



**Summer Shade Solar Project**  
Wetland and Waterbody Delineation Report

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## Sign-off Sheet


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# SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

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## SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

# 1.0 INTRODUCTION

## 1.1 PURPOSE

Summer Shade Solar LLC (the “Client”) is proposing to develop the Summer Shade Solar Facility (the “Project”) within Metcalfe and Monroe Counties, Kentucky (**Appendix A, Figure 1**). The Project includes approximately 1,468 acres of primarily upland and riparian forested areas and agricultural fields. Kentucky State Highway 90 (Summer Shade Road) runs west to east through the northern portion of the Project and Kentucky State Highway 163 (Tompkinsville Road) runs north to south to the east of the Project area. The Project is located between the towns of Summer Shade, which lies to the west of the Project, and Beaumont, which lies to the east, and is approximately 13 miles southeast of the city of Glasgow, Kentucky.

Stantec Consulting Services Inc. (Stantec) was retained by Summer Shade Solar LLC to conduct a delineation of potential waters of the United States (WOTUS), including wetlands, streams, waterbodies, and potentially isolated wetlands within the Project area. WOTUS features are subject to regulation under Section 404 of the Clean Water Act (CWA) and the jurisdictional regulatory authority lies with the U.S. Army Corps of Engineers (USACE).

Stantec completed the delineation of wetlands, streams, and waterbodies over three deployments which took place October 4-10, 2021, April 18-27, 2022, and February 26-29, 2024. The information contained in this report reflects the current site conditions that were observed during the field delineations and updated jurisdictional discussion to reflect Kentucky’s transition from the pre-2015 regulatory regime to the now operative amended 2023 rule regulatory regime.

## 1.2 LOCATION OF PROJECT

The Project is located approximately 13 miles southeast of Glasgow, Kentucky and is predominantly located within Metcalfe County, with a small portion of the Project lying within Monroe County to the south. The Project is primarily contained within the Skaggs Creek watershed (HUC-10 0511000203), though a small portion in the northeast corner of the Project overlaps the Little Barren River watershed (HUC-10 0511000106). Additionally, the entire Project area lies within the Green watershed (HUC-6 051100). The Project is drained by Nobob Creek, which flows east to west through the central portion of the Project. Glover Creek and its tributaries are also located near the Project, with one tributary directly adjacent to the northwesternmost parcel in the Project area (**Appendix A, Figure 2**).

# 2.0 REGULATORY CONSIDERATIONS

The Federal Water Pollution Control Act Amendments of 1972 established a comprehensive program of regulations and permits to control water pollution within the United States. Section 404 of the Clean Water Act (CWA) was created as a part of the above-mentioned amendments and has become the principal regulatory mechanism to control discharges into wetlands and waters of the United States.

Both the U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) have assigned authorities under Section 404 of the CWA. The USACE has the authority to issue permits for the discharge of fill materials after notice and an opportunity for comment. The EPA, in conjunction with USACE, has the authority to

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develop substantive water protection criteria as a part of the guidelines that individuals must meet when applying for a permit from the USACE. Enforcement authority with regard to Section 404 is divided between the two agencies.

Subsequently, Section 401 of the CWA was created to allocate certifying authority to states and tribes in relation to wetlands and waters of the United States. These certifying authorities may also oversee implementation of local state or tribal statutes and regulatory program implementations and/or hold enforcement authority of these complementary programs. Kentucky does not currently have its own regulatory program for wetlands and lacks water quality standards for ephemeral streams.

On September 8, 2023, the final rule was published by the EPA and USACE redefining the definition of “Waters of the United States” to conform to the 2023 Supreme Court decision. This conforming rule, also known as the *Sackett* Rule, amends the provisions of the agencies' definition of “Waters of the United States” that are invalid under the Supreme Court's interpretation of the Clean Water Act in the 2023 decision (EPA 2023), most notably the ‘significant nexus’ test.

On September 23, 2024, the Sixth Circuit issued a mandate lifting its stay order regarding pending litigations<sup>1</sup>, and as of that date, the Amended 2023 Rule is operative in Kentucky which conforms its definitions of the “Waters of the United States” conforming with the Supreme Court's decision in *Sackett v. EPA*. Although limited formal written guidance has been released by EPA or USACE to date, the Jurisdictional Determinations presented in this report reflect what Stantec believes USACE will be considering going forward. The final authority regarding CWA jurisdiction remains with USACE and EPA. Following the Amended 2023 Rule in accordance with *Sackett*, a brief summary of the key points of that rule is outlined below.

The USACE and EPA will assert jurisdiction over the following categories of waters:

- Traditional navigable waters (TNW);
- Territorial Seas;
- Interstate waters excluding wetlands;
- Impoundments created from “Waters of the United States”;
- Tributaries that are relatively permanent waters (RPW) and flow into a TNW;
- Wetlands adjacent (direct surface connection) to traditional navigable waters, interstate water, territorial seas or relatively permanent tributary or impoundment; and
- Other relatively permanent waters that could affect interstate or foreign commerce.

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<sup>1</sup> Commonwealth of Kentucky v. EPA (No. 23-5343) and Kentucky Chamber of Commerce, et al. v. EPA (No. 23-5345)

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The USACE and EPA generally will not assert jurisdiction over the following excluded features:

- Waste treatment systems
- Prior converted cropland
- Certain ditches
- Artificially irrigated areas that would revert to dry land if irrigation ceased
- Certain artificial lakes and ponds
- Artificial reflecting or swimming pools or other small ornamental bodies of water
- Certain waterfilled depressions
- Swales and erosional features.

Based on these criteria, TNWs, RPWs, and their directly adjacent wetlands are by definition considered jurisdictional WOTUS. Non-directly adjacent wetlands and non-relatively permanent waters (NRPW) do not meet the current definition of a WOTUS under this rule.

RPW extent is often described or based on characteristics such as their flow regime or Strahler stream order. Flow regime classifications are defined as perennial, intermittent, or ephemeral. Strahler stream order is described below.

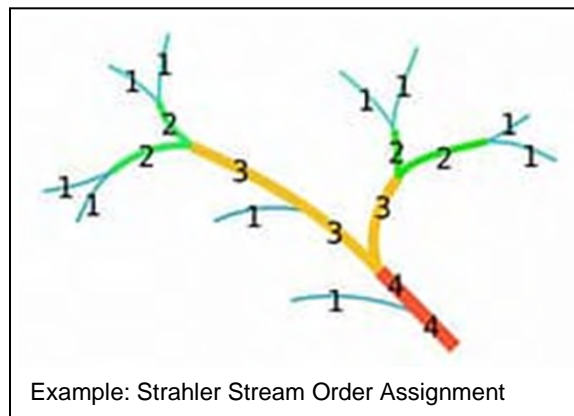
**Perennial:** Has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

**Intermittent:** Has flowing water during certain times of the year when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

**Ephemeral:** Has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

**Strahler Stream Order:** From the point of confluence, where two lower order streams met to form the tributary, downstream to the point such tributary enters a higher order stream.

Note that USACE will assess the flow characteristics of a particular tributary at the farthest downstream limit of such tributary (i.e. the point the tributary enters a higher order stream).



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Within this report, stream reach refers to a particular channel length of one singular Stahler stream order unit. A stream segment refers to each flow type where multiple flow types occur within the same stream reach.

Under the current Amended 2023 Rule regime stream, wetland, and open water resources are considered RPWs when they have a direct continuous surface connection (CSC) to waters that meet the requirements of paragraphs (a)(1) through (a)(5) of the Amended 2023 regulations. This connection can be through a stream of any flow type or a discrete feature like a non-jurisdictional ditch, upland swale, pipe, or culvert.

### Clean Water Act Section 404 Permit

The Project may require authorization under the federal Clean Water Act (CWA) Section 404 for any proposed impacts to jurisdictional WOTUS. The USACE regulates the discharge of fill material in WOTUS, including wetlands, under Section 404 of the Clean Water Act (33 U.S.C. §1344), Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. §403), and Section 103 of the Marine Protection Research and Sanctuaries Act of 1972 (33 U.S.C. §1413). Discharge of fill material includes digging, trenching, or equipment crossing of a jurisdictional waterbody.

The Project is located in the USACE Louisville District and may be eligible for NWP 14, NWP 51, and/or NWP 57, provided that all required NWP conditions are met. Permanent loss of up to 0.5 acre of jurisdictional WOTUS is allowable by these NWP options. Compensatory mitigation would be required for permanent impacts exceeding 0.10 acre wetland or 0.03 acre stream bed should PreConstruction Notification (PCN) coordination be required. Dependent on conditions of the specific NWP used, a PCN may not be required if impacts are less than 0.10 acre. If no permanent impacts for the Project are assumed, and all impacts to jurisdictional WOTUS would be temporary in nature, compensatory mitigation would likely not be required. A project restoration plan would be required as part of the USACE NWP 51 and/or NWP 57 application. If the Project impacts cannot meet the conditions of NWP 14, NWP 51 and/or NWP 57, a CWA Section 404 Individual Standard Permit may be required from the USACE.

Stantec assumes a CWA Section 404 Individual Standard Permit will not be required from the USACE, as the Project is anticipated to meet all the conditions of NWP 14, NWP 51 and/or NWP 57. Typical timeframe for completing a draft of the PCN application would be approximately three (3) weeks. The review time by the USACE for this type of permit application is 45-60 days from when they receive a complete application. No fee is associated with this type of permit application.

### Clean Water Act Section 401 Water Quality Certification

Section 401 of the CWA (33 U.S.C. §1344) mandates that a Water Quality Certification (WQC) be obtained from the certifying authorities (states, authorized tribes, and EPA) prior to any discharge of dredged or fill material into WOTUS. The Kentucky Division of Water (KDOW) administers the WQC program within Kentucky.

As indicated above, the Project may qualify for authorization by the USACE under NWP 14, NWP 51 and/or NWP 57, provided that the conditions of the permits are met and/or a waiver can be obtained. The KDOW has certified many of the USACE Section 404 NWPs by automatically granting state 401 WQC approval to activities covered under NWPs, provided that the project meets special limitations and conditions. If the Project impacts cannot meet the state conditions of NWP 14, NWP 51 and/or NWP 57, a Section 401 Individual WQC may be required from KDOW. Stantec assumes a Section 401 Individual WQC will not be required from the KDOW, as the Project is anticipated to meet all the state conditions of NWP 14, NWP 51 and/or NWP 57.

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### Clean Water Act Section 402 National Pollutant Discharge Elimination System (NPDES) Permit

For Section 402, construction sites with a disturbed area of one or more acres are required to either obtain individual NPDES permits for stormwater discharges or be covered by the Construction General Permit. In Kentucky, the Kentucky Energy and Environment Cabinet (KEEC) administers the National Pollutant Discharge Elimination System program [referred to as Kentucky Pollutant Discharge Elimination System (KPDES)], in compliance with NPDES guidelines, to issue a Construction General Permit (KYR10) which authorizes the discharge of stormwater associated with construction activity.

Each applicant under the Construction General Permit is required to prepare a Stormwater Pollution Prevention Plan (SWPPP) prior to the commencement of grading activities and implement the SWPPP during construction activities. The primary objective of the SWPPP is to identify, construct, implement, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in stormwater discharges and authorized non-stormwater discharges from the construction site. BMPs may include programs, technologies, processes, practices, and devices that control, prevent, remove, or reduce pollution. The SWPPP would also address BMPs developed specifically to reduce pollutants in stormwater discharges following the completion of construction activities.

Submission of a NOI to KEEC is required and must be authorized prior to ground disturbing construction activities. The review time by the KEEC for the NOI permit is 21 days and application fees will vary depending upon the total acreage of ground disturbance.

### Floodplain Permit

A floodplain development permit may be required when construction activities consisting of above ground facilities or any ground disturbance occurring within a mapped Federal Emergency Management Agency (FEMA) special flood hazard area. Coordination with county and local officials will be required to determine the extent of consultation and permits that will be required when working within their jurisdiction.

Stantec used the Federal Emergency Management Agency (FEMA) Flood Map Services Center website to identify floodplain boundaries within the Project area. FEMA regulates development within floodplains and requires permits for development within the 100-year flood zone, which are administered by the Kentucky Division of Water - Floodplain Section in Kentucky. Stantec downloaded preliminary floodplain data for Metcalfe County and Monroe County from the FEMA Flood Map Services Center. This map data is provided on **Figure 7** in **Appendix A**. 16.39 acres of the Project area is in the 100-year floodplain, the majority of which is concentrated around Nobob Creek and its various tributaries that intersect the center of the Project area. Summer Shade Solar LLC should consult with Kentucky Division of Water - Floodplain Section and the Metcalfe County and Monroe County floodplain coordinators if development is planned to take place within the 100-year flood zone to determine state and local requirements.

## 3.0 METHODS

### 3.1 WETLAND DELINEATION

Prior to completing the survey, a desktop review of the Project area was conducted using the Sulphur Lick, Kentucky and Summer Shade, Kentucky USGS 7.5 Minute Series topographic maps (**Appendix A, Figure 2**), U.S. Department

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of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey of Metcalfe County and Monroe County, Kentucky (USDA 1972) (**Appendix A, Figures 3-6**), the National Wetlands Inventory database (NWI [USFWS 2023]), the National Hydrography Dataset (NHD [USGS 2023]), and the Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL [FEMA 2023]) (**Appendix A, Figure 7**), and aerial imagery mapping to assess the likelihood of occurrence and probable location of wetlands and waterbodies within the Project area. Delineated features are presented in **Appendix A, Figures 8-49**.

Stantec conducted field surveys within the Project area during three deployments that took place October 4-10, 2021, April 18-27, 2022, and February 26-29, 2024. Wetland boundaries were assessed using the "Routine On-site Determination Method" as described in the USACE Wetland Delineation Manual (USACE Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountain and Piedmont Region (Version 2.0) (USACE 2012). As of August 17, 1991, the USACE was directed to utilize the USACE Wetland Delineation Manual (USACE Environmental Laboratory 1987) to identify and delineate wetlands potentially subject to regulation under Section 404 of the CWA.

Wetlands were classified according to "Classification of Wetlands and Deepwater Habitats of the United States" (Cowardin et al. 1979). In this classification system, wetland habitats are divided into five major systems including: (1) Marine, (2) Estuarine, (3) Lacustrine, (4) Palustrine, and (5) Riverine. Each of these systems is further divided into subsystems, classes, and subclasses. Vegetative communities were inventoried to assess the dominant plant species in each of four vegetative layers: trees, saplings/shrubs, herbs, and woody vines. The wetland indicator status for each of the dominant species was obtained using the 2023 National Wetland Plant List (USACE 2023). The wetland soil indicators were obtained using the Munsell soil-color chart (Munsell Color 2009) and the hydric soil field indicators (USDA, NRCS 2010). The wetland boundary and sampling points were identified and surveyed using a handheld Global Positioning System (GPS) unit and mapped with Geographical Information System (GIS) software. Stantec collected data and completed relevant assessment forms, which included USACE Wetland Determination Forms (WDF). Datasheets are provided in **Appendix B**.

### 3.2 STREAM DELINEATION

Streams that demonstrated a continuously defined channel (bed and bank), ordinary high-water mark (OHWM), and the disturbance of terrestrial vegetation were delineated within the Project area, per the protocols outlined in the USACE's Guidance on Ordinary High Water Mark Identification (Regulatory Guidance Letter, No. 05-05; USACE 2005). Delineated streams were classified as ephemeral, intermittent, or perennial per definitions in the 85 Federal Register 22250 (effective June 22, 2020). The centerline of each waterway, or both banks for streams 15 feet or wider, was identified and surveyed using a sub-meter accurate handheld GPS unit and mapped with GIS software. Potential waterways without a continuously defined channel (bed and bank), OHWM, or disturbance of terrestrial vegetation were considered upland drainage features.

The Strahler stream order categorizes river and stream networks based on the hierarchical arrangement of their tributaries. The system assigns an order of 1 to the smallest headwater streams, with higher orders resulting from the confluence of streams of equal or lower order. This hierarchical organization facilitates the study of river morphology, watershed management, and ecological processes. As Strahler outlined in his work in "Quantitative Analysis of Watershed Geomorphology" (1952), the stream order classification enables a systematic understanding of drainage

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patterns and basin characteristics essential for effective water resource management and environmental conservation.

### 4.0 OVERVIEW OF PROJECT AREA

#### 4.1 GEOLOGY AND TOPOGRAPHY

The Project lies within the western portion of the Mississippi Embayment physiographic province of Kentucky. This region is relatively flat laying and contains numerous lakes, swamps, sloughs, and ponds. The Cretaceous, Tertiary, and Quaternary sediment consist of unconsolidated gravel, silt, sand, and clays that have been deposited by the Mississippi River. (KGS 2012). The Mississippi Embayment is part of the Western Mesophytic forest region described by Braun (1950). In the eastern section of the Mississippian Plateau where the Project is located, the slopes contain beech- (Fagus) dominated mixed mesophytic forest with oak (Quercus), oak-hickory (Q.-Carya), and oak-chestnut (Q.-Castanea) forest types on the drier slopes and ridges.

