wetland was thick, restricting access. SWCA has determined, using the ORAM methodology, that WA45 is a Category 1 wetland.

*Wetland WA46*

Wetland WA46 is a depressional PEM wetland located within the same actively cultivated agricultural field that also contains wetlands WA42-WA44. SWCA has determined, using the ORAM methodology, that WA46 is a Category 1 wetland.

*Wetland WA47*

Wetland WA47 is primarily a PUB that appears to have been constructed in an upland area. A narrow depression connects the PUB component with what appears to have been a constructed PUB to the northwest, though this area is now dominated by emergent and young, early successional woody vegetation. This wetland does not appear to be an impoundment. SWCA has determined, using the ORAM methodology, that WA47 is a Category 2 wetland.

*Wetland WA48*

Wetland WA48 is a depressional PEM wetland located within the same actively cultivated agricultural field that also contains wetland WA49. SWCA has determined, using the ORAM methodology, that WA48 is a Category 1 wetland.

*Wetland WA49*

Wetland WA49 is a linear depressional PEM wetland located within a relict stream channel that discharges directly into Stream SA15. This feature is connected to Stream SA15. SWCA has determined, using the ORAM methodology, that WA493 is a Category 1 wetland.



### *Wetlands PNDA01 and PNDA02*

These wetlands are PUBs that have been evidently constructed in upland areas, likely for recreational purposes. SWCA has determined, using the ORAM methodology, that these wetlands are Category 1 wetlands.

### *Wetland WB02*

Wetland WB02 is a depressional PFO wetland located within the floodplain of Stream SB04 (Bokes Creek). This feature is connected to Stream SB04. This wetland is buffered by upland deciduous forest. SWCA has determined, using the ORAM methodology, that WB02 is a Modified Category 2 wetland.

### *Wetland WB03*

Wetland WB03 is a linear depressional PFO wetland located within a relict stream channel that discharges directly into Stream SB04 (Bokes Creek). This feature is connected to Stream SB04. This wetland is buffered by upland deciduous forest. SWCA has determined, using the ORAM methodology, that WB03 is a Modified Category 2 wetland.

### *Wetland WB04*

Wetland WB04 is a depressional PEM wetland connected to SB04 (Bokes Creek) via ephemeral stream SB07. This feature is connected to SB04. This wetland is buffered by upland deciduous forest and pasture. SWCA has determined, using the ORAM methodology, that WB04 is a Category 1 wetland.

### *Wetland WB05*

Wetland WB05 is a depressional PEM wetland located within an agricultural field. This wetland was recently modified by agricultural (mowing) activities; therefore, the grass species had no identifiable characteristics. SWCA has determined, using the ORAM methodology, that WB05 is a Category 1 wetland.

### *Wetland WB06*

Wetland WB06 is a depressional PEM wetland located along SB08. This feature is likely to be considered under USACE and OEPA jurisdiction due to its proximity to SB08. This wetland is buffered by old field/scrub-shrub. SWCA has determined, using the ORAM methodology, that WB06 is a Modified Category 2 wetland.

### *Wetland WB07*

Wetland WB07 is a depressional PFO wetland located near SB08. This feature is likely to be considered under USACE and OEPA jurisdiction due to its proximity to SB08. This feature is buffered by upland deciduous forest and row crop. SWCA has determined, using the ORAM methodology, that WB07 is a Modified Category 2 wetland.

### *Wetland WB08*

Wetland WB08 is a depressional linear wetland in a non-flowing stretch of Powder Lick Run. This feature is buffered on either side by row crop. SWCA has determined, using the ORAM methodology, that WB08 is a Category 1 wetland.



#### *Wetland WB09*

Wetland WB09 is a depressional PEM wetland located within an agricultural field. This wetland was recently modified by agricultural (mowing) activities; therefore, the grass species had no identifiable characteristics. SWCA has determined, using the ORAM methodology, that WB09 is a Category 1 wetland.

#### *Wetlands PNDB01 and PNDB02*

Wetland PNDB01 is a PUB and appears to have been constructed in an upland area, likely for recreational purposes. SWCA has determined, using the ORAM methodology, that these wetlands are Category 1 wetlands.

#### *Wetland WC01*

Wetland WC01 is a depressional PUB wetland located within a disturbed, fallow field. Historical imagery suggests the field was used as a motorsport track. This wetland is buffered by upland herbaceous field and a hedge row. SWCA has determined, using the ORAM methodology, that WC01 is a Category 1 wetland.

#### *Wetland WC02*

Wetland WC02 is a depressional PEM wetland located within an actively cultivated agricultural field. This wetland is buffered by upland agricultural fields and a hedgerow. SWCA has determined, using the ORAM methodology, that WC02 is a Category 1 wetland.

#### *Wetland WC03*

Wetland WC03 is a depressional PEM wetland located within the same actively cultivated agricultural field as wetland WC02. This wetland is buffered by upland agricultural fields and a hedgerow. SWCA has determined, using the ORAM methodology, that WC03 is a Category 1 wetland.

#### *Wetland WC04*

Wetland WC04 is a depressional PEM wetland located within the same actively cultivated agricultural field as Wetlands WC02 and WC03. This wetland is buffered by upland agricultural fields and hedgerow. SWCA has determined, using the ORAM methodology, that WC04 is a Category 1 wetland.

#### *Wetland WC05*

Wetland WC05 is depressional PFO wetland located within a disturbed, though recovering woodlot adjacent to SB17. While no discreet surface channel was observed, this feature is likely to be considered jurisdictional due to connectivity to SB17. This wetland is buffered by upland deciduous forest and stream bank. SWCA has determined, using the ORAM methodology, that WC05 falls within the "gray zone" for Category 1 or 2 and thus defaults to Category 2.

#### *Wetland WC06*

Wetland WC06 is a depressional PFO wetland surrounded by an agricultural field. This wetland is buffered by upland agricultural fields. Aerial imagery suggests that during some years or precipitation events a channel is scoured between this wetland and other waters, however this appears to change each year. SWCA has determined, using the ORAM methodology, that WC06 is a Category 1 wetland, mainly due to its size and lack of upland buffer.

#### *Wetland WC07*

Wetland WC07 is a depressional PUB wetland located within a fallow field. Historic aerial imagery indicates that this feature developed between August of 2015 and August of 2016 and was likely human made for hunting purposes. This wetland is buffered by upland fallow fields and managed forest. SWCA has determined, using the ORAM methodology, that WC07 is a Category 1 wetland, mainly due to disturbance in surrounding upland buffers.

#### *Wetland WC08*

Wetland WC08 is a series of connected, depressional PUB wetlands located within the same fallow field as WC07. Historic aerial imagery indicates that this feature developed between August of 2015 and August of 2016 and was likely human made for hunting purposes. This wetland is buffered by upland fallow fields and managed forest. SWCA has determined, using the ORAM methodology, that WC08 is a Category 1 wetland, mainly due to disturbance in surrounding upland buffers.

#### *Wetland WC09*

Wetland WC09 is a depressional PUB wetland located within the same fallow field as Wetlands WC07 and WC08. Historic aerial imagery indicates that this feature developed between August of 2015 and August of 2016 and was likely human made for hunting purposes. This wetland is buffered by upland fallow fields and managed forest. SWCA has determined, using the ORAM methodology, that WC09 is a Category 1 wetland, mainly due to disturbance in surrounding upland buffers.

#### *Wetland WC10*

Wetland WC10 is a depressional PEM wetland located within the same fallow field as Wetlands WC07 – WC09. This wetland is buffered by upland fallow fields. SWCA has determined, using the ORAM methodology, that WC10 is a Category 1 wetland, mainly due to disturbance in surrounding upland buffers and within the boundaries of the wetland itself.

#### *Wetland WC11*

Wetland WC11 is a depressional PSS wetland surrounding a perennial pond (PNDC03). This wetland is buffered by upland deciduous forest. SWCA has determined, using the ORAM methodology, that WC11 is a Modified Category 2 wetland.

#### *Wetland WC12*

Wetland WC12 is a linear depressional PEM wetland located within an actively grazed pasture, which is connected to SC03 by a culvert. The vegetation, hydrology, and soil are significantly affected by the livestock within this field. Further, a drain tile system had been installed in low-lying areas, however there was evidence that the system had failed, further altering hydrology. This wetland is buffered by upland pastures. SWCA has determined, using the ORAM methodology, that WC12 is a Category 1 wetland.

#### *Wetland WC13*

Wetland WC13 is a depressional PEM wetland located within the same actively grazed pasture as Wetland WC12. It appears that this wetland may be a silted-in, constructed pond. This wetland is buffered by upland herbaceous pasture. SWCA has determined, using the ORAM methodology, that WC13 is a Category 1 wetland.

#### *Wetland WC14*

Wetland WC14 is a depressional PFO wetland located in a low-lying area at the confluence of Streams SC05 and SC06. This wetland is buffered by upland deciduous forest. SWCA has determined, using the ORAM methodology, that WC14 is a Modified Category 2 wetland.

#### *Wetland WC15*

Wetland WC15 is a depressional PFO wetland located adjacent to two streams, SC07 and SB16. This wetland is buffered by upland deciduous forest and managed field. SWCA has determined, using the ORAM methodology, that WC15 is a Modified Category 2 wetland.

#### *Wetland WC16*

Wetland WC16 is a depressional PEM wetland located within a young, though recovering forest. This wetland is buffered by upland forest. SWCA has determined, using the ORAM methodology, that WC16 is a Modified Category 2 wetland.

#### *Wetland WC17*

Wetland WC17 is a depressional PFO wetland located within the same young, recovering forest as Wetland WC16. This wetland is buffered by upland deciduous forest. SWCA has determined, using the ORAM methodology, that WC17 is a Modified Category 2 wetland.

#### *Wetland WC18*

Wetland WC18 is a depressional PEM/PFO wetland located within the same young, recovering forest as Wetlands WC16 and WC17. This wetland is buffered by upland deciduous forest. SWCA has determined, using the ORAM methodology, that WC18 is a Modified Category 2 wetland.

#### *Wetlands PNDC01, PNDC02, PNDC04, PNDC05, PNDC06, PNDC07, PNDC08*

These wetlands are PUBs and appear to have been constructed in uplands. SWCA has determined, using the ORAM methodology, that these wetlands are Category 1 wetlands.

#### *Wetland PNDC03*

Wetland PNDC03 is a PUB and appears to be a naturally occurring pond that developed within a wetland. SWCA has determined, using the ORAM methodology, that PNDC03 is a Category 1 wetland.

### **3.2.2 Waterbodies**

SWCA recorded 37 separate streams, totaling 72,556 linear feet of stream within the Project Area (Table 6). Please refer to Appendix A for the location of each waterbody within the Project Area. Photographs of all features are provided in Appendix A.

**Table 6. Waterbodies Identified during Field Survey for the Cadence Solar Energy Center, Union County, Ohio**

Feature ID	Survey Date	Location		Jurisdictional Status*	Classification	Linear Feet within Project Area	Map Book Page
SA01	12/10/2019	40.405929	-83.468184	USACE, OEPA	Intermittent	2,154 lf	1

Feature ID	Survey Date	Location		Jurisdictional Status*	Classification	Linear Feet within Project Area	Map Book Page
SA02	12/10/2019	40.410294	-83.478470	USACE, OEPA	Ephemeral	1,761 lf	1
SA03	12/10/2019	40.410355	-83.476181	USACE, OEPA	Ephemeral	287 lf	1
SA04	12/10/2019	40.414868	-83.472628	USACE, OEPA	Ephemeral	663 lf	1
SA05	12/27/2019	40.355018	-83.444996	USACE, OEPA	Ephemeral	965 lf	4
SA08	1/14/2020	40.395260	-83.425556	USACE, OEPA	Ephemeral	1,071 lf	2
SA09	1/14/2020	40.386385	-83.459586	USACE, OEPA	Ephemeral	1,310 lf	1, 3
SA10	1/15/2020	40.390623	-83.467263	USACE, OEPA	Ephemeral	1,457 lf	1
SA11	11/23/2020	40.350322	-83.463335	OEPA	Ephemeral	132 lf	6
SA12	11/23/2020	40.341198	-83.441482	OEPA	Ephemeral	245 lf	6
SA13	11/23/2020	40.335616	-83.436297	OEPA	Ephemeral	450 lf	7
SA14	11/23/2020	40.346847	-83.451155	OEPA	Ephemeral	767 lf	7
SA15	11/23/2020	40.347058	-83.453459	USACE, OEPA	Intermittent	170 lf	7
SB01	12/11/2019	40.405661	-83.466968	USACE, OEPA	Ephemeral	621 lf	1
SB02	12/11/2019	40.401324	-83.455371	USACE, OEPA	Perennial	4,573 lf	1, 2
SB03	12/11/2019	40.407188	-83.457737	USACE, OEPA	Ephemeral	74 lf	1
SB04	12/12/2019	40.408632	-83.442806	USACE, OEPA	Perennial	2,792 lf	2
SB06	12/12/2019	40.400193	-83.439930	USACE, OEPA	Intermittent	821 lf	2
SB07	12/13/2019	40.393273	-83.415092	USACE, OEPA	Ephemeral	133 lf	1, 2, 4
SB08	12/13/2019	40.383599	-83.419275	USACE, OEPA	Ephemeral, Perennial	8,831 lf	2
SB09	12/14/2019	40.386492	-83.438700	USACE, OEPA	Ephemeral, Perennial	1,772 lf	3, 4
SB10	12/14/2019	40.373915	-83.430270	USACE, OEPA	Ephemeral, Intermittent, Perennial	11,104 lf	4
SB11	12/15/2019	40.364590	-83.452551	USACE, OEPA	Perennial	7,488 lf	7
SB12	12/15/2019	40.367829	-83.437401	USACE, OEPA	Intermittent	330 lf	7
SB13	12/15/2019	40.370757	-83.439815	OEPA	Ephemeral	655 lf	7
SB15	12/15/2019	40.361072	-83.451550	USACE, OEPA	Intermittent	1,998 lf	4
SB16	12/16/2019	40.350927	-83.428198	USACE, OEPA	Intermittent, Perennial	8,281 lf	1
SB17	12/16/2019	40.351484	-83.401735	USACE, OEPA	Perennial	5,003 lf	4
SB18	12/16/2019	40.355198	-83.441801	USACE, OEPA	Ephemeral	190 lf	4
SB19	12/16/2019	40.351248	-83.434000	USACE, OEPA	Intermittent	1,885 lf	7
SC01	1/8/2020	40.349114	-83.415539	USACE, OEPA	Ephemeral	612 lf	7
SC02	1/9/2020	40.369491	-83.423977	USACE, OEPA	Intermittent	485 lf	6
SC03	1/9/2020	40.358786	-83.456931	USACE, OEPA	Ephemeral	476 lf	6
SC04	1/9/2020	40.342549	-83.433343	USACE, OEPA	Ephemeral	263 lf	3
SC05	1/9/2020	40.344694	-83.433224	USACE, OEPA	Ephemeral	1,354 lf	7
SC06	1/9/2020	40.341550	-83.433573	USACE, OEPA	Intermittent	351 lf	7
SC07	1/10/2020	40.349252	-83.427212	USACE, OEPA	Ephemeral	1,033 lf	3

\* This determination is SWCA's professional opinion of USACE and OEPA jurisdictional status of each feature under Section 404 of the Clean Water Act (CWA).

### **3.2.2.1 FEATURE DESCRIPTIONS**

#### *Stream SA01*

Stream SA01 is an intermittent unnamed tributary (UNT) to Bokes Creek flowing south to north through the Project Area. Wetland WA02 sits on the terrace of stream SA01. No macrobenthos or fish were observed within the stream reach. Upstream of the reach within the Project Area stream SA01 is impounded to form a lake. WA01 is on the perimeter of that lake.

#### *Stream SA02*

Stream SA02 is an ephemeral UNT to Bokes Creek flowing southwest to northeast through the Project Area. It is subtended by a drain tile system that appears to have been damaged or is incomplete, resulting in irregular channel continuity. The stream disappears into a tile system at the downstream terminus as depicted on mapping provided in Appendix A. The stream appears to daylight into wetland WA04 further downslope. This stream is supported by outflow from tile systems in adjoining agricultural fields. No macrobenthos or fish were observed within the stream reach.

#### *Stream SA03*

Stream SA03 is an ephemeral UNT to Bokes Creek flowing southeast to northwest through the Project Area. Its hydrology appears to have been severely impacted by a drain tile system that has fallen into disrepair, resulting in an irregular and inconsistent channel. No macrobenthos or fish were observed within the stream reach.

#### *Stream SA04*

Stream SA04 is an ephemeral UNT to Bokes Creek flowing west to east through the Project Area. Hydrology appears to be supported by the upslope PEM wetland WA03, which is piped into a drain tile system and daylights at the western terminus of Stream SA04 within the Project Area. The channel is well formed, and consistent between termini, but disappears into a drain tile system downslope. No macrobenthos or fish were observed within the stream reach.

#### *Stream SA05*

Stream SA05 is an ephemeral UNT to the headwaters of Blues Creek flowing from south to north through the Project Area. No macrobenthos or fish were observed within the stream reach. Hydrology appears to be natural, consisting of overland sheet flow.

#### *Stream SA08*

SA08 is an ephemeral UNT to Bokes Creek flowing from west to east through the Project Area. This stream is supported by hydrology provided from drain tile systems in adjoining fields. An erosional feature with an inconsistent channel that appears to have been scoured by heavy rains prior to survey also supports this stream. The stream ends in a drain tile system on the eastern terminus of the reach as depicted in mapping provided in Appendix A. No macrobenthos or fish were observed within the stream reach.

*Stream SA09*

SA09 is an ephemeral UNT to Powder Lick Run (SB08) that flows from south to north through the Project Area. This stream is supported by hydrology provided from drain tile systems in the adjoining field. No macrobenthos or fish were observed within the stream reach.

*Stream SA10*

SA10 is an ephemeral UNT to Powder Lick Run (SB08) that flows from west to east through the Project Area. This stream is supported by hydrology provided from drain tile systems in the adjoining field. No macrobenthos or fish were observed within the stream reach.

*Stream SA11*

SA11 is an ephemeral UNT that flows from north to south through the Project Area. This stream continues to flow south outside of the Project Area into a woodlot. This stream is supported by hydrology from drain tile systems in the adjoining field. No macrobenthos or fish were observed within the stream reach.

*Stream SA12*

SA12 is an ephemeral ditch that flows from north to south through the Project Area. This stream continues to flow south outside of the Project Area. This stream is supported by hydrology from drain tile systems in the adjoining field. No macrobenthos or fish were observed within the stream reach.

*Stream SA13*

SA13 is an ephemeral UNT that flows from north to south through the Project Area. This stream continues to flow south outside of the Project Area. This stream is supported by hydrology from drain tile systems in the adjoining field. No macrobenthos or fish were observed within the stream reach.

*Stream SA14*

SA14 is an ephemeral UNT that flows from west to east through the Project Area. This stream continues to flow east outside of the Project Area. This stream is supported by hydrology from surface flow of the adjoining woodlot and drain tile system in the fields to the west. No macrobenthos or fish were observed within the stream reach.

*Stream SA15*

SA15 is an intermittent UNT that flows from west to east through the Project Area. This stream is supported by hydrology from a drain tile system in the surrounding fields and surface flow of the adjoining woodlot and fields. No macrobenthos or fish were observed within the stream reach.

*Stream SB01*

Stream SB01 is an ephemeral UNT to Bokes Creek flowing south to north through the Project Area. No macrobenthos or fish were observed within the stream reach. Hydrology input appeared to be tile drainage from adjacent agricultural fields.

#### *Stream SB02*

Stream SB02 is a perennial UNT to Bokes Creek flowing southwest to northeast through the Project Area. The stream is primarily buffered by agricultural fields. Much of the stream reach within the Project Area has been modified by agricultural activities. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB03*

Stream SB03 is an ephemeral ditch located entirely within the Project Area. The stream was buffered by agricultural fields. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB04*

Stream SB04 is the perennial stream Bokes Creek. SB04 flows west to east along portions of the northern Project Area boundary. The stream is buffered by both upland deciduous forest, forested wetland, and agricultural fields. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB06*

Stream SB06 is an intermittent UNT to Bokes Creek flowing south to north through the Project Area. The stream reach is buffered by a narrow, forested corridor followed by agricultural fields. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB07*

Stream SB07 is an ephemeral stream flowing southwest to northeast into Bokes Creek. The stream is buffered by upland deciduous forest and forested wetland. The stream was dry at the time of site investigations. This stream is the outflow of wetland WB04. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB08*

Stream SB08, Powder Lick Run, flows through multiple portions of the Project Area, and includes reaches that are ephemeral as well as reaches that are perennial. The stream is buffered in places by old field, upland deciduous forest, and emergent wetland. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB09*

Stream SB09 is a perennial UNT of Powder Lick Run generally flowing west to east through multiple tracts within the Project Area, and includes reaches that are ephemeral, as well as reaches that are perennial. The stream has been modified by, and is buffered by, agricultural activities. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB10*

Stream SB10, Brush Run, generally flows west to east through multiple parcels within the Project Area. There are ephemeral, intermittent, and perennial reaches within the Project Area. The stream is buffered in places by old field, agriculture, and upland deciduous forest. No macrobenthos or fish were observed within the stream reach.



#### *Stream SB11*

Stream SB11 is a perennial UNT of Brush Run, generally flowing west to east through multiple parcels within the Project Area. The stream is buffered primarily by agricultural fields with some forested upland areas. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB12*

Stream SB12 is an intermittent stream flowing west to east into SB11. The stream is buffered by agricultural fields. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB13*

Stream SB13 is an ephemeral channel contained entirely within the Project Area ending in diffuse flow prior to connectivity to a water of the U.S. It appears natural hydrology is impacted by a drain tile system, perhaps one in disrepair. The stream is within an agricultural field and was dry at the time of site investigations. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB15*

Stream SB15 is an intermittent stream generally flowing southwest to northeast into SB11, Brush Run. The stream has been channelized and is buffered by agricultural activities. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB16*

Stream SB16, an UNT to Blues Creek, generally flowing west to east through multiple parcels within the Project Area. There are intermittent and perennial reaches of this stream within the Project Area. The stream is buffered primarily by agricultural fields with some forested upland areas. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB17*

Stream SB17, Blues Creek, is a perennial stream generally flowing west to east through multiple parcels within the Project Area. The stream is buffered primarily by agricultural fields with some forested upland areas. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB18*

Stream SB18 is an ephemeral UNT to Blues Creek flowing southwest to northeast into SB16. The stream is buffered by upland and wetland forest. No macrobenthos or fish were observed within the stream reach.

#### *Stream SB19*

Stream SB19 is an intermittent UNT to Blues Creek flowing west to east into SB16. The stream has been modified by, and is buffered by, agricultural activities. No macrobenthos or fish were observed within the stream reach.

#### *Stream SC01*

Stream SC01 is an ephemeral UNT to SB16 flowing north/northwest through the Project Area without flow at the time of survey. The stream is bisected by an area with no bed and bank, most likely due to



reduced flow due to human activities. No macrobenthos or fish were observed within the stream reach. Hydrology input appeared to be tile drainage from adjacent agricultural fields and off the Project Area.

#### *Stream SC02*

Stream SC02 is an intermittent UNT to Brush Run Creek flowing south to north through the Project Area with low flow at the time of survey. No macrobenthos or fish were observed within the stream reach. Hydrology input appeared to be tile drainage from adjacent agricultural fields.

#### *Stream SC03*

Stream SC03 is an ephemeral UNT to SB15 flowing southwest to northeast through the Project Area with no flow at the time of survey. No macrobenthos or fish were observed within the stream reach. Hydrology input appeared to be tile drainage and surface flow from adjacent agricultural fields.

#### *Stream SC04*

Stream SC04 is an ephemeral UNT to Blues Creek flowing southwest to northeast through the Project Area with no flow at the time of survey. No macrobenthos or fish were observed within the stream reach. Hydrology input appeared to be tile drainage from adjacent agricultural fields.

#### *Stream SC05*

Stream SC05 is an ephemeral UNT to Blues Creek flowing southwest to northeast through the Project Area with moderate flow at the time of survey. No macrobenthos or fish were observed within the stream reach. Hydrology input appeared to be tile drainage from adjacent agricultural fields.

#### *Stream SC06*

Stream SC06 is an ephemeral UNT to SC05 flowing west to east through the Project Area with low flow at the time of survey. No macrobenthos or fish were observed within the stream reach. Hydrology input appeared to be tile drainage from adjacent agricultural fields.

#### *Stream SC07*

Stream SC07 is an ephemeral UNT to Blues Creek flowing south to north through the Project Area with no flow at the time of survey. No macrobenthos or fish were observed within the stream reach. Hydrology input appeared to be surface flow from the surrounding forested area.

## **4 CONCLUSIONS**

SWCA conducted a field investigation of the Project Area on December 10-16 and 26-27, 2019; January 8-10 and 14-15, and November 5-6 and 23, 2020. SWCA biologists identified 87 wetlands and 37 streams in the Project Area. Wetlands and waterbodies are regulated in Ohio by the USACE, who has authority under Section 404 of the CWA; U.S. EPA, who enforces Section 404; and OEPA, who issue Section 401 Water Quality Certifications for all Section 404 Permits and Isolated Wetlands Permits.

The conclusions provided in this report represent SWCA's professional opinion based on SWCA's knowledge and experience with the USACE, including the USACE's regulatory guidance documents and manuals. The USACE and OEPA have final authority in determining the jurisdictional status of waters of the U.S. and State and the extent of their boundaries.