#### 4.2 CLIMATE

The average February, April, and October high temperatures in Metcalfe and Monroe counties are 49 degrees, 69 degrees, and 71 degrees Fahrenheit (F), respectively. The average daily low temperatures are 29 degrees, 45 degrees, and 47 degrees F, respectively. The annual high temperature for the city of Glasgow is 70 degrees F and the annual low temperature is 47 degrees F. Precipitation in Glasgow averages 53.86 inches per year. Most of the precipitation falls from March through July, with another spike in precipitation amounts in December (U.S. Climate Data 2024). Glasgow experienced approximately 5.2 inches of precipitation during September 2021 in the month leading up to the October 2021 fieldwork and an additional 2.0 inches throughout the October 4-10, 2021, field effort (U.S. Climate Data 2024). During March 2022 in the month leading up to the April 2022 field effort, Glasgow experienced approximately 3.8 inches of precipitation and an additional 0.6 inches of precipitation during the April 18-27, 2022, field effort (U.S. Climate Data 2024). Glasgow experienced approximately 3.8 inches of precipitation during the month of February in 2024, with approximately 0.5 inches of this precipitation occurring during the February 26-29, 2024, survey period (U.S. Climate Data 2024).

#### 4.3 SOILS

The Soil Survey of Metcalfe and Monroe counties, Kentucky (USDA 1972) and the NRCS Web Soil Survey were consulted to assess soil types within the Project area (USDA, NRCS 2010). A copy of the soil map is included in **Appendix A, Figures 3-6**. Soils within the Project area with respective acreages and percentages are included in **Appendix C, Table 1**. Three soil series listed within the Project area were considered hydric, as shown in **Appendix C, Table 1**.



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### 5.0 RESULTS

#### 5.1 EXISTING CONDITIONS

Upland habitat within the Project area consists of forested areas, agricultural fields including pastureland and some row crops, and existing farm roads. The agricultural fields appear to have been previously planted with soybeans (*Glycine max*) and corn (*Zea Mays*). Forest areas were dominated by southern red oak (*Quercus falcata*), red maple (*Acer rubrum*), tulip tree (*Liriodendron tulipifera*), and black cherry (*Prunus serotina*). Dominant herbaceous plants in the forested areas included common chickweed (*Stellaria media*), bristly buttercup (*Ranunculus hispidus*), Japanese honeysuckle (*Lonicera japonica*), and white clover (*Trifolium repens*).

#### 5.2 WETLAND HABITAT

There were 66 wetlands identified within the Project area, totaling 28.34 acres (**Appendix A, Figures 8-49**). Of the 66 wetlands, 20 are considered RPWs, totaling 13.60 acres. The jurisdictional wetlands include a mixture of Cowardin classes: 6.71 acres of palustrine emergent (PEM), 4.83 acres of palustrine shrub-scrub (PSS), and 2.06 acres of palustrine forested (PFO). Of the 66 wetlands, 46 were considered NRPW, totaling 14.74 acres. These NRPW wetlands include a mixture of Cowardin classes: 13.56 acres of PEM and 1.18 acres of PFO. **Appendix B** contains the WDF for the wetlands identified within the Project area. NRPW wetland features on the site were typically found in upland forested areas and agricultural fields with no continuous surface connection to other jurisdictional features. Representative photographs of the wetlands are provided in **Appendix D**. The wetlands are summarized in **Appendix C, Table 2**.

##### 5.2.1 RPWs

Of the 66 wetlands delineated within the Project, 20 are considered adjacent RPWs. Under the current amended 2023 rule regulatory regime, wetlands are considered to be adjacent RPWs when they have a direct continuous surface connection (CSC) to waters that meet the requirements of paragraphs (a)(1) through (a)(5) of the amended 2023 rule regulations. This connection can be through a stream of any flow type or a discrete feature like a non-jurisdictional ditch, upland swale, pipe, or culvert. The 20 wetlands considered to be RPWs within the Project all had direct CSCs to streams that are considered adjacent RPWs and meet one or more categories of WOTUS under the amended 2023 rule regulatory regime conforming with the Supreme Court's decision in *Sackett v. EPA*.

##### 5.2.2 NRPWs

Of the 66 wetlands delineated within the Project, 46 are considered non-adjacent NRPWs. These wetlands are depressions surrounded entirely by uplands with no CSC to any downstream waters identified in paragraphs (a)(1) through (a)(5) of the amended 2023 rule regulations. These wetlands do not meet one or more categories of WOTUS under the amended 2023 rule regulatory regime conforming with the Supreme Court's decision in *Sackett v. EPA*. These wetlands also do not meet any of the interstate commerce factors in paragraph (a)(1)(iii) of the amended 2023 rule regulations. Therefore, these 46 wetlands are not considered to be WOTUS.



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### 5.3 STREAM HABITAT

362 stream segments were identified within the Project area, totaling 99,574.58 linear feet (**Appendix A, Figures 8-49**). Additionally, two segments of non-jurisdictional upland drainage features were also identified in the Project area, totaling 1,104.09 linear feet. These upland drainage features lacked the required features to be considered a stream and in general did not have a defined bed and bank and/or ordinary highwater mark throughout the reach but were mapped for siting purposes for solar panel placement. These features form on the landscape seasonally after crop harvest due to the slope of the landscape and bare soil after harvest. Of the 362 stream segments, 102 were considered to be RPWs and totaled 48,161.19 linear feet. The table of stream determination datasheets is found in **Appendix B**. The remaining 260 stream segments were considered to be NRPWs and totaled 51,413.39 linear feet. Representative photographs of the streams are provided in **Appendix D**. The streams are summarized in **Appendix C, Table 3**.

#### 5.3.1 RPWs

Of the 362 stream segments identified within the Project area, 102 were considered to be RPW. Under the current regulatory regime stream features are considered to be RPWs when they have a direct CSC to waters that meet the requirements of paragraphs (a)(1) through (a)(5) of the amended 2023 rule regulations. This connection can be through a stream of any flow type or a discrete feature like a non-jurisdictional ditch, upland swale, pipe, or culvert.

35 perennial stream segments were delineated within the Project, totaling 33,391.63 linear feet. 31 of the delineated perennial stream segments, totaling 29,740.75 linear feet, are considered to be RPWs due to their direct CSC to streams that meet one or more categories of WOTUS under the amended 2023 rule regulatory regime conforming with the Supreme Court's decision in *Sackett v. EPA*.

99 intermittent stream segments were delineated within the Project, totaling 29,709.95 linear feet. Of these 99 intermittent stream segments, 60 are considered to be RPWs for a total length of 16,545.01 linear feet. These stream segments are considered to be RPWs due to their direct CSC to streams that meet one or more categories of WOTUS under the amended 2023 rule regulatory regime conforming with the Supreme Court's decision in *Sackett v. EPA*.

228 ephemeral stream segments were delineated within the Project, totaling 36,473.02 linear feet. Of these 228 ephemeral stream segments, 11 were considered RPW for a total length of 1,875.48 linear feet. Taking into account Strahler stream order across the site, each of these RPW ephemeral stream segments were less than 50% of the length of the total stream reach, with the remaining lengths of these streams having an intermittent flow that was greater than 50% of the length of the total reach. The ephemeral lengths were therefore considered to be absorbed as RPW due to being <50% of the length of the stream reach which was dominated by an intermittent flow regime that had a direct CSC to streams that meet one or more categories of WOTUS under the amended 2023 rule regulatory regime, conforming with the Supreme Court's decision in *Sackett v. EPA*.

#### 5.3.2 NRPWs

Of the 35 perennial stream segments delineated within the Project, four are considered to be NRPW, for a total of 3,650.89 linear feet. Due to onsite karst topography these segments were considered to be NRPWs because they terminated into sinkholes, causing their flow to go subsurface with no obvious nearby outlet. Therefore, these

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segments did not have any direct CSC to streams that meet one or more categories of WOTUS under the amended 2023 rule regulatory regime conforming with the Supreme Court's decision in *Sackett v. EPA* and were therefore considered to be isolated without any apparent surface connections.

Of the 99 intermittent stream segments delineated within the Project, 39 are considered to be NRPW, for a total length of 13,164.95 linear feet. All 39 of these stream segments are considered to be NRPW because they are isolated with no direct CSC to streams that meet one or more categories of WOTUS under the amended 2023 rule regulatory regime conforming with the Supreme Court's decision in *Sackett v. EPA*.

Of the 228 ephemeral stream segments delineated within the Project, 217 are considered to be NRPW, for a total length of 34,597.55 linear feet. These ephemeral segments are generally headwater streams or erosional features that are isolated with no direct CSC to streams that meet one or more categories of WOTUS under the amended 2023 rule regulatory regime conforming with the Supreme Court's decision in *Sackett v. EPA*.

Both of the upland drainage features delineated within the Project are considered to be NRPW, for a total length of 1,104.09 linear feet. These upland drainage features lacked the required features to be considered a stream and in general did not have a defined bed and bank and/or ordinary highwater mark throughout the reach. These upland drainage features are both isolated with no direct CSC to streams that meet one or more categories of WOTUS under the amended 2023 rule regulatory regime conforming with the Supreme Court's decision in *Sackett v. EPA*.

### 5.4 OPEN WATER HABITAT

22 open waters were identified within the Project, totaling 8.53 acres (**Appendix A, Figures 8-49**). Of the 22 open water features, five were considered to be RPW, for a total of 0.92 acres. The remaining 17 open water features were considered to be NRPW, totaling 7.61 acres. Representative photographs of the open waters are provided in **Appendix D**. The open waters are summarized in **Appendix C, Table 4**.

#### 5.4.1 RPWs

Of the 22 open waters delineated within the Project, five are considered to be RPW. Under the current regulatory regime open water features are considered to be RPWs when they have a direct CSC to waters that meet the requirements of paragraphs (a)(1) through (a)(5) of the amended 2023 rule regulations. This connection can be through a stream of any flow type or a discrete feature like a non-jurisdictional ditch, upland swale, pipe, or culvert. The five open water features considered to be RPW within the Project have a direct CSC to streams that are considered RPWs and meet one or more categories of WOTUS under the amended 2023 rule regulatory regime conforming with the Supreme Court's decision in *Sackett v. EPA*.

#### 5.4.2 NRPWs

Of the 22 open water features delineated within the Project, 17 are considered to be NRPWs. These open water features are likely man-made farm ponds surrounded entirely by uplands with no CSC to any downstream waters identified in paragraphs (a)(1) through (a)(5) of the amended 2023 rule regulations. These open water features do not meet one or more categories of WOTUS under the amended 2023 rule regulatory regime conforming with the Supreme Court's decision in *Sackett v. EPA*. These open waters also do not meet any of the interstate commerce

## SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

factors in paragraph (a)(1)(iii) of the amended 2023 rule regulations. Therefore, these 17 open water features are not considered to be WOTUS.

### 6.0 CONCLUSION

Stantec conducted a delineation of potential WOTUS within the Project area located in Metcalfe County and Monroe County, Kentucky. The purpose and objective of the wetland and waterbody delineation was to identify the extent and location of potential jurisdictional wetlands and waterbodies within the Project area.

20 RPW wetlands, totaling 13.60 acres, 102 RPW stream segments, totaling 48,161.19 linear feet, and 5 RPW open water features, totaling 0.92 acres, were identified.

Stantec's opinion regarding the presence/absence of jurisdictional WOTUS and isolated features is a preliminary determination. Only the USACE/EPA can provide an official determination of the presence and extent of jurisdictional WOTUS. Wetlands that are considered WOTUS are subject to regulation under Section 404 of the CWA and the jurisdictional regulatory authority lies with the USACE with confirmation by EPA. Stantec recommends that Summer Shade Solar LLC contact the USACE Louisville District for final jurisdictional review and concurrence with Stantec's opinion regarding the presence/absence of WOTUS within the Project area prior to construction activities associated with this Project.

## SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

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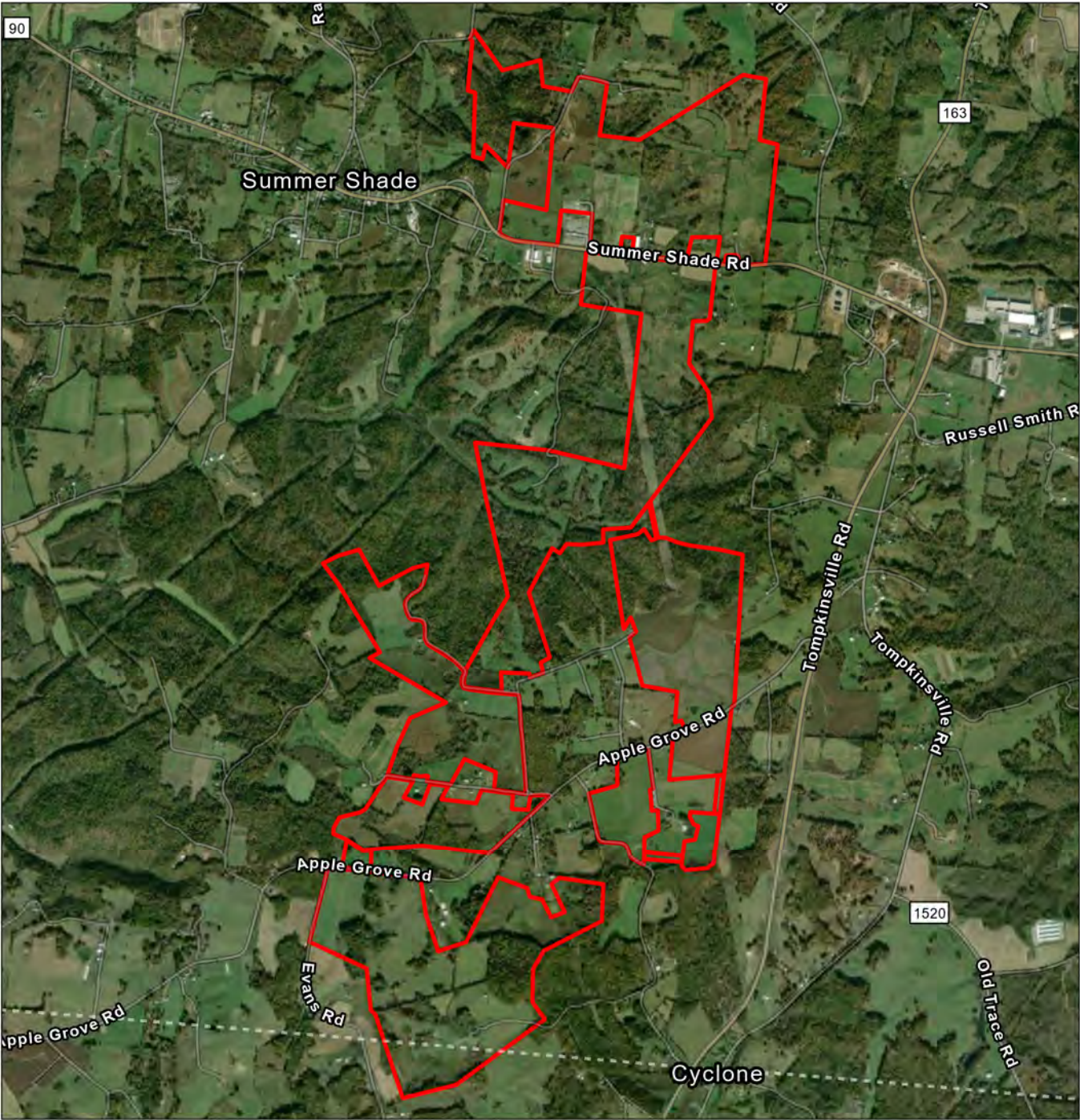
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# APPENDICES

## SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

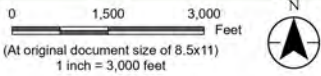
### Appendix A FIGURES





**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Hybrid Basemap

**Legend**  
 Project Boundary

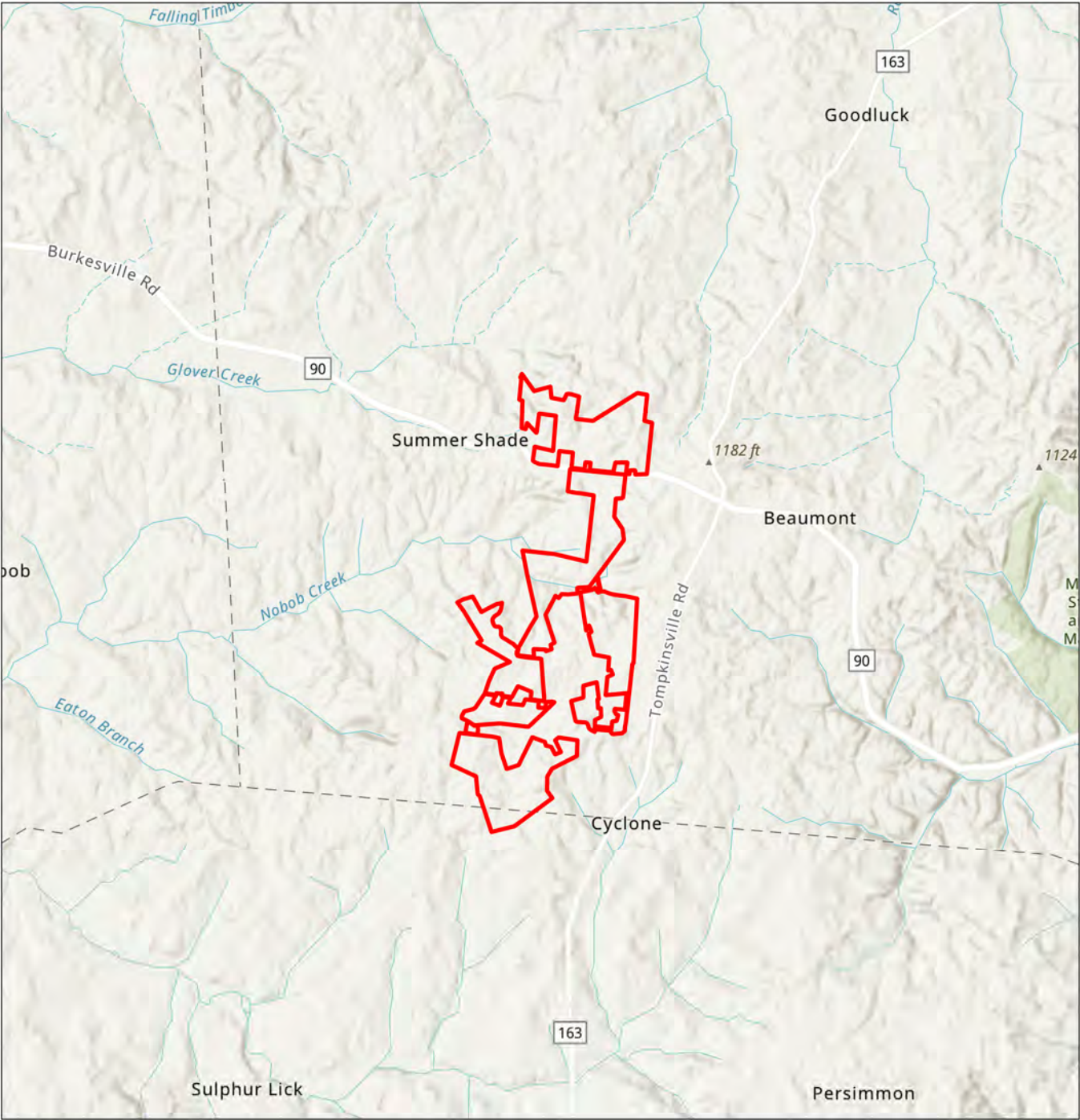


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**Prepared by MNA on 2024-07-08**  
**TR by KC on 2024-07-09**  
**IR by SPK on 2024-07-09**

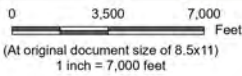
**Client/Project** Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report  
**Figure No.** 172658275

**Title**  
**Project Overview Map**





**Legend**  
 Project Boundary



*Project Location* Metcalfe and Monroe Counties, Kentucky  
*Prepared by MNA on 2024-07-08*  
*TR by KC on 2024-07-09*  
*IR by SPK on 2024-07-09*  
*Client/Project* Summer Shade Solar, LLC  
*172658275*

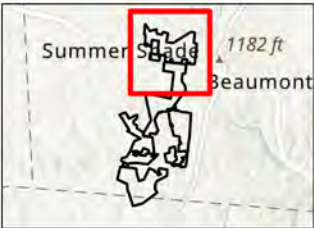
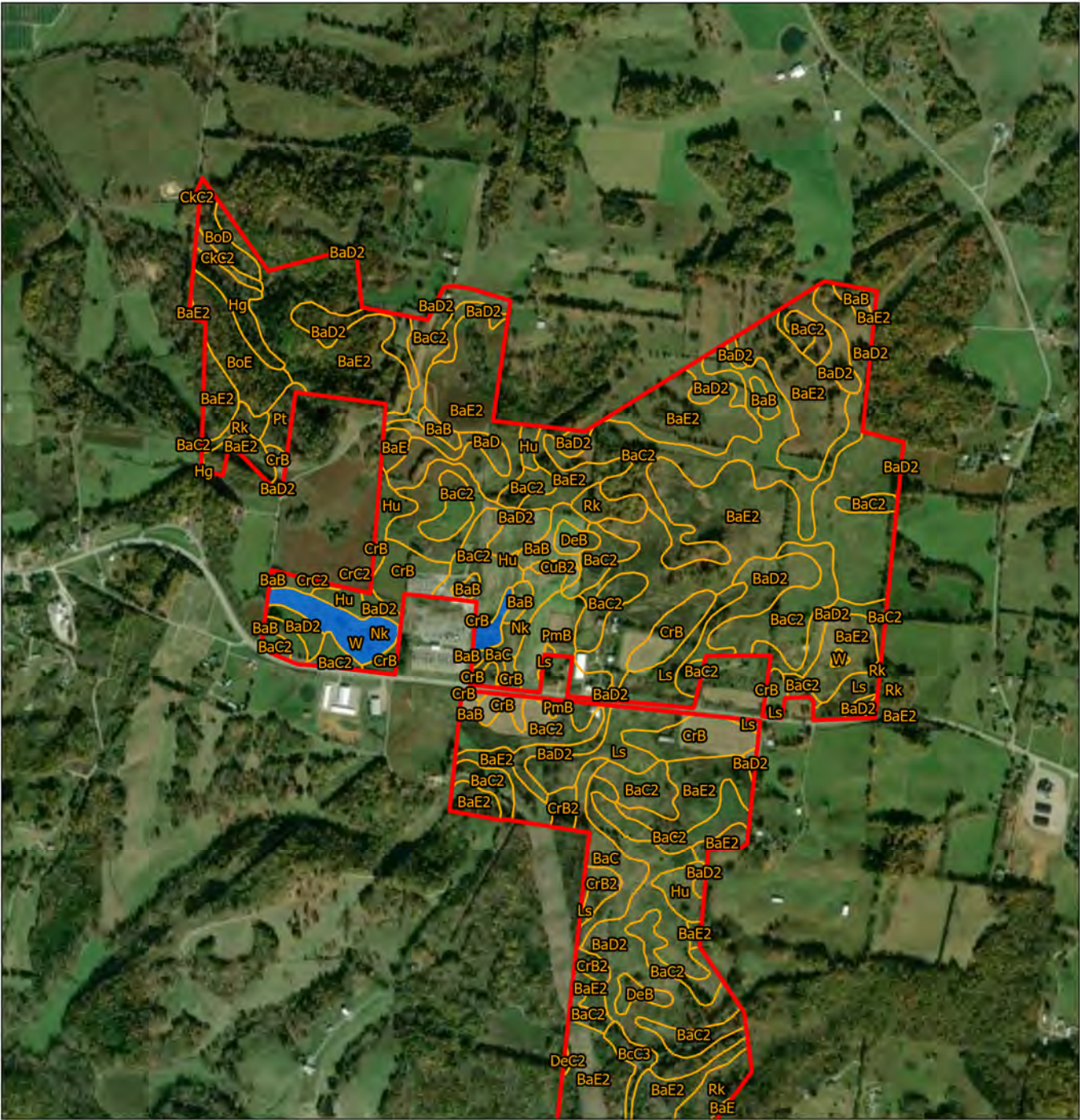
*Summer Shade Solar Project*  
*Wetland and Waterbody Delineation Report*  
*Figure No.*  
**2**

*Title*  
**Project Topographic Overview Map**

**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Topographic Basemap

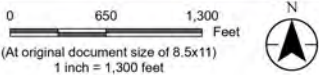
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**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar  
LLC, NRCS  
3. Background: Esri Aerial Imagery Basemap

**Legend**  
Project Boundary  
NRCS Soil Series  
Hydric Soils

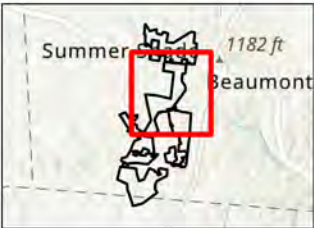
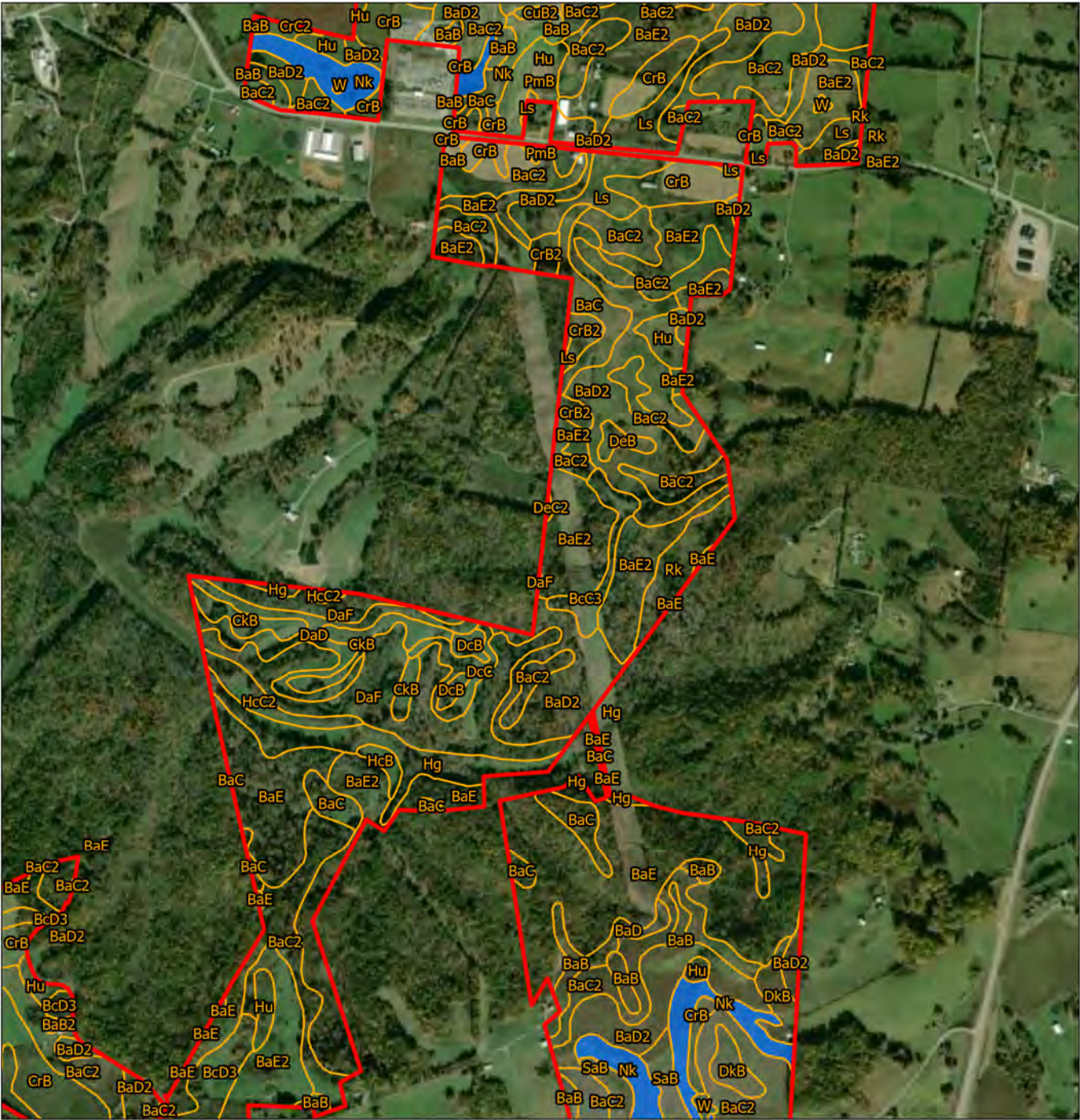


**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky  
**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09  
172658275

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report  
**Figure No.**  
**3**

**Title**  
**Natural Resources Conservation  
Service (NRCS) Soil Survey Data Map**





- Legend**
- Project Boundary
  - NRCS Soil Series
  - Hydric Soils

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1 inch = 1,300 feet



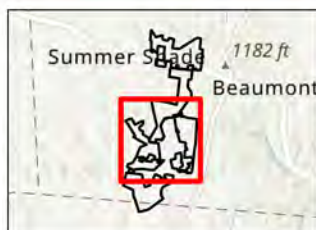
Project Location Metcalfe and Monroe Counties, Kentucky  
Prepared by MNA on 2024-07-08  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09  
172658275

Client/Project Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report  
Figure No. 4

**Natural Resources Conservation Service (NRCS) Soil Survey Data Map**

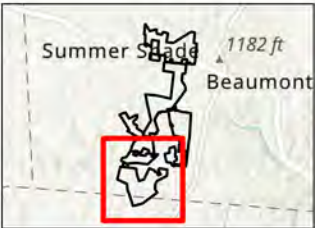
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  - Background: Esri Aerial Imagery Basemap





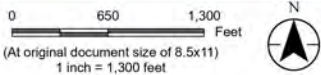
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**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar  
LLC, NRCS  
3. Background: Esri Aerial Imagery Basemap

**Legend**  
 Project Boundary  
 NRCS Soil Series  
 Hydric Soils



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky  
**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09  
172658275

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report  
**Figure No.**  
**6**

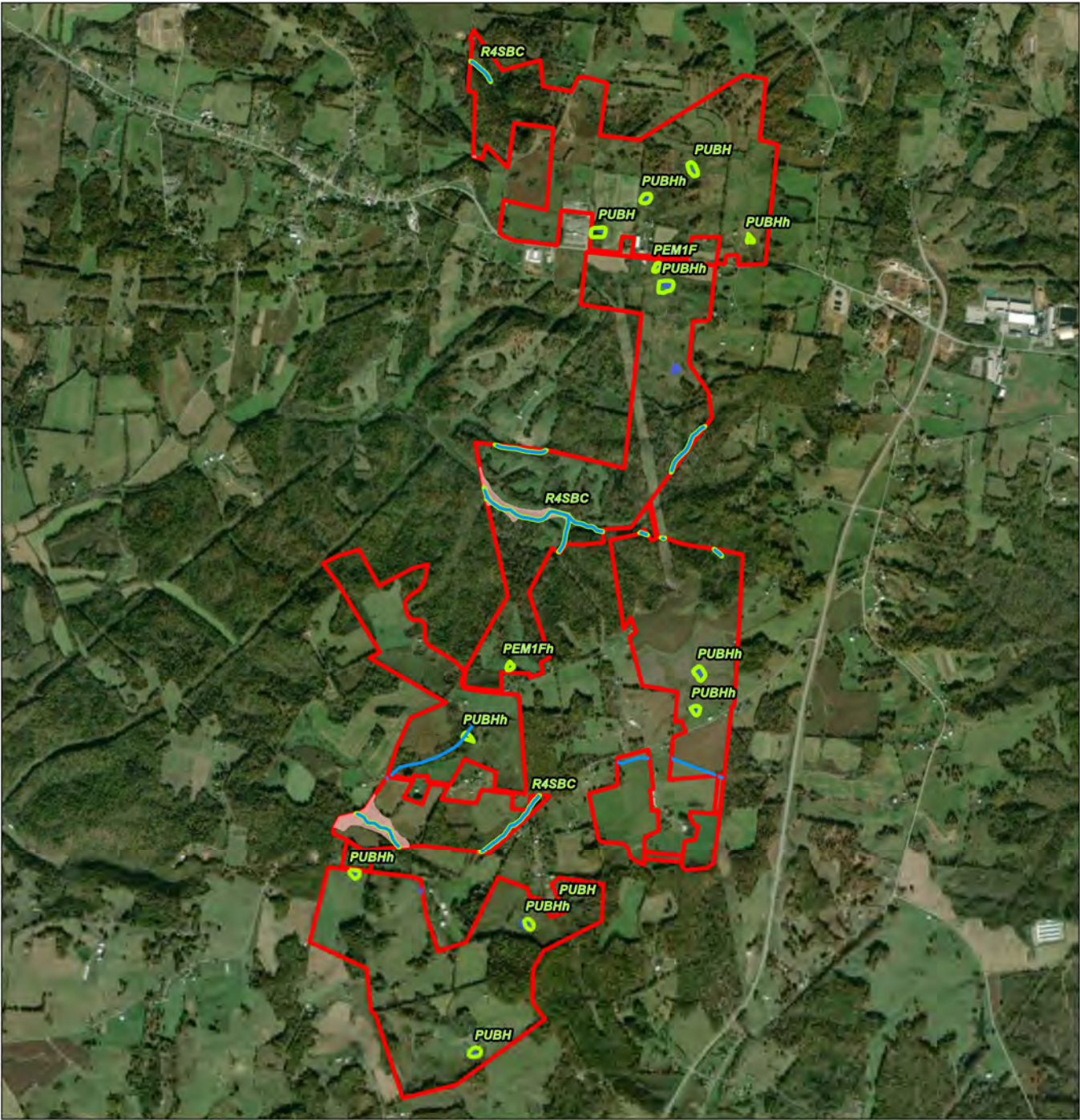
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Service (NRCS) Soil Survey Data Map**

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**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar  
LLC, NHD, NWI, FEMA  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Project Boundary
  - NHD Streams
  - NHD Waterbodies Update
  - NWI Wetlands
  - FEMA 100-year Floodplain

0 1,500 3,000 Feet  
(At original document size of 8.5x11)  
1 inch = 3,000 feet



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

Prepared by MNA on 2024-07-08  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
7

**Title**  
National Wetlands Inventory (NWI), National  
Hydrography Database (NHD), and Federal  
Emergency Management Agency (FEMA) Map

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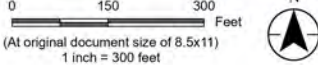




**Notes**  
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2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties, Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
8

**Title**  
Wetland and Waterbody Delineation Map

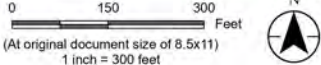




**Notes**  
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2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalf and Monroe Counties, Kentucky

**Prepared by MNA on 2024-07-08**  
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IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
9

**Title**  
Wetland and Waterbody Delineation Map

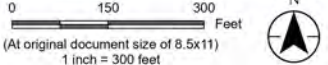




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3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties, Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
**10**

**Title**  
**Wetland and Waterbody Delineation Map**

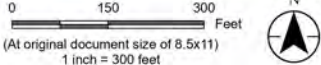




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2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalf and Monroe Counties, Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
11