## 5 LITERATURE CITED

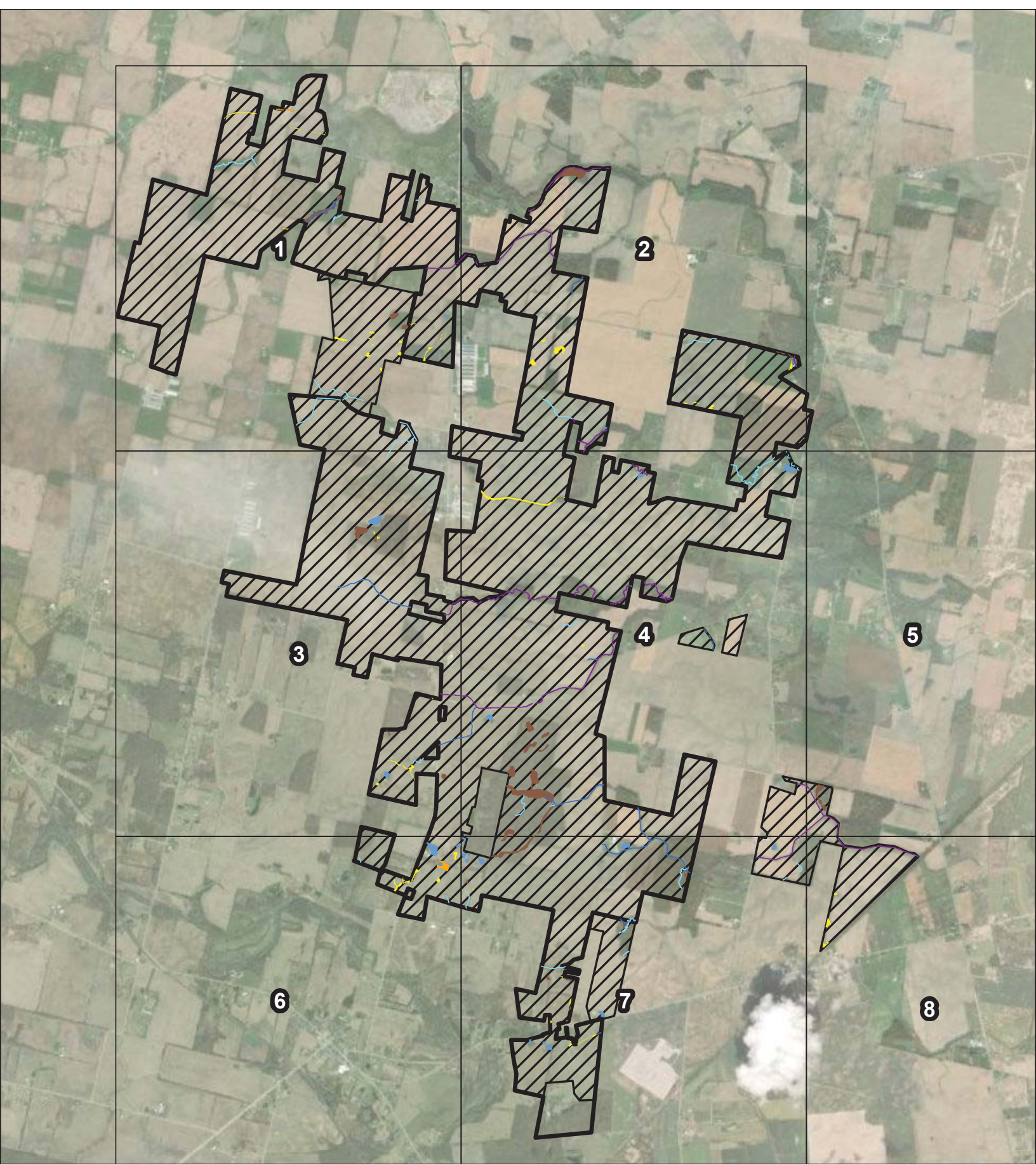
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## **APPENDIX A**

### **Wetland and Waterbody Delineation Maps**





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**SWCA**  
ENVIRONMENTAL CONSULTANTS

## CADENCE SOLAR ENERGY CENTER

Union County, Ohio

Page Index

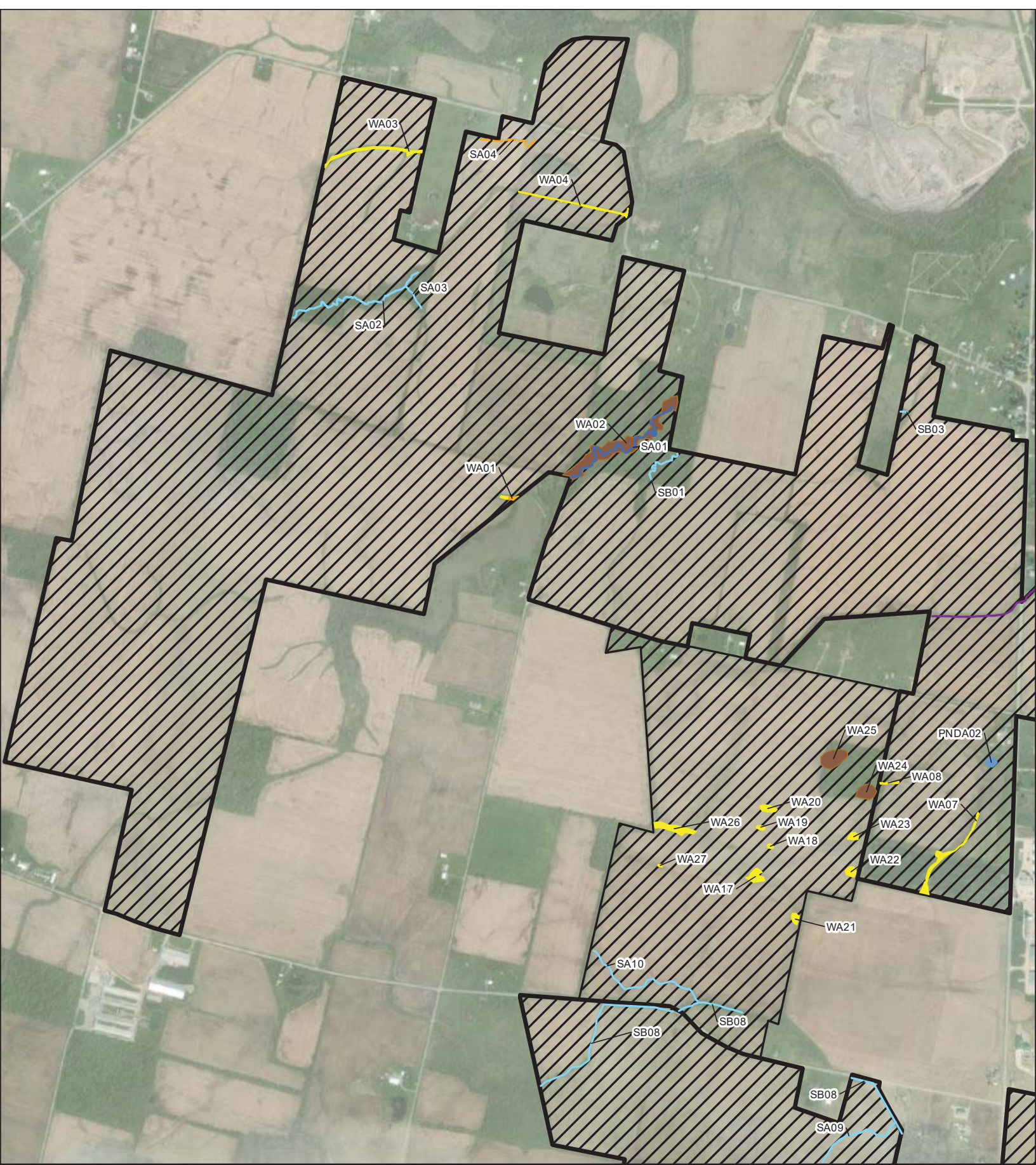
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	Ephemeral Stream		Forested Wetland
	Intermittent Stream		Scrub-Shrub Wetland
	Perennial Stream		Unconsolidated Bottom Wetland
	Delineation Survey Area		
	Project Area		

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Project Number: 58990  
Date: 12/21/2020  
NAD 1983 StatePlane Ohio North FIPS 3401 Feet







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# **CADENCE SOLAR ENERGY CENTER**

Union County, Ohio

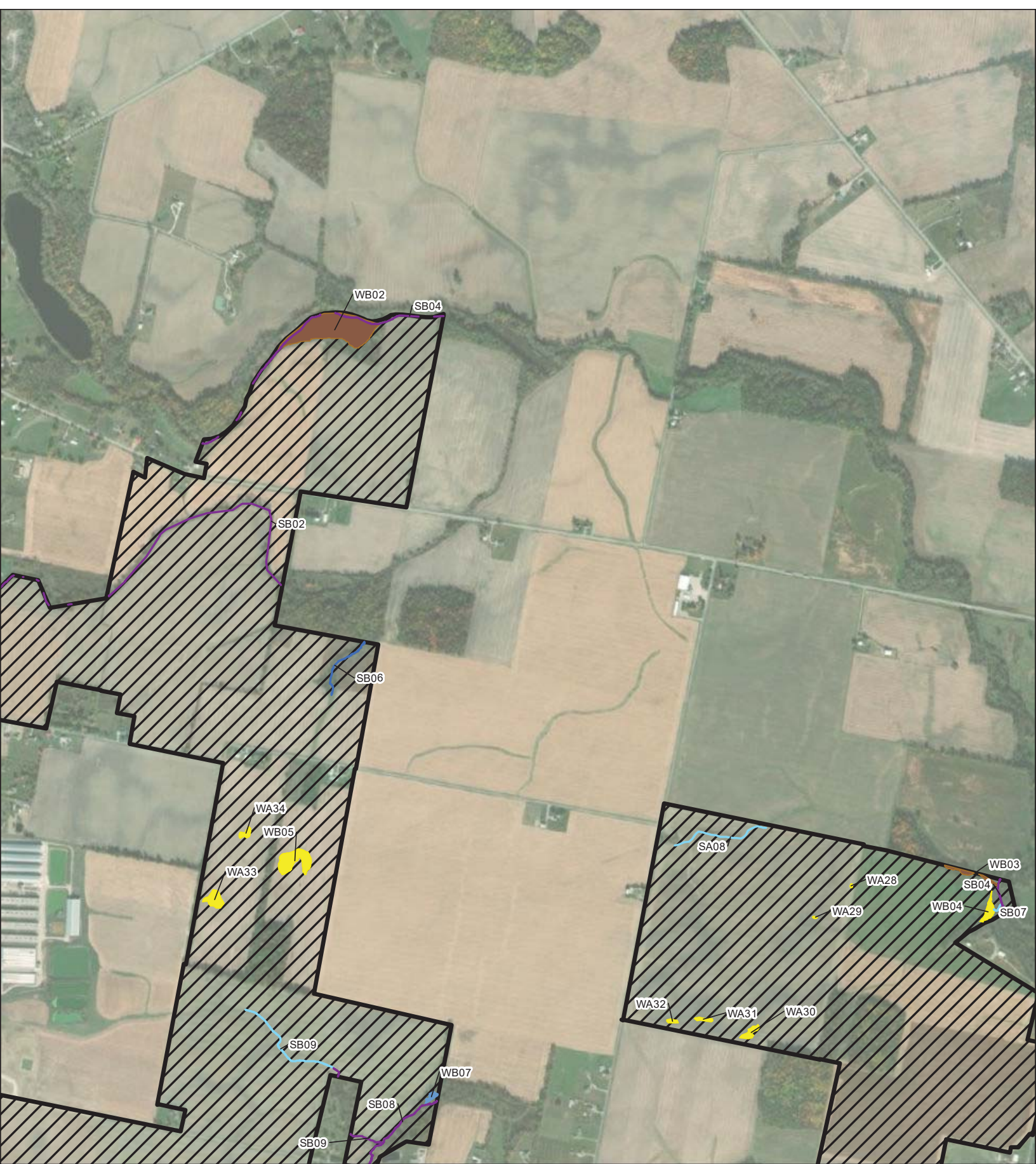
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	Ephemeral Stream		Forested Wetland
	Intermittent Stream		Scrub-Shrub Wetland
	Perennial Stream		Unconsolidated Bottom Wetland
	Delineation Survey Area		
	Project Area		

1:20,000

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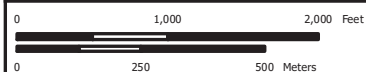
# **CADENCE SOLAR ENERGY CENTER**

Union County, Ohio

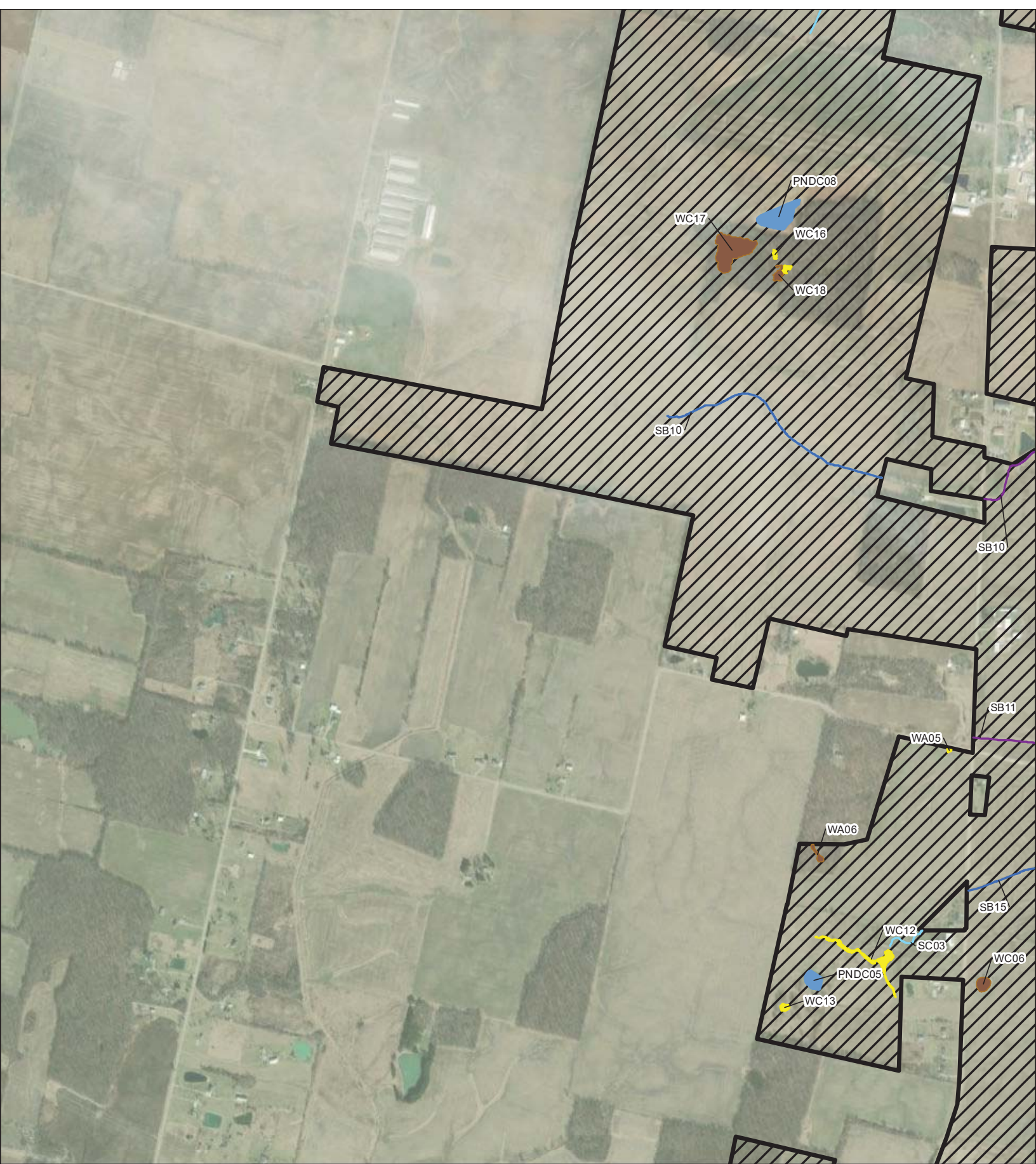
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	Ephemeral Stream		Forested Wetland
	Intermittent Stream		Scrub-Shrub Wetland
	Perennial Stream		Unconsolidated Bottom Wetland
	Delineation Survey Area		
	Project Area		

1:20,000

Created By: L. Johnson  
Project Number: 58990  
Date: 12/21/2020  
NAD 1983 StatePlane Ohio North FIPS 3401 Feet







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# **CADENCE SOLAR ENERGY CENTER**

Union County, Ohio

— Drainage	Emergent Wetland
— Ephemeral Stream	Forested Wetland
— Intermittent Stream	Scrub-Shrub Wetland
— Perennial Stream	Unconsolidated Bottom Wetland
▨ Delineation Survey Area	
▨ Project Area	

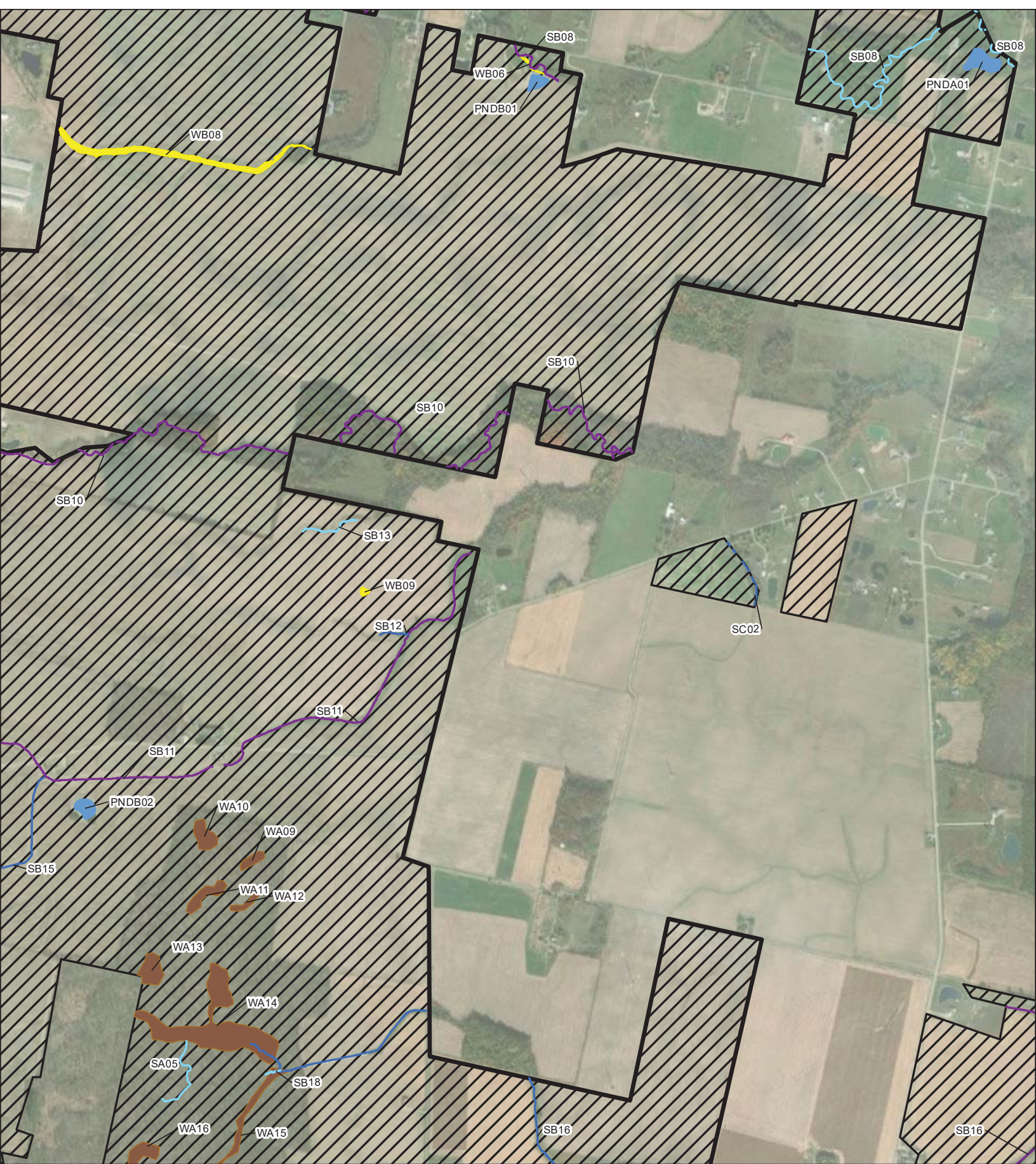
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Created By: L. Johnson  
Project Number: 58990  
Date: 12/21/2020  
NAD 1983 StatePlane Ohio North FIPS 3401 Feet

0 1,000 2,000 Feet  
0 250 500 Meters

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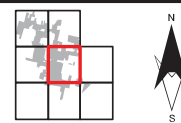
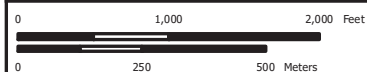
# **CADENCE SOLAR ENERGY CENTER**

Union County, Ohio

- |                         |                               |
|-------------------------|-------------------------------|
| Drainage                | Emergent Wetland              |
| Ephemeral Stream        | Forested Wetland              |
| Intermittent Stream     | Scrub-Shrub Wetland           |
| Perennial Stream        | Unconsolidated Bottom Wetland |
| Delineation Survey Area |                               |
| Project Area            |                               |

1:20,000

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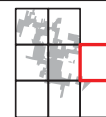


## Union County, Ohio

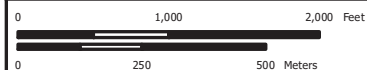
Page 5 of 8

- |   |                         |   |                               |
|---|-------------------------|---|-------------------------------|
|  | Drainage                |  | Emergent Wetland              |
|  | Ephemeral Stream        |  | Forested Wetland              |
|  | Intermittent Stream     |  | Scrub-Shrub Wetland           |
|  | Perennial Stream        |  | Unconsolidated Bottom Wetland |
|  | Delineation Survey Area |   |                               |
|  | Project Area            |   |                               |

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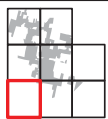
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Union County, Ohio

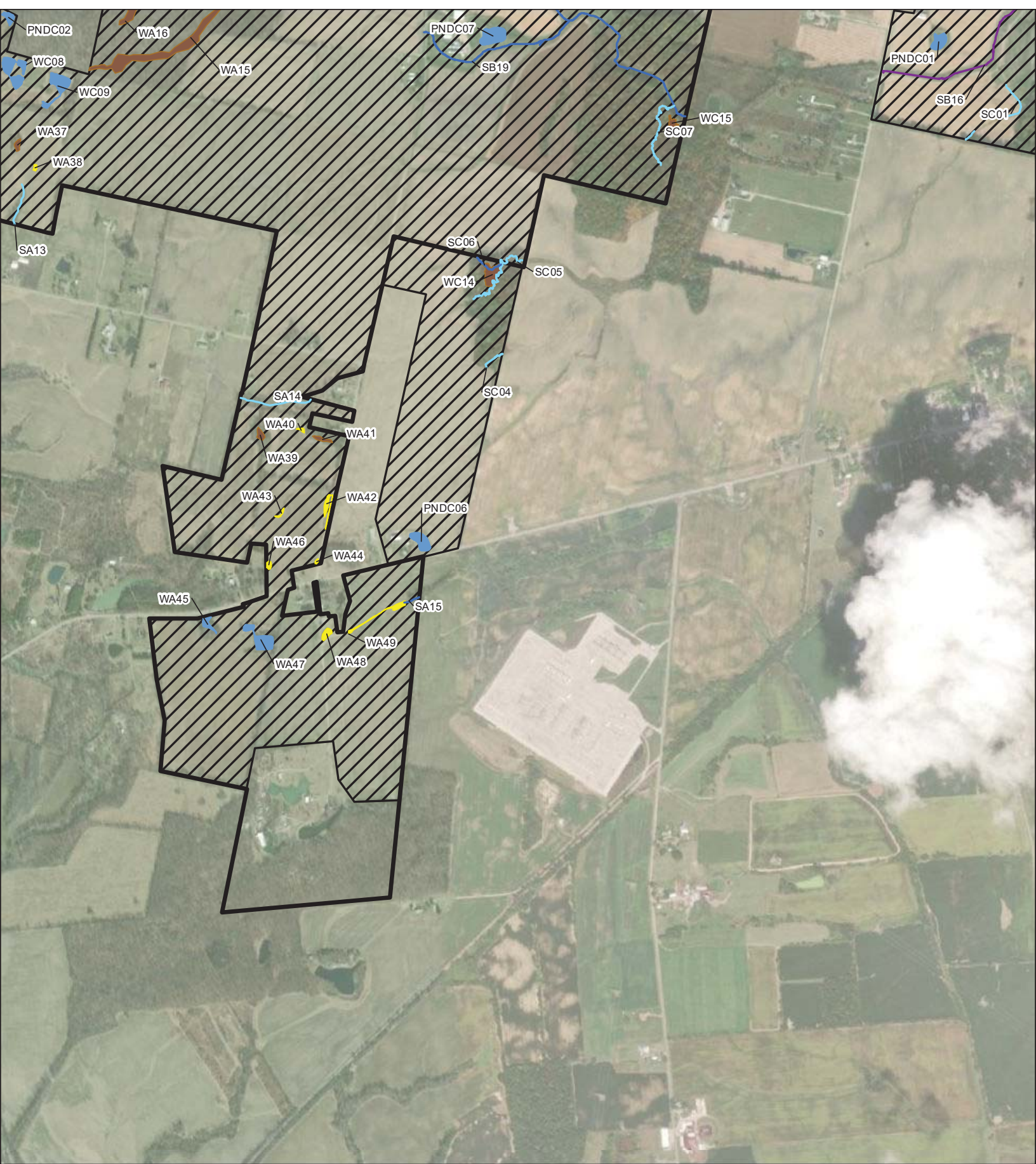
	Drainage		Emergent Wetland
	Ephemeral Stream		Forested Wetland
	Intermittent Stream		Scrub-Shrub Wetland
	Perennial Stream		Unconsolidated Bottom Wetland
	Delineation Survey Area		
	Project Area		

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Created By: L. Johnson  
Project Number: 58990  
Date: 12/21/2020  
NAD 1983 StatePlane Ohio North FIPS 3401 Feet







Path: N:\Projects\58000\58990\_Cadence\_Solar\MXD\_APR\XINR\Report\Wetland\_Delineation\_Dec2020\58990\_CadenceSolar\_Wetlands\_Mapbook.mxd

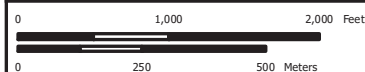
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Union County, Ohio