**Title**  
Wetland and Waterbody Delineation Map





**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

**Legend**

**Delineated Streams**

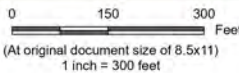
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- Jurisdictional - Intermittent
- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

**Delineated Wetlands**

- Jurisdictional - PEM
- Jurisdictional - PFO
- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

**Soil Data Points**

- Upland
- Wetland
- Culverts
- Inlet
- Outlet



**Project Location**  
Metcalf and Monroe Counties,  
Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
**12**

**Title**  
**Wetland and Waterbody Delineation Map**





**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

**Legend**

**Delineated Streams**

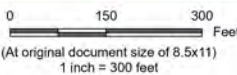
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- Jurisdictional - Intermittent
- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

**Delineated Wetlands**

- Jurisdictional - PEM
- Jurisdictional - PFO
- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

**Soil Data Points**

- Upland
- Wetland
- Culverts
- Inlet
- Outlet



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
**13**

**Title**  
**Wetland and Waterbody Delineation Map**

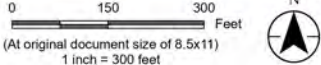




**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties, Kentucky

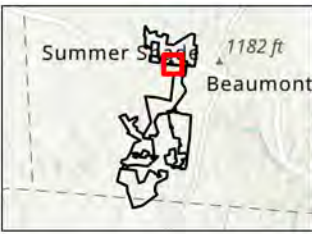
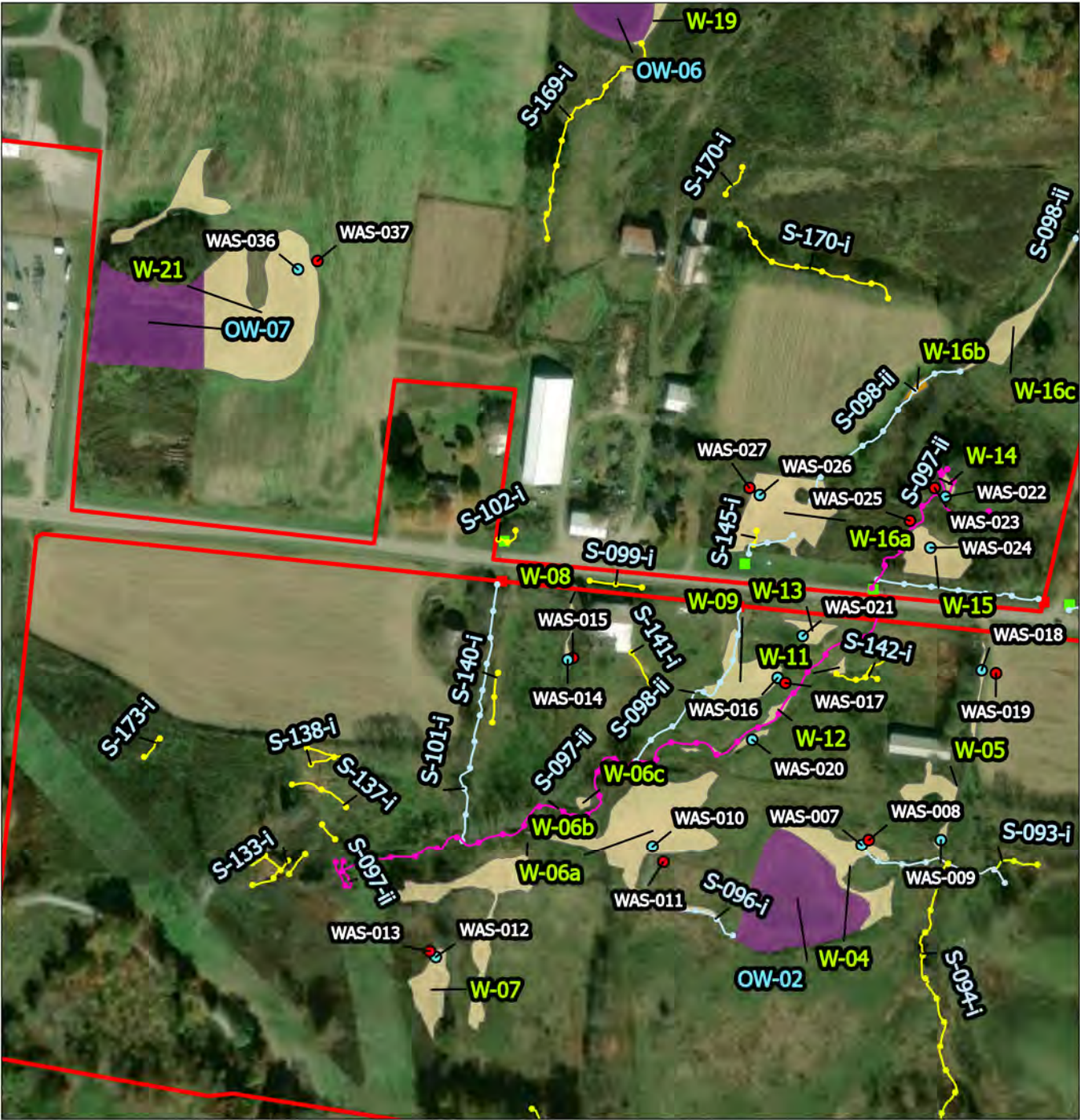
**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
14

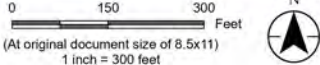
**Title**  
Wetland and Waterbody Delineation Map





**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional
- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalf and Monroe Counties, Kentucky

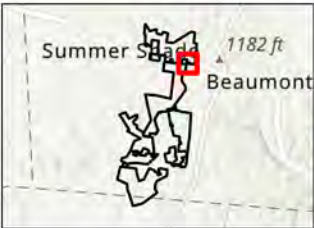
**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
15

**Title**  
Wetland and Waterbody Delineation Map

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09  
172658275

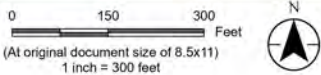




**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

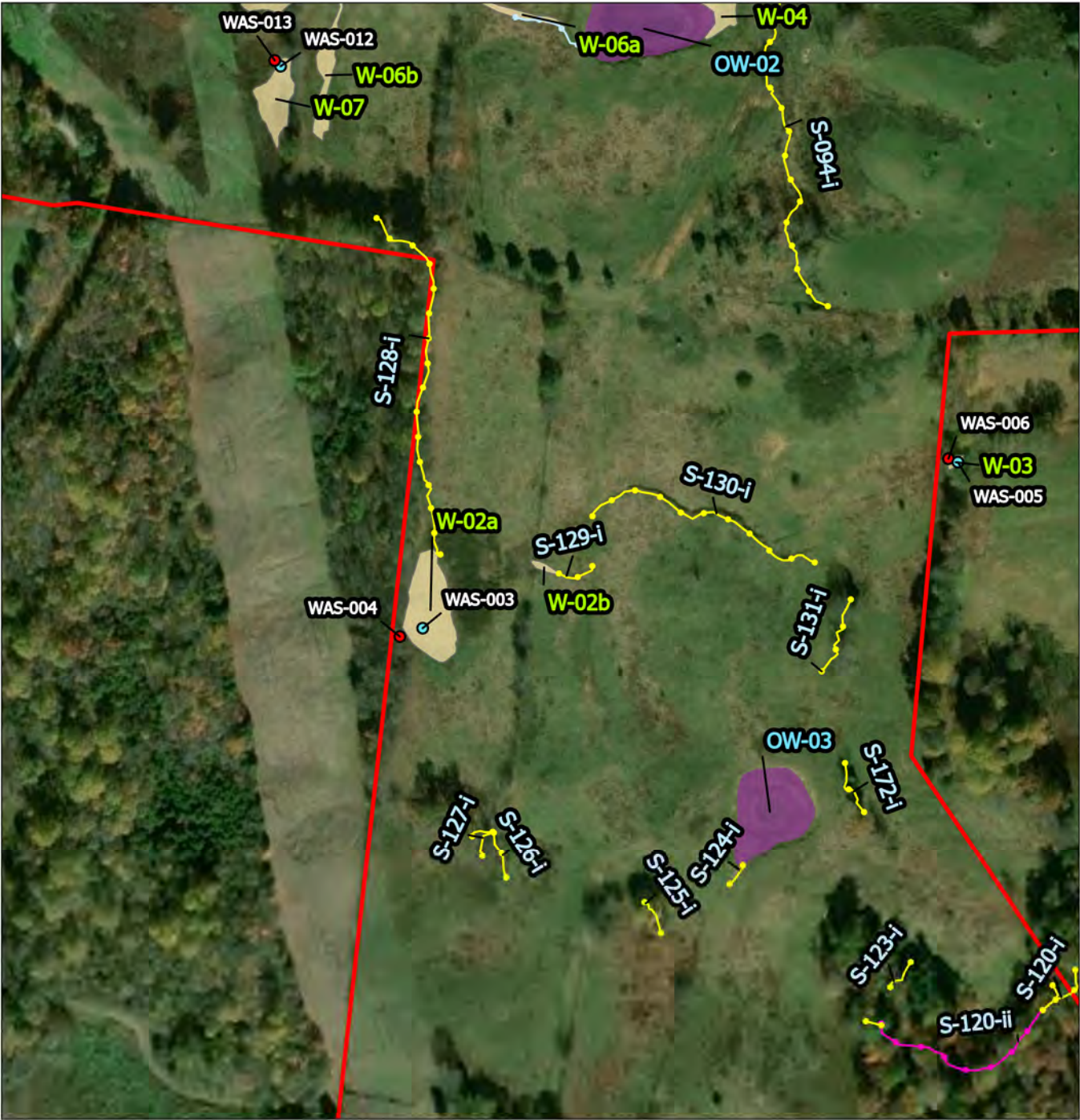
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**TR by KC on 2024-07-09**  
**IR by SPK on 2024-07-09**

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
**16**

**Title**  
**Wetland and Waterbody Delineation Map**

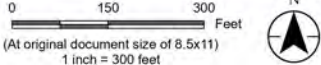




**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalf and Monroe Counties,  
Kentucky

**Prepared by MNA on 2024-07-08**  
**TR by KC on 2024-07-09**  
**IR by SPK on 2024-07-09**

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
**17**

**Title**  
**Wetland and Waterbody Delineation Map**

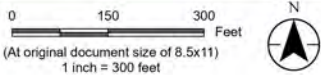




**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties, Kentucky

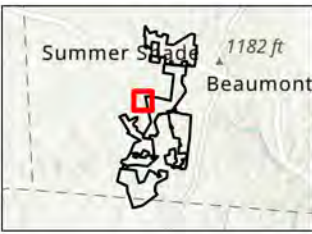
**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
18

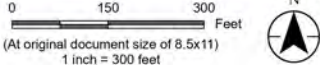
**Title**  
Wetland and Waterbody Delineation Map





**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional
- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties, Kentucky

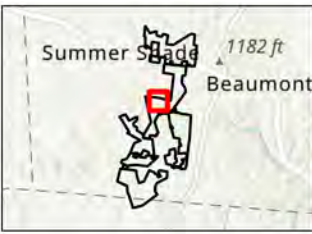
**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
19

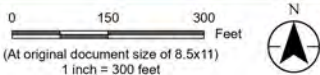
**Title**  
Wetland and Waterbody Delineation Map





**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional
- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties, Kentucky

**Prepared by MNA on 2024-07-08**  
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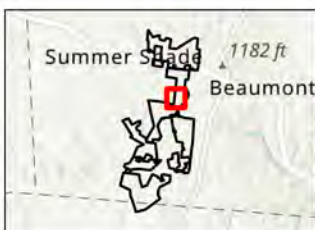
**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
**20**

**Title**  
**Wetland and Waterbody Delineation Map**

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Page 14 of 42





**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

**Legend**

**Delineated Streams**

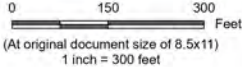
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- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

**Delineated Wetlands**

- Jurisdictional - PEM
- Jurisdictional - PFO
- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

**Soil Data Points**

- Upland
- Wetland
- Culverts
- Inlet
- Outlet



**Project Location**  
Metcalf and Monroe Counties, Kentucky  
**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09  
172658275

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
**22**  
**Title**  
**Wetland and Waterbody Delineation Map**



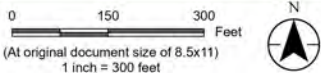
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**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

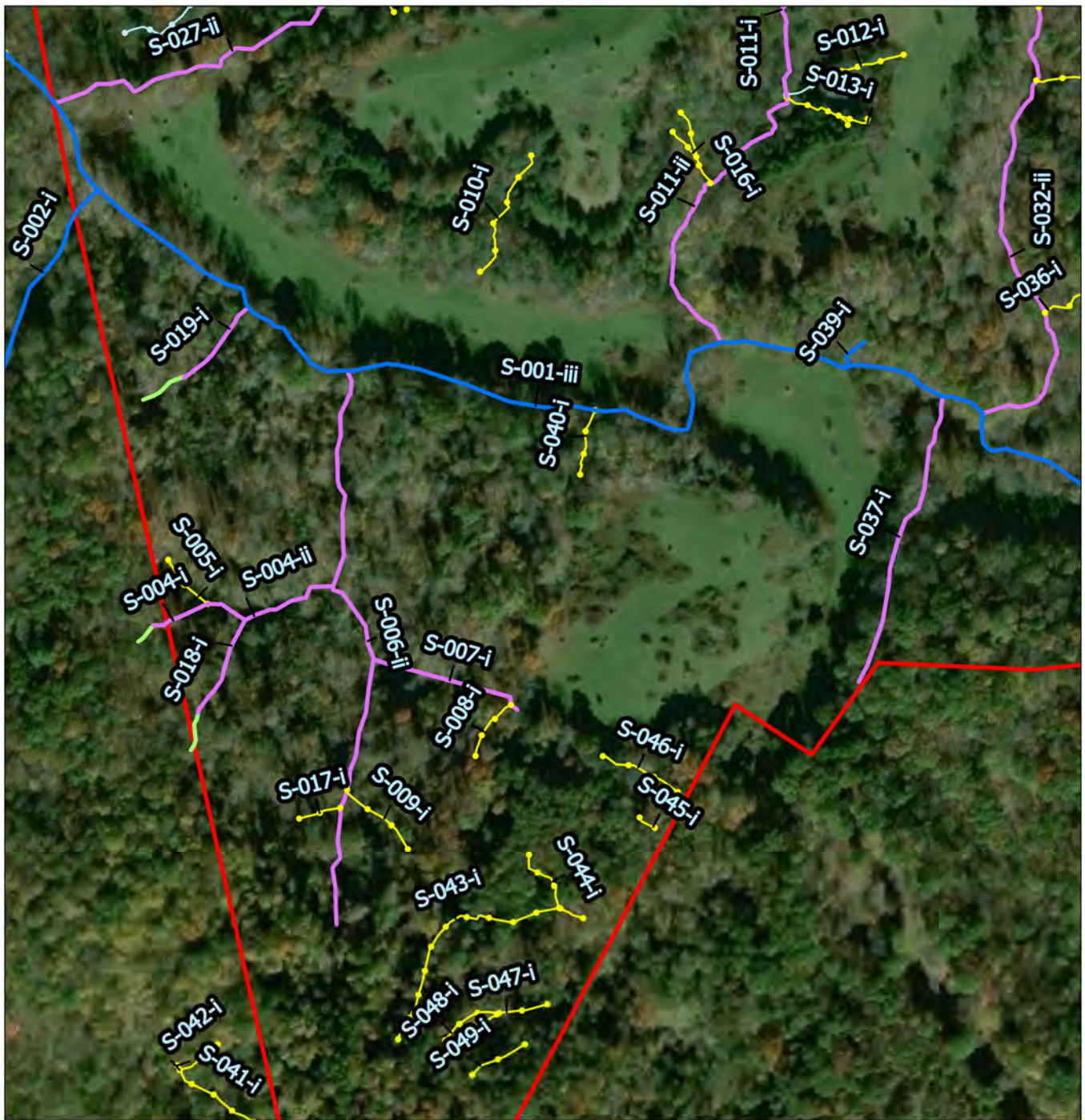
**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
**23**

**Title**  
**Wetland and Waterbody Delineation Map**





**Notes**  
 1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
 2. Data Sources: Stantec, Summer Shade Solar LLC  
 3. Background: Esri Aerial Imagery Basemap

#### Legend

##### Delineated Streams

- Jurisdictional - Ephemeral
- Jurisdictional - Intermittent
- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

##### Delineated Wetlands

- Jurisdictional - PEM
- Jurisdictional - PFO
- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

##### Soil Data Points

- Upland
- Wetland

##### Culverts

- Inlet
- Outlet

0 150 300 Feet  
 (At original document size of 8.5x11)  
 1 inch = 300 feet



**Project Location**  
 Metcalfe and Monroe Counties,  
 Kentucky

**Prepared by MNA on 2024-07-08**  
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 IR by SPK on 2024-07-09

**Client/Project**  
 Summer Shade Solar, LLC  
 Summer Shade Solar Project  
 Wetland and Waterbody Delineation Report

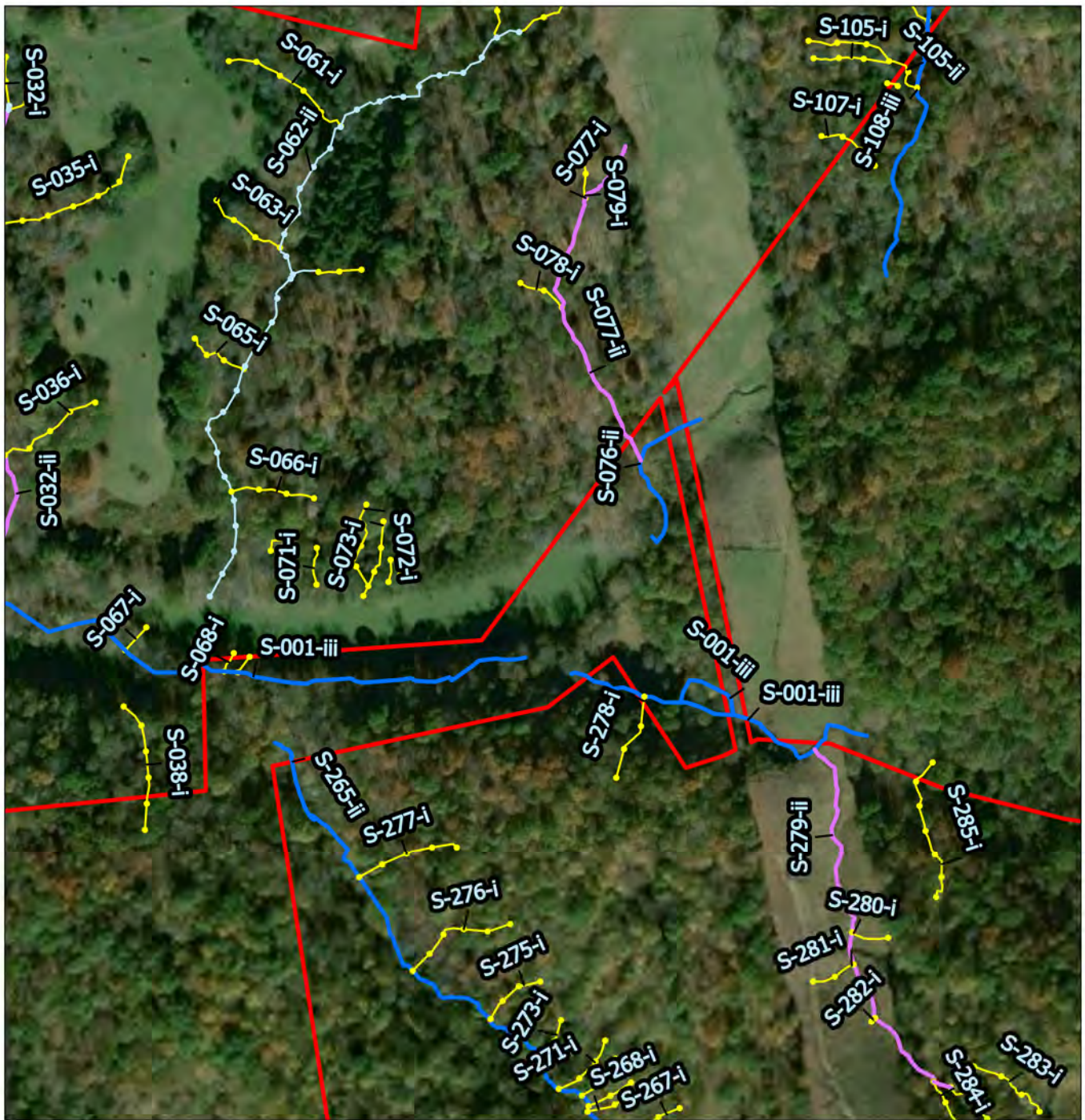
**Figure No.**  
 24

**Title**  
 Wetland and Waterbody Delineation Map

**Page 17 of 42**

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**Notes**  
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 Kentucky FIPS 1600 Feet  
 2. Data Sources: Stantec, Summer Shade Solar LLC  
 3. Background: Esri Aerial Imagery Basemap

#### Legend

##### Delineated Streams

- Jurisdictional - Ephemeral
- Jurisdictional - Intermittent
- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

##### Delineated Wetlands

- Jurisdictional - PEM
- Jurisdictional - PFO
- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

##### Soil Data Points

- Upland
- Wetland
- Culverts
- Inlet
- Outlet

0 150 300 Feet  
 (At original document size of 8.5x11)  
 1 inch = 300 feet



**Project Location**  
 Metcalfe and Monroe Counties,  
 Kentucky

**Prepared by MNA on 2024-07-08**  
 TR by KC on 2024-07-09  
 IR by SPK on 2024-07-09

**Client/Project**  
 Summer Shade Solar, LLC  
 Summer Shade Solar Project  
 Wetland and Waterbody Delineation Report

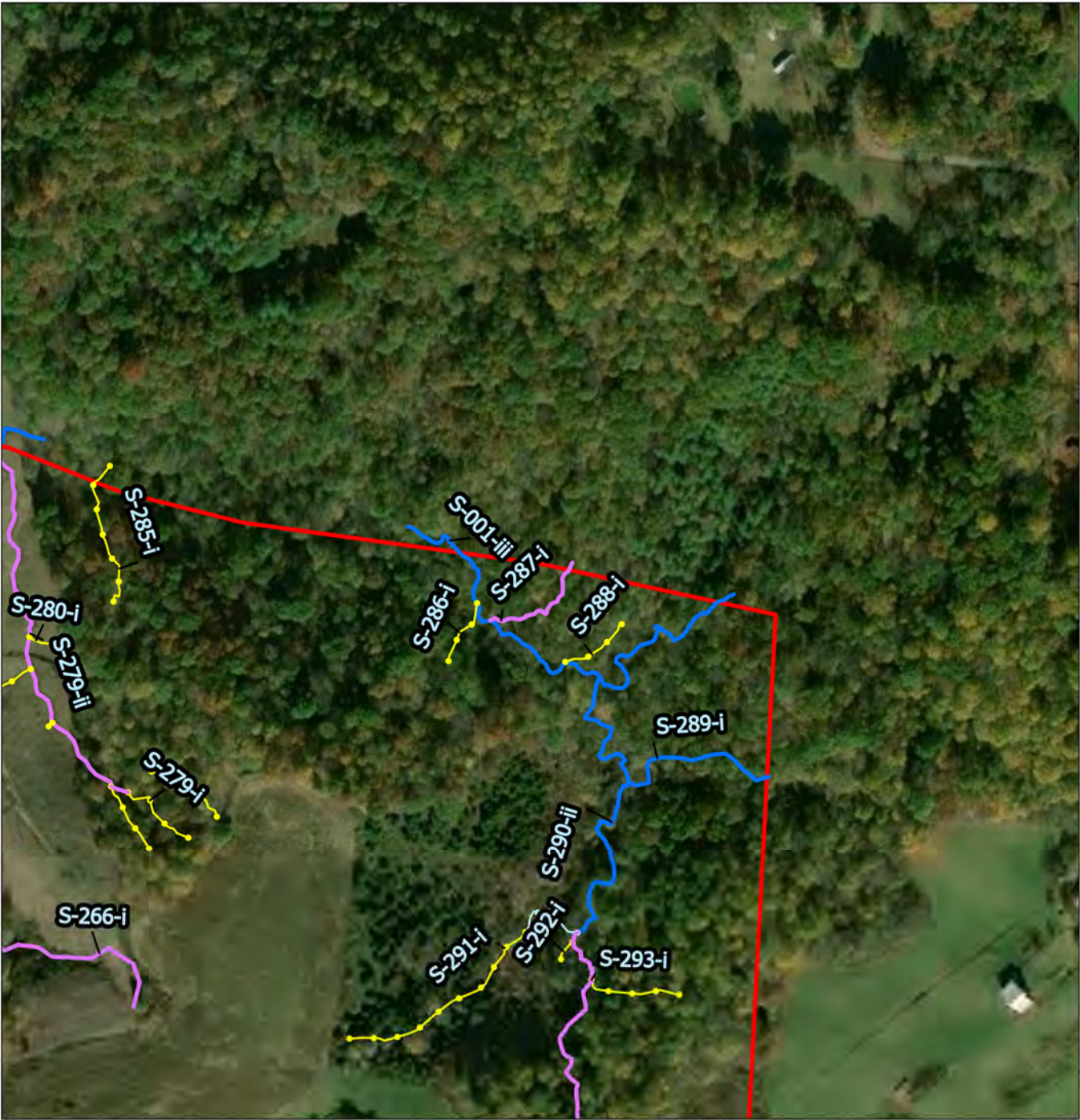
**Figure No.**  
 25

**Title**  
 Wetland and Waterbody Delineation Map

**Page**  
 18 of 42

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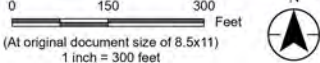




**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
**26**

**Title**  
**Wetland and Waterbody Delineation Map**





**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

**Legend**

**Delineated Streams**

- Jurisdictional - Ephemeral
- Jurisdictional - Intermittent
- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

**Delineated Wetlands**

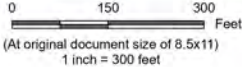
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- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

**Soil Data Points**

- Upland
- Wetland

**Culverts**

- Inlet
- Outlet



**Project Location**  
Metcalf and Monroe Counties,  
Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
27

**Title**  
Wetland and Waterbody Delineation  
Map





**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

**Legend**

**Delineated Streams**

- Jurisdictional - Ephemeral
- Jurisdictional - Intermittent
- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

**Delineated Wetlands**

- Jurisdictional - PEM
- Jurisdictional - PFO
- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

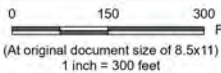
**Soil Data Points**

- Upland

- Wetland

**Culverts**

- Inlet
- Outlet



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

Prepared by MNA on 2024-07-08  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

Figure No. 172658275

**Title**  
Wetland and Waterbody Delineation  
Map

Page 21 of 42

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3. Background: Esri Aerial Imagery Basemap

**Legend**

**Delineated Streams**

- Jurisdictional - Ephemeral
- Jurisdictional - Intermittent
- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

**Delineated Wetlands**

- Jurisdictional - PEM
- Jurisdictional - PFO
- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

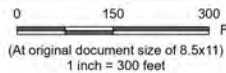
**Soil Data Points**

- Upland

- Wetland

**Culverts**

- Inlet
- Outlet



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
29

**Title**  
Wetland and Waterbody Delineation  
Map

**Prepared by** MNA on 2024-07-08  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**172658275**

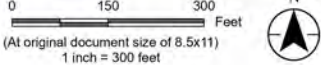




**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties, Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
30

**Title**  
Wetland and Waterbody Delineation Map





**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

**Legend**

**Delineated Streams**

- Jurisdictional - Ephemeral
- Jurisdictional - Intermittent
- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

**Delineated Wetlands**

- Jurisdictional - PEM
- Jurisdictional - PFO
- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

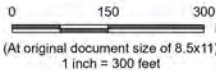
**Soil Data Points**

- Upland

- Wetland

**Culverts**

- Inlet
- Outlet



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

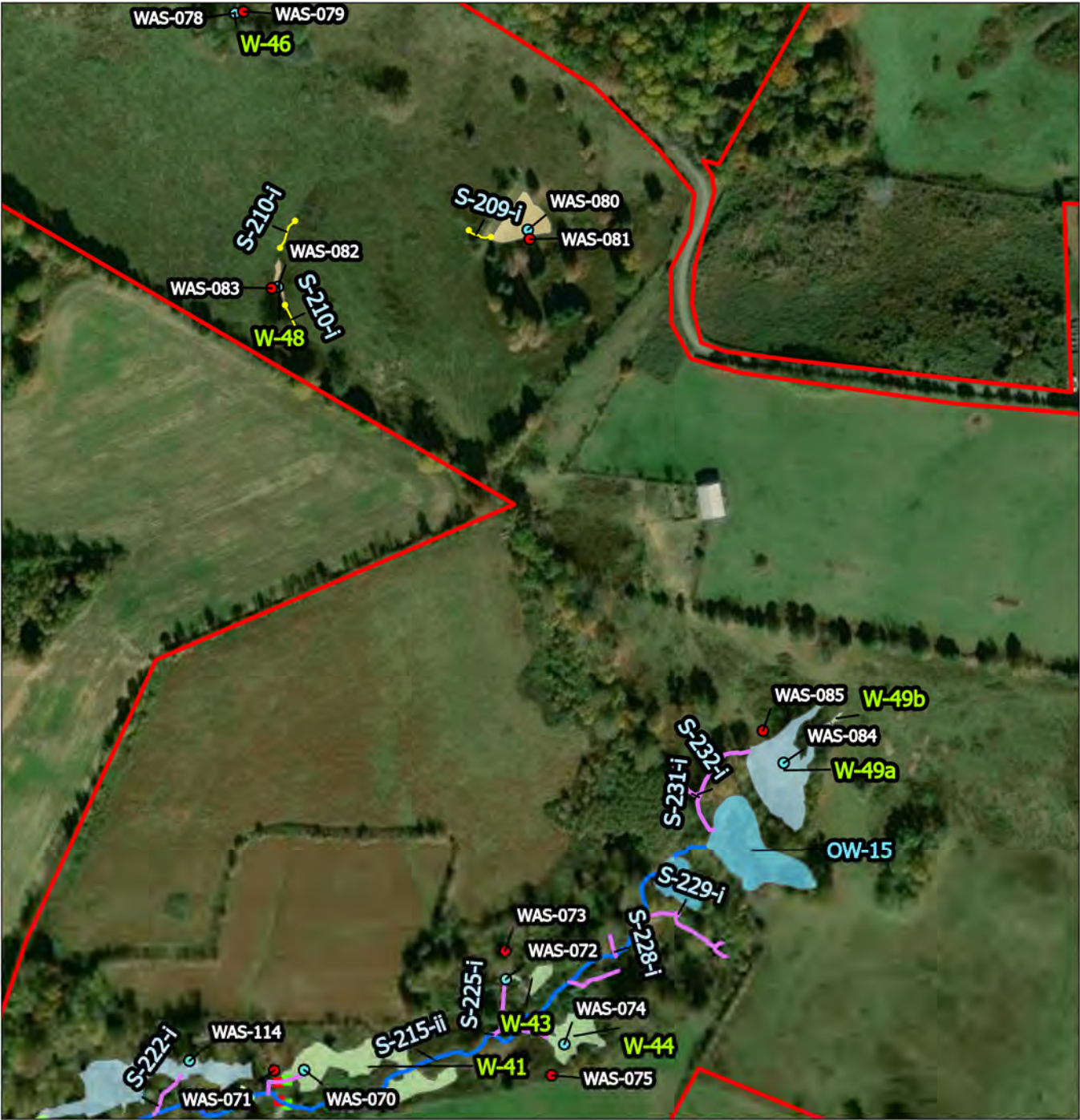
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**TR by KC on 2024-07-09**  
**IR by SPK on 2024-07-09**

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
**31**

**Title**  
**Wetland and Waterbody Delineation Map**

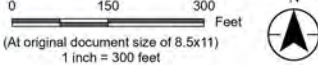




**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalf and Monroe Counties, Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
32

**Title**  
Wetland and Waterbody Delineation Map





**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

**Legend**

**Delineated Streams**

- Jurisdictional - Ephemeral
- Jurisdictional - Intermittent
- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

**Delineated Wetlands**

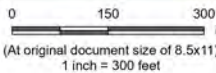
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- Jurisdictional - PFO
- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

**Soil Data Points**

- Upland
- Wetland

**Culverts**

- Inlet
- Outlet



**Project Location**  
Metcalf and Monroe Counties,  
Kentucky

Prepared by MNA on 2024-07-08  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
33  
**Title**  
Wetland and Waterbody Delineation Map

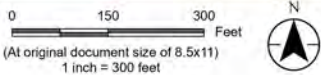




**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

**Prepared by MNA on 2024-07-08**  
**TR by KC on 2024-07-09**  
**IR by SPK on 2024-07-09**  
172658275

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
**34**  
**Title**  
**Wetland and Waterbody Delineation Map**





**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

**Legend**

**Delineated Streams**

- Jurisdictional - Ephemeral
- Jurisdictional - Intermittent
- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

**Delineated Wetlands**

- Jurisdictional - PEM
- Jurisdictional - PFO
- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

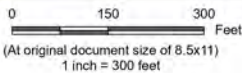
**Soil Data Points**

- Upland

- Wetland

**Culverts**

- Inlet
- Outlet



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

Prepared by MNA on 2024-07-08  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
35

**Title**  
Wetland and Waterbody Delineation  
Map

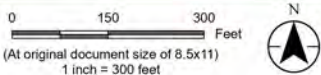




**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09  
172658275

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
36

**Title**  
Wetland and Waterbody Delineation  
Map

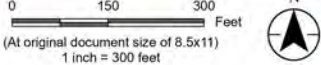




**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties, Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
37

**Title**  
Wetland and Waterbody Delineation Map



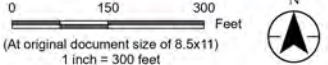
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**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalf and Monroe Counties,  
Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