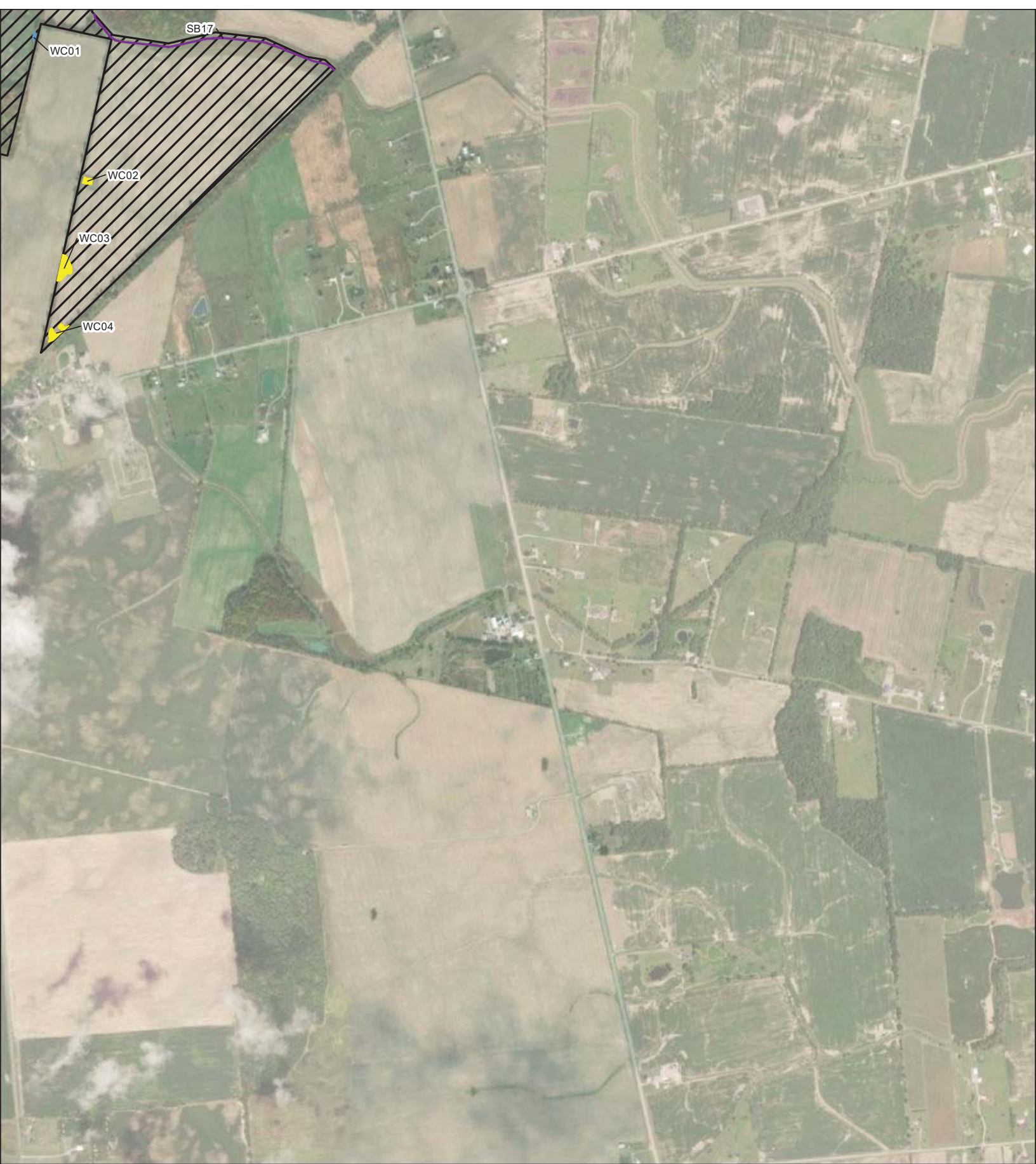
— Drainage	Emergent Wetland
— Ephemeral Stream	Forested Wetland
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**SWCA**<sup>®</sup>  
ENVIRONMENTAL CONSULTANTS

## CADENCE SOLAR ENERGY CENTER

Union County, Ohio

	Drainage		Emergent Wetland
	Ephemeral Stream		Forested Wetland
	Intermittent Stream		Scrub-Shrub Wetland
	Perennial Stream		Unconsolidated Bottom Wetland
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## **APPENDIX B**

### **USACE Wetland Determination Data Forms**

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 10, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA01-WA01  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.40460 Long: -83.47253 Datum: NAD83  
 Soil Map Unit Name: Blq1B1 - Blount silt loam, ground moraine, 2 to 4 percent slopes NWI classification: PSS/PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																
1. <u>Populus deltoides</u>	10	Yes	FAC																	
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
10 = Total Cover																				
<b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>7</u></td> <td>x 1 = <u>7</u></td> </tr> <tr> <td>FACW species <u>110</u></td> <td>x 2 = <u>220</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>2</u></td> <td>x 4 = <u>8</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>129</u> (A)</td> <td><u>265</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.05</u></td> </tr> </tbody> </table>					Total % Cover of:	Multiply by:	OBL species <u>7</u>	x 1 = <u>7</u>	FACW species <u>110</u>	x 2 = <u>220</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>2</u>	x 4 = <u>8</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>129</u> (A)	<u>265</u> (B)	Prevalence Index = B/A = <u>2.05</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>7</u>	x 1 = <u>7</u>																			
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Column Totals: <u>129</u> (A)	<u>265</u> (B)																			
Prevalence Index = B/A = <u>2.05</u>																				
<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>																				

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPA01-WA01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/1	90	10YR 4/4	10	C	M	Clay	
6-16	10YR 4/1	80	10YR 4/4	20	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
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Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).  
Wetland situated on fringe of lake

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 10, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA03-WA02  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.40623 Long: -83.46829 Datum: NAD83  
 Soil Map Unit Name: Sh - Shoals silt loam, 0 to 2 percent slopes, occasionally flooded NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																
1. <u>Populus deltoides</u>	<u>50</u>	<u>Yes</u>	<u>FAC</u>																	
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
<u>50</u> = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	<b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>80</u></td> <td>x 2 = <u>160</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>130</u> (A)</td> <td><u>310</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.38</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>80</u>	x 2 = <u>160</u>	FAC species <u>50</u>	x 3 = <u>150</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>130</u> (A)	<u>310</u> (B)	Prevalence Index = B/A = <u>2.38</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>80</u>	x 2 = <u>160</u>																			
FAC species <u>50</u>	x 3 = <u>150</u>																			
FACU species <u>0</u>	x 4 = <u>0</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>130</u> (A)	<u>310</u> (B)																			
Prevalence Index = B/A = <u>2.38</u>																				
1. <u>Fraxinus pennsylvanica</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
<u>50</u> = Total Cover																				
Herb Stratum (Plot size: <u>5 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Carex sp</u>	<u>10</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Phalaris arundinacea</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
6. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
7. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
8. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
9. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
10. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
<u>30</u> = Total Cover																				
Woody Vine Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>																
1. <u>None Observed</u>	<u>      </u>	<u>      </u>	<u>      </u>																	
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
<u>      </u> = Total Cover																				

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPA03-WA02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 4/1	90	10YR 4/4	10	C	M	Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
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Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
 A positive indication of wetland hydrology was observed (at least one primary indicator).  
 A positive indication of wetland hydrology was observed (at least two secondary indicators).  
 Wetland is situated on stream terrace



# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 10, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA05-WA03  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.41449 Long: -83.47770 Datum: NAD83  
 Soil Map Unit Name: Gwg5C2 -Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Phalaris arundinacea</u> 100 Yes FACW 2. <u>Apocynum cannabinum</u> 5 No FAC 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>105</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>100</u></td> <td>x 2 = <u>200</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>105</u> (A)</td> <td><u>215</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.05</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>100</u>	x 2 = <u>200</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>105</u> (A)	<u>215</u> (B)	Prevalence Index = B/A = <u>2.05</u>	
Total % Cover of:	Multiply by:																
OBL species <u>0</u>	x 1 = <u>0</u>																
FACW species <u>100</u>	x 2 = <u>200</u>																
FAC species <u>5</u>	x 3 = <u>15</u>																
FACU species <u>0</u>	x 4 = <u>0</u>																
UPL species <u>0</u>	x 5 = <u>0</u>																
Column Totals: <u>105</u> (A)	<u>215</u> (B)																
Prevalence Index = B/A = <u>2.05</u>																	

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPA05-WA03

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/1	100	None	—	—	—	Loam	
4-16	10YR 4/1	90	10YR 4/4	10	C	M	Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
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Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Other (Explain in Remarks)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Other (Explain in Remarks)
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 11, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA06-WA04  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.41303 Long: -83.46997 Datum: NAD83  
 Soil Map Unit Name: Sac3AF - Saranac silty clay loam, 0 to 1 percent slopes, frequently flooded NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Phalaris arundinacea</u> 100 Yes FACW 2. <u>Apocynum cannabinum</u> 2 No FAC 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>102</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B) <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>100</u></td> <td>x 2 = <u>200</u></td> </tr> <tr> <td>FAC species <u>2</u></td> <td>x 3 = <u>6</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>102</u> (A)</td> <td><u>206</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.02</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>100</u>	x 2 = <u>200</u>	FAC species <u>2</u>	x 3 = <u>6</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>102</u> (A)	<u>206</u> (B)	Prevalence Index = B/A = <u>2.02</u>	
Total % Cover of:	Multiply by:																
OBL species <u>0</u>	x 1 = <u>0</u>																
FACW species <u>100</u>	x 2 = <u>200</u>																
FAC species <u>2</u>	x 3 = <u>6</u>																
FACU species <u>0</u>	x 4 = <u>0</u>																
UPL species <u>0</u>	x 5 = <u>0</u>																
Column Totals: <u>102</u> (A)	<u>206</u> (B)																
Prevalence Index = B/A = <u>2.02</u>																	

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPA06-WA04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/2	100	None	—	—	—	Loam	
6-16	10YR 4/1	90	10YR 4/1	10	C	M	Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
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Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <u>Primary Indicators (minimum of one required; check all that apply)</u>  <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9)  <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13)  <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> True Aquatic Plants (B14)  <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1)  <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)  <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4)  <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)  <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7)  <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Gauge or Well Data (D9)  <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Other (Explain in Remarks)           </div> <div style="width: 45%;"> <u>Secondary Indicators (minimum of two required)</u>  <input type="checkbox"/> Surface Soil Cracks (B6)  <input checked="" type="checkbox"/> Drainage Patterns (B10)  <input type="checkbox"/> Dry-Season Water Table (C2)  <input type="checkbox"/> Crayfish Burrows (C8)  <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  <input type="checkbox"/> Stunted or Stressed Plants (D1)  <input checked="" type="checkbox"/> Geomorphic Position (D2)  <input checked="" type="checkbox"/> FAC-Neutral Test (D5)           </div> </div>	
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 11, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA08-WA05  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.36433 Long: -83.45543 Datum: NAD83  
 Soil Map Unit Name: Ble1A1 - Blount silt loam, end moraine, 0 to 2 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<p><b>Tree Stratum</b> (Plot size: <u>30 ft.</u>)</p> <p>1. <u>None Observed</u></p> <p>2. <u>      </u></p> <p>3. <u>      </u></p> <p>4. <u>      </u></p> <p>5. <u>      </u></p> <p><u>      </u> = Total Cover</p> <p><b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u>)</p> <p>1. <u>None Observed</u></p> <p>2. <u>      </u></p> <p>3. <u>      </u></p> <p>4. <u>      </u></p> <p>5. <u>      </u></p> <p><u>      </u> = Total Cover</p> <p><b>Herb Stratum</b> (Plot size: <u>5 ft.</u>)</p> <table border="1"> <thead> <tr> <th></th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Phalaris arundinacea</u></td><td><u>50</u></td><td><u>Yes</u></td><td><u>FACW</u></td></tr> <tr><td>2. <u>Sorghum halepense</u></td><td><u>40</u></td><td><u>Yes</u></td><td><u>FACU</u></td></tr> <tr><td>3. <u>Carex sp.</u></td><td><u>5</u></td><td><u>No</u></td><td><u>FACW</u></td></tr> <tr><td>4. <u>Scirpus atrovirens</u></td><td><u>5</u></td><td><u>No</u></td><td><u>OBL</u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>6. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>7. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>8. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>9. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>10. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2"><u>100</u> = Total Cover</td><td></td><td></td></tr> </tbody> </table> <p><b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u>)</p> <p>1. <u>None Observed</u></p> <p>2. <u>      </u></p> <p><u>      </u> = Total Cover</p>		Absolute % cover	Dominant Species?	Indicator Status	1. <u>Phalaris arundinacea</u>	<u>50</u>	<u>Yes</u>	<u>FACW</u>	2. <u>Sorghum halepense</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>	3. <u>Carex sp.</u>	<u>5</u>	<u>No</u>	<u>FACW</u>	4. <u>Scirpus atrovirens</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	6. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	7. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	8. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	9. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	10. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>100</u> = Total Cover				<p><b>Dominance Test worksheet:</b></p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>2</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)</p> <p><b>Prevalence Index Worksheet:</b></p> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr><td>OBL species</td><td><u>5</u> x 1 =</td><td><u>5</u></td></tr> <tr><td>FACW species</td><td><u>55</u> x 2 =</td><td><u>110</u></td></tr> <tr><td>FAC species</td><td><u>0</u> x 3 =</td><td><u>0</u></td></tr> <tr><td>FACU species</td><td><u>40</u> x 4 =</td><td><u>160</u></td></tr> <tr><td>UPL species</td><td><u>0</u> x 5 =</td><td><u>0</u></td></tr> <tr><td>Column Totals:</td><td><u>100</u> (A)</td><td><u>275</u> (B)</td></tr> <tr><td colspan="2">Prevalence Index = B/A =</td><td><u>2.75</u></td></tr> </tbody> </table> <p><b>Hydrophytic Vegetation Indicators:</b></p> <p><u>      </u> 1 - Rapid Test for Hydrophytic Vegetation</p> <p><u>      </u> 2 - Dominance Test is &gt;50%</p> <p><u>X</u> 3 - Prevalence Index is ≤3.0<sup>1</sup></p> <p><u>      </u> 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</p> <p><u>      </u> Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)</p> <p><sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <p><b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u></p>	Total % Cover of:	Multiply by:		OBL species	<u>5</u> x 1 =	<u>5</u>	FACW species	<u>55</u> x 2 =	<u>110</u>	FAC species	<u>0</u> x 3 =	<u>0</u>	FACU species	<u>40</u> x 4 =	<u>160</u>	UPL species	<u>0</u> x 5 =	<u>0</u>	Column Totals:	<u>100</u> (A)	<u>275</u> (B)	Prevalence Index = B/A =		<u>2.75</u>
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Remarks:  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).



## SOIL

Sampling Point: DPA08-WA05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/1	100	None	—	—	—	Loam	
4-16	10YR 4/1	90	10YR4/4 10	10	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
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<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).  
Natural hydrology disturbed by drain tile syste that may be in disrepair.

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 26, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA10-WA06  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.36130 Long: -83.46031 Datum: NAD83  
 Soil Map Unit Name: Ble1A1 - Blount silt loam, end moraine, 0 to 2 percent slopes NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>Fraxinus pennsylvanica</u> <u>40</u> <u>Yes</u> <u>FACW</u> 2. <u>Ulmus rubra</u> <u>10</u> <u>Yes</u> <u>FAC</u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>50</u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>Ulmus rubra</u> <u>40</u> <u>Yes</u> <u>FAC</u> 2. <u>Carpinus caroliniana</u> <u>10</u> <u>Yes</u> <u>FAC</u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>50</u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Persicaria pensylvanica</u> <u>5</u> <u>No</u> <u>FACW</u> 2. <u>Carex sp</u> <u>50</u> <u>Yes</u> <u>FACW</u> 3. <u>Onoclea sensibilis</u> <u>5</u> <u>No</u> <u>FACW</u> 4. <u>Phalaris arundinacea</u> <u>20</u> <u>Yes</u> <u>FACW</u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 6. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 7. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 8. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 9. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 10. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>80</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> <u>      </u> <u>      </u> <u>      </u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B) <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>120</u></td> <td>x 2 = <u>240</u></td> </tr> <tr> <td>FAC species <u>60</u></td> <td>x 3 = <u>180</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>180</u> (A)</td> <td><u>420</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.33</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>120</u>	x 2 = <u>240</u>	FAC species <u>60</u>	x 3 = <u>180</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>180</u> (A)	<u>420</u> (B)	Prevalence Index = B/A = <u>2.33</u>	
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<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>																	

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPA10-WA06

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/3	100	None	—	—	—	Loam	
2-8	10YR 4/1	95	10YR 4/4	5	C	M	Clay loam	
8-16	10YR 4/1	80	10YR 4/4	20	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
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<input type="checkbox"/> 2 cm Muck (A10)	
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<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 26, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA14-WA07  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39423 Long: -83.45621 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>Ulmus rubra</u> <u>10</u> <u>Yes</u> <u>FAC</u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>10</u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>None Observed</u> <u>      </u> <u>      </u> <u>      </u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Scirpus atrovirens</u> <u>40</u> <u>Yes</u> <u>OBL</u> 2. <u>Carex sp</u> <u>20</u> <u>Yes</u> <u>FACW</u> 3. <u>Phalaris arundinacea</u> <u>30</u> <u>Yes</u> <u>FACW</u> 4. <u>Symphotrichum pilosum</u> <u>10</u> <u>No</u> <u>FACU</u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 6. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 7. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 8. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 9. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 10. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>100</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> <u>      </u> <u>      </u> <u>      </u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B) <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr> <td>OBL species <u>40</u></td> <td>x 1 =</td> <td><u>40</u></td> </tr> <tr> <td>FACW species <u>50</u></td> <td>x 2 =</td> <td><u>100</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 =</td> <td><u>30</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 =</td> <td><u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals: <u>110</u></td> <td>(A)</td> <td><u>210</u> (B)</td> </tr> <tr> <td colspan="3">Prevalence Index = B/A = <u>1.91</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:		OBL species <u>40</u>	x 1 =	<u>40</u>	FACW species <u>50</u>	x 2 =	<u>100</u>	FAC species <u>10</u>	x 3 =	<u>30</u>	FACU species <u>10</u>	x 4 =	<u>40</u>	UPL species <u>0</u>	x 5 =	<u>0</u>	Column Totals: <u>110</u>	(A)	<u>210</u> (B)	Prevalence Index = B/A = <u>1.91</u>		
Total % Cover of:	Multiply by:																								
OBL species <u>40</u>	x 1 =	<u>40</u>																							
FACW species <u>50</u>	x 2 =	<u>100</u>																							
FAC species <u>10</u>	x 3 =	<u>30</u>																							
FACU species <u>10</u>	x 4 =	<u>40</u>																							
UPL species <u>0</u>	x 5 =	<u>0</u>																							
Column Totals: <u>110</u>	(A)	<u>210</u> (B)																							
Prevalence Index = B/A = <u>1.91</u>																									

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPA14-WA07**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 4/1	100	None	—	—	—	Clay	
3-6	10YR 4/1	90	10YR 4/4	10	C	M	Clay	
6-16	10YR 4/1	70	10YR 4/4	30	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soils Indicators:**

- |  |  |
|--|--|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)        |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)                |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)            |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)        |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)         |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7)      |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)          |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)      |  |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16)        |
| <input type="checkbox"/> Dark Surface (S7)                |
| <input type="checkbox"/> Iron-Manganese Masses (F12)      |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks)       |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**
 Type: \_\_\_\_\_  
 Depth(inches): \_\_\_\_\_

 Hydric Soil Present?      Yes   X   No \_\_\_\_\_
**Remarks:**

A positive indication of hydric soil was observed.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   | <input type="checkbox"/> Other (Explain in Remarks)                 |

Secondary Indicators (minimum of two required)

- |   |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6)                             |
| <input checked="" type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Dry-Season Water Table (C2)                          |
| <input type="checkbox"/> Crayfish Burrows (C8)                                |
| <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input checked="" type="checkbox"/> Geomorphic Position (D2)                  |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5)                     |

**Field Observations:**

Surface Water Present?	Yes _____ No <u>  X  </u>	Depth (inches): <u>  N/A  </u>
Water Table Present?	Yes _____ No <u>  X  </u>	Depth (inches): <u>  &gt;20  </u>
Saturation Present?	Yes <u>  X  </u> No _____	Depth (inches): <u>  6  </u>

 (includes capillary fringe)

 Wetland Hydrology Present?      Yes   X   No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
 A positive indication of wetland hydrology was observed (at least one primary indicator).  
 A positive indication of wetland hydrology was observed (at least two secondary indicators).



# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 27, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA15-WA08  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39653 Long: -83.45813 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>Cornus alba</u> 10 Yes FACW 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>10</u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Carex sp.</u> 30 Yes FACW 2. <u>Juncus effusus</u> 10 No OBL 3. <u>Scirpus atrovirens</u> 10 No OBL 4. <u>Phalaris arundinacea</u> 50 Yes FACW 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>100</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>90</u></td> <td>x 2 = <u>180</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>110</u> (A)</td> <td><u>200</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.82</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>90</u>	x 2 = <u>180</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>110</u> (A)	<u>200</u> (B)	Prevalence Index = B/A = <u>1.82</u>	
Total % Cover of:	Multiply by:																
OBL species <u>20</u>	x 1 = <u>20</u>																
FACW species <u>90</u>	x 2 = <u>180</u>																
FAC species <u>0</u>	x 3 = <u>0</u>																
FACU species <u>0</u>	x 4 = <u>0</u>																
UPL species <u>0</u>	x 5 = <u>0</u>																
Column Totals: <u>110</u> (A)	<u>200</u> (B)																
Prevalence Index = B/A = <u>1.82</u>																	

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPA15-WA08**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/1	100	None	—	—	—	Clay	
6-16	10YR 4/1	90	10YR 4/4	10	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soils Indicators:**

- |  |  |
|--|--|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)        |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)                |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)            |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)        |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)         |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7)      |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)          |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)      |  |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16)        |
| <input type="checkbox"/> Dark Surface (S7)                |
| <input type="checkbox"/> Iron-Manganese Masses (F12)      |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks)       |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**
 Type: \_\_\_\_\_  
 Depth(inches): \_\_\_\_\_

 Hydric Soil Present?      Yes   X   No \_\_\_\_\_
**Remarks:**

A positive indication of hydric soil was observed.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one required; check all that apply)

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1)             | <input type="checkbox"/> Water-Stained Leaves (B9)                  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   | <input type="checkbox"/> Other (Explain in Remarks)                 |

Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input checked="" type="checkbox"/> Drainage Patterns (B10)        |
| <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input checked="" type="checkbox"/> Geomorphic Position (D2)       |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5)          |

**Field Observations:**

Surface Water Present?	Yes <u>  X  </u> No _____	Depth (inches): <u>  4  </u>
Water Table Present?	Yes _____ No <u>  X  </u>	Depth (inches): <u>  &gt;20  </u>
Saturation Present?	Yes <u>  X  </u> No _____	Depth (inches): <u>  0  </u>

 (includes capillary fringe)

 Wetland Hydrology Present?      Yes   X   No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
 A positive indication of wetland hydrology was observed (at least one primary indicator).  
 A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 27, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA17-WA09  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.36129 Long: -83.44264 Datum: NAD83  
 Soil Map Unit Name: Ble1A1 - Blount silt loam, end moraine, 0 to 2 percent slopes NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Acer rubrum</u></td><td style="text-align: center;">40</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u>Ulmus rubra</u></td><td style="text-align: center;">10</td><td style="text-align: center;">No</td><td style="text-align: center;">FAC</td></tr> <tr><td>3. <u>Fraxinus pennsylvanica</u></td><td style="text-align: center;">10</td><td style="text-align: center;">No</td><td style="text-align: center;">FACW</td></tr> <tr><td>4. <u>                    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">60 = Total Cover</td><td></td><td></td></tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Lindera benzoin</u></td><td style="text-align: center;">15</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Acer rubrum</u></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>3. <u>Ulmus rubra</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FAC</td></tr> <tr><td>4. <u>                    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">30 = Total Cover</td><td></td><td></td></tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Carex sp</u></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>                    </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>                    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>                    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                    </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>                    </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>                    </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>                    </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>                    </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">5 = Total Cover</td><td></td><td></td></tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>                    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">= Total Cover</td><td></td><td></td></tr> </table>	Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Total % Cover of:	Multiply by:	OBL species	<u>0</u> x 1 = <u>0</u>	FACW species	<u>30</u> x 2 = <u>60</u>	FAC species	<u>65</u> x 3 = <u>195</u>	FACU species	<u>0</u> x 4 = <u>0</u>	UPL species	<u>0</u> x 5 = <u>0</u>	Column Totals:	<u>95</u> (A) <u>255</u> (B)	Prevalence Index = B/A = <u>2.68</u>	
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## SOIL

Sampling Point: DPA17-WA09

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/3	100	None	—	—	—	Loam	
4-16	10YR 4/1	80	10YR 4/4	20	C	M	Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>N/A</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;20</u>		
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ (includes capillary fringe)	Depth (inches): <u>6</u>		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 27, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA19-WA10  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.36196 Long: -83.44445 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>Acer saccharinum</u> <u>40</u> <u>Yes</u> <u>FACW</u> 2. <u>Acer rubrum</u> <u>20</u> <u>Yes</u> <u>FAC</u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>60</u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>Ulmus rubra</u> <u>10</u> <u>Yes</u> <u>FAC</u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>10</u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>None Observed</u> <u>      </u> <u>      </u> <u>      </u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 6. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 7. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 8. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 9. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 10. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> <u>      </u> <u>      </u> <u>      </u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>40</u></td> <td>x 2 = <u>80</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>70</u> (A)</td> <td><u>170</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.43</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>40</u>	x 2 = <u>80</u>	FAC species <u>30</u>	x 3 = <u>90</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>70</u> (A)	<u>170</u> (B)	Prevalence Index = B/A = <u>2.43</u>	
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<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>																	

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).