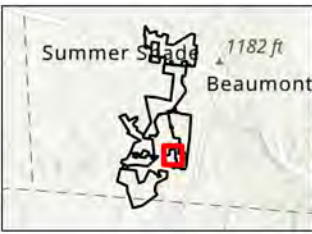
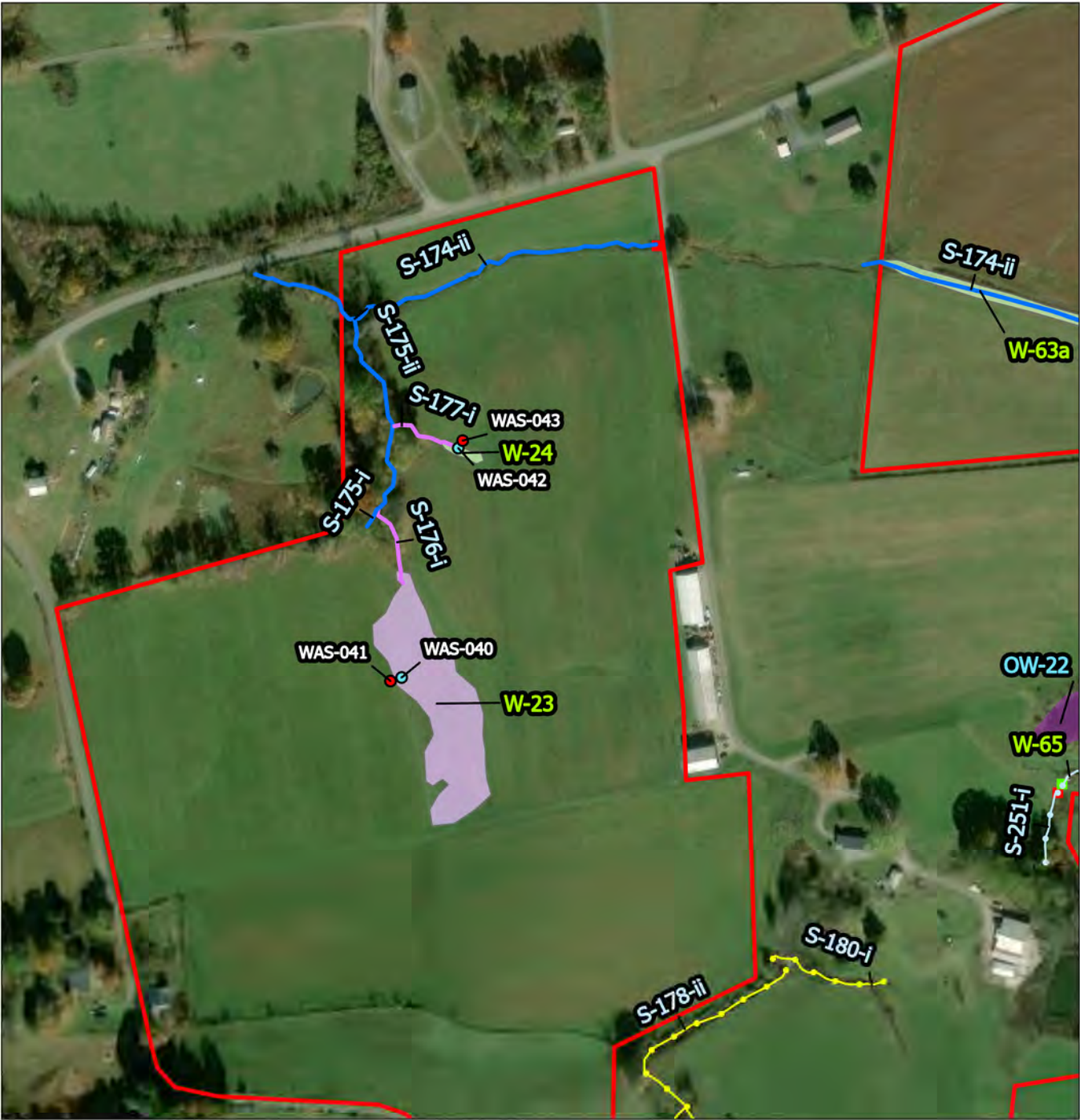
**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
38

**Title**  
Wetland and Waterbody Delineation  
Map

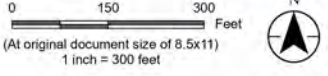
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**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional
- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

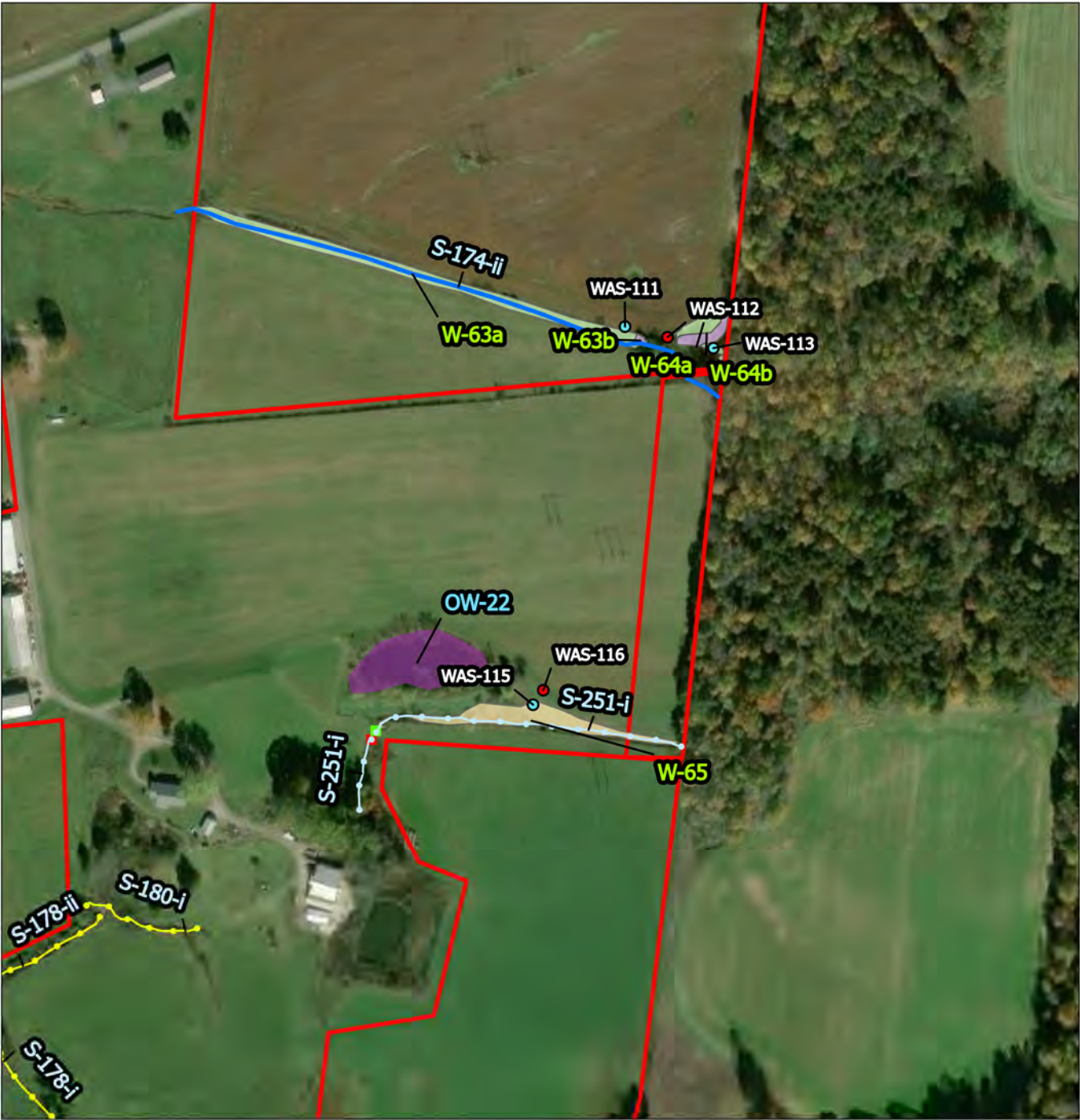
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TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
39

**Title**  
Wetland and Waterbody Delineation  
Map





**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

**Legend**

**Delineated Streams**

- Jurisdictional - Ephemeral
- Jurisdictional - Intermittent
- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

**Delineated Wetlands**

- Jurisdictional - PEM
- Jurisdictional - PFO
- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

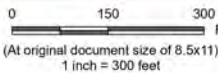
**Soil Data Points**

- Upland

- Wetland

**Culverts**

- Inlet
- Outlet

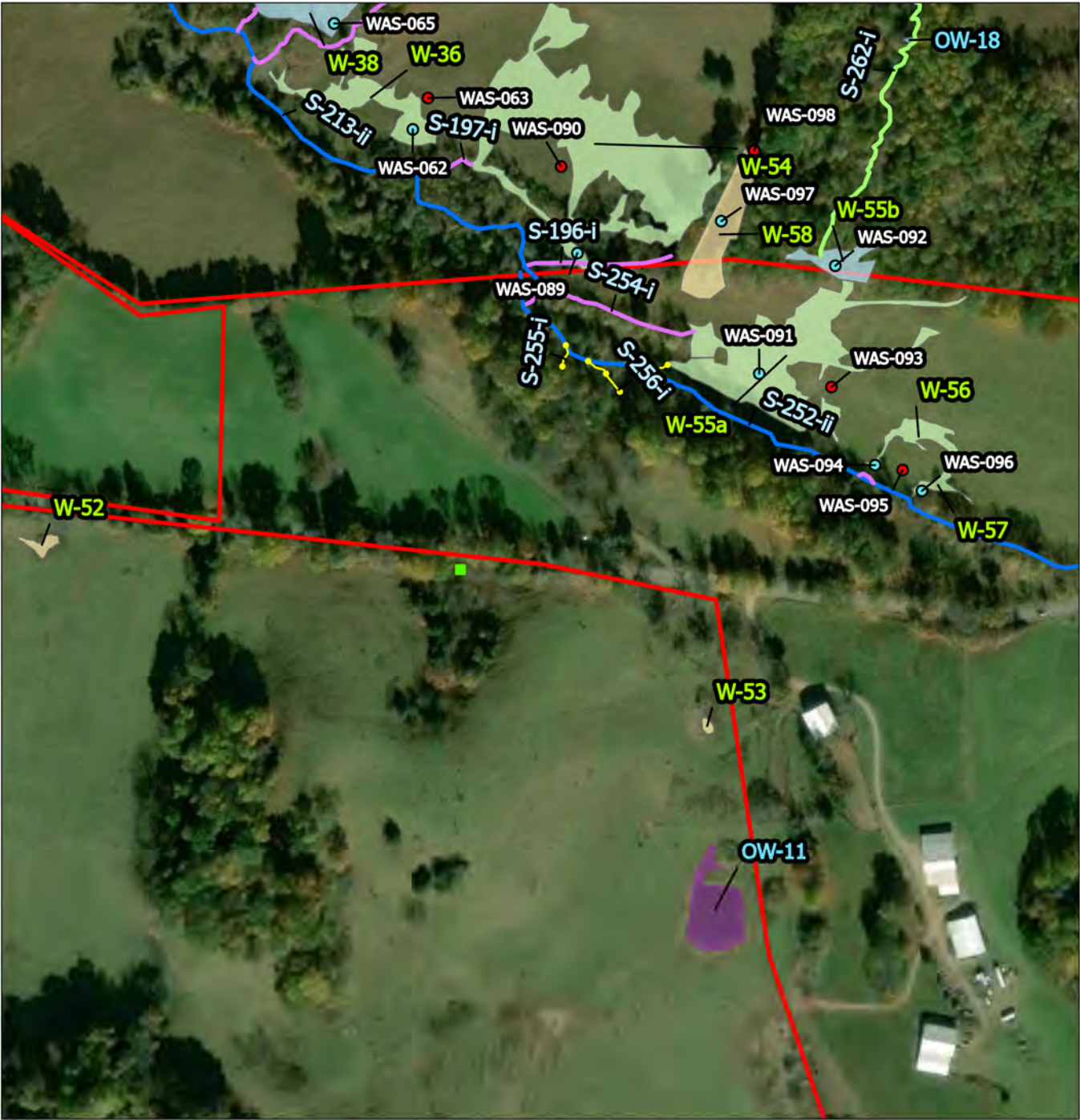


**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
40  
**Title**  
Wetland and Waterbody Delineation  
Map

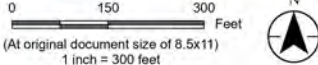




**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties, Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

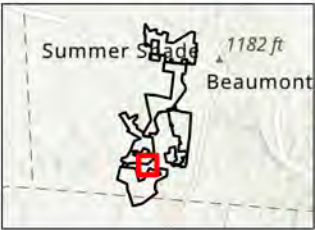
**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
41

**Title**  
Wetland and Waterbody Delineation Map

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**Notes**  
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Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

**Legend**

**Delineated Streams**

- Jurisdictional - Ephemeral
- Jurisdictional - Intermittent
- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

**Delineated Wetlands**

- Jurisdictional - PEM
- Jurisdictional - PFO
- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

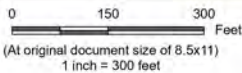
**Soil Data Points**

- Upland

- Wetland

**Culverts**

- Inlet
- Outlet



**Project Location**  
Metcalf and Monroe Counties,  
Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09  
172658275

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
42

**Title**  
Wetland and Waterbody Delineation  
Map

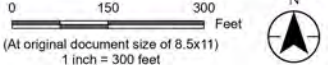




**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties, Kentucky

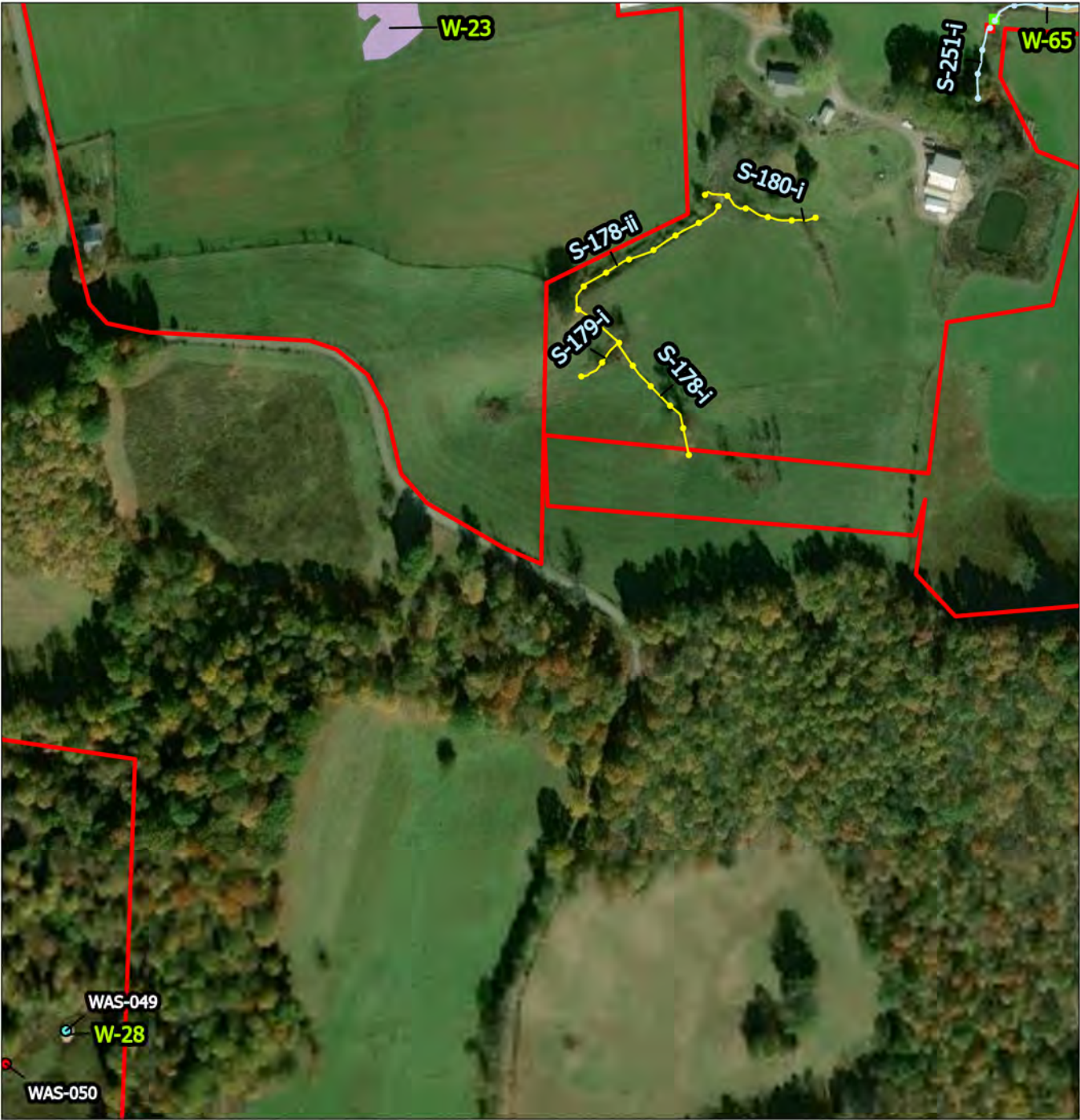
**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
43

**Title**  
Wetland and Waterbody Delineation Map

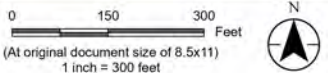




**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalf and Monroe Counties, Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
44

**Title**  
Wetland and Waterbody Delineation Map





**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

**Legend**

**Delineated Streams**

- Jurisdictional - Ephemeral
- Jurisdictional - Intermittent
- Jurisdictional - Perennial
- Non-Jurisdictional - Ephemeral
- Non-Jurisdictional - Intermittent
- Non-Jurisdictional - Perennial
- Non-Jurisdictional - Upland Drainage
- Delineated Open Water
- Jurisdictional
- Non-Jurisdictional

**Delineated Wetlands**

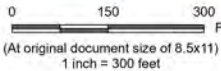
- Jurisdictional - PEM
- Jurisdictional - PFO
- Jurisdictional - PSS
- Non-Jurisdictional - PEM
- Non-Jurisdictional - PFO