## SOIL

Sampling Point: DPA19-WA10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 3/3	100	None	—	—	—	Clay loam	
7-16	10YR 4/1	90	10YR 4/4	10	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
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Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Other (Explain in Remarks)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Other (Explain in Remarks)
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 27, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA20-WA11  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.36025 Long: -83.44439 Datum: NAD83  
 Soil Map Unit Name: Ble1A1 - Blount silt loam, end moraine, 0 to 2 percent slopes NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;"><u>Tree Stratum</u> (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Ulmus rubra</u></td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u>Fraxinus pennsylvanica</u></td><td style="text-align: center;">30</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">50 = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;"><u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Lindera benzoin</u></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">10 = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;"><u>Herb Stratum</u> (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Persicaria virginiana</u></td><td style="text-align: center;">80</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u>Carex sp</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">85 = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;"><u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">= Total Cover</td><td></td><td></td></tr> </table>	<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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## SOIL

Sampling Point: DPA20-WA11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/3	100	None	—	—	—	Loam	
2-16	10YR 4/1	90	10YR 4/4	10	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
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Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Other (Explain in Remarks)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5) <input type="checkbox"/> Other (Explain in Remarks)
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 27, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA22-WA12  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.36008 Long: -83.44282 Datum: NAD83  
 Soil Map Unit Name: Ble1A1 - Blount silt loam, end moraine, 0 to 2 percent slopes NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>Populus deltoides</u> <u>10</u> <u>No</u> <u>FAC</u> 2. <u>Ulmus rubra</u> <u>50</u> <u>Yes</u> <u>FAC</u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>60</u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>Lindera benzoin</u> <u>10</u> <u>Yes</u> <u>FACW</u> 2. <u>Ulmus rubra</u> <u>10</u> <u>Yes</u> <u>FAC</u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>20</u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Onoclea sensibilis</u> <u>40</u> <u>Yes</u> <u>FACW</u> 2. <u>Carex sp</u> <u>10</u> <u>No</u> <u>FACW</u> 3. <u>Phalaris arundinacea</u> <u>10</u> <u>No</u> <u>FACW</u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 6. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 7. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 8. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 9. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 10. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>60</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> <u>      </u> <u>      </u> <u>      </u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species <u>70</u></td> <td>x 2 =</td> <td><u>140</u></td> </tr> <tr> <td>FAC species <u>70</u></td> <td>x 3 =</td> <td><u>210</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td><u>140</u> (A)</td> <td><u>350</u> (B)</td> </tr> <tr> <td>Prevalence Index = B/A =</td> <td colspan="2"><u>2.50</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:		OBL species <u>0</u>	x 1 =	<u>0</u>	FACW species <u>70</u>	x 2 =	<u>140</u>	FAC species <u>70</u>	x 3 =	<u>210</u>	FACU species <u>0</u>	x 4 =	<u>0</u>	UPL species <u>0</u>	x 5 =	<u>0</u>	Column Totals:	<u>140</u> (A)	<u>350</u> (B)	Prevalence Index = B/A =	<u>2.50</u>	
Total % Cover of:	Multiply by:																								
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Column Totals:	<u>140</u> (A)	<u>350</u> (B)																							
Prevalence Index = B/A =	<u>2.50</u>																								
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>																									

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).



## SOIL

Sampling Point: DPA22-WA12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/2	100	None	—	—	—	Loam	
6-16	10YR 4/1	90	10YR 4/4	10	C	M	Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
---	---

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Other (Explain in Remarks)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 27, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA23-WA13  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35810 Long: -83.44639 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%; padding: 5px;"> <b>Is the Sampled Area within a Wetland?</b> </td> <td style="width: 40%; padding: 5px;"> <b>Yes</b> <u>X</u> <b>No</b> <u>      </u> </td> </tr> </table>	<b>Is the Sampled Area within a Wetland?</b>	<b>Yes</b> <u>X</u> <b>No</b> <u>      </u>
<b>Is the Sampled Area within a Wetland?</b>	<b>Yes</b> <u>X</u> <b>No</b> <u>      </u>		
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.			

## VEGETATION - Use scientific names of plants.

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Tree Stratum (Plot size: <u>30 ft.</u>)</th> <th style="width: 10%;">Absolute % cover</th> <th style="width: 10%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Populus deltoides</u></td><td><u>40</u></td><td><u>Yes</u></td><td><u>FAC</u></td></tr> <tr><td>2. <u>Ulmus americana</u></td><td><u>10</u></td><td><u>No</u></td><td><u>FACW</u></td></tr> <tr><td>3. <u>Acer rubrum</u></td><td><u>10</u></td><td><u>No</u></td><td><u>FAC</u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>60</u> = Total Cover</td><td colspan="2"></td></tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)</th> <th style="width: 10%;">Absolute % cover</th> <th style="width: 10%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Cephalanthus occidentalis</u></td><td><u>40</u></td><td><u>Yes</u></td><td><u>OBL</u></td></tr> <tr><td>2. <u>Lindera benzoin</u></td><td><u>10</u></td><td><u>Yes</u></td><td><u>FACW</u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>50</u> = Total Cover</td><td colspan="2"></td></tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Herb Stratum (Plot size: <u>5 ft.</u>)</th> <th style="width: 10%;">Absolute % cover</th> <th style="width: 10%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Phalaris arundinacea</u></td><td><u>20</u></td><td><u>Yes</u></td><td><u>FACW</u></td></tr> <tr><td>2. <u>Scirpus atrovirens</u></td><td><u>5</u></td><td><u>No</u></td><td><u>OBL</u></td></tr> <tr><td>3. <u>Carex sp.</u></td><td><u>5</u></td><td><u>No</u></td><td><u>FACW</u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>6. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>7. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>8. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>9. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>10. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>30</u> = Total Cover</td><td colspan="2"></td></tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 30%;">Woody Vine Stratum (Plot size: <u>30 ft.</u>)</th> <th style="width: 10%;">Absolute % cover</th> <th style="width: 10%;">Dominant Species?</th> <th style="width: 10%;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>      </u> = Total Cover</td><td colspan="2"></td></tr> </tbody> </table>	Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPA23-WA13

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/1	100	None	—	—	—	Loam	
2-16	10YR 4/1	80	10YR 4/4	20	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
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Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)	

<b>Field Observations:</b> Surface Water Present? Yes <u>  X  </u> No _____      Depth (inches): <u>  8  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes <u>  X  </u> No _____      Depth (inches): <u>  0  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
--	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 27, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA24-WA14  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35653 Long: -83.44393 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																
1. <u>Acer saccharinum</u>	40	Yes	FACW																	
2. <u>Ulmus americana</u>	10	Yes	FACW																	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
50 = Total Cover																				
<b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>50</u></td> <td>x 1 = <u>50</u></td> </tr> <tr> <td>FACW species <u>95</u></td> <td>x 2 = <u>190</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>150</u> (A)</td> <td><u>255</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.70</u></td> </tr> </tbody> </table>					Total % Cover of:	Multiply by:	OBL species <u>50</u>	x 1 = <u>50</u>	FACW species <u>95</u>	x 2 = <u>190</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>150</u> (A)	<u>255</u> (B)	Prevalence Index = B/A = <u>1.70</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>50</u>	x 1 = <u>50</u>																			
FACW species <u>95</u>	x 2 = <u>190</u>																			
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UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>150</u> (A)	<u>255</u> (B)																			
Prevalence Index = B/A = <u>1.70</u>																				
<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>																				

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).



## SOIL

Sampling Point: DPA24-WA14**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-1	10YR 3/2	100	None	—	—	—	Organic Layer	
1-16	10YR 4/1	80	10YR 4/4	20	C	M	Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soils Indicators:**

- |  |  |
|--|--|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)        |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)                |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)            |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)        |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)         |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7)      |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)          |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)      |  |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- ☐
- Coast Prairie Redox (A16)
- 
- ☐
- Dark Surface (S7)
- 
- ☐
- Iron-Manganese Masses (F12)
- 
- ☐
- Very Shallow Dark Surface (TF12)
- 
- ☐
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**
Type: \_\_\_\_\_  
Depth(inches): \_\_\_\_\_

**Hydric Soil Present?**      Yes   X   No \_\_\_\_\_
**Remarks:**

A positive indication of hydric soil was observed.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input checked="" type="checkbox"/> Water-Stained Leaves (B9)       |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   | <input type="checkbox"/> Other (Explain in Remarks)                 |

Secondary Indicators (minimum of two required)

- ☐
- Surface Soil Cracks (B6)
- 
- ☒
- Drainage Patterns (B10)
- 
- ☐
- Dry-Season Water Table (C2)
- 
- ☐
- Crayfish Burrows (C8)
- 
- ☒
- Saturation Visible on Aerial Imagery (C9)
- 
- ☐
- Stunted or Stressed Plants (D1)
- 
- ☒
- Geomorphic Position (D2)
- 
- ☒
- FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?	Yes _____ No <u>  X  </u>	Depth (inches): <u>  N/A  </u>
Water Table Present?	Yes _____ No <u>  X  </u>	Depth (inches): <u>  &gt;20  </u>
Saturation Present?	Yes _____ No <u>  X  </u>	Depth (inches): <u>  &gt;20  </u>

(includes capillary fringe)

**Wetland Hydrology Present?**      Yes   X   No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**

A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 27, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA25-WA15  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35245 Long: -83.44466 Datum: NAD83  
 Soil Map Unit Name: Ble1A1 - Blount silt loam, end moraine, 0 to 2 percent slopes NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>Ulmus americana</u> <u>30</u> <u>Yes</u> <u>FACW</u> 2. <u>Acer rubrum</u> <u>25</u> <u>Yes</u> <u>FAC</u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>55</u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>Lindera benzoin</u> <u>25</u> <u>Yes</u> <u>FACW</u> 2. <u>Ulmus rubra</u> <u>10</u> <u>Yes</u> <u>FAC</u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>35</u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Phalaris arundinacea</u> <u>10</u> <u>Yes</u> <u>FACW</u> 2. <u>Carex sp.</u> <u>5</u> <u>Yes</u> <u>FACW</u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 6. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 7. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 8. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 9. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 10. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>15</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> <u>      </u> <u>      </u> <u>      </u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> <th></th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 =</td> <td><u>0</u></td> </tr> <tr> <td>FACW species <u>70</u></td> <td>x 2 =</td> <td><u>140</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 =</td> <td><u>105</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> <tr> <td>Column Totals:</td> <td></td> <td><u>105</u> (A) <u>245</u> (B)</td> </tr> <tr> <td>Prevalence Index = B/A =</td> <td></td> <td><u>2.33</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:		OBL species <u>0</u>	x 1 =	<u>0</u>	FACW species <u>70</u>	x 2 =	<u>140</u>	FAC species <u>35</u>	x 3 =	<u>105</u>	FACU species <u>0</u>	x 4 =	<u>0</u>	UPL species <u>0</u>	x 5 =	<u>0</u>	Column Totals:		<u>105</u> (A) <u>245</u> (B)	Prevalence Index = B/A =		<u>2.33</u>
Total % Cover of:	Multiply by:																								
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FACW species <u>70</u>	x 2 =	<u>140</u>																							
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FACU species <u>0</u>	x 4 =	<u>0</u>																							
UPL species <u>0</u>	x 5 =	<u>0</u>																							
Column Totals:		<u>105</u> (A) <u>245</u> (B)																							
Prevalence Index = B/A =		<u>2.33</u>																							
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>																									

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPA25-WA15

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/2	100	None	—	—	—	Loam	
8-16	10YR 4/1	95	10YR 4/4	5	C	M	Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Crayfish Burrows (C8)	
<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).  
Appears to be a drain tile system in disrepair affecting the hydrology of this feature.

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 14, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA26-WA16  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35272 Long: -83.44676 Datum: NAD83  
 Soil Map Unit Name: Ble1A1 - Blount silt loam, end moraine, 0 to 2 percent slopes NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>Fagus grandifolia</u> <u>30</u> <u>Yes</u> <u>FACU</u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>30</u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>Ulmus americana</u> <u>10</u> <u>Yes</u> <u>FACW</u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>10</u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Carex sp</u> <u>20</u> <u>Yes</u> <u>FACW</u> 2. <u>Onoclea sensibilis</u> <u>5</u> <u>No</u> <u>FACW</u> 3. <u>Scirpus atrovirens</u> <u>10</u> <u>Yes</u> <u>OBL</u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 6. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 7. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 8. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 9. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 10. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>35</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> <u>      </u> <u>      </u> <u>      </u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>10</u></td> <td>x 1 = <u>10</u></td> </tr> <tr> <td>FACW species <u>35</u></td> <td>x 2 = <u>70</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>75</u> (A)</td> <td><u>200</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.67</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>10</u>	x 1 = <u>10</u>	FACW species <u>35</u>	x 2 = <u>70</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>75</u> (A)	<u>200</u> (B)	Prevalence Index = B/A = <u>2.67</u>	
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Prevalence Index = B/A = <u>2.67</u>																	
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>																	

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).



## SOIL

Sampling Point: DPA26-WA16

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 4/2	100	None	—	—	—	Loam	
7-16	10YR 4/1	95	10YR 4/4	5	C	M	Clay loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
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Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Other (Explain in Remarks)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 14, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA27-WA17  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39382 Long: -83.46310 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural vegetation  This is a wetland within an actively cultivated agricultural field. Portions of this feature appear to be inundated for too long or at too great of depth for cultivation, whereas the fringes appear to have been planted. Natural vegetation community removed for cultivation.	

## VEGETATION - Use scientific names of plants.

<table style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">= Total Cover</td><td></td><td></td></tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">= Total Cover</td><td></td><td></td></tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Phalaris arundinacea</u></td><td style="text-align: center;">15</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Glycine max</u></td><td style="text-align: center;">40</td><td style="text-align: center;">Yes</td><td style="text-align: center;">UPL</td></tr> <tr><td>3. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">55 = Total Cover</td><td></td><td></td></tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">= Total Cover</td><td></td><td></td></tr> </table>	Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA27-WA17

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No _____
---	--

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
---	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 14, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA29-WA18  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39468 Long: -83.46258 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Remarks: This location was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural  This feature is within an actively cultivated agricultural field. The natural vegetation community has been eliminated by cultivation.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Glycine max</u> <u>100</u> <u>Yes</u> <u>UPL</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>100</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>100</u></td> <td>x 5 = <u>500</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>500</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>5.00</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>100</u>	x 5 = <u>500</u>	Column Totals: <u>100</u> (A)	<u>500</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
Total % Cover of:	Multiply by:																
OBL species <u>0</u>	x 1 = <u>0</u>																
FACW species <u>0</u>	x 2 = <u>0</u>																
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Column Totals: <u>100</u> (A)	<u>500</u> (B)																
Prevalence Index = B/A = <u>5.00</u>																	

Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).



## SOIL

Sampling Point: DPA29-WA18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)
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<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
---	---

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes <u>  X  </u> No _____      Depth (inches): <u>  0  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
---	---

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 14, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA30-WA19  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39521 Long: -83.46294 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural vegetation  This feature is within an actively cultivated agricultural field. The natural vegetation community has been removed.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Glycine max</u> <u>100</u> <u>Yes</u> <u>UPL</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>100</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>100</u></td> <td>x 5 = <u>500</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>500</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>5.00</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>100</u>	x 5 = <u>500</u>	Column Totals: <u>100</u> (A)	<u>500</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
Total % Cover of:	Multiply by:																
OBL species <u>0</u>	x 1 = <u>0</u>																
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UPL species <u>100</u>	x 5 = <u>500</u>																
Column Totals: <u>100</u> (A)	<u>500</u> (B)																
Prevalence Index = B/A = <u>5.00</u>																	

Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA30-WA19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
---	---

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 14, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA31-WA20  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39576 Long: -83.46268 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This location was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural  This feature is within an actively cultivated agricultural field. The natural vegetation community has been removed through cultivation.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Glycine max</u> <u>100</u> <u>Yes</u> <u>UPL</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>100</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>100</u></td> <td>x 5 = <u>500</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>500</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>5.00</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>100</u>	x 5 = <u>500</u>	Column Totals: <u>100</u> (A)	<u>500</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
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Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA31-WA20

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
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Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <u>Primary Indicators (minimum of one required; check all that apply)</u>  <input type="checkbox"/> Surface Water (A1)                      <input type="checkbox"/> Water-Stained Leaves (B9)  <input type="checkbox"/> High Water Table (A2)                  <input type="checkbox"/> Aquatic Fauna (B13)  <input type="checkbox"/> Saturation (A3)                           <input type="checkbox"/> True Aquatic Plants (B14)  <input type="checkbox"/> Water Marks (B1)                        <input type="checkbox"/> Hydrogen Sulfide Odor (C1)  <input type="checkbox"/> Sediment Deposits (B2)               <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)  <input type="checkbox"/> Drift Deposits (B3)                      <input type="checkbox"/> Presence of Reduced Iron (C4)  <input type="checkbox"/> Algal Mat or Crust (B4)                  <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)  <input type="checkbox"/> Iron Deposits (B5)                       <input type="checkbox"/> Thin Muck Surface (C7)  <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)   <input type="checkbox"/> Gauge or Well Data (D9)  <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   <input type="checkbox"/> Other (Explain in Remarks)           </div> <div style="width: 45%;"> <u>Secondary Indicators (minimum of two required)</u>  <input type="checkbox"/> Surface Soil Cracks (B6)  <input type="checkbox"/> Drainage Patterns (B10)  <input type="checkbox"/> Dry-Season Water Table (C2)  <input type="checkbox"/> Crayfish Burrows (C8)  <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)  <input checked="" type="checkbox"/> Geomorphic Position (D2)  <input type="checkbox"/> FAC-Neutral Test (D5)           </div> </div>	
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).



# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 14, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA32-WA21  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39262 Long: -83.46161 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This location was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural  This feature is within an actively cultivated agricultural field. The natural vegetation community has been removed through cultivation.	

## VEGETATION - Use scientific names of plants.

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Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA32-WA21

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
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<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 14, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA33-WA22  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39398 Long: -83.45953 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.  This feature is within an actively cultivated agricultural field. The natural vegetation has been significantly disturbed through cultivation.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Phalaris arundinacea</u> 40 Yes FACW 2. <u>Sorghum halepense</u> 20 Yes FACU 3. <u>Setaria pumila</u> 10 No FAC 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>70</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>40</u></td> <td>x 2 = <u>80</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>70</u> (A)</td> <td><u>190</u> (B)</td> </tr> </tbody> </table> Prevalence Index = B/A = <u>2.71</u>  <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>40</u>	x 2 = <u>80</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>20</u>	x 4 = <u>80</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>70</u> (A)	<u>190</u> (B)
Total % Cover of:	Multiply by:														
OBL species <u>0</u>	x 1 = <u>0</u>														
FACW species <u>40</u>	x 2 = <u>80</u>														
FAC species <u>10</u>	x 3 = <u>30</u>														
FACU species <u>20</u>	x 4 = <u>80</u>														
UPL species <u>0</u>	x 5 = <u>0</u>														
Column Totals: <u>70</u> (A)	<u>190</u> (B)														

Remarks:  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPA33-WA22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
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Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 14, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA35-WA23  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39499 Long: -83.45946 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.  This feature is within an actively cultivated agricultural field. The natural vegetation community has been significantly disturbed through cultivation.	

## VEGETATION - Use scientific names of plants.

<div style="margin-bottom: 10px;"> <u>Tree Stratum</u> (Plot size: <u>30 ft.</u>)            1. <u>None Observed</u>            2. <u>      </u>            3. <u>      </u>            4. <u>      </u>            5. <u>      </u>  <u>      </u> = Total Cover         </div> <div style="margin-bottom: 10px;"> <u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft.</u>)            1. <u>None Observed</u>            2. <u>      </u>            3. <u>      </u>            4. <u>      </u>            5. <u>      </u>  <u>      </u> = Total Cover         </div> <div style="margin-bottom: 10px;"> <u>Herb Stratum</u> (Plot size: <u>5 ft.</u>)            1. <u>Phalaris arundinacea</u> <u>40</u> Yes <u>FACW</u>            2. <u>Glycine max</u> <u>20</u> Yes <u>UPL</u>            3. <u>Setaria pumila</u> <u>10</u> No <u>FAC</u>            4. <u>      </u>            5. <u>      </u>            6. <u>      </u>            7. <u>      </u>            8. <u>      </u>            9. <u>      </u>            10. <u>      </u>  <u>70</u> = Total Cover         </div> <div> <u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u>)            1. <u>None Observed</u>            2. <u>      </u>  <u>      </u> = Total Cover         </div>	<div> <b>Dominance Test worksheet:</b>            Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)             Total Number of Dominant Species Across All Strata: <u>2</u> (B)             Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)         </div> <div> <b>Prevalence Index Worksheet:</b>  <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: left;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>40</u></td> <td>x 2 = <u>80</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>20</u></td> <td>x 5 = <u>100</u></td> </tr> <tr> <td>Column Totals: <u>70</u> (A)</td> <td><u>210</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.00</u></td> </tr> </table> </div> <div> <b>Hydrophytic Vegetation Indicators:</b>  <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation  <u>      </u> 2 - Dominance Test is &gt;50%  <u>X</u> 3 - Prevalence Index is ≤3.0<sup>1</sup>  <u>      </u> 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <u>      </u> Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.         </div> <div style="margin-top: 10px;"> <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u> </div>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>40</u>	x 2 = <u>80</u>	FAC species <u>10</u>	x 3 = <u>30</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>70</u> (A)	<u>210</u> (B)	Prevalence Index = B/A = <u>3.00</u>	
Total % Cover of:	Multiply by:																
OBL species <u>0</u>	x 1 = <u>0</u>																
FACW species <u>40</u>	x 2 = <u>80</u>																
FAC species <u>10</u>	x 3 = <u>30</u>																
FACU species <u>0</u>	x 4 = <u>0</u>																
UPL species <u>20</u>	x 5 = <u>100</u>																
Column Totals: <u>70</u> (A)	<u>210</u> (B)																
Prevalence Index = B/A = <u>3.00</u>																	

Remarks:  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).



## SOIL

Sampling Point: DPA35-WA23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 14, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA36-WA24  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39627 Long: -83.45899 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>7</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																
1. <u>Fraxinus pennsylvanica</u>	<u>30</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Ulmus americana</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Quercus palustris</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>																	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
<u>70</u> = Total Cover																				
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	<b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>115</u></td> <td>x 2 = <u>230</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>135</u> (A)</td> <td><u>280</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.07</u></td> </tr> </tbody> </table>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>115</u>	x 2 = <u>230</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>135</u> (A)	<u>280</u> (B)	Prevalence Index = B/A = <u>2.07</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>5</u>	x 1 = <u>5</u>																			
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Column Totals: <u>135</u> (A)	<u>280</u> (B)																			
Prevalence Index = B/A = <u>2.07</u>																				
1. <u>Fraxinus pennsylvanica</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
2. <u>Acer rubrum</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>																	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
<u>30</u> = Total Cover																				
Herb Stratum (Plot size: <u>5 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Scirpus atrovirens</u>	<u>5</u>	<u>No</u>	<u>OBL</u>																	
2. <u>Carex sp</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
3. <u>Phalaris arundinacea</u>	<u>15</u>	<u>Yes</u>	<u>FACW</u>																	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
6. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
7. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
8. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
9. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
10. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
<u>35</u> = Total Cover																				
Woody Vine Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>																
1. <u>None Observed</u>	<u>      </u>	<u>      </u>	<u>      </u>																	
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
<u>      </u> = Total Cover																				

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPA36-WA24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 4/2	100	None	—	—	—	Clay loam	
8-16	10YR 4/1	80	10YR 4/6	20	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 14, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA38-WA25  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39722 Long: -83.46024 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>Acer rubrum</u> <u>40</u> <u>Yes</u> <u>FAC</u> 2. <u>Ulmus rubra</u> <u>20</u> <u>Yes</u> <u>FAC</u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>60</u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>Ulmus rubra</u> <u>20</u> <u>Yes</u> <u>FAC</u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>20</u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Phalaris arundinacea</u> <u>30</u> <u>Yes</u> <u>FACW</u> 2. <u>Scirpus atrovirens</u> <u>20</u> <u>Yes</u> <u>OBL</u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 6. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 7. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 8. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 9. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 10. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>50</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> <u>      </u> <u>      </u> <u>      </u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>30</u></td> <td>x 2 = <u>60</u></td> </tr> <tr> <td>FAC species <u>80</u></td> <td>x 3 = <u>240</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>130</u> (A)</td> <td><u>320</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.46</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>30</u>	x 2 = <u>60</u>	FAC species <u>80</u>	x 3 = <u>240</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>130</u> (A)	<u>320</u> (B)	Prevalence Index = B/A = <u>2.46</u>	
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OBL species <u>20</u>	x 1 = <u>20</u>																
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Column Totals: <u>130</u> (A)	<u>320</u> (B)																
Prevalence Index = B/A = <u>2.46</u>																	
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>																	

Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPA38-WA25**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/2	100	None	—	—	—	Clay loam	
4-16	10YR 4/1	80	10YR 4/6	20	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soils Indicators:**

- |  |  |
|--|--|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)        |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)                |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)            |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)        |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)         |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7)      |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)          |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)      |  |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- ☐
- Coast Prairie Redox (A16)
- 
- ☐
- Dark Surface (S7)
- 
- ☐
- Iron-Manganese Masses (F12)
- 
- ☐
- Very Shallow Dark Surface (TF12)
- 
- ☐
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**
 Type: \_\_\_\_\_  
 Depth(inches): \_\_\_\_\_

**Hydric Soil Present?**      Yes   X   No \_\_\_\_\_
**Remarks:**

A positive indication of hydric soil was observed.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

- |  |   |
|--|---|
| <input checked="" type="checkbox"/> Surface Water (A1)             | <input checked="" type="checkbox"/> Water-Stained Leaves (B9)       |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   | <input type="checkbox"/> Other (Explain in Remarks)                 |

Secondary Indicators (minimum of two required)

- ☐
- Surface Soil Cracks (B6)
- 
- ☐
- Drainage Patterns (B10)
- 
- ☐
- Dry-Season Water Table (C2)
- 
- ☐
- Crayfish Burrows (C8)
- 
- ☒
- Saturation Visible on Aerial Imagery (C9)
- 
- ☐
- Stunted or Stressed Plants (D1)
- 
- ☒
- Geomorphic Position (D2)
- 
- ☐
- FAC-Neutral Test (D5)

**Field Observations:**
 Surface Water Present? Yes   X   No \_\_\_\_\_      Depth (inches):   2    
 Water Table Present? Yes \_\_\_\_\_ No   X        Depth (inches):   >20    
 Saturation Present? Yes   X   No \_\_\_\_\_      Depth (inches):   0    
 (includes capillary fringe)

**Wetland Hydrology Present?**      Yes   X   No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
 A positive indication of wetland hydrology was observed (at least one primary indicator).  
 A positive indication of wetland hydrology was observed (at least two secondary indicators).



# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 14, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA39-WA26  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39516 Long: -83.46619 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This location was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural  This feature is within an actively cultivated agricultural field. The natural vegetation community has been eliminated via cultivation.	

## VEGETATION - Use scientific names of plants.

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Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA39-WA26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
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Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 15, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA41-WA27  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39409 Long: -83.46670 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This location was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural  This feature is within an actively cultivated agricultural field. The natural vegetation community has been eliminated via cultivation.	

## VEGETATION - Use scientific names of plants.

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<b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>X</u>																																																																																																																																									

Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA41-WA27

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
--	--

<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No _____
---	--

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Gauge or Well Data (D9) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input checked="" type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> FAC-Neutral Test (D5)	

<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
---	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 15, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA42-WA28  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39390 Long: -83.42062 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This location was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural  This feature is within an actively cultivated agricultural field. The natural vegetation community has been eliminated via cultivation.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">= Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">= Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Glycine max</u></td><td style="text-align: center;">100</td><td style="text-align: center;">Yes</td><td style="text-align: center;">UPL</td></tr> <tr><td>2. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">100 = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">= Total Cover</td><td></td><td></td></tr> </table>	Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Indicator Status	1. <u>None Observed</u>				2. <u>      </u>				= Total Cover				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: center;">Multiply by:</th> </tr> <tr><td>OBL species</td><td style="text-align: center;"><u>0</u> x 1 = <u>0</u></td></tr> <tr><td>FACW species</td><td style="text-align: center;"><u>0</u> x 2 = <u>0</u></td></tr> <tr><td>FAC species</td><td style="text-align: center;"><u>0</u> x 3 = <u>0</u></td></tr> <tr><td>FACU species</td><td style="text-align: center;"><u>0</u> x 4 = <u>0</u></td></tr> <tr><td>UPL species</td><td style="text-align: center;"><u>100</u> x 5 = <u>500</u></td></tr> <tr><td>Column Totals:</td><td style="text-align: center;"><u>100</u> (A) <u>500</u> (B)</td></tr> <tr><td>Prevalence Index = B/A =</td><td style="text-align: center;"><u>5.00</u></td></tr> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species	<u>0</u> x 1 = <u>0</u>	FACW species	<u>0</u> x 2 = <u>0</u>	FAC species	<u>0</u> x 3 = <u>0</u>	FACU species	<u>0</u> x 4 = <u>0</u>	UPL species	<u>100</u> x 5 = <u>500</u>	Column Totals:	<u>100</u> (A) <u>500</u> (B)	Prevalence Index = B/A =	<u>5.00</u>
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Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).



## SOIL

Sampling Point: DPA42-WA28**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/2	100	-	-	-	-	-	
4-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soils Indicators:**

- |  |  |
|--|--|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)        |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)                |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)            |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)        |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)         |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7)      |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)          |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)      |  |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16)        |
| <input type="checkbox"/> Dark Surface (S7)                |
| <input type="checkbox"/> Iron-Manganese Masses (F12)      |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks)       |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**
 Type: \_\_\_\_\_  
 Depth(inches): \_\_\_\_\_
Hydric Soil Present? Yes X No \_\_\_\_\_**Remarks:**

A positive indication of hydric soil was observed.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   | <input type="checkbox"/> Other (Explain in Remarks)                 |

Secondary Indicators (minimum of two required)

- |   |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6)                             |
| <input type="checkbox"/> Drainage Patterns (B10)                              |
| <input type="checkbox"/> Dry-Season Water Table (C2)                          |
| <input type="checkbox"/> Crayfish Burrows (C8)                                |
| <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input checked="" type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> FAC-Neutral Test (D5)                                |

**Field Observations:**

Surface Water Present?	Yes _____ No <u>X</u>	Depth (inches): <u>N/A</u>
Water Table Present?	Yes _____ No <u>X</u>	Depth (inches): <u>&gt;20</u>
Saturation Present?	Yes <u>X</u> No _____	Depth (inches): <u>0</u>

 (includes capillary fringe)
Wetland Hydrology Present? Yes X No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
 A positive indication of wetland hydrology was observed (at least one primary indicator).  
 A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 15, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA44-WA29  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39298 Long: -83.42198 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This location was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural  This feature is within an actively cultivated agricultural field. The natural vegetation community has been eliminated via cultivation.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Glycine max</u> <u>100</u> <u>Yes</u> <u>UPL</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>100</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>100</u></td> <td>x 5 = <u>500</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>500</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>5.00</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>100</u>	x 5 = <u>500</u>	Column Totals: <u>100</u> (A)	<u>500</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
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Column Totals: <u>100</u> (A)	<u>500</u> (B)																
Prevalence Index = B/A = <u>5.00</u>																	

Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA44-WA29

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/2	100	-	-	-	-	-	
4-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <u>  X  </u> No _____
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Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <u>Primary Indicators (minimum of one required; check all that apply)</u>  <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9)  <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13)  <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> True Aquatic Plants (B14)  <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1)  <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)  <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4)  <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)  <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7)  <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Gauge or Well Data (D9)  <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Other (Explain in Remarks)           </div> <div style="width: 45%;"> <u>Secondary Indicators (minimum of two required)</u>  <input type="checkbox"/> Surface Soil Cracks (B6)  <input type="checkbox"/> Drainage Patterns (B10)  <input type="checkbox"/> Dry-Season Water Table (C2)  <input type="checkbox"/> Crayfish Burrows (C8)  <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)  <input checked="" type="checkbox"/> Geomorphic Position (D2)  <input type="checkbox"/> FAC-Neutral Test (D5)           </div> </div>	
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<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  N/A  </u> Water Table Present? Yes _____ No <u>  X  </u> Depth (inches): <u>  &gt;20  </u> Saturation Present? Yes <u>  X  </u> No _____      Depth (inches): <u>  0  </u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>  X  </u> No _____
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 15, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA45-WA30  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.38966 Long: -83.42435 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This location was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural  This feature is within an actively cultivated agricultural field. The natural vegetation community has been eliminated via cultivation.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Glycine max</u> <u>100</u> <u>Yes</u> <u>UPL</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>100</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>100</u></td> <td>x 5 = <u>500</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>500</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>5.00</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>100</u>	x 5 = <u>500</u>	Column Totals: <u>100</u> (A)	<u>500</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
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Column Totals: <u>100</u> (A)	<u>500</u> (B)																
Prevalence Index = B/A = <u>5.00</u>																	

Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA45-WA30

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/2	100	-	-	-	-	-	
4-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soils Indicators:</b> <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Stratified Layers (A5) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> 2 cm Muck (A10) <input checked="" type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)  <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
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<b>Restrictive Layer (if present):</b> Type: _____ Depth(inches): _____	<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No _____
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Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one required; check all that apply)</u>				<u>Secondary Indicators (minimum of two required)</u>			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)		<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)		<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)			<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

<b>Field Observations:</b> Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No _____      Depth (inches): <u>0</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No _____
--	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).



# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 15, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA47-WA31  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39002 Long: -83.42611 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This location was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural  This feature is within an actively cultivated agricultural field. The natural vegetation community has been eliminated via cultivation.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Glycine max</u> <u>100</u> <u>Yes</u> <u>UPL</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>100</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>100</u></td> <td>x 5 = <u>500</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>500</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>5.00</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>100</u>	x 5 = <u>500</u>	Column Totals: <u>100</u> (A)	<u>500</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
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Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA47-WA31**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/2	100	-	-	-	-	-	
4-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.**Hydric Soils Indicators:**

- |  |  |
|--|--|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Sandy Gleyed Matrix (S4)        |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> Sandy Redox (S5)                |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Stripped Matrix (S6)            |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> Loamy Mucky Mineral (F1)        |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        |
| <input type="checkbox"/> 2 cm Muck (A10)                   | <input checked="" type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6)         |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Dark Surface (F7)      |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Depressions (F8)          |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)      |  |

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- |   |
|---|
| <input type="checkbox"/> Coast Prairie Redox (A16)        |
| <input type="checkbox"/> Dark Surface (S7)                |
| <input type="checkbox"/> Iron-Manganese Masses (F12)      |
| <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Other (Explain in Remarks)       |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**
 Type: \_\_\_\_\_  
 Depth(inches): \_\_\_\_\_
Hydric Soil Present? Yes X No \_\_\_\_\_**Remarks:**

A positive indication of hydric soil was observed.

## HYDROLOGY

**Wetland Hydrology Indicators:**Primary Indicators (minimum of one required; check all that apply)

- |  |   |
|--|---|
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Water-Stained Leaves (B9)                  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Aquatic Fauna (B13)                        |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> True Aquatic Plants (B14)                  |
| <input type="checkbox"/> Water Marks (B1)                          | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |
| <input type="checkbox"/> Sediment Deposits (B2)                    | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |
| <input type="checkbox"/> Drift Deposits (B3)                       | <input type="checkbox"/> Presence of Reduced Iron (C4)              |
| <input type="checkbox"/> Algal Mat or Crust (B4)                   | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) |
| <input type="checkbox"/> Iron Deposits (B5)                        | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Gauge or Well Data (D9)                    |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   | <input type="checkbox"/> Other (Explain in Remarks)                 |

Secondary Indicators (minimum of two required)

- |   |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6)                             |
| <input type="checkbox"/> Drainage Patterns (B10)                              |
| <input type="checkbox"/> Dry-Season Water Table (C2)                          |
| <input type="checkbox"/> Crayfish Burrows (C8)                                |
| <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)           |
| <input checked="" type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> FAC-Neutral Test (D5)                                |

**Field Observations:**

Surface Water Present?	Yes _____ No <u>X</u>	Depth (inches): <u>N/A</u>
Water Table Present?	Yes _____ No <u>X</u>	Depth (inches): <u>&gt;20</u>
Saturation Present?	Yes <u>X</u> No _____	Depth (inches): <u>0</u>

 (includes capillary fringe)
Wetland Hydrology Present? Yes X No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

**Remarks:**
 A positive indication of wetland hydrology was observed (at least one primary indicator).  
 A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 15, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA49-WA32  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.38996 Long: -83.42729 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This location was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural  This feature is within an actively cultivated agricultural field. The natural vegetation community has been eliminated via cultivation.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="4" style="text-align: right;">= Total Cover</td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="4" style="text-align: right;">= Total Cover</td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Glycine max</u></td><td style="text-align: center;">100</td><td style="text-align: center;">Yes</td><td style="text-align: center;">UPL</td></tr> <tr><td>2. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="4" style="text-align: right;">100 = Total Cover</td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="4" style="text-align: right;">= Total Cover</td></tr> </table>	Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA49-WA32

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/2	100	-	-	-	-	-	
4-16	10YR 4/1	90	10YR 4/6	10	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
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<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 15, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA50-WA33  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39331 Long: -83.44452 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This location was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural  This feature is within an actively cultivated agricultural field. The natural vegetation community has been eliminated via cultivation.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Glycine max</u> <u>100</u> <u>Yes</u> <u>UPL</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>100</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>100</u></td> <td>x 5 = <u>500</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>500</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>5.00</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>100</u>	x 5 = <u>500</u>	Column Totals: <u>100</u> (A)	<u>500</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
Total % Cover of:	Multiply by:																
OBL species <u>0</u>	x 1 = <u>0</u>																
FACW species <u>0</u>	x 2 = <u>0</u>																
FAC species <u>0</u>	x 3 = <u>0</u>																
FACU species <u>0</u>	x 4 = <u>0</u>																
UPL species <u>100</u>	x 5 = <u>500</u>																
Column Totals: <u>100</u> (A)	<u>500</u> (B)																
Prevalence Index = B/A = <u>5.00</u>																	

Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).



## SOIL

Sampling Point: DPA50-WA33

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/1	100	None	—	—	—	Silty clay	
6-16	10YR 4/1	90	10YR 4/6	10	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: January 15, 2020  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPA52-WA34  
 Investigator(s): DC and DC Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Agriculture Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39521 Long: -83.44338 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This location was determined to be within a wetland despite the lack of dominance of hydrophytic vegetation due to the significant disturbance to the natural  This feature is within an actively cultivated agricultural field. The natural vegetation community has been eliminated via cultivation.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Glycine max</u> 90 Yes UPL 2. <u>Scirpus atrovirens</u> 10 No OBL 3. <u>      </u> 4. <u>      </u> 5. <u>      </u> 6. <u>      </u> 7. <u>      </u> 8. <u>      </u> 9. <u>      </u> 10. <u>      </u> <u>100</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>None Observed</u> 2. <u>      </u> <u>      </u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>10</u></td> <td>x 1 = <u>10</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>90</u></td> <td>x 5 = <u>450</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>460</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.60</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>10</u>	x 1 = <u>10</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>90</u>	x 5 = <u>450</u>	Column Totals: <u>100</u> (A)	<u>460</u> (B)	Prevalence Index = B/A = <u>4.60</u>	
Total % Cover of:	Multiply by:																
OBL species <u>10</u>	x 1 = <u>10</u>																
FACW species <u>0</u>	x 2 = <u>0</u>																
FAC species <u>0</u>	x 3 = <u>0</u>																
FACU species <u>0</u>	x 4 = <u>0</u>																
UPL species <u>90</u>	x 5 = <u>450</u>																
Column Totals: <u>100</u> (A)	<u>460</u> (B)																
Prevalence Index = B/A = <u>4.60</u>																	
<b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>X</u>																	

Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA52-WA34

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 4/1	100	None	—	—	—	Silty clay	
7-16	10YR 4/1	90	10YR 4/6	10	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:			
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>N/A</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;20</u>		
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ (includes capillary fringe)	Depth (inches): <u>0</u>		

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
Applicant/Owner: Cadence State: OH Sampling Point: DPA53\_WA35  
Investigator(s): DC and - Section, Township, Range: Liberty Township  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
Slope (%): 10-15 Lat: 40.34812 Long: -83.45920 Datum: NAD83  
Soil Map Unit Name: Morley silt loam, 6-12 percent slopes, eroded NWI classification: NA  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

Hydrophytic Vegetation Present?	Yes <u>  X  </u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>  X  </u>	No <u>      </u>
Hydric Soil Present?	Yes <u>  X  </u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>  X  </u>	No <u>      </u>			
<b>Remarks:</b> This point was determined to be within a wetland due to the presence of all 3 wetland criteria. This wetland is divided by a farm access road and a Co hwy, though connected under each via a culvert.					

	Absolute	Dominant	Indicator
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )	<b>% cover</b>	<b>Species?</b>	<b>Status</b>
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
	<u>0</u>	= Total Cover	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> )			
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
	<u>0</u>	= Total Cover	
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )			
1. <u>Phalaris arundinacea</u>	<u>90</u>	<u>Yes</u>	<u>FACW</u>
2. <u>Typha latifolia</u>	<u>10</u>	<u>No</u>	<u>OBL</u>
3. <u>Scirpus atrovirens</u>	<u>5</u>	<u>No</u>	<u>OBL</u>
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
	<u>105</u>	= Total Cover	
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )			
1. <u>None Observed</u>			
2. _____			
	<u>0</u>	= Total Cover	

<b>Prevalence Index Worksheet:</b>			
Total % Cover of:		Multiply by:	
OBL species	<u>15</u>	x 1 =	<u>15</u>
FACW species	<u>90</u>	x 2 =	<u>180</u>
FAC species	<u>0</u>	x 3 =	<u>0</u>
FACU species	<u>0</u>	x 4 =	<u>0</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column Totals:	<u>105</u>	(A)	<u>195</u> (B)
Prevalence Index = B/A =	<u>1.86</u>		

<b>Hydrophytic Vegetation Indicators:</b>
<u>    </u> 1 - Rapid Test for Hydrophytic Vegetation
<u>  X  </u> 2 - Dominance Test is >50%
<u>  X  </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
<u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
<u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

<b>Hydrophytic Vegetation Present?</b>	Yes <u>  X  </u> No <u>    </u>
--	---------------------------------

Remarks:	<p>A positive indication of hydrophytic vegetation was observed (&gt;50% of dominant species indexed as OBL, FACW, or FAC).</p> <p>A positive indication of hydrophytic vegetation was observed (Prevalence Index is <math>\leq 3.0</math>).</p>
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## SOIL

Sampling Point: DPA53\_WA35

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>3</u>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
A positive indication of wetland hydrology was observed (at least one primary indicator).			
A positive indication of wetland hydrology was observed (at least two secondary indicators).			



# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA55\_WA35b  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.34854 Long: -83.45750 Datum: NAD83  
 Soil Map Unit Name: Blount silt loam, 2-4 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Phalaris arundinacea</u></td><td><u>95</u></td><td><u>Yes</u></td><td><u>FACW</u></td></tr> <tr><td>2. <u>Typha latifolia</u></td><td><u>5</u></td><td><u>No</u></td><td><u>OBL</u></td></tr> <tr><td>3. <u>Poa pratensis</u></td><td><u>5</u></td><td><u>No</u></td><td><u>FAC</u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>6. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>7. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>8. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>9. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>10. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>105</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table>	Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Indicator Status	1. <u>Phalaris arundinacea</u>	<u>95</u>	<u>Yes</u>	<u>FACW</u>	2. <u>Typha latifolia</u>	<u>5</u>	<u>No</u>	<u>OBL</u>	3. <u>Poa pratensis</u>	<u>5</u>	<u>No</u>	<u>FAC</u>	4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	6. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	7. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	8. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	9. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	10. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>105</u> = Total Cover				Woody Vine Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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## SOIL

Sampling Point: DPA55\_WA35b

<b>Profile Description:</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 4/1	100	None	—	—	—	Silt loam	
3-18	10YR 4/1	95	7.5YR	5	C	M	Silt loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

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**Hydric Soils Indicators:**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ 2 cm Muck (A10)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 5 cm Mucky Peat or Peat (S3)

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ Coast Prairie Redox (A16)  
☐ Dark Surface (S7)  
☐ Iron-Manganese Masses (F12)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

---

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth(inches): \_\_\_\_\_

**Hydric Soil Present?**      Yes ☒ No ☐

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>5</u>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
A positive indication of wetland hydrology was observed (at least one primary indicator).			
A positive indication of wetland hydrology was observed (at least two secondary indicators).			

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA56 WA36  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.34846 Long: -83.45447 Datum: NAD83  
 Soil Map Unit Name: Blount silt loam, 0-2 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined not to be within a wetland due to the lack of hydrophytic vegetation.  Vegetation community eliminated by agricultural practices. Other indicators indicate a wetland, and historic imagery shows regular soil saturation or stressed/stunted crops.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Zea mays</u></td><td><u>100</u></td><td><u>Yes</u></td><td><u>UPL</u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>6. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>7. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>8. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>9. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>10. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>100</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table>	Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Indicator Status	1. <u>Zea mays</u>	<u>100</u>	<u>Yes</u>	<u>UPL</u>	2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	6. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	7. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	8. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	9. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	10. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>100</u> = Total Cover				Woody Vine Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Total % Cover of:	Multiply by:	OBL species	<u>0</u> x 1 = <u>0</u>	FACW species	<u>0</u> x 2 = <u>0</u>	FAC species	<u>0</u> x 3 = <u>0</u>	FACU species	<u>0</u> x 4 = <u>0</u>	UPL species	<u>100</u> x 5 = <u>500</u>	Column Totals:	<u>100</u> (A) <u>500</u> (B)	Prevalence Index = B/A = <u>5.00</u>	
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Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).  
  
 Veg community eliminated by agricultural practices

## SOIL

Sampling Point: DPA56\_WA36

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 4/1	90	5YR 4/6	10	C	M	Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soils Indicators:</b>			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Coast Prairie Redox (A16)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10)			<input checked="" type="checkbox"/> Depleted Matrix (F3)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)								
<b>Restrictive Layer (if present):</b>								
Type: _____					<b>Hydric Soil Present?</b> Yes <u>  X  </u> No <u>      </u>			
Depth(inches): _____								
Remarks: A positive indication of hydric soil was observed.								

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
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<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>4</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
A positive indication of wetland hydrology was observed (at least one primary indicator).			
A positive indication of wetland hydrology was observed (at least two secondary indicators).			
Corn within the wetland boundary was stressed and less dense than that planted outside.			

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA58 WA37  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.34860 Long: -83.45132 Datum: NAD83  
 Soil Map Unit Name: Blount silt loam, 2-4 percent slopes NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Quercus palustris</u></td><td style="text-align: center;">30</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Acer saccharinum</u></td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">50 = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Acer rubrum</u></td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u>Acer saccharinum</u></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u>Fraxinus pennsylvanica</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FACW</td></tr> <tr><td>4. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">35 = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Carex vulpinoidea</u></td><td style="text-align: center;">40</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Phalaris arundinacea</u></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">50 = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">0 = Total Cover</td><td></td><td></td></tr> </table>	Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Total % Cover of:	Multiply by:	OBL species	<u>0</u> x 1 = <u>0</u>	FACW species	<u>115</u> x 2 = <u>230</u>	FAC species	<u>20</u> x 3 = <u>60</u>	FACU species	<u>0</u> x 4 = <u>0</u>	UPL species	<u>0</u> x 5 = <u>0</u>	Column Totals:	<u>135</u> (A) <u>290</u> (B)	Prevalence Index = B/A =	<u>2.15</u>
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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).



## SOIL

Sampling Point: DPA58\_WA37

<b>Profile Description:</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 3/2	100	None	—	—	—	Clay loam	
5-16	10YR 4/1	90	5YR4/5	10	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soils Indicators:**

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 2 cm Muck (A10)
- ☒ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 5 cm Mucky Peat or Peat (S3)

- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1)
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- ☐ Coast Prairie Redox (A16)
- ☐ Dark Surface (S7)
- ☐ Iron-Manganese Masses (F12)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth(inches): \_\_\_\_\_

**Hydric Soil Present?**

Yes ☒ No ☐

**Remarks:**

A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
A positive indication of wetland hydrology was observed (at least one primary indicator). A positive indication of wetland hydrology was observed (at least two secondary indicators).			

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA60 WA38  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.34783 Long: -83.45059 Datum: NAD83  
 Soil Map Unit Name: Blount silt loam, 2-4 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined not to be within a wetland due to the lack of hydrophytic vegetation.  Vegetation community eliminated by agricultural practices. Other indicators indicate a wetland, and historic imagery shows regular soil saturation or stressed/stunted crops.	

## VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. <u>None Observed</u>	<u>      </u>	<u>      </u>	<u>      </u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)																
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2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
<u>0</u> = Total Cover																				
Herb Stratum (Plot size: <u>5 ft.</u> )				<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>      </u> 2 - Dominance Test is >50% <u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
1. <u>Zea mays</u>	<u>100</u>	<u>Yes</u>	<u>UPL</u>																	
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
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10. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
<u>100</u> = Total Cover																				
Woody Vine Stratum (Plot size: <u>30 ft.</u> )				<b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>X</u>																
1. <u>None Observed</u>	<u>      </u>	<u>      </u>	<u>      </u>																	
2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>																	
<u>0</u> = Total Cover																				

Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA60\_WA38

<b>Profile Description:</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 4/1	90	5YR 4/6	10	C	M	Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soils Indicators:</b>					<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>			
<input type="checkbox"/> Histosol (A1)					<input type="checkbox"/> Sandy Gleyed Matrix (S4)			
<input type="checkbox"/> Histic Epipedon (A2)					<input type="checkbox"/> Sandy Redox (S5)			
<input type="checkbox"/> Black Histic (A3)					<input type="checkbox"/> Stripped Matrix (S6)			
<input type="checkbox"/> Hydrogen Sulfide (A4)					<input type="checkbox"/> Loamy Mucky Mineral (F1)			
<input type="checkbox"/> Stratified Layers (A5)					<input type="checkbox"/> Loamy Gleyed Matrix (F2)			
<input type="checkbox"/> 2 cm Muck (A10)					<input checked="" type="checkbox"/> Depleted Matrix (F3)			
<input type="checkbox"/> Depleted Below Dark Surface (A11)					<input type="checkbox"/> Redox Dark Surface (F6)			
<input type="checkbox"/> Thick Dark Surface (A12)					<input type="checkbox"/> Depleted Dark Surface (F7)			
<input type="checkbox"/> Sandy Mucky Mineral (S1)					<input type="checkbox"/> Redox Depressions (F8)			
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)								
					<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.			
<b>Restrictive Layer (if present):</b>								
Type: _____								
Depth(inches): _____								
					<b>Hydric Soil Present?</b> Yes <u>X</u> No _____			
<b>Remarks:</b> A positive indication of hydric soil was observed.								

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>4</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>2</u>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
A positive indication of wetland hydrology was observed (at least one primary indicator).			
A positive indication of wetland hydrology was observed (at least two secondary indicators).			

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA62 WA39  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.34033 Long: -83.44211 Datum: NAD83  
 Soil Map Unit Name: Blount silt loam, 0-2 percent slopes NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr> <td>1. <u>Quercus palustris</u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>2. <u>Ulmus rubra</u></td> <td style="text-align: center;">10</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>3. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>30</u> = Total Cover</td> <td colspan="2"></td> </tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr> <td>1. <u>Ulmus rubra</u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>2. <u>Acer rubrum</u></td> <td style="text-align: center;">20</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FAC</td> </tr> <tr> <td>3. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>40</u> = Total Cover</td> <td colspan="2"></td> </tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr> <td>1. <u>None Observed</u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>3. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>4. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>5. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>6. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>7. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>8. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>9. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>10. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td> <td colspan="2"></td> </tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr> <td>1. <u>None Observed</u></td> <td></td> <td></td> <td></td> </tr> <tr> <td>2. <u>                                  </u></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td> <td colspan="2"></td> </tr> </table>	Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	1. <u>Quercus palustris</u>	20	Yes	FACW	2. <u>Ulmus rubra</u>	10	Yes	FAC	3. <u>                                  </u>				4. <u>                                  </u>				5. <u>                                  </u>				<u>30</u> = Total Cover				Sapling/Shrub Stratum (Plot size: <u>15 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	1. <u>Ulmus rubra</u>	20	Yes	FAC	2. <u>Acer rubrum</u>	20	Yes	FAC	3. <u>                                  </u>				4. <u>                                  </u>				5. <u>                                  </u>				<u>40</u> = Total Cover				Herb Stratum (Plot size: <u>5 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	1. <u>None Observed</u>				2. <u>                                  </u>				3. <u>                                  </u>				4. <u>                                  </u>				5. <u>                                  </u>				6. <u>                                  </u>				7. <u>                                  </u>				8. <u>                                  </u>				9. <u>                                  </u>				10. <u>                                  </u>				<u>0</u> = Total Cover				Woody Vine Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	1. <u>None Observed</u>				2. <u>                                  </u>				<u>0</u> = Total Cover				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: center;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>50</u></td> <td>x 3 = <u>150</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>70</u> (A)</td> <td><u>190</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.71</u></td> </tr> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	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Remarks: A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).																																																																																																																																									

## SOIL

Sampling Point: DPA62 WA39

<b>Profile Description:</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/2	100	None	—	—	—	Clay loam	
2-18	10YR 4/1	90	5YR4/5	10	C	M	Clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soils Indicators:</b>			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Coast Prairie Redox (A16)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10)			<input checked="" type="checkbox"/> Depleted Matrix (F3)					
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Redox Depressions (F8)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Type: _____ Depth(inches): _____								
Remarks:  A positive indication of hydric soil was observed.								