**Soil Data Points**

- Upland
- Wetland

**Culverts**

- Inlet
- Outlet



**Project Location**  
Metcalf and Monroe Counties,  
Kentucky

**Prepared by MNA on 2024-07-08**  
**TR by KC on 2024-07-09**  
**IR by SPK on 2024-07-09**

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
**45**

**Title**  
**Wetland and Waterbody Delineation Map**





**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet

0 150 300 Feet  
(At original document size of 8.5x11)  
1 inch = 300 feet



**Project Location**  
Metcalf and Monroe Counties,  
Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
46

**Title**  
Wetland and Waterbody Delineation  
Map



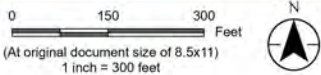
C:\Users\mangel\Documents\Projects\2024\Summer\_Shade\_Solar\SummerShadeSolar\_Map\SummerShadeSolar\_Map.aprx Revised: 2024-07-08 By: mangel



**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties, Kentucky

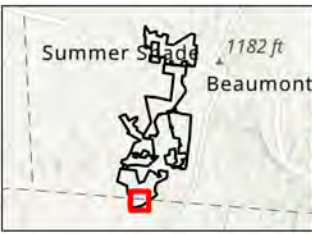
**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09  
172658275

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
47

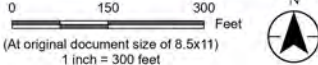
**Title**  
Wetland and Waterbody Delineation Map





**Notes**  
1. Coordinate System: NAD 1983 StatePlane  
Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional
- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalfe and Monroe Counties,  
Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
48

**Title**  
Wetland and Waterbody Delineation  
Map



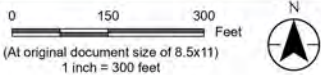
C:\Users\mangel\Documents\Projects\_2024\Summer\_Shade\_Solar\SummerShadeSolar\_Maps.aprx Revised: 2024-07-08 By: mangel



**Notes**  
1. Coordinate System: NAD 1983 StatePlane Kentucky FIPS 1600 Feet  
2. Data Sources: Stantec, Summer Shade Solar LLC  
3. Background: Esri Aerial Imagery Basemap

- Legend**
- Delineated Streams**
- Jurisdictional - Ephemeral
  - Jurisdictional - Intermittent
  - Jurisdictional - Perennial
  - Non-Jurisdictional - Ephemeral
  - Non-Jurisdictional - Intermittent
  - Non-Jurisdictional - Perennial
  - Non-Jurisdictional - Upland Drainage
- Delineated Open Water**
- Jurisdictional
  - Non-Jurisdictional

- Delineated Wetlands**
- Jurisdictional - PEM
  - Jurisdictional - PFO
  - Jurisdictional - PSS
  - Non-Jurisdictional - PEM
  - Non-Jurisdictional - PFO
- Soil Data Points**
- Upland
  - Wetland
- Culverts**
- Inlet
  - Outlet



**Project Location**  
Metcalf and Monroe Counties, Kentucky

**Prepared by MNA on 2024-07-08**  
TR by KC on 2024-07-09  
IR by SPK on 2024-07-09

**Client/Project**  
Summer Shade Solar, LLC  
Summer Shade Solar Project  
Wetland and Waterbody Delineation Report

**Figure No.**  
49

**Title**  
Wetland and Waterbody Delineation Map



SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

## Appendix B WETLAND DETERMINATION DATA FORMS



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Reference to 1-69  
 Page 70 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: October 7, 2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-01  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.871969 Long: -85.684445 Datum: NAD 83 KY S  
 Soil Map Unit Name: BaE2 - Baxter gravelly silt loam, 20 to 30 percent slopes, eroded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Wetland 01 wet data point. Feature is located under power line ROW and is fed by STR-55			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</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:		



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-01

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	<input checked="" type="checkbox"/>	NA	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>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>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = _____	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>0</u>	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (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>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Woody Vine Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>														

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.

**Woody vine** – All woody vines greater than 3.28 ft in height.



[illegible]



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Replaces to 1-69  
 Page 73 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: October 7, 2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-02  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5%  
 Subregion (LRR or MLRA): LRR N Lat: 36.871986 Long: -85.684474 Datum: NAD 83 KY S  
 Soil Map Unit Name: BaE2 - Baxter gravelly silt loam, 20 to 30 percent slopes, eroded NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: WTL-01 Upland Data Point					

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is 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"/> 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"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-02

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	<input checked="" type="checkbox"/>	NA	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>67</u></td> <td>x 4 = <u>268</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>92</u> (A)</td> <td><u>338</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.7</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>20</u>	x 3 = <u>60</u>	FACU species <u>67</u>	x 4 = <u>268</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>92</u> (A)	<u>338</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>5</u>	x 2 = <u>10</u>																	
FAC species <u>20</u>	x 3 = <u>60</u>																	
FACU species <u>67</u>	x 4 = <u>268</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>92</u> (A)	<u>338</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <i>Symphyotricum pilosum</i>	<u>15</u>	_____	FAC	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <i>Vernonia gigantea</i>	<u>5</u>	_____	FAC															
3. <i>Eupatorium perfoliatum</i>	<u>5</u>	_____	FACW															
4. <i>Solanum carolinense</i>	<u>2</u>	_____	FACU															
5. <i>Digitaria sanguinalis</i>	<u>60</u>	<input checked="" type="checkbox"/>	FACU															
6. <i>Ambrosia artemisiifolia</i>	<u>5</u>	_____	FACU															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>92.0</u> = Total Cover 50% of total cover: <u>46.0</u> 20% of total cover: <u>18.4</u>																		
<b>Woody Vine Stratum (Plot size: <u>15</u> )</b>																		
1. <i>Rubus sp.</i>	<u>10</u>	_____	NA	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
<u>10.0</u> = Total Cover 50% of total cover: <u>5.0</u> 20% of total cover: <u>2.0</u>																		
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		



[illegible]

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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Replaces to 1-69  
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Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: October 8, 2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-03  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.875817 Long: -85.684332 Datum: NAD 83 KY S  
 Soil Map Unit Name: CrB2 - Crider silt loam, 2 to 6 percent slopes, eroded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Remarks: Ponded water due to recent rains.			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</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:		



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-03

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	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>100.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>60</u></td> <td>x 1 = <u>60</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</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>75</u> (A)</td> <td><u>105</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.4</u>	Total % Cover of:	Multiply by:	OBL species <u>60</u>	x 1 = <u>60</u>	FACW species <u>0</u>	x 2 = <u>0</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>75</u> (A)	<u>105</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>60</u>	x 1 = <u>60</u>																	
FACW species <u>0</u>	x 2 = <u>0</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>75</u> (A)	<u>105</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <i>Echinochloa crus-gali</i>	<u>15</u>	_____	FAC															
2. <i>Percicaria punctata</i>	<u>40</u>	<input checked="" type="checkbox"/>	OBL															
3. <i>Eleocharis obtusa</i>	<u>20</u>	<input checked="" type="checkbox"/>	OBL															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>75.0</u> = Total Cover 50% of total cover: <u>37.5</u> 20% of total cover: <u>15.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 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> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.														
				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														

[illegible]



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Replaces to 1-69  
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Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-08-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-04  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.875778 Long: -85.684485 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: WTL-02 Upland data point	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is 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"/> 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"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-04

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. <u>Juglans nigra</u>	25	✓	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)																
2. <u>Pecan</u>	10	✓	FACU																	
3. <u>Robinia pseudoacacia</u>	5		FACU	Total Number of Dominant Species Across All Strata: <u>5</u> (B)																
4. _____			NA	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40.0</u> (A/B)																
5. _____			NA																	
6. _____			NA																	
7. _____			NA																	
<u>40.0</u> = Total Cover 50% of total cover: <u>20.0</u> 20% of total cover: <u>8.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</u></td> </tr> <tr> <td>FACU species <u>45</u></td> <td>x 4 = <u>180</u></td> </tr> <tr> <td>UPL species <u>25</u></td> <td>x 5 = <u>125</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>380</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.0</u></td> </tr> </table>	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>25</u>	x 3 = <u>75</u>	FACU species <u>45</u>	x 4 = <u>180</u>	UPL species <u>25</u>	x 5 = <u>125</u>	Column Totals: <u>95</u> (A)	<u>380</u> (B)	Prevalence Index = B/A = <u>4.0</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>25</u>	x 3 = <u>75</u>																			
FACU species <u>45</u>	x 4 = <u>180</u>																			
UPL species <u>25</u>	x 5 = <u>125</u>																			
Column Totals: <u>95</u> (A)	<u>380</u> (B)																			
Prevalence Index = B/A = <u>4.0</u>																				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																				
1. _____			NA																	
2. _____			NA																	
3. _____			NA																	
4. _____			NA																	
5. _____			NA																	
6. _____			NA																	
7. _____			NA																	
8. _____			NA																	
9. _____			NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
<b>Herb Stratum</b> (Plot size: <u>5</u> )																				
1. <u>Sida rhombifolia</u>	25	✓	UPL	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Persicaria longiseta</u>	15	✓	FAC																	
3. <u>Verbesina occidentalis</u>	5		FACU																	
4. <u>Microstegium vimineum</u>	10	✓	FAC																	
5. _____			NA																	
6. _____			NA																	
7. _____			NA																	
8. _____			NA																	
9. _____			NA																	
10. _____			NA																	
11. _____			NA																	
<u>55.0</u> = Total Cover 50% of total cover: <u>27.5</u> 20% of total cover: <u>11.0</u>																				
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																				
1. _____			NA	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.   <b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>																
2. _____			NA																	
3. _____			NA																	
4. _____			NA																	
5. _____			NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
Remarks: (Include photo numbers here or on a separate sheet.)																				



[illegible]

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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 82 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-08-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-05  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.876705 Long: -85.680765 Datum: NAD 83 KY S  
 Soil Map Unit Name: BaD2 - Baxter gravelly silt loam, 12 to 20 percent slopes, eroded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Remarks:			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </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:		



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-05

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. <u><i>Celtis laevigata</i></u>	<u>30</u>	<input checked="" type="checkbox"/>	FACW	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>100.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>30.0</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>30</u></td> <td>x 2 = <u>60</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>35</u> (A)</td> <td><u>75</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.1</u>	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>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>35</u> (A)	<u>75</u> (B)
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>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>35</u> (A)	<u>75</u> (B)																	
50% of total cover: <u>15.0</u> 20% of total cover: <u>6.0</u>																		
Sapling/Shrub Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover																		
50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Herb Stratum (Plot size: <u>5</u> )																		
1. <u><i>Persicaria longiseta</i></u>	<u>5</u>	<input checked="" type="checkbox"/>	FAC	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 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> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>5.0</u> = Total Cover																		
50% of total cover: <u>2.5</u> 20% of total cover: <u>1.0</u>																		
Woody Vine Stratum (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover																		
50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)

Sparsely vegetated concave wetland

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

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

Hydric Soil Present? Yes ✓ No       

Eastern Mountains and Piedmont – Version 2.0



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Request to 1-69  
 Page 85 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-08-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-06  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.876726 Long: -85.680827 Datum: NAD 83 KY S  
 Soil Map Unit Name: BaD2 - Baxter gravelly silt loam, 12 to 20 percent slopes, eroded NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<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 type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)				
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)				
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)				
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Iron Deposits (B5)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)					
<input type="checkbox"/> Water-Stained Leaves (B9)					
<input type="checkbox"/> Aquatic Fauna (B13)					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____			Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-06

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Juglans nigra</u>	<u>20</u>	<input checked="" type="checkbox"/>	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	NA	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	NA	
4. _____	_____	_____	NA	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0</u> (A/B)
5. _____	_____	_____	NA	
6. _____	_____	_____	NA	
7. _____	_____	_____	NA	
<u>20.0</u> = Total Cover 50% of total cover: <u>10.0</u> 20% of total cover: <u>4.0</u>				<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>60</u> x 3 = <u>180</u> FACU species <u>30</u> x 4 = <u>120</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>90</u> (A) <u>300</u> (B) Prevalence Index = B/A = <u>3.3</u>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. _____	_____	_____	NA	
2. _____	_____	_____	NA	
3. _____	_____	_____	NA	
4. _____	_____	_____	NA	
5. _____	_____	_____	NA	
6. _____	_____	_____	NA	
7. _____	_____	_____	NA	
8. _____	_____	_____	NA	
9. _____	_____	_____	NA	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
<b>Herb Stratum</b> (Plot size: <u>5</u> )				
1. <u>Persicaria longiseta</u>	<u>60</u>	<input checked="" type="checkbox"/>	FAC	
2. <u>Amaranthus palmeri</u>	<u>10</u>	_____	FACU	
3. _____	_____	_____	NA	
4. _____	_____	_____	NA	
5. _____	_____	_____	NA	
6. _____	_____	_____	NA	
7. _____	_____	_____	NA	
8. _____	_____	_____	NA	
9. _____	_____	_____	NA	
10. _____	_____	_____	NA	
11. _____	_____	_____	NA	
<u>70.0</u> = Total Cover 50% of total cover: <u>35.0</u> 20% of total cover: <u>14.0</u>				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )				
1. _____	_____	_____	NA	
2. _____	_____	_____	NA	
3. _____	_____	_____	NA	
4. _____	_____	_____	NA	
5. _____	_____	_____	NA	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				
Remarks: (Include photo numbers here or on a separate sheet.)				



[illegible]

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Referred to 1-69  
 Page 88 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-08-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-07  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.879426 Long: -85.682441 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: PUBHh, Freshwater Pond

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: See WTL-04/WAS-07 for Upland Data Point	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</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:		



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-07

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	NA	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>100.0</u> (A/B)																
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</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>55</u> (A)</td> <td><u>125</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>2.3</u></td> </tr> </table> <b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 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> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>0</u>	x 2 = <u>0</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>55</u> (A)	<u>125</u> (B)	Prevalence Index = B/A = <u>2.3</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>20</u>	x 1 = <u>20</u>																			
FACW species <u>0</u>	x 2 = <u>0</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>55</u> (A)	<u>125</u> (B)																			
Prevalence Index = B/A = <u>2.3</u>																				
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																				
1. _____	_____	_____	NA																	
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
8. _____	_____	_____	NA																	
9. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
<b>Herb Stratum (Plot size: <u>5</u> )</b>																				
1. <i>Echinochloa crus-galli</i>	<u>35</u>	<input checked="" type="checkbox"/>	FAC																	
2. <i>Eleocharis obtusa</i>	<u>10</u>	_____	OBL																	
3. <i>Persicaria punctata</i>	<u>10</u>	_____	OBL																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
8. _____	_____	_____	NA																	
9. _____	_____	_____	NA																	
10. _____	_____	_____	NA																	
11. _____	_____	_____	NA																	
<u>55.0</u> = Total Cover 50% of total cover: <u>27.5</u> 20% of total cover: <u>11.0</u>																				
<b>Woody Vine Stratum (Plot size: <u>15</u> )</b>																				
1. _____	_____	_____	NA																	
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																

[illegible]



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Reference to 1-69  
 Page 91 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-08-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-08  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.879454 Long: -85.682393 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks: Upland point for WTL-04 & WTL-05 (WAS-07 & WAS-09)			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-08

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>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>70</u></td> <td>x 4 = <u>280</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>85</u> (A)</td> <td><u>355</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.2</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>70</u>	x 4 = <u>280</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>85</u> (A)	<u>355</u> (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>70</u>	x 4 = <u>280</u>																	
UPL species <u>15</u>	x 5 = <u>75</u>																	
Column Totals: <u>85</u> (A)	<u>355</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <i>Trifolium repens</i>	<u>40</u>	<input checked="" type="checkbox"/>	FACU															
2. <i>Digitaria sanguinalis</i>	<u>30</u>	<input checked="" type="checkbox"/>	FACU															
3. <i>Sida rhombifolia</i>	<u>15</u>	_____	UPL															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>85.0</u> = Total Cover 50% of total cover: <u>42.5</u> 20% of total cover: <u>17.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

**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)

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No ☒



[illegible]

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Reference to 1-69  
 Page 94 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-08-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-09  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.87945 Long: -85.681915 Datum: NAD 83 KY S  
 Soil Map Unit Name: BaE2 - Baxter gravelly silt loam, 20 to 30 percent slopes, eroded NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: See WTL-04/WAS-07 for Upland data point.(WAS-08)		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</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:		



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-09

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	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>100.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>30</u></td> <td>x 1 = <u>30</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</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>50</u> (A)</td> <td><u>90</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.8</u>	Total % Cover of:	Multiply by:	OBL species <u>30</u>	x 1 = <u>30</u>	FACW species <u>0</u>	x 2 = <u>0</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>50</u> (A)	<u>90</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>30</u>	x 1 = <u>30</u>																	
FACW species <u>0</u>	x 2 = <u>0</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>50</u> (A)	<u>90</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: _____)																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: _____)																		
1. <i>Echinochloa crus-galli</i>	<u>20</u>	<input checked="" type="checkbox"/>	FAC															
2. <i>Eleocharis obtusa</i>	<u>5</u>	<input type="checkbox"/>	OBL															
3. <i>Persicaria punctata</i>	<u>10</u>	<input checked="" type="checkbox"/>	OBL															
4. <i>Hydrocotyle americana</i>	<u>15</u>	<input checked="" type="checkbox"/>	OBL															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>50.0</u> = Total Cover 50% of total cover: <u>25.0</u> 20% of total cover: <u>10.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: _____)																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