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>6</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
A positive indication of wetland hydrology was observed (at least one primary indicator).			
A positive indication of wetland hydrology was observed (at least two secondary indicators).			



# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA64 WA40  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.34048 Long: -83.44047 Datum: NAD83  
 Soil Map Unit Name: Blount silt loam, 0-2 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined not to be within a wetland due to the lack of hydrophytic vegetation.  Vegetation community significantly altered due to agricultural practices.	

## VEGETATION - Use scientific names of plants.

<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Barbarea vulgaris</u></td><td><u>5</u></td><td><u>No</u></td><td><u>FAC</u></td></tr> <tr><td>2. <u>Juncus tenuis</u></td><td><u>5</u></td><td><u>No</u></td><td><u>FAC</u></td></tr> <tr><td>3. <u>Glycine max</u></td><td><u>25</u></td><td><u>Yes</u></td><td><u>UPL</u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>6. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>7. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>8. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>9. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>10. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>35</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table>	Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).  
  
 Additional grass species present, though ID wasn't possible given condition of the plants. Community severely impacted by agricultural practices

SOIL

Sampling Point: DPA64\_WA40

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 4/1	90	5YR 5/4	10	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:

Histosol (A1)

Histic Epipedon (A2)

Black Histic (A3)

Hydrogen Sulfide (A4)

Stratified Layers (A5)

2 cm Muck (A10)

Depleted Below Dark Surface (A11)

Thick Dark Surface (A12)

Sandy Mucky Mineral (S1)

5 cm Mucky Peat or Peat (S3)

Sandy Gleyed Matrix (S4)

Sandy Redox (S5)

Stripped Matrix (S6)

Loamy Mucky Mineral (F1)

Loamy Gleyed Matrix (F2)

X

Depleted Matrix (F3)

Redox Dark Surface (F6)

Depleted Dark Surface (F7)

Redox Depressions (F8)

Indicators for Problematic Hydric Soils<sup>3</sup>:

Coast Prairie Redox (A16)

Dark Surface (S7)

Iron-Manganese Masses (F12)

Very Shallow Dark Surface (TF12)

Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type:

Depth(inches):

Hydric Soil Present?

Yes 

X

 No

Remarks:

A positive indication of hydric soil was observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Surface Water (A1)

High Water Table (A2)

X

Saturation (A3)

Water Marks (B1)

Sediment Deposits (B2)

Drift Deposits (B3)

Algal Mat or Crust (B4)

Iron Deposits (B5)

Inundation Visible on Aerial Imagery (B7)

Sparsely Vegetated Concave Surface (B8)

Water-Stained Leaves (B9)

Aquatic Fauna (B13)

True Aquatic Plants (B14)

Hydrogen Sulfide Odor (C1)

Oxidized Rhizospheres on Living Roots (C3)

Presence of Reduced Iron (C4)

Recent Iron Reduction in Tilled Soils (C6)

Thin Muck Surface (C7)

Gauge or Well Data (D9)

Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

Surface Soil Cracks (B6)

Drainage Patterns (B10)

Dry-Season Water Table (C2)

Crayfish Burrows (C8)

X

Saturation Visible on Aerial Imagery (C9)

X

Stunted or Stressed Plants (D1)

X

Geomorphic Position (D2)

FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?

Yes

No 

X

Water Table Present?

Yes

No 

X

Saturation Present?

Yes 

X

No

Depth (inches): 

N/A

Depth (inches): 

>20

Depth (inches): 

6

Wetland Hydrology Present?

Yes 

X

 No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

A positive indication of wetland hydrology was observed (at least one primary indicator).

A positive indication of wetland hydrology was observed (at least two secondary indicators).

US Army Corps of Engineers

Midwest Region - Version 2.0

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA66 WA41  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.34018 Long: -83.43972 Datum: NAD83  
 Soil Map Unit Name: Blount silt loam, 0-2 percent slopes NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Acer saccharinum</u></td><td style="text-align: center;">25</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Ulmus rubra</u></td><td style="text-align: center;">35</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>3. <u>Populus deltoides</u></td><td style="text-align: center;">15</td><td style="text-align: center;">No</td><td style="text-align: center;">FAC</td></tr> <tr><td>4. <u>Quercus palustris</u></td><td style="text-align: center;">10</td><td style="text-align: center;">No</td><td style="text-align: center;">FACW</td></tr> <tr><td>5. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">85 = Total Cover</td><td></td><td></td></tr> </tbody> </table> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Acer saccharinum</u></td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Fraxinus pennsylvanica</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u>Ulmus rubra</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FAC</td></tr> <tr><td>4. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">30 = Total Cover</td><td></td><td></td></tr> </tbody> </table> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Phalaris arundinacea</u></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">5 = Total Cover</td><td></td><td></td></tr> </tbody> </table> <table border="0" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">0 = Total Cover</td><td></td><td></td></tr> </tbody> </table>	Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPA66\_WA41

<b>Profile Description:</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 4/2	80	2.5YR 4/8	20	C	m	Silt loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

#### Hydric Soils Indicators:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

#### Indicators for Problematic Hydric Soils<sup>3</sup>:

☐ Coast Prairie Redox (A16)  
☐ Dark Surface (S7)  
☐ Iron-Manganese Masses (F12)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks) \_\_\_\_\_

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if present):</b>  Type: _____ Depth(inches): _____	<div style="text-align: center;"> <b>Hydric Soil Present?</b>      Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> </div>
Remarks:  A positive indication of hydric soil was observed.	

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator). A positive indication of wetland hydrology was observed (at least two secondary indicators). There appears to be a small constructed soil dam in the middle of the wetland, though water permeates through most of it.			

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
Applicant/Owner: Cadence State: OH Sampling Point: DPA68\_WA42  
Investigator(s): DC and - Section, Township, Range: Liberty Township  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
Slope (%): 00-05 Lat: 40.33853 Long: -83.43950 Datum: NAD83  
Soil Map Unit Name: Blount silt loam, 0-2 percent slopes NWI classification: PEM  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

Hydrophytic Vegetation Present?	Yes <u>  X  </u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>      X      </u>	No <u>          </u>
Hydric Soil Present?	Yes <u>      X      </u>	No <u>          </u>			
Wetland Hydrology Present?	Yes <u>      X      </u>	No <u>          </u>			
<b>Remarks:</b> This point was determined to be within a wetland due to the presence of all 3 wetland criteria.					

Tree Stratum (Plot size: <u>30 ft.</u> )		Absolute % cover	Dominant Species?	Indicator Status
1.	<u>None Observed</u>			
2.	<u></u>			
3.	<u></u>			
4.	<u></u>			
5.	<u></u>			
		<u>0</u>	= Total Cover	
Sapling/Shrub Stratum (Plot size: <u>15 ft.</u> )				
1.	<u>None Observed</u>			
2.	<u></u>			
3.	<u></u>			
4.	<u></u>			
5.	<u></u>			
		<u>0</u>	= Total Cover	
Herb Stratum (Plot size: <u>5 ft.</u> )				
1.	<u>Barbarea vulgaris</u>	40	Yes	FAC
2.	<u>Phalaris arundinacea</u>	20	Yes	FACW
3.	<u>Juncus effusus</u>	20	Yes	OBL
4.	<u>Glycine max</u>	20	Yes	UPL
5.	<u></u>			
6.	<u></u>			
7.	<u></u>			
8.	<u></u>			
9.	<u></u>			
10.	<u></u>			
		<u>100</u>	= Total Cover	
Woody Vine Stratum (Plot size: <u>30 ft.</u> )				
1.	<u>None Observed</u>			
2.	<u></u>			
		<u>0</u>	= Total Cover	

Prevalence Index Worksheet:	
Total % Cover of:	Multiply by:
OBL species <u>20</u>	x 1 = <u>20</u>
FACW species <u>20</u>	x 2 = <u>40</u>
FAC species <u>40</u>	x 3 = <u>120</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>20</u>	x 5 = <u>100</u>
Column Totals: <u>100</u>	(A) <u>280</u> (B)
Prevalence Index = B/A = <u>2.80</u>	
Hydrophytic Vegetation Indicators:	
<u>  </u> 1 - Rapid Test for Hydrophytic Vegetation	
<u>  X  </u> 2 - Dominance Test is >50%	
<u>  X  </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup>	
<u>  </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
<u>  </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Hydrophytic Vegetation Present?	
Yes <u>  X  </u>	No <u>      </u>

Remarks:	<p>A positive indication of hydrophytic vegetation was observed (&gt;50% of dominant species indexed as OBL, FACW, or FAC).</p> <p>A positive indication of hydrophytic vegetation was observed (Prevalence Index is <math>\leq 3.0</math>).</p>
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## SOIL

Sampling Point: DPA68\_WA42

<b>Profile Description:</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 4/1	95	7.5YR 4/6	5	C	M	Silty clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soils Indicators:**

☐ Histosol (A1)  
☐ Histic Epipedon (A2)  
☐ Black Histic (A3)  
☐ Hydrogen Sulfide (A4)  
☐ Stratified Layers (A5)  
☐ 2 cm Muck (A10)  
☐ Depleted Below Dark Surface (A11)  
☐ Thick Dark Surface (A12)  
☐ Sandy Mucky Mineral (S1)  
☐ 5 cm Mucky Peat or Peat (S3)

☐ Sandy Gleyed Matrix (S4)  
☐ Sandy Redox (S5)  
☐ Stripped Matrix (S6)  
☐ Loamy Mucky Mineral (F1)  
☐ Loamy Gleyed Matrix (F2)  
☒ Depleted Matrix (F3)  
☐ Redox Dark Surface (F6)  
☐ Depleted Dark Surface (F7)  
☐ Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ Coast Prairie Redox (A16)  
☐ Dark Surface (S7)  
☐ Iron-Manganese Masses (F12)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks) \_\_\_\_\_  
  

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_

Depth(inches): \_\_\_\_\_

**Hydric Soil Present?**      Yes  X  No

**Remarks:**

A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
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<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
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<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
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<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>6</u>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
A positive indication of wetland hydrology was observed (at least one primary indicator).			
A positive indication of wetland hydrology was observed (at least two secondary indicators).			

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA70 WA43  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.33798 Long: -83.44132 Datum: NAD83  
 Soil Map Unit Name: Morley silt loam, 2-6 percent slopes, eroded NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined not to be within a wetland due to the lack of hydrophytic vegetation.  Vegetation community eliminated by agricultural practices.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;"><u>Tree Stratum</u> (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;"><u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;"><u>Herb Stratum</u> (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Glycine max</u></td><td><u>20</u></td><td><u>Yes</u></td><td><u>UPL</u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>6. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>7. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>8. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>9. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>10. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>20</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;"><u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table>	<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Total % Cover of:	Multiply by:	OBL species	<u>0</u> x 1 = <u>0</u>	FACW species	<u>0</u> x 2 = <u>0</u>	FAC species	<u>0</u> x 3 = <u>0</u>	FACU species	<u>0</u> x 4 = <u>0</u>	UPL species	<u>20</u> x 5 = <u>100</u>	Column Totals:	<u>20</u> (A) <u>100</u> (B)	Prevalence Index = B/A =	<u>5.00</u>
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Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA70\_WA43

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
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Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
A positive indication of wetland hydrology was observed (at least one primary indicator).			
A positive indication of wetland hydrology was observed (at least two secondary indicators).			

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA72 WA44  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.33669 Long: -83.43989 Datum: NAD83  
 Soil Map Unit Name: Blount silt loam, 2-4 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation Yes, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined not to be within a wetland due to the lack of hydrophytic vegetation.  Vegetation community significantly impacted by agricultural practices.	

## VEGETATION - Use scientific names of plants.

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Indicator Status	1. <u>Barbarea vulgaris</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	2. <u>Glycine max</u>	<u>60</u>	<u>Yes</u>	<u>UPL</u>	3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	6. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	7. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	8. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	9. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	10. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>80</u> = Total Cover				Woody Vine Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Remarks:  
 No positive indication of hydrophytic vegetation was observed (≥50% of dominant species indexed as FACU or drier).

## SOIL

Sampling Point: DPA72\_WA44

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 4/1	95	7.5YR 4/6	5	C	M	Silty clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soils Indicators:</b>			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Coast Prairie Redox (A16)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10)			<input checked="" type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)								
<b>Restrictive Layer (if present):</b>								
Type: _____						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No _____		
Depth(inches): _____								
Remarks: A positive indication of hydric soil was observed.								

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>6</u>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
A positive indication of wetland hydrology was observed (at least one primary indicator).			
A positive indication of wetland hydrology was observed (at least two secondary indicators).			

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA74 WA45  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.33481 Long: -83.44412 Datum: NAD83  
 Soil Map Unit Name: Blount silt loam, 2-4 percent slopes NWI classification: NA  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

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Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).



## SOIL

Sampling Point: DPA74\_WA45

<b>Profile Description:</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 3/3	100	None	—	—	—	Loam	
3-18	10YR 4/2	90	10R 5/6	10	C	M	Clay loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.							<sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
<b>Hydric Soils Indicators:</b>			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Coast Prairie Redox (A16)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10)			<input checked="" type="checkbox"/> Depleted Matrix (F3)					
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)								
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
Restrictive Layer (if present): Type: _____ Depth(inches): _____						Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks:  A positive indication of hydric soil was observed.								

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>&gt;20</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
<p>A positive indication of wetland hydrology was observed (at least one primary indicator).</p> <p>A positive indication of wetland hydrology was observed (at least two secondary indicators).</p> <p>Appears to have been a pond either constructed or created by the nearby roadway.</p>			

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA76 WA46  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.33651 Long: -83.44161 Datum: NAD83  
 Soil Map Unit Name: Blount silt loam, 0-2 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

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## SOIL

Sampling Point: DPA76\_WA46

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 4/1	95	7.5YR 4/6	5	C	M	Silty clay	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.					<sup>2</sup> Location: PL=Pore Lining, M=Matrix.			
<b>Hydric Soils Indicators:</b>			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Coast Prairie Redox (A16)		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Dark Surface (S7)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Iron-Manganese Masses (F12)		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Mucky Mineral (F1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10)			<input checked="" type="checkbox"/> Depleted Matrix (F3)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Redox Dark Surface (F6)					
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Depleted Dark Surface (F7)					
<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)								
<b>Restrictive Layer (if present):</b>								
Type: _____					<b>Hydric Soil Present?</b> Yes <u>  X  </u> No <u>      </u>			
Depth(inches): _____								
Remarks:								
A positive indication of hydric soil was observed.								

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
A positive indication of wetland hydrology was observed (at least one primary indicator). A positive indication of wetland hydrology was observed (at least two secondary indicators).			

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA78 WA47  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.33452 Long: -83.44209 Datum: NAD83  
 Soil Map Unit Name: Blount silt loam, 2-4 percent slopes NWI classification: PUB  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

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## SOIL

Sampling Point: DPA78\_WA47

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>&gt;20</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
A positive indication of wetland hydrology was observed (at least one primary indicator). A positive indication of wetland hydrology was observed (at least two secondary indicators).			

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA80 WA48  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Pond Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.33444 Long: -83.43958 Datum: NAD83  
 Soil Map Unit Name: Blount silt loam, 0-2 percent slopes NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

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Remarks: A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC). A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).																																																																																																																																									



## SOIL

Sampling Point: DPA80\_WA48

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>&gt;20</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
A positive indication of wetland hydrology was observed (at least one primary indicator).			
A positive indication of wetland hydrology was observed (at least two secondary indicators).			

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: November 23, 2020  
 Applicant/Owner: Cadence State: OH Sampling Point: DPA82 WA49  
 Investigator(s): DC and - Section, Township, Range: Liberty Township  
 Landform (hillslope, terrace, etc.): Drainageway Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.33549 Long: -83.43675 Datum: NAD83  
 Soil Map Unit Name: Wetzel silty clay loam NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>      </u> No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	Is the Sampled Area within a Wetland? Yes <u>      </u> No <u>X</u>
Remarks: This point was determined not to be within a wetland due to the lack of hydric soils.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Phalaris arundinacea</u></td><td><u>100</u></td><td><u>Yes</u></td><td><u>FACW</u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>3. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>4. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>5. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>6. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>7. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>8. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>9. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>10. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>100</u> = Total Cover</td><td colspan="2"></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td>2. <u>      </u></td><td><u>      </u></td><td><u>      </u></td><td><u>      </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </table>	Tree Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Indicator Status	1. <u>Phalaris arundinacea</u>	<u>100</u>	<u>Yes</u>	<u>FACW</u>	2. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	3. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	4. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	5. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	6. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	7. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	8. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	9. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	10. <u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>100</u> = Total Cover				Woody Vine Stratum (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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## SOIL

Sampling Point: DPA82\_WA49

[illegible]

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
A positive indication of wetland hydrology was observed (at least one primary indicator).			
A positive indication of wetland hydrology was observed (at least two secondary indicators).			

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 11, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPB01\_WB01  
 Investigator(s): H. McFeeters and S. Schratz Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.40667 Long: -83.46704 Datum: NAD83  
 Soil Map Unit Name: Sh - Shoals silt loam, 0 to 2 percent slopes, occasionally flooded NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<table style="width: 100%;"> <tr> <th style="text-align: left;"><u>Tree Stratum</u> (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Ulmus americana</u></td><td style="text-align: center;">25</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Quercus rubra</u></td><td style="text-align: center;">15</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACU</td></tr> <tr><td>3. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">40 = Total Cover</td><td></td><td></td></tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;"><u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Ulmus americana</u></td><td style="text-align: center;">15</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Rosa multiflora</u></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACU</td></tr> <tr><td>3. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">25 = Total Cover</td><td></td><td></td></tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;"><u>Herb Stratum</u> (Plot size: <u>5 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Carex sp.</u></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>                                  </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;">10 = Total Cover</td><td></td><td></td></tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;"><u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u>)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Toxicodendron radicans</u></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td>2. <u>Vitis sp.</u></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FAC</td></tr> <tr><td colspan="2" style="text-align: right;">10 = Total Cover</td><td></td><td></td></tr> </table>	<u>Tree Stratum</u> (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	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Indicator Status	1. <u>Carex sp.</u>	10	Yes	FACW	2. <u>                                  </u>				3. <u>                                  </u>				4. <u>                                  </u>				5. <u>                                  </u>				6. <u>                                  </u>				7. <u>                                  </u>				8. <u>                                  </u>				9. <u>                                  </u>				10. <u>                                  </u>				10 = Total Cover				<u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u> )	Absolute % cover	Dominant Species?	Indicator Status	1. <u>Toxicodendron radicans</u>	5	Yes	FAC	2. <u>Vitis sp.</u>	5	Yes	FAC	10 = Total Cover				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>71%</u> (A/B)
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<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																																																																																																									
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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPB01\_WB01

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/1	80	10YR 4/4	20	C	M	Clay Loam	
6-16	10YR 4/1	65	10YR 4/4	35	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
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<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	
(includes capillary fringe)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 12, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPB05\_WB02  
 Investigator(s): H. McFeeters and B. Rogness Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.40918 Long: -83.44219 Datum: NAD83  
 Soil Map Unit Name: Gn - Genesee silt loam NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<p><u>Tree Stratum</u> (Plot size: <u>30 ft.</u>)</p> <table border="1"> <thead> <tr> <th></th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Fraxinus pennsylvanica</u></td><td>15</td><td>Yes</td><td>FACW</td></tr> <tr><td>2. <u>Platanus occidentalis</u></td><td>10</td><td>Yes</td><td>FACW</td></tr> <tr><td>3. <u>Acer saccharum</u></td><td>10</td><td>Yes</td><td>FACU</td></tr> <tr><td>4. <u>Acer rubrum</u></td><td>10</td><td>Yes</td><td>FAC</td></tr> <tr><td>5. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2">45 = Total Cover</td><td></td><td></td></tr> </tbody> </table> <p><u>Sapling/Shrub Stratum</u> (Plot size: <u>15 ft.</u>)</p> <table border="1"> <tbody> <tr><td>1. <u>Fraxinus pennsylvanica</u></td><td>10</td><td>Yes</td><td>FACW</td></tr> <tr><td>2. <u>Acer rubrum</u></td><td>10</td><td>Yes</td><td>FAC</td></tr> <tr><td>3. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2">20 = Total Cover</td><td></td><td></td></tr> </tbody> </table> <p><u>Herb Stratum</u> (Plot size: <u>5 ft.</u>)</p> <table border="1"> <tbody> <tr><td>1. <u>Carex sp.</u></td><td>20</td><td>Yes</td><td>FACW</td></tr> <tr><td>2. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2">20 = Total Cover</td><td></td><td></td></tr> </tbody> </table> <p><u>Woody Vine Stratum</u> (Plot size: <u>30 ft.</u>)</p> <table border="1"> <tbody> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>      </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2">= Total Cover</td><td></td><td></td></tr> </tbody> </table>		Absolute % cover	Dominant Species?	Indicator Status	1. <u>Fraxinus pennsylvanica</u>	15	Yes	FACW	2. <u>Platanus occidentalis</u>	10	Yes	FACW	3. <u>Acer saccharum</u>	10	Yes	FACU	4. <u>Acer rubrum</u>	10	Yes	FAC	5. <u>      </u>				45 = Total Cover				1. <u>Fraxinus pennsylvanica</u>	10	Yes	FACW	2. <u>Acer rubrum</u>	10	Yes	FAC	3. <u>      </u>				4. <u>      </u>				5. <u>      </u>				20 = Total Cover				1. <u>Carex sp.</u>	20	Yes	FACW	2. <u>      </u>				3. <u>      </u>				4. <u>      </u>				5. <u>      </u>				6. <u>      </u>				7. <u>      </u>				8. <u>      </u>				9. <u>      </u>				10. <u>      </u>				20 = Total Cover				1. <u>None Observed</u>				2. <u>      </u>				= Total Cover				<p><b>Dominance Test worksheet:</b></p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>7</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>86%</u> (A/B)</p> <p><b>Prevalence Index Worksheet:</b></p> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>0</u></td><td>x 1 = <u>0</u></td></tr> <tr><td>FACW species <u>55</u></td><td>x 2 = <u>110</u></td></tr> <tr><td>FAC species <u>20</u></td><td>x 3 = <u>60</u></td></tr> <tr><td>FACU species <u>10</u></td><td>x 4 = <u>40</u></td></tr> <tr><td>UPL species <u>0</u></td><td>x 5 = <u>0</u></td></tr> <tr><td>Column Totals: <u>85</u> (A)</td><td><u>210</u> (B)</td></tr> <tr><td colspan="2">Prevalence Index = B/A = <u>2.47</u></td></tr> </tbody> </table> <p><b>Hydrophytic Vegetation Indicators:</b></p> <p><u>1</u> - Rapid Test for Hydrophytic Vegetation  <u>X</u> 2 - Dominance Test is &gt;50%  <u>X</u> 3 - Prevalence Index is ≤3.0<sup>1</sup>  <u>      </u> 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <u>      </u> Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <p><b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u></p>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>55</u>	x 2 = <u>110</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>85</u> (A)	<u>210</u> (B)	Prevalence Index = B/A = <u>2.47</u>	
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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).



## SOIL

Sampling Point: DPB05\_WB02

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 4/1	95	10YR 4/4	5	C	PL	Clay Loam	
7-20	10YR 4/2	98	10YR 4/4	2	C	M	Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	
(includes capillary fringe)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
No positive indication of wetland hydrology was observed.  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 13, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPB09\_WB03  
 Investigator(s): H. McFeeters and B. Rogness Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.39449 Long: -83.41709 Datum: NAD83  
 Soil Map Unit Name: Gwg1B1 - Glynwood silt loam, ground moraine, 2 to 6 percent slopes NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>Quercus bicolor</u> <u>25</u> <u>Yes</u> <u>FACW</u> 2. <u>Quercus rubra</u> <u>10</u> <u>Yes</u> <u>FACU</u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>35</u> = Total Cover <b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> ) 1. <u>None Observed</u> <u>      </u> <u>      </u> <u>      </u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>      </u> = Total Cover <b>Herb Stratum</b> (Plot size: <u>5 ft.</u> ) 1. <u>Carex sp.</u> <u>60</u> <u>Yes</u> <u>FACW</u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 6. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 7. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 8. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 9. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 10. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>60</u> = Total Cover <b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> ) 1. <u>Toxicodendron radicans</u> <u>5</u> <u>Yes</u> <u>FAC</u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>5</u> = Total Cover	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="1"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>85</u></td> <td>x 2 = <u>170</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>225</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.25</u></td> </tr> </tbody> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>X</u> <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>85</u>	x 2 = <u>170</u>	FAC species <u>5</u>	x 3 = <u>15</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>100</u> (A)	<u>225</u> (B)	Prevalence Index = B/A = <u>2.25</u>	
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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: **DPB09\_WB03**

Profile Description: (Describe to the depth needed to document the presence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 4/1	100	None	—	—	—	Clay Loam	
5-16	10YR 3/1	90	10YR 4/4	10	C	M	Clay Loam	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.						<sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
<b>Hydric Soils Indicators:</b>						<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Coast Prairie Redox (A16)		
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<input type="checkbox"/> Stratified Layers (A5)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> 2 cm Muck (A10)			<input checked="" type="checkbox"/> Depleted Matrix (F3)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Redox Dark Surface (F6)					
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<input type="checkbox"/> Sandy Mucky Mineral (S1)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Type: _____ Depth(inches): _____								
Remarks: A positive indication of hydric soil was observed.								

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input checked="" type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		
<div> <div>Field Observations:</div> <div> <div> <div>Surface Water Present?</div> <div>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></div> </div> <div> <div>Depth (inches):</div> <div><b>N/A</b></div> </div> </div> <div> <div>Water Table Present?</div> <div>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></div> </div> <div> <div>Depth (inches):</div> <div><b>&gt;20</b></div> </div> </div> <div> <div>Saturation Present?</div> <div>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></div> </div> <div> <div>Depth (inches):</div> <div><b>&gt;20</b></div> </div> <div> <div>(includes capillary fringe)</div> </div> <div> <div>Wetland Hydrology Present?</div> <div>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></div> </div> <div>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</div> <div>Remarks:</div> <div>A positive indication of wetland hydrology was observed (at least one primary indicator).</div>			

Project/Site: Cadence Solar Energy Project County:                      Union:                      Sampling Date: December 13, 2019  
Applicant/Owner: Cadence Solar State: OH Sampling Point: DPB11\_WB04  
Investigator(s): H. McFeeters and B. Rogness Section, Township, Range:                      York  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
Slope (%): 00-05 Lat: 40.39344 Long: -83.41545 Datum: NAD83  
Soil Map Unit Name: Sh - Shoals silt loam, 0 to 2 percent slopes, occasionally flooded NWI classification: PEM  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No                      (If no, explain in Remarks.)  
Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No                       
Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

Hydrophytic Vegetation Present?	Yes <u>  X  </u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>	<b>Yes <u>      X      </u></b>	<b>No <u>      </u></b>
Hydric Soil Present?	Yes <u>  X  </u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>  X  </u>	No <u>      </u>			
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.					

	Absolute % cover	Dominant Species?	Indicator Status
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )			
1. <u>None Observed</u>			
2. _____			
3. _____			
4. _____			
5. _____			
	= Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> )			
1. <u>Rosa multiflora</u>	5	Yes	FACU
2. _____			
3. _____			
4. _____			
5. _____			
	= Total Cover		
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )			
1. <u>Carex sp.</u>	80	Yes	FACW
2. <u>Leersia oryzoides</u>	15	No	OBL
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
	= Total Cover		
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )			
1. <u>None Observed</u>			
2. _____			
	= Total Cover		

<b>Dominance Test worksheet:</b>			
Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)			
Total Number of Dominant Species Across All Strata: <u>2</u> (B)			
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)			
<b>Prevalence Index Worksheet:</b>			
Total % Cover of:		Multiply by:	
OBL species	<u>15</u>	x 1 =	<u>15</u>
FACW species	<u>80</u>	x 2 =	<u>160</u>
FAC species	<u>0</u>	x 3 =	<u>0</u>
FACU species	<u>5</u>	x 4 =	<u>20</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column Totals:	<u>100</u>	(A)	<u>195</u> (B)
Prevalence Index = B/A = <u>1.95</u>			
<b>Hydrophytic Vegetation Indicators:</b>			
<u>    </u> 1 - Rapid Test for Hydrophytic Vegetation			
<u>    </u> 2 - Dominance Test is >50%			
<u>  X  </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup>			
<u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
<u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
<b>Hydrophytic Vegetation Present?</b>			
Yes <u>  X  </u> No <u>    </u>			

US Army Corps of Engineers

## SOIL

Sampling Point: DPB11\_WB04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-6	10YR 4/1	80	10YR 4/6	20	C	M	Silty Clay Loam	
6-16	10YR 3/1	80	10YR 4/4	20	C	M	Silty Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	
(includes capillary fringe)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site:	Cadence Solar Energy Project	County:	Union	Sampling Date:	December 13, 2019
Applicant/Owner:	Cadence Solar	State:	OH	Sampling Point:	DPB13_WB05
Investigator(s):	H. McFeeters and B. Rogness	Section, Township, Range:	York		
Landform (hillslope, terrace, etc.):	Agriculture	Local relief (concave, convex, none):	Concave		
Slope (%):	00-05	Lat:	40.39452	Long:	-83.44162
		Datum:	NAD83		
Soil Map Unit Name:	We - Wetzel silty clay loam	NWI classification:	PEM		

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?      Yes <u>  X  </u> No <u>      </u> Hydric Soil Present?                      Yes <u>  X  </u> No <u>      </u> Wetland Hydrology Present?            Yes <u>  X  </u> No <u>      </u>	<div style="border: 1px solid black; padding: 10px; min-height: 100px;"> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <b>Is the Sampled Area within a Wetland?</b> </div> <div style="text-align: center;"> <b>Yes</b> <u>      X      </u> </div> <div style="text-align: center;"> <b>No</b> <u>                  </u> </div> </div> </div>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

**VEGETATION** - Use scientific names of plants.

	Absolute	Dominant	Indicator
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )	<b>% cover</b>	<b>Species?</b>	<b>Status</b>
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
	= Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> )			
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
	= Total Cover		
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )			
1. <i>Dactylis sp.</i>	100	Yes	FAC
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
	100 = Total Cover		
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )			
1. <i>None Observed</i>			
2. _____			
	= Total Cover		

<b>Dominance Test worksheet:</b>			
Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)			
Total Number of Dominant Species Across All Strata: <u>1</u> (B)			
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)			
<b>Prevalence Index Worksheet:</b>			
Total % Cover of:		Multiply by:	
OBL species	<u>0</u>	x 1 =	<u>0</u>
FACW species	<u>0</u>	x 2 =	<u>0</u>
FAC species	<u>100</u>	x 3 =	<u>300</u>
FACU species	<u>0</u>	x 4 =	<u>0</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column Totals:	<u>100</u>	(A)	<u>300</u> (B)
Prevalence Index = B/A = <u>3.00</u>			
<b>Hydrophytic Vegetation Indicators:</b>			
<u>    </u> 1 - Rapid Test for Hydrophytic Vegetation			
<input checked="" type="checkbox"/> 2 - Dominance Test is >50%			
<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>			
<u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)			
<u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)			
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
<b>Hydrophytic Vegetation Present?</b>			
		Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is  $\leq 3.0$ ).



## SOIL

Sampling Point: DPB13\_WB05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 4/1	70	10YR 4/6	30	C	PL	Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: <u>Compaction</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Depth(inches): <u>8</u>	

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>1</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>4</u>	
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches):	<u>0</u>	
(includes capillary fringe)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site:	Cadence Solar Energy Project	County:	Union	Sampling Date:	December 13, 2019
Applicant/Owner:	Cadence Solar	State:	OH	Sampling Point:	DPB15_WB06
Investigator(s):	H. McFeeters and B. Rogness	Section, Township, Range:	York		
Landform (hillslope, terrace, etc.):	Floodplain	Local relief (concave, convex, none):	Concave		
Slope (%):	00-05	Lat:	40.38405	Long:	-83.43239
				Datum:	NAD83
Soil Map Unit Name:	We - Wetzel silty clay loam	NWI classification:	PEM		

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>  X  </u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>	<b>Yes <u>      X      </u></b>	<b>No <u>      </u></b>
Hydric Soil Present?	Yes <u>  X  </u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>  X  </u>	No <u>      </u>			
<b>Remarks:</b> This point was determined to be within a wetland due to the presence of all 3 wetland criteria.					

**VEGETATION** - Use scientific names of plants.

Tree Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2. _____			
3. _____			
4. _____			
5. _____			
	_____ = Total Cover		

Sapling/Shrub Stratum (Plot size: 15 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Salix nigra</i>	10	Yes	OBL
2. _____			
3. _____			
4. _____			
5. _____			
	_____ = Total Cover		

Herb Stratum (Plot size: 5 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>Phalaris arundinacea</i>	90	Yes	FACW
2. <i>Solidago ohioensis</i>	10	No	OBL
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
	_____ = Total Cover		

Woody Vine Stratum (Plot size: 30 ft.)	Absolute % cover	Dominant Species?	Indicator Status
1. <i>None Observed</i>			
2. _____			
	_____ = Total Cover		

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

**Prevalence Index Worksheet:**

Total % Cover of:	Multiply by:
OBL species <u>20</u>	x 1 = <u>20</u>
FACW species <u>90</u>	x 2 = <u>180</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>110</u>	(A) <u>200</u> (B)
Prevalence Index = B/A = <u>1.82</u>	

**Hydrophytic Vegetation Indicators:**

\_\_\_\_ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☒ 3 - Prevalence Index is ≤3.0<sup>1</sup>

\_\_\_\_ 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

\_\_\_\_ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Hydrophytic Vegetation Present?** Yes ☒ No \_\_\_\_\_

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is  $\leq 3.0$ ).

## SOIL

Sampling Point: DPB15\_WB06

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 3/1	100					Silty Clay	
5-16	10YR 4/1	85	10YR 4/4	15	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	
(includes capillary fringe)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 14, 2019  
 Applicant/Owner: Cadence Solar State: OH Sampling Point: DPB20\_WB07  
 Investigator(s): H. McFeeters and B. Rogness Section, Township, Range: York  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.38766 Long: -83.43634 Datum: NAD83  
 Soil Map Unit Name: We - Wetzel silty clay loam NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u> Hydric Soil Present? Yes <u>X</u> No <u>      </u> Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<p><b>Tree Stratum</b> (Plot size: <u>30 ft.</u>)</p> <table style="width: 100%;"> <thead> <tr> <th></th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <i>Fraxinus pennsylvanica</i></td><td>60</td><td>Yes</td><td>FACW</td></tr> <tr><td>2. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">60 = Total Cover</td></tr> </tbody> </table> <p><b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u>)</p> <table style="width: 100%;"> <thead> <tr> <th></th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <i>Fraxinus pennsylvanica</i></td><td>40</td><td>Yes</td><td>FACW</td></tr> <tr><td>2. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">40 = Total Cover</td></tr> </tbody> </table> <p><b>Herb Stratum</b> (Plot size: <u>5 ft.</u>)</p> <table style="width: 100%;"> <thead> <tr> <th></th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <i>Phalaris arundinacea</i></td><td>15</td><td>Yes</td><td>FACW</td></tr> <tr><td>2. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>3. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>4. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>5. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>6. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>7. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>8. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>9. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>10. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">15 = Total Cover</td></tr> </tbody> </table> <p><b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u>)</p> <table style="width: 100%;"> <thead> <tr> <th></th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <i>None Observed</i></td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>2. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td colspan="4" style="text-align: right;">_____ = Total Cover</td></tr> </tbody> </table>		Absolute % cover	Dominant Species?	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Indicator Status	1. <i>None Observed</i>	_____	_____	_____	2. _____	_____	_____	_____	_____ = Total Cover				<p><b>Dominance Test worksheet:</b></p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>3</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)</p> <p><b>Prevalence Index Worksheet:</b></p> <table style="width: 100%;"> <thead> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> </thead> <tbody> <tr><td>OBL species <u>0</u></td><td>x 1 = <u>0</u></td></tr> <tr><td>FACW species <u>115</u></td><td>x 2 = <u>230</u></td></tr> <tr><td>FAC species <u>0</u></td><td>x 3 = <u>0</u></td></tr> <tr><td>FACU species <u>0</u></td><td>x 4 = <u>0</u></td></tr> <tr><td>UPL species <u>0</u></td><td>x 5 = <u>0</u></td></tr> <tr><td>Column Totals: <u>115</u> (A)</td><td><u>230</u> (B)</td></tr> <tr><td colspan="2">Prevalence Index = B/A = <u>2.00</u></td></tr> </tbody> </table> <p><b>Hydrophytic Vegetation Indicators:</b></p> <p><u>X</u> 1 - Rapid Test for Hydrophytic Vegetation  <u>X</u> 2 - Dominance Test is &gt;50%  <u>X</u> 3 - Prevalence Index is ≤3.0<sup>1</sup>  <u>      </u> 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <u>      </u> Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  <sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p> <p><b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u></p>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>115</u>	x 2 = <u>230</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>115</u> (A)	<u>230</u> (B)	Prevalence Index = B/A = <u>2.00</u>	
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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: DPB20\_WB07

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 4/1	80	10YR 4/4	20	C	M	Silt Loam	
5-17	10YR 5/1	90	10YR 4/4	10	C	M	Silty Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
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<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
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<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	
Saturation Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	
(includes capillary fringe)				

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
No positive indication of wetland hydrology was observed.  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site:	Cadence Solar Energy Project	County:	Union	Sampling Date:	December 14, 2019
Applicant/Owner:	Cadence Solar	State:	OH	Sampling Point:	DPB22_WB08
Investigator(s):	H. McFeeters and B. Rogness	Section, Township, Range:	York		
Landform (hillslope, terrace, etc.):	Depression	Local relief (concave, convex, none):	Concave		
Slope (%):	00-05	Lat:	40.38160	Long:	-83.44816
				Datum:	NAD83
Soil Map Unit Name:	We - Wetzel silty clay loam	NWI classification:	PEM		

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?      Yes <u>  X  </u> No <u>      </u> Hydric Soil Present?                      Yes <u>  X  </u> No <u>      </u> Wetland Hydrology Present?              Yes <u>  X  </u> No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>
	Yes <u>  X  </u> No <u>      </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

**VEGETATION** - Use scientific names of plants.

	Absolute % cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )				
1. <u>None Observed</u>				
2. _____				
3. _____				
4. _____				
5. _____				
	= Total Cover			
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> )				
1. <u>None Observed</u>				
2. _____				
3. _____				
4. _____				
5. _____				
	= Total Cover			
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )				
1. <u>Phalaris arundinacea</u>	100	Yes	FACW	
2. <u>Typha angustifolia</u>	15	No	OBL	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
	115 = Total Cover			
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )				
1. <u>None Observed</u>				
2. _____				
	= Total Cover			

<b>Dominance Test worksheet:</b>			
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u>		(A)
Total Number of Dominant Species Across All Strata:	<u>1</u>		(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100%</u>		(A/B)

<b>Prevalence Index Worksheet:</b>			
Total % Cover of:		Multiply by:	
OBL species	<u>15</u>	x 1 =	<u>15</u>
FACW species	<u>100</u>	x 2 =	<u>200</u>
FAC species	<u>0</u>	x 3 =	<u>0</u>
FACU species	<u>0</u>	x 4 =	<u>0</u>
UPL species	<u>0</u>	x 5 =	<u>0</u>
Column Totals:	<u>115</u>	(A)	<u>215</u> (B)
Prevalence Index = B/A =	<u>1.87</u>		

<b>Hydrophytic Vegetation Indicators:</b>	
<u>X</u>	1 - Rapid Test for Hydrophytic Vegetation
<u>X</u>	2 - Dominance Test is >50%
<u>X</u>	3 - Prevalence Index is $\leq 3.0^1$
_____	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
_____	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	

<b>Hydrophytic Vegetation Present?</b>	Yes <u>X</u> No _____
--	-----------------------

Remarks:

A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).

A positive indication of hydrophytic vegetation was observed (Prevalence Index is  $\leq 3.0$ ).



## SOIL

Sampling Point: DPB22\_WB08

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 4/1	90	10YR 4/4	10	C	M	Silty Clay	
8-16	10YR 5/1	70	10YR 4/6	30	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<u>1</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<u>6</u>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<u>0</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

Project/Site: Cadence Solar Energy Project County: Union Sampling Date: December 15, 2019  
Applicant/Owner: Cadence Solar State: OH Sampling Point: DPB25\_WB09  
Investigator(s): H. McFeeters and B. Rogness Section, Township, Range: York  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
Slope (%): 00-05 Lat: 40.36902 Long: -83.43853 Datum: NAD83  
Soil Map Unit Name: Big1A1 - Blount silt loam, ground moraine, 0 to 2 percent slopes NWI classification: PEM  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation Yes , Soil No , or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation Yes , Soil No , or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

Hydrophytic Vegetation Present?	Yes <u>  X  </u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b>	<b>Yes <u>      X      </u></b>	<b>No <u>      </u></b>
Hydric Soil Present?	Yes <u>  X  </u>	No <u>      </u>			
Wetland Hydrology Present?	Yes <u>  X  </u>	No <u>      </u>			
<b>Remarks:</b> This point was determined to be within a wetland due to the presence of all 3 wetland criteria.  Vegetation was mowed and could not be identified.					

	Absolute % cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30 ft.</u> )				
1. <u>None Observed</u>				
2. _____				
3. _____				
4. _____				
5. _____				
		= Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft.</u> )				
1. <u>None Observed</u>				
2. _____				
3. _____				
4. _____				
5. _____				
		= Total Cover		
<b>Herb Stratum</b> (Plot size: <u>5 ft.</u> )				
1. <u>Glycine max</u>	10	Yes	UPL	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
		10 = Total Cover		
<b>Woody Vine Stratum</b> (Plot size: <u>30 ft.</u> )				
1. <u>None Observed</u>				
2. _____				
		= Total Cover		

<b>Prevalence Index Worksheet:</b>			
	Total % Cover of:	Multiply by:	
OBL species	<u>0</u>	x 1 =	<u>0</u>
FACW species	<u>0</u>	x 2 =	<u>0</u>
FAC species	<u>0</u>	x 3 =	<u>0</u>
FACU species	<u>0</u>	x 4 =	<u>0</u>
UPL species	<u>10</u>	x 5 =	<u>50</u>
Column Totals:	<u>10</u>	(A)	<u>50</u> (B)
Prevalence Index = B/A =		<u>5.00</u>	

<b>Hydrophytic Vegetation Indicators:</b>	
1	Rapid Test for Hydrophytic Vegetation
2	Dominance Test is >50%
3	Prevalence Index is $\leq 3.0$ <sup>1</sup>
4	Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
<u>X</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	

<b>Hydrophytic Vegetation Present?</b>	Yes <u>X</u> No _____
--	-----------------------

70% mowed, unidentifiable grass species

## SOIL

Sampling Point: **DPB25\_WB09**

<b>Profile Description:</b> (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 4/1	80	10YR 4/6	20	C	M	Clay Loam	
10-16	10YR 5/1	75	10YR 4/6	25	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<p><b>Hydric Soils Indicators:</b></p> <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input type="checkbox"/> Histosol (A1)  <input type="checkbox"/> Histic Epipedon (A2)  <input type="checkbox"/> Black Histic (A3)  <input type="checkbox"/> Hydrogen Sulfide (A4)  <input type="checkbox"/> Stratified Layers (A5)  <input type="checkbox"/> 2 cm Muck (A10)  <input type="checkbox"/> Depleted Below Dark Surface (A11)  <input type="checkbox"/> Thick Dark Surface (A12)  <input type="checkbox"/> Sandy Mucky Mineral (S1)  <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)         </div> <div style="width: 48%;"> <input type="checkbox"/> Sandy Gleyed Matrix (S4)  <input type="checkbox"/> Sandy Redox (S5)  <input type="checkbox"/> Stripped Matrix (S6)  <input type="checkbox"/> Loamy Mucky Mineral (F1)  <input type="checkbox"/> Loamy Gleyed Matrix (F2)  <input checked="" type="checkbox"/> Depleted Matrix (F3)  <input type="checkbox"/> Redox Dark Surface (F6)  <input type="checkbox"/> Depleted Dark Surface (F7)  <input type="checkbox"/> Redox Depressions (F8)         </div> </div>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <input type="checkbox"/> Coast Prairie Redox (A16) <input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Iron-Manganese Masses (F12) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) _____
<p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>	

<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth(inches): _____</p>	<p><b>Hydric Soil Present?</b>      Yes <u> X </u> No _____</p>
--	---

**Remarks:**

A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:				Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one required; check all that apply)					
<input checked="" type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)		<input type="checkbox"/> True Aquatic Plants (B14)		<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)		<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)		<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Thin Muck Surface (C7)		<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Gauge or Well Data (D9)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Other (Explain in Remarks)			
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> (includes capillary fringe)				<b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks: A positive indication of wetland hydrology was observed (at least one primary indicator).					

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 8, 2020  
 Applicant/Owner: Invenery State: OH Sampling Point: DPC003 WC01  
 Investigator(s): K. Barnett and S. Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35213 Long: -83.41180 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: 0  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Yes      No       
 Are Vegetation No, Soil Yes, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.  <div style="text-align: center;">The survey area has been previously disturbed from agricultural activities.</div>	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Typha X glauca</u></td><td style="text-align: center;">40</td><td style="text-align: center;">Yes</td><td style="text-align: center;">OBL</td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>40</u> = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td></td><td></td></tr> </table>	Tree Stratum (Plot size: <u>30</u> ft.)	Absolute % cover	Dominant Species?	Indicator Status	1. <u>None Observed</u>				2. <u>    </u>				3. <u>    </u>				4. <u>    </u>				5. <u>    </u>				<u>0</u> = Total Cover				Sapling/Shrub Stratum (Plot size: <u>15</u> ft.)	Absolute % cover	Dominant Species?	Indicator Status	1. <u>None Observed</u>				2. <u>    </u>				3. <u>    </u>				4. <u>    </u>				5. <u>    </u>				<u>0</u> = Total Cover				Herb Stratum (Plot size: <u>5</u> ft.)	Absolute % cover	Dominant Species?	Indicator Status	1. <u>Typha X glauca</u>	40	Yes	OBL	2. <u>    </u>				3. <u>    </u>				4. <u>    </u>				5. <u>    </u>				6. <u>    </u>				7. <u>    </u>				8. <u>    </u>				9. <u>    </u>				10. <u>    </u>				<u>40</u> = Total Cover				Woody Vine Stratum (Plot size: <u>30</u> ft.)	Absolute % cover	Dominant Species?	Indicator Status	1. <u>None Observed</u>				2. <u>    </u>				<u>0</u> = Total Cover				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Total % Cover of:</th> <th style="text-align: right;">Multiply by:</th> </tr> <tr> <td>OBL species <u>40</u></td> <td style="text-align: right;">x 1 = <u>40</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td style="text-align: right;">x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td style="text-align: right;">x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td style="text-align: right;">x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td style="text-align: right;">x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>40</u> (A)</td> <td style="text-align: right;"><u>40</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>1.00</u></td> </tr> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>40</u>	x 1 = <u>40</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>40</u> (A)	<u>40</u> (B)	Prevalence Index = B/A = <u>1.00</u>	
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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: **DPC003\_WC01**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10 YR 5/6	80	5 YR 4/6	2	C	M	Clay	Disturbed
	5 Y 5/8	18						Mixed matrix

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.  
Fill material likely present.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>12</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 8, 2020  
 Applicant/Owner: Invenenergy State: OH Sampling Point: DPC006 WC02  
 Investigator(s): K. Barnett and S. Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.34788 Long: -83.40989 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Panicum dichotomiflorum</u></td><td style="text-align: center;">100</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>100</u> = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td></td><td></td></tr> </table>	Tree Stratum (Plot size: <u>30</u> ft.)	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## SOIL

Sampling Point: **DPC006\_WC02**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10 YR 4/1	90	2.5 YR 4/6	10	C	M	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
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<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<b>N/A</b>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<b>&gt;20</b>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<b>5</b>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 8, 2020  
 Applicant/Owner: Invenenergy State: OH Sampling Point: DPC008 WC03  
 Investigator(s): K. Barnett and S. Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.34550 Long: -83.41061 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Tree Stratum (Plot size: <u>30</u> ft.)</th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr> <td></td> <td><u>0</u></td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sapling/Shrub Stratum (Plot size: <u>15</u> ft.)</th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Cornus alba</u></td><td><u>10</u></td><td><u>Yes</u></td><td><u>FACW</u></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr> <td></td> <td><u>10</u></td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Herb Stratum (Plot size: <u>5</u> ft.)</th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Phalaris arundinacea</u></td><td><u>80</u></td><td><u>Yes</u></td><td><u>FACW</u></td></tr> <tr><td>2. <u>Typha X glauca</u></td><td><u>15</u></td><td><u>No</u></td><td><u>OBL</u></td></tr> <tr><td>3. <u>Cyperus sp.</u></td><td><u>5</u></td><td><u>No</u></td><td><u>FACW</u></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>    </u></td><td></td><td></td><td></td></tr> <tr> <td></td> <td><u>100</u></td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Woody Vine Stratum (Plot size: <u>30</u> ft.)</th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr> <td></td> <td><u>0</u></td> <td colspan="2">= Total Cover</td> </tr> </tbody> </table>	Tree Stratum (Plot size: <u>30</u> ft.)	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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: **DPC008\_WC03**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10 YR 4/1	80	5 YR 5/8	20	C	M	Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)		

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
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<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<u>2</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<u>4</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 8, 2020  
 Applicant/Owner: Invenenergy State: OH Sampling Point: DPC010 WC04  
 Investigator(s): K. Barnett and S. Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.34331 Long: -83.41111 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Yes      No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: **DPC010\_WC04**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10 YR 4/1	85	5 YR 4/4	15	C	M	Silty Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 8, 2020  
 Applicant/Owner: Invenenergy State: OH Sampling Point: DPC012 WC05  
 Investigator(s): K. Barnett and S. Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Bottom Forest Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35515 Long: -83.41121 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).



## SOIL

Sampling Point: **DPC012\_WC05**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10 YR 4/1	60	5 YR 4/6	40	C	M	Silty Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>6</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 9, 2020  
 Applicant/Owner: Invenery State: OH Sampling Point: DPC016 WC06  
 Investigator(s): Kirk Barnett and Samuel Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Bottom Forest Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35761 Long: -83.45409 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

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<b>Hydrophytic Vegetation Indicators:</b> <u>    </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																																																																																																																									
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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: **DPC016\_WC06**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 5/1	60	5YR 4/6	40	C	PL	Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<b>N/A</b>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<b>4</b>	
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<b>4</b>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 9, 2020  
 Applicant/Owner: Invenery State: OH Sampling Point: DPC018 WC07  
 Investigator(s): Kirk Barnett and Samuel Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35181 Long: -83.45207 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PUB  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Yes      No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>  X  </u> No <u>    </u> Hydric Soil Present? Yes <u>    </u> No <u>  X  </u> Wetland Hydrology Present? Yes <u>  X  </u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>  X  </u>
Remarks: This point was determined not to be within a wetland due to the lack of hydric soils.	

## VEGETATION - Use scientific names of plants.

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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: **DPC018\_WC07**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 4/1	60	5YR 4/6	40	C	M	Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes _____ No <b>X</b>

Remarks:  
No positive indication of hydric soils was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes <b>X</b> No _____	Depth (inches):	<b>24</b>	
Water Table Present?	Yes <b>X</b> No _____	Depth (inches):	_____	
Saturation Present? (includes capillary fringe)	Yes _____ No <b>X</b>	Depth (inches):	<b>&gt;20</b>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 9, 2020  
 Applicant/Owner: Invenery State: OH Sampling Point: DPC020 WC08  
 Investigator(s): Kirk Barnett and Samuel Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35063 Long: -83.45161 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PUB  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

### VEGETATION - Use scientific names of plants.

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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).



## SOIL

Sampling Point: **DPC020\_WC08**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 5/1	60	5YR 4/6	40	C	PL	Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>30</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>4</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 9, 2020  
 Applicant/Owner: Invenery State: OH Sampling Point: DPC022 WC09  
 Investigator(s): Kirk Barnett and Samuel Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35020 Long: -83.44964 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Yes      No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>  X  </u> No <u>    </u> Hydric Soil Present? Yes <u>  X  </u> No <u>    </u> Wetland Hydrology Present? Yes <u>  X  </u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>  X  </u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: **DPC022\_WC09**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 4/1	70	5YR 4/6	30	C	M	Clay Loam	
4-18	10YR 5/1	60	5YR 4/6	40	C	PL	Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>&gt;24</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>8</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 9, 2020  
 Applicant/Owner: Invenery State: OH Sampling Point: DPC024 WC10  
 Investigator(s): Kirk Barnett and Samuel Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Bottom Forest Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35111 Long: -83.45259 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: **DPC024\_WC10**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 5/1	70	5YR 4/6	30	C	M	Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 9, 2020  
 Applicant/Owner: Invenery State: OH Sampling Point: DPC026 WC11  
 Investigator(s): Kirk Barnett and Samuel Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Bottom Forest Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35009 Long: -83.45363 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PSS  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Tree Stratum (Plot size: <u>30</u> ft.)</th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Quercus palustris</u></td><td><u>30</u></td><td><u>Yes</u></td><td><u>FACW</u></td></tr> <tr><td>2. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td>3. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td>4. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td>5. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>30</u> = Total Cover</td><td colspan="2"></td></tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sapling/Shrub Stratum (Plot size: <u>15</u> ft.)</th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Ulmus americana</u></td><td><u>30</u></td><td><u>Yes</u></td><td><u>FACW</u></td></tr> <tr><td>2. <u>Acer rubrum</u></td><td><u>20</u></td><td><u>Yes</u></td><td><u>FAC</u></td></tr> <tr><td>3. <u>Populus deltoides</u></td><td><u>5</u></td><td><u>No</u></td><td><u>FAC</u></td></tr> <tr><td>4. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td>5. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>55</u> = Total Cover</td><td colspan="2"></td></tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Herb Stratum (Plot size: <u>5</u> ft.)</th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>Phalaris arundinacea</u></td><td><u>10</u></td><td><u>Yes</u></td><td><u>FACW</u></td></tr> <tr><td>2. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td>3. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td>4. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td>5. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td>6. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td>7. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td>8. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td>9. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td>10. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>10</u> = Total Cover</td><td colspan="2"></td></tr> </tbody> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Woody Vine Stratum (Plot size: <u>30</u> ft.)</th> <th>Absolute % cover</th> <th>Dominant Species?</th> <th>Indicator Status</th> </tr> </thead> <tbody> <tr><td>1. <u>None Observed</u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td>2. <u>    </u></td><td><u>    </u></td><td><u>    </u></td><td><u>    </u></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td colspan="2"></td></tr> </tbody> </table>	Tree Stratum (Plot size: <u>30</u> ft.)	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## SOIL

Sampling Point: **DPC026\_WC11**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
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<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
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<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 9, 2020  
 Applicant/Owner: Invenery State: OH Sampling Point: DPC028 WC12  
 Investigator(s): Kirk Barnett and Samuel Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35808 Long: -83.45774 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Persicaria sp.</u></td><td style="text-align: center;">40</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Cyperus sp.</u></td><td style="text-align: center;">60</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u>Dipsacus fullonum</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FACU</td></tr> <tr><td>4. <u>Tradescantia ohioensis</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FACU</td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>110</u> = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td></td><td></td></tr> </table>	Tree Stratum (Plot size: <u>30</u> ft.)	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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: **DPC028\_WC12**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 4/2	75	5YR 6/6	25	C	PL	Clay	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
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<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
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<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
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<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 9, 2020  
 Applicant/Owner: Invenenergy State: OH Sampling Point: DPC030 WC13  
 Investigator(s): Kirk Barnett and Samuel Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.35683 Long: -83.46145 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).  
  
 Grazed pasture

## SOIL

Sampling Point: **DPC030\_WC13**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/1	70	5YR 4/6	30	C	PL	Clay	Broken tiles in soil

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present?	Yes <input checked="" type="checkbox"/> No _____	Depth (inches):	<u>6</u>	
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 10, 2020  
 Applicant/Owner: Invenenergy State: OH Sampling Point: DPC034 WC14  
 Investigator(s): K. Barnett and S. Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Bottom Forest Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.34512 Long: -83.43339 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).



## SOIL

Sampling Point: **DPC034\_WC14**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/1	100					Silty Clay Loam	
4-18	10YR 3/1	90	2.5YR 3/6	10	C	M	Silty Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>	
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

Stream bank terrace

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 10, 2020  
 Applicant/Owner: Invenenergy State: OH Sampling Point: DPC036 WC15  
 Investigator(s): K. Barnett and S. Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Bottom Forest Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.34930 Long: -83.42669 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Yes      No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>  X  </u> No <u>    </u> Hydric Soil Present? Yes <u>  X  </u> No <u>    </u> Wetland Hydrology Present? Yes <u>  X  </u> No <u>    </u>	Is the Sampled Area within a Wetland? Yes <u>  X  </u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: **DPC036\_WC15**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	7.5YR 4/1	90	2.5YR 4/6	10	C	PL	Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:			
<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Gauge or Well Data (D9)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Other (Explain in Remarks)		

Field Observations:				Wetland Hydrology Present?
Surface Water Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present?	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	
Saturation Present? (includes capillary fringe)	Yes _____ No <input checked="" type="checkbox"/>	Depth (inches):	<u>&gt;20</u>	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 10, 2020  
 Applicant/Owner: Invenenergy State: OH Sampling Point: DPC042 WC16  
 Investigator(s): K. Barnett and S. Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Bottomland Forest Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.37854 Long: -83.46216 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: **DPC042\_WC16**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 6/1	80	5YR 6/6	20	C	M	Silty Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 10, 2020  
 Applicant/Owner: Invenenergy State: OH Sampling Point: DPC044 WC17  
 Investigator(s): K. Barnett and S. Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Bottom Forest Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.37853 Long: -83.46391 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Acer saccharinum</u></td><td style="text-align: center;">30</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Quercus palustris</u></td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u>Ulmus americana</u></td><td style="text-align: center;">10</td><td style="text-align: center;">No</td><td style="text-align: center;">FACW</td></tr> <tr><td>4. <u>Quercus rubra</u></td><td style="text-align: center;">10</td><td style="text-align: center;">No</td><td style="text-align: center;">FACU</td></tr> <tr><td>5. <u>    </u></td><td style="text-align: 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## SOIL

Sampling Point: **DPC044\_WC17**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/1	70	2.5YR 4/8	30	C	M	Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

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<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>N/A</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).  
A positive indication of wetland hydrology was observed (at least two secondary indicators).

## WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 10, 2020  
 Applicant/Owner: Invenenergy State: OH Sampling Point: DPC046 WC18  
 Investigator(s): K. Barnett and S. Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Bottom Forest Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.37788 Long: -83.46208 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PFO  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

### SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

### VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <td style="width: 30%;"><u>Tree Stratum</u> (Plot size: <u>30</u> ft.)</td> <td style="width: 10%; text-align: center;">Absolute % cover</td> <td style="width: 10%; text-align: center;">Dominant Species?</td> <td style="width: 10%; text-align: center;">Indicator Status</td> </tr> <tr><td>1. <u>Ulmus americana</u></td><td style="text-align: center;">70</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Acer saccharinum</u></td><td style="text-align: center;">15</td><td style="text-align: center;">No</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u>acer rubrum</u></td><td style="text-align: center;">15</td><td style="text-align: center;">No</td><td style="text-align: center;">FAC</td></tr> <tr><td>4. <u>Quercus rubra</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FACU</td></tr> <tr><td>5. <u>Carya ovata</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FACU</td></tr> <tr><td colspan="4" style="text-align: right;">110 = Total Cover</td></tr> </table> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;"><u>Sapling/Shrub Stratum</u> (Plot size: <u>15</u> ft.)</td> <td style="width: 10%; 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Indicator Status	1. <u>None Observed</u>				2. <u>                    </u>				3. <u>                    </u>				4. <u>                    </u>				5. <u>                    </u>				6. <u>                    </u>				7. <u>                    </u>				8. <u>                    </u>				9. <u>                    </u>				10. <u>                  </u>				0 = Total Cover				<u>Woody Vine Stratum</u> (Plot size: <u>30</u> ft.)	Absolute % cover	Dominant Species?	Indicator Status	1. <u>None Observed</u>				2. <u>                    </u>				0 = Total Cover				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  <b>Prevalence Index Worksheet:</b> <table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">Total % Cover of:</td> <td style="width: 40%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>125</u></td> <td>x 2 = <u>250</u></td> </tr> <tr> <td>FAC species <u>15</u></td> <td>x 3 = <u>45</u></td> </tr> <tr> <td>FACU species <u>10</u></td> <td>x 4 = <u>40</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>150</u> (A)</td> <td><u>335</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.23</u></td> </tr> </table> <b>Hydrophytic Vegetation Indicators:</b> <u>X</u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>125</u>	x 2 = <u>250</u>	FAC species <u>15</u>	x 3 = <u>45</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>150</u> (A)	<u>335</u> (B)	Prevalence Index = B/A = <u>2.23</u>	
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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: **DPC046\_WC18**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 3/1	70	2.5YR 4/8	30	C	M	Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
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<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>2</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>0</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).

# WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: Cadence Solar County: Union Sampling Date: January 10, 2020  
 Applicant/Owner: Invenenergy State: OH Sampling Point: DPC047 WC18  
 Investigator(s): K. Barnett and S. Schratz Section, Township, Range: 0  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave  
 Slope (%): 00-05 Lat: 40.37802 Long: -83.46179 Datum: NAD83  
 Soil Map Unit Name: 0 NWI classification: PEM  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes      No      (If no, explain in Remarks.)  
 Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u> Hydric Soil Present? Yes <u>X</u> No <u>    </u> Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>    </u>
Remarks: This point was determined to be within a wetland due to the presence of all 3 wetland criteria.	

## VEGETATION - Use scientific names of plants.

<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum (Plot size: <u>30</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum (Plot size: <u>15</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>3. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum (Plot size: <u>5</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Cyperus sp.</u></td><td style="text-align: center;">100</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Juncus sp.</u></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">OBL</td></tr> <tr><td>3. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>4. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>5. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>6. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>7. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>8. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>9. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td>10. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>105</u> = Total Cover</td><td></td><td></td></tr> </table> <table border="0" style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum (Plot size: <u>30</u> ft.)</th> <th style="text-align: center;">Absolute % cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>None Observed</u></td><td></td><td></td><td></td></tr> <tr><td>2. <u>    </u></td><td></td><td></td><td></td></tr> <tr><td colspan="2" style="text-align: right;"><u>0</u> = Total Cover</td><td></td><td></td></tr> </table>	Tree Stratum (Plot size: <u>30</u> ft.)	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Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>100</u>	x 2 = <u>200</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>105</u> (A)	<u>205</u> (B)	Prevalence Index = B/A = <u>1.95</u>	
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Remarks:  
 A positive indication of hydrophytic vegetation was observed (>50% of dominant species indexed as OBL, FACW, or FAC).  
 A positive indication of hydrophytic vegetation was observed (Prevalence Index is ≤ 3.0).

## SOIL

Sampling Point: **DPC047\_WC18**

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-18	10YR 4/1	80	5YR 5/8	20	C	M	Clay Loam	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soils Indicators:	Indicators for Problematic Hydric Soils <sup>3</sup> :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Iron-Manganese Masses (F12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):	Hydric Soil Present?
Type: _____ Depth(inches): _____	Yes <input checked="" type="checkbox"/> No _____

Remarks:  
A positive indication of hydric soil was observed.

## HYDROLOGY

Wetland Hydrology Indicators:	
<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (minimum of two required)</u>
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Iron Deposits (B5)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9)	
<input type="checkbox"/> Aquatic Fauna (B13)	
<input type="checkbox"/> True Aquatic Plants (B14)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Gauge or Well Data (D9)	
<input type="checkbox"/> Other (Explain in Remarks)	

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3</u>	Yes <input checked="" type="checkbox"/> No _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>&gt;20</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No _____ Depth (inches): <u>3</u> (includes capillary fringe)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
A positive indication of wetland hydrology was observed (at least one primary indicator).

## **APPENDIX C**

### **Photographs**





Photograph 1. Scrub Shrub Wetland (PSS) WA01, view facing west (December 10, 2019 by D. Carson).



Photograph 2. Forested Wetland (PFO) WA02, view facing north (December 10, 2019 by D. Carson).





Photograph 3. Palustrine Emergent Wetland (PEM) WA03, view facing west (December 10, 2019 by D. Carson).



Photograph 4. PEM Wetland WA04, view facing south (December 10, 2019 by D. Carson).





Photograph 5. PEM Wetland WA05, view facing north (December 11, 2019 by D. Carson).



Photograph 6. PFO Wetland WA06, view facing north (December 11, 2019 by D. Carson).





Photograph 7. PEM Wetland WA07, view facing west (December 27, 2019 by D. Carson).



Photograph 8. PEM Wetland WA08, view facing west (December 27, 2019 by D. Carson).





Photograph 9. PFO Wetland WA09, view facing east (December 27, 2019 by D. Carson).



Photograph 10. PFO Wetland WA10, view facing east (December 27, 2019 by D. Carson).





Photograph 11. PFO Wetland WA11, view facing east (December 27, 2019 by D. Carson).



Photograph 12. PFO Wetland WA12, view facing south (December 27, 2019 by D. Carson).





Photograph 13. PFO Wetland WA13, view facing west (December 27, 2019 by D. Carson).



Photograph 14. PFO Wetland WA14, view facing south (December 27, 2019 by D. Carson).





Photograph 15. PFO Wetland 15, view facing east (December 27, 2019 by D. Carson).



Photograph 16. PFO Wetland WA16, view facing east (December 27, 2019 by D. Carson).





Photograph 17. PEM Wetland WA17, view facing south (January 14, 2020 by D. Carson).



Photograph 18. PEM Wetland WA18, view facing south (January 14, 2020 by D. Carson).



Photograph 19. PEM Wetland WA19, view facing north (January 14, 2020 by D. Carson).

NO PHOTOGRAPH AVAILABLE

Photograph 20. PEM Wetland WA20.



NO PHOTOGRAPH AVAILABLE

Photograph 21. PEM Wetland WA21.



Photograph 22. PEM Wetland WA22, view facing south (January 14, 2020 by D. Carson).





Photograph 23. PEM Wetland WA23, view facing west (January 14, 2020 by D. Carson).



Photograph 24. PFO Wetland WA24, view facing east (January 14, 2020 by D. Carson).





Photograph 25. PFO Wetland WA25, view facing south (January 14, 2020 by D. Carson).



Photograph 26. PEM Wetland WA26, view facing south (January 14, 2020 by D. Carson).





Photograph 27. PEM Wetland WA27, view facing west (January 14, 2020 by D. Carson).



Photograph 28. PEM Wetland WA28, view facing east (January 15, 2020 by D. Carson).





Photograph 29. PEM Wetland WA29, view facing east (January 15, 2020 by D. Carson).



Photograph 30. PEM Wetland WA30, view facing north (January 15, 2020 by D. Carson).



Photograph 31. PEM Wetland WA31, view facing east (January 15, 2020 by D. Carson).



Photograph 32. PEM Wetland WA32, view facing north (January 15, 2020 by D. Carson).





Photograph 33. PEM Wetland WA33, view facing north (January 15, 2020 by D. Carson).



Photograph 34. PEM Wetland WA34, view facing east (January 15, 2020 by D. Carson).





Photograph 35. PEM Wetland WA35, view facing south (November 5, 2020 by D. Carson).



Photograph 36. PEM Wetland WA36, view facing north (November 23, 2020 by D. Carson).





Photograph 37. PFO Wetland WA37, view facing north (November 23, 2020 by D. Carson).



Photograph 38. PEM Wetland WA38, view facing west (November 5, 2020 by D. Carson).





Photograph 39. PFO Wetland WA39, view facing east (November 5, 2020 by D. Carson).



Photograph 40. PFO Wetland WA40, view facing east (November 5, 2020 by D. Carson).





Photograph 41. PFO Wetland WA41, view facing east (November 6, 2020 by D. Carson).



Photograph 42. PEM Wetland WA42, view facing north (November 6, 2020 by D. Carson).





Photograph 43. PEM Wetland WA43, view facing west (November 5, 2020 by D. Carson).



Photograph 44. PEM Wetland WA44, view facing south (November 6, 2020 by D. Carson).





Photograph 45. PUB Wetland WA45, view facing east (November 6, 2020 by D. Carson).

NO PHOTOGRAPH AVAILABLE

Photograph 46. PEM Wetland WA46, view facing east (November 23, 2020 by D. Carson).





Photograph 47. PUB Wetland WA47, view facing east (November 6, 2020 by D. Carson).



Photograph 48. PEM Wetland WA48, view facing east (November 23, 2020 by D. Carson).





Photograph 49. PEM Wetland WA49, view facing east (November 23, 2020 by D. Carson).



Photograph 50. PFO Wetland WB03, view facing north (December 13, 2019 by H. McFeeters).





Photograph 51. PEM Wetland WB04, view facing north (December 13, 2019 by H. McFeeters).



Photograph 52. PEM Wetland WB05, view facing west (December 13, 2019 by H. McFeeters).





Photograph 53. PEM Wetland WB06, view facing east (December 13, 2019 by H. McFeeters).



Photograph 54. PFO Wetland WB07, view facing south (December 14, 2019 by H. McFeeters).





Photograph 55. PEM Wetland WB08, view facing west (December 14, 2019 by H. McFeeters).



Photograph 56. PEM Wetland WB09, view facing south (December 14, 2019 by H. McFeeters).





Photograph 57. PEM Wetland WC01, view facing south (January 8, 2020 by K. Barnett).



Photograph 58. PEM Wetland WC02, view facing east (January 8, 2020 by K. Barnett).





Photograph 59. PEM Wetland WC03, view facing south (January 8, 2020 by K. Barnett).



Photograph 60. PEM Wetland WC04, view facing south (January 8, 2020 by K. Barnett).





Photograph 61. PFO Wetland WC05, view facing north (January 8, 2020 by K. Barnett).



Photograph 62. PFO Wetland WC06, view facing south (January 9, 2020 by K. Barnett).





Photograph 63. PUB Wetland WC07, view facing south (January 9, 2020 by K. Barnett).



Photograph 64. PUB Wetland WC08, view facing south (January 9, 2020 by K. Barnett).





Photograph 65. PUB Wetland WC09, view facing west (January 9, 2020 by K. Barnett).



Photograph 66. PEM Wetland WC10, view facing south (January 10, 2020 by K. Barnett).





Photograph 67. PSS Wetland WC11, view facing south (January 9, 2020 by K. Barnett).



Photograph 68. PEM Wetland WC12, view facing south (January 9, 2020 by K. Barnett).





Photograph 69. PEM Wetland WC13, view facing south (January 9, 2020 by K. Barnett).



Photograph 70. PFO Wetland WC14, view facing west (January 10, 2020 by K. Barnett).





Photograph 71. PFO Wetland WC15, view facing west (January 10, 2020 by K. Barnett).



Photograph 72. Upstream view of SA01 (December 10, 2019 by S. Schratz).





Photograph 73. Upstream view of SA02, (December 10, 2019 by D. Carson).



Photograph 74. Downstream view of SA03, (December 10, 2019 by D. Carson).





Photograph 75. Upstream view of SA04 (December 10, 2019 by S. Schratz).

NO PHOTOGRAPH AVAILABLE

Photograph 76. SA05, (December 10, 2019).

NO PHOTOGRAPH AVAILABLE

Photograph 77. SA06, (December 10, 2019).

NO PHOTOGRAPH AVAILABLE

Photograph 78. SA07, (December 10, 2019).





Photograph 79. Upstream view of SA08, (January 16, 2020 by D. Carson).



Photograph 80. Downstream view of SA09, (January 14, 2020 by D. Carson).





Photograph 81. Upstream view of SA10, (January 14, 2020 by D. Carson).



Photograph 82. Upstream view of SA11, (November 23, 2020 by D. Carson).





Photograph 83. Downstream view of SA12, (November 23, 2020 by D. Carson).



Photograph 84. Upstream view of SA13, (November 23, 2020 by D. Carson).





Photograph 85. Downstream view of SA14, (November 23, 2020 by D. Carson).



Photograph 86. Upstream view of SA15, (November 23, 2020 by D. Carson).



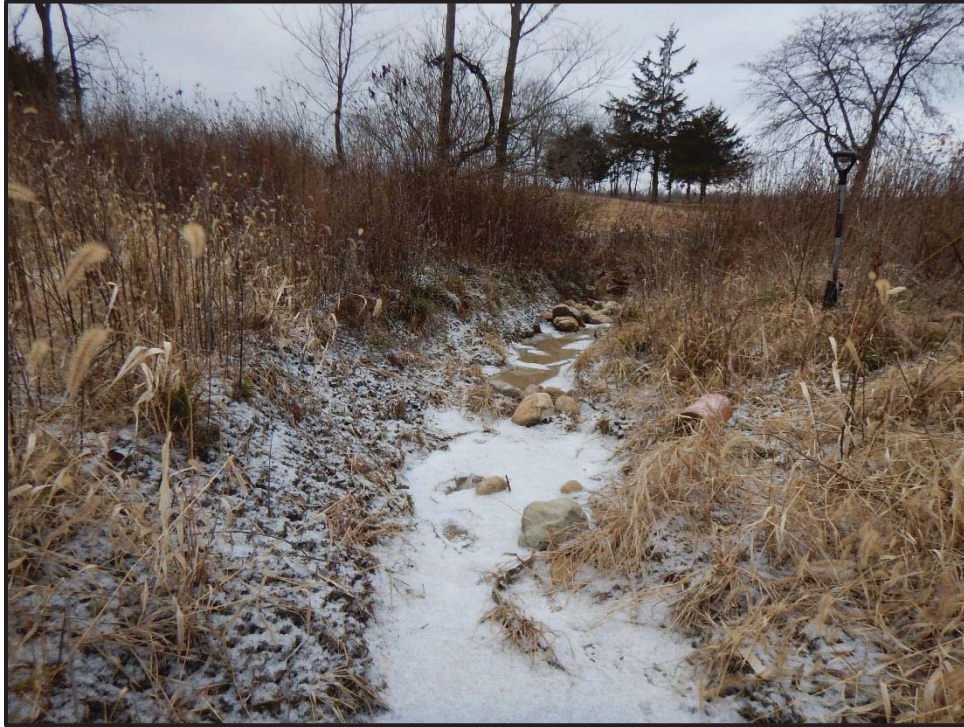


Photograph 87. Downstream view of SB01, (December 11, 2019 by H. McFeeters).



Photograph 88. Downstream view of SB02, (December 11, 2019 by H. McFeeters).





Photograph 89. Upstream view of SB03, (December 11, 2019 by H. McFeeters).



Photograph 90. Downstream view of SB04, (December 12, 2019 by H. McFeeters).





Photograph 91. Downstream view of SB05, (December 12, 2019 by H. McFeeters).



Photograph 92. Upstream view of SB06, (December 12, 2019 by H. McFeeters).





Photograph 93. Downstream view of SB07, (December 13, 2019 by H. McFeeters).



Photograph 94. Upstream view of SB08, (December 13, 2019 by H. McFeeters).





Photograph 95. Upstream view of SB09, (December 14, 2019 by H. McFeeters).



Photograph 96. Upstream view of SB10, (December 14, 2019 by H. McFeeters).





Photograph 97. Downstream view of SB11, (December 14, 2019 by H. McFeeters).



Photograph 98. Downstream view of SB12, (December 15, 2019 by H. McFeeters).





Photograph 99. Downstream view of SB13, (December 15, 2019 by H. McFeeters).



Photograph 100. Downstream view of SB14, (December 15, 2019 by H. McFeeters).





Photograph 101. Upstream view of SB15, (December 15, 2019 by H. McFeeters).



Photograph 102. Downstream view of SB16, (December 16, 2019 by H. McFeeters).





Photograph 103. Downstream view of SB17, (December 16, 2019 by H. McFeeters).



Photograph 104. Downstream view of SB18, (December 16, 2019 by H. McFeeters).





Photograph 105. Upstream view of SB19, (December 16, 2019 by H. McFeeters).



Photograph 106. Downstream view of SC01, (January 8, 2020 by K. Barnett).





Photograph 107. Downstream view of SC02, (January 9, 2020 by K. Barnett).



Photograph 108. Downstream view of SC03, (January 9, 2020 by K. Barnett).





Photograph 109. Upstream view of SC04, (January 9, 2020 by K. Barnett).



Photograph 110. Downstream view of SC05, (January 9, 2020 by K. Barnett).





Photograph 111. Upstream view of SC06, (January 9, 2020 by K. Barnett).



Photograph 112. PUB PNDA01, view facing east (December 11, 2019 by D. Carson).





Photograph 113. PUB PNDA02, view facing east (December 27, 2019 by D. Carson).



Photograph 114. PUB PNDB01, view facing southeast (December 13, 2019 by H. McFeeters).



Photograph 115. PUB of PNDC01, view facing northeast (January 8, 2020 by K. Barnett).



Photograph 116. PUB PNDC02, view facing north (January 9, 2020 by K. Barnett).





Photograph 117. PUB PNDC03, view facing southwest (January 9, 2020 by K. Barnett).



Photograph 118. PUB PNDC04, view facing north (January 9, 2020 by K. Barnett).





Photograph 119. PUB PNDC05, view facing north (January 9, 2020 by K. Barnett).



Photograph 120. View of PNDC06, view facing north (January 9, 2020 by K. Barnett).



Photograph 121. PNDC07, view facing east (January 10, 2020 by K. Barnett).



Photograph 122. PNDC08, view facing south (January 10, 2020 by S. Schratz).



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

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Summary: Application - 14 of 14 (Exhibit L – Wetland and Waterbody Delineation Report)  
electronically filed by Christine M.T. Pirik on behalf of CADENCE SOLAR ENERGY LLC