**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)

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐

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

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

Hydric Soil Present? Yes ✓ No       

Eastern Mountains and Piedmont – Version 2.0



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Request to 1-69  
 Page 97 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-08-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-10  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley/Sink Area Local relief (concave, convex, none): Concave Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.879416 Long: -85.683838 Datum: NAD 83 KY S  
 Soil Map Unit Name: BaC - Baxter gravelly silt loam, 6 to 12 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" 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"/> 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"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</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:			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-10

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	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>100.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>80</u></td> <td>x 1 = <u>80</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</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>100</u> (A)</td> <td><u>140</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.4</u>	Total % Cover of:	Multiply by:	OBL species <u>80</u>	x 1 = <u>80</u>	FACW species <u>0</u>	x 2 = <u>0</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>100</u> (A)	<u>140</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>80</u>	x 1 = <u>80</u>																	
FACW species <u>0</u>	x 2 = <u>0</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>100</u> (A)	<u>140</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <i>Leersia oryzoides</i>	<u>70</u>	<input checked="" type="checkbox"/>	OBL															
2. <i>Echinochloa crus-galli</i>	<u>15</u>	_____	FAC															
3. <i>Persicaria punctata</i>	<u>10</u>	_____	OBL															
4. <i>Persicaria longiseta</i>	<u>5</u>	_____	FAC															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>100.0</u> = Total Cover 50% of total cover: <u>50.0</u> 20% of total cover: <u>20.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

**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)

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐



[illegible]

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Report to 1-69  
 Page 100 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-08-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-11  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley slope Local relief (concave, convex, none): Convex Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.879332 Long: -85.683763 Datum: NAD 83 KY S  
 Soil Map Unit Name: BaC2 - Baxter gravelly silt loam, 6 to 12 percent slopes, eroded NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks:			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-11

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>25</u></td> <td>x 1 = <u>25</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>70</u></td> <td>x 4 = <u>280</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>95</u> (A)</td> <td><u>305</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.2</u>	Total % Cover of:	Multiply by:	OBL species <u>25</u>	x 1 = <u>25</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>70</u>	x 4 = <u>280</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>95</u> (A)	<u>305</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>25</u>	x 1 = <u>25</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>70</u>	x 4 = <u>280</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>95</u> (A)	<u>305</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <i>Persicaria punctata</i>	<u>25</u>	_____	OBL															
2. <i>Amaranthus palmeri</i>	<u>10</u>	_____	FACU															
3. <i>Trifolium repens</i>	<u>60</u>	<input checked="" type="checkbox"/>	FACU															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>95.0</u> = Total Cover 50% of total cover: <u>47.5</u> 20% of total cover: <u>19.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

**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)

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No ☒

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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 103 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-08-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-12  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley/sink area Local relief (concave, convex, none): Concave Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.878826 Long: -85.685275 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland 07 wet data point - closed depression		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</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:		

## VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-12

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Fraxinus pennsylvanica</u>	<u>20</u>	<input checked="" type="checkbox"/>	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	NA	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	NA	
4. _____	_____	_____	NA	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0</u> (A/B)
5. _____	_____	_____	NA	
6. _____	_____	_____	NA	<b>Prevalence Index worksheet:</b>
7. _____	_____	_____	NA	
<u>20.0</u> = Total Cover				Total % Cover of: _____ Multiply by: _____
50% of total cover: <u>10.0</u> 20% of total cover: <u>4.0</u>				OBL species <u>40</u> x 1 = <u>40</u>
Sapling/Shrub Stratum (Plot size: <u>15</u> )				FACW species <u>20</u> x 2 = <u>40</u>
1. _____	_____	_____	NA	FAC species <u>0</u> x 3 = <u>0</u>
2. _____	_____	_____	NA	FACU species <u>0</u> x 4 = <u>0</u>
3. _____	_____	_____	NA	UPL species <u>0</u> x 5 = <u>0</u>
4. _____	_____	_____	NA	Column Totals: <u>60</u> (A) <u>80</u> (B)
5. _____	_____	_____	NA	Prevalence Index = B/A = <u>1.3</u>
6. _____	_____	_____	NA	
7. _____	_____	_____	NA	<b>Hydrophytic Vegetation Indicators:</b>
8. _____	_____	_____	NA	
9. _____	_____	_____	NA	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation
<u>0.0</u> = Total Cover				<input checked="" type="checkbox"/> 2 - Dominance Test is >50%
50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup>
Herb Stratum (Plot size: <u>5</u> )				<input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
1. <u>Persicaria punctata</u>	<u>40</u>	<input checked="" type="checkbox"/>	OBL	<input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
2. _____	_____	_____	NA	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____	_____	_____	NA	
4. _____	_____	_____	NA	<b>Definitions of Four Vegetation Strata:</b>
5. _____	_____	_____	NA	
6. _____	_____	_____	NA	<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7. _____	_____	_____	NA	<b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
8. _____	_____	_____	NA	<b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
9. _____	_____	_____	NA	<b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
10. _____	_____	_____	NA	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
11. _____	_____	_____	NA	
<u>40.0</u> = Total Cover				
50% of total cover: <u>20.0</u> 20% of total cover: <u>8.0</u>				
Woody Vine Stratum (Plot size: <u>15</u> )				
1. _____	_____	_____	NA	
2. _____	_____	_____	NA	
3. _____	_____	_____	NA	
4. _____	_____	_____	NA	
5. _____	_____	_____	NA	
<u>0.0</u> = Total Cover				
50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				
Remarks: (Include photo numbers here or on a separate sheet.)				



[illegible]

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 106 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-08-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-13  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley slope Local relief (concave, convex, none): Convex Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.878856 Long: -85.685312 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: Upland point for wetland 07					

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<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"/> Saturation (A3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<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"/> Water-Stained Leaves (B9)					
<input type="checkbox"/> Aquatic Fauna (B13)					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____			Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-13

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	NA	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> (A/B)																
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>3</u></td> <td>x 1 = <u>3</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>45</u></td> <td>x 4 = <u>180</u></td> </tr> <tr> <td>UPL species <u>40</u></td> <td>x 5 = <u>200</u></td> </tr> <tr> <td>Column Totals: <u>88</u> (A)</td> <td><u>383</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.4</u></td> </tr> </table> <b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	Total % Cover of:	Multiply by:	OBL species <u>3</u>	x 1 = <u>3</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>45</u>	x 4 = <u>180</u>	UPL species <u>40</u>	x 5 = <u>200</u>	Column Totals: <u>88</u> (A)	<u>383</u> (B)	Prevalence Index = B/A = <u>4.4</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>3</u>	x 1 = <u>3</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>45</u>	x 4 = <u>180</u>																			
UPL species <u>40</u>	x 5 = <u>200</u>																			
Column Totals: <u>88</u> (A)	<u>383</u> (B)																			
Prevalence Index = B/A = <u>4.4</u>																				
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																				
1. _____	_____	_____	NA																	
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
8. _____	_____	_____	NA																	
9. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
<b>Herb Stratum (Plot size: <u>5</u> )</b>																				
1. <i>Persicaria punctata</i>	<u>3</u>	_____	OBL																	
2. <i>Amaranthus palmeri</i>	<u>5</u>	✓	FACU																	
3. <i>Trifolium repens</i>	<u>40</u>	✓	FACU																	
4. <i>Sida rhombifolia</i>	<u>40</u>	✓	UPL																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
8. _____	_____	_____	NA																	
9. _____	_____	_____	NA																	
10. _____	_____	_____	NA																	
11. _____	_____	_____	NA																	
<u>88.0</u> = Total Cover 50% of total cover: <u>44.0</u> 20% of total cover: <u>17.6</u>																				
<b>Woody Vine Stratum (Plot size: <u>15</u> )</b>																				
1. _____	_____	_____	NA																	
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>																

[illegible]



Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Hydrophytic Vegetation Present?</td> <td style="width: 10%;">Yes</td> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 10%;">No</td> <td style="width: 10%; text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Hydric Soil Present?</td> <td>Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>No</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Wetland Hydrology Present?</td> <td>Yes</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>No</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	Hydrophytic Vegetation Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Hydric Soil Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	Wetland Hydrology Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>	<p><b>Is the Sampled Area within a Wetland?</b></p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
Hydrophytic Vegetation Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>												
Hydric Soil Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>												
Wetland Hydrology Present?	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>												
<p>Remarks:</p> <p>Wetland 08 wet data point . Feature appears to be excavated depression near barn. Minimal soils present before hitting rock/gravel</p>																

Wetland Hydrology Indicators:			Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)					
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)			
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)			
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)			
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)			
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)			
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)			
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)			
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)			
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)			
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)			
		<input type="checkbox"/> FAC-Neutral Test (D5)			
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 4 Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 0 (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:					

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-14

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	<input checked="" type="checkbox"/>	NA	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA	Total Number of Dominant Species Across All Strata: <u>3</u> (B)														
4. _____	_____	_____	NA															
5. _____	_____	_____	NA	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7</u> (A/B)														
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>30</u></td> <td>x 1 = <u>30</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</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>55</u> (A)</td> <td><u>105</u> (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>30</u>	x 1 = <u>30</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>55</u> (A)	<u>105</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>30</u>	x 1 = <u>30</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>25</u>	x 3 = <u>75</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>55</u> (A)	<u>105</u> (B)																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				Prevalence Index = B/A = <u>1.9</u>														
1. _____	_____	_____	NA															
2. _____	_____	_____	NA	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 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> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.														
1. <i>Echinochloa crus-galli</i>	<u>20</u>	<input checked="" type="checkbox"/>	FAC															
2. <i>Panicum punctatum</i>	<u>30</u>	<input checked="" type="checkbox"/>	OBL	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
3. <i>Panicum longisetum</i>	<u>5</u>	_____	FAC															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>55.0</u> = Total Cover 50% of total cover: <u>27.5</u> 20% of total cover: <u>11.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		



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

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

Hydric Soil Present? Yes ✓ No       

Site appears to have been excavated

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Report to 1-69  
 Page 112 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-08-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-15  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Closed depression Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR or MLRA): LRR N Lat: 36.880426 Long: -85.684364 Datum: NAD 83 KY S  
 Soil Map Unit Name: PmB - Pembroke silt loam, 2 to 6 percent slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks: Wetland 08 upland data			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-15

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	<input checked="" type="checkbox"/>	NA	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> (A/B)																
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>30</u></td> <td>x 4 = <u>120</u></td> </tr> <tr> <td>UPL species <u>50</u></td> <td>x 5 = <u>250</u></td> </tr> <tr> <td>Column Totals: <u>90</u> (A)</td> <td><u>400</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.4</u></td> </tr> </table>	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>10</u>	x 3 = <u>30</u>	FACU species <u>30</u>	x 4 = <u>120</u>	UPL species <u>50</u>	x 5 = <u>250</u>	Column Totals: <u>90</u> (A)	<u>400</u> (B)	Prevalence Index = B/A = <u>4.4</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>10</u>	x 3 = <u>30</u>																			
FACU species <u>30</u>	x 4 = <u>120</u>																			
UPL species <u>50</u>	x 5 = <u>250</u>																			
Column Totals: <u>90</u> (A)	<u>400</u> (B)																			
Prevalence Index = B/A = <u>4.4</u>																				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																				
1. _____	_____	_____	NA																	
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
8. _____	_____	_____	NA																	
9. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
<b>Herb Stratum</b> (Plot size: <u>5</u> )																				
1. <i>Symphotrichum pilosum</i>	<u>10</u>	_____	FAC																	
2. <i>Sida rhombifolia</i>	<u>50</u>	<input checked="" type="checkbox"/>	UPL																	
3. <i>Digitaria sanguinalis</i>	<u>30</u>	<input checked="" type="checkbox"/>	FACU																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
8. _____	_____	_____	NA																	
9. _____	_____	_____	NA																	
10. _____	_____	_____	NA																	
11. _____	_____	_____	NA																	
<u>90.0</u> = Total Cover 50% of total cover: <u>45.0</u> 20% of total cover: <u>18.0</u>																				
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																				
1. _____	_____	_____	NA																	
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
Remarks: (Include photo numbers here or on a separate sheet.)																				

**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)

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No ☒

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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 115 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-16  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.880319 Long: -85.682999 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: PEM1F, Freshwater Emergent Wetland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland 09 wet data point. For upland data point, See WAS-17.		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>      </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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-16

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	<input checked="" type="checkbox"/>	NA
2. _____	_____	_____	NA
3. _____	_____	_____	NA
4. _____	_____	_____	NA
5. _____	_____	_____	NA
6. _____	_____	_____	NA
7. _____	_____	_____	NA
50% of total cover: <u>0.0</u>		20% of total cover: <u>0.0</u>	
0.0 = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>15</u> )			
1. _____	_____	_____	NA
2. _____	_____	_____	NA
3. _____	_____	_____	NA
4. _____	_____	_____	NA
5. _____	_____	_____	NA
6. _____	_____	_____	NA
7. _____	_____	_____	NA
8. _____	_____	_____	NA
9. _____	_____	_____	NA
50% of total cover: <u>0.0</u>		20% of total cover: <u>0.0</u>	
0.0 = Total Cover			
Herb Stratum (Plot size: <u>5</u> )			
1. <u>Persicaria punctata</u>	<u>10</u>	_____	OBL
2. <u>Echinochloa cru-galli</u>	<u>20</u>	<input checked="" type="checkbox"/>	FAC
3. <u>Eleocharis obtusa</u>	<u>30</u>	<input checked="" type="checkbox"/>	OBL
4. <u>Cyperus sp.</u>	<u>15</u>	_____	NA
5. <u>Persicaria longiseta</u>	<u>20</u>	<input checked="" type="checkbox"/>	FAC
6. _____	_____	_____	NA
7. _____	_____	_____	NA
8. _____	_____	_____	NA
9. _____	_____	_____	NA
10. _____	_____	_____	NA
11. _____	_____	_____	NA
50% of total cover: <u>47.5</u>		20% of total cover: <u>19.0</u>	
95.0 = Total Cover			
Woody Vine Stratum (Plot size: <u>15</u> )			
1. _____	_____	_____	NA
2. _____	_____	_____	NA
3. _____	_____	_____	NA
4. _____	_____	_____	NA
5. _____	_____	_____	NA
50% of total cover: <u>0.0</u>		20% of total cover: <u>0.0</u>	
0.0 = Total Cover			
Remarks: (Include photo numbers here or on a separate sheet.)			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0 (A/B)

**Prevalence Index worksheet:**

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>40</u>	x 3 = <u>120</u>
FACU species <u>0</u>	x 4 = <u>0</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>80</u> (A)	<u>160</u> (B)

Prevalence Index = B/A = 2.0

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐



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

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

Hydric Soil Present? Yes ✓ No       

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 118 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-08-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-17  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Berm Local relief (concave, convex, none): Convex Slope (%): 0  
 Subregion (LRR or MLRA): LRR N Lat: 36.880289 Long: -85.682948 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: Upland data point for WTL-09, WTL-11, WTL-12, & WTL-13					

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<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 type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)				
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)				
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)				
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Iron Deposits (B5)					
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)					
<input type="checkbox"/> Water-Stained Leaves (B9)					
<input type="checkbox"/> Aquatic Fauna (B13)					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____			Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-17

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	<input checked="" type="checkbox"/>	NA	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> (A/B)														
2. _____	_____	<input type="checkbox"/>	NA															
3. _____	_____	<input type="checkbox"/>	NA															
4. _____	_____	<input type="checkbox"/>	NA															
5. _____	_____	<input type="checkbox"/>	NA															
6. _____	_____	<input type="checkbox"/>	NA															
7. _____	_____	<input type="checkbox"/>	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>5</u></td> <td>x 3 = <u>15</u></td> </tr> <tr> <td>FACU species <u>33</u></td> <td>x 4 = <u>132</u></td> </tr> <tr> <td>UPL species <u>60</u></td> <td>x 5 = <u>300</u></td> </tr> <tr> <td>Column Totals: <u>98</u> (A)</td> <td><u>447</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.6</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>5</u>	x 3 = <u>15</u>	FACU species <u>33</u>	x 4 = <u>132</u>	UPL species <u>60</u>	x 5 = <u>300</u>	Column Totals: <u>98</u> (A)	<u>447</u> (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>5</u>	x 3 = <u>15</u>																	
FACU species <u>33</u>	x 4 = <u>132</u>																	
UPL species <u>60</u>	x 5 = <u>300</u>																	
Column Totals: <u>98</u> (A)	<u>447</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	<input type="checkbox"/>	NA															
2. _____	_____	<input type="checkbox"/>	NA															
3. _____	_____	<input type="checkbox"/>	NA															
4. _____	_____	<input type="checkbox"/>	NA															
5. _____	_____	<input type="checkbox"/>	NA															
6. _____	_____	<input type="checkbox"/>	NA															
7. _____	_____	<input type="checkbox"/>	NA															
8. _____	_____	<input type="checkbox"/>	NA															
9. _____	_____	<input type="checkbox"/>	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <u>Persicaria longiseta</u>	<u>5</u>	<input type="checkbox"/>	FAC	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u>Sida rhombifolia</u>	<u>60</u>	<input checked="" type="checkbox"/>	UPL															
3. <u>Digitaria sanguinalis</u>	<u>30</u>	<input checked="" type="checkbox"/>	FACU															
4. <u>Trifolium repens</u>	<u>3</u>	<input type="checkbox"/>	FACU															
5. _____	_____	<input type="checkbox"/>	NA															
6. _____	_____	<input type="checkbox"/>	NA															
7. _____	_____	<input type="checkbox"/>	NA															
8. _____	_____	<input type="checkbox"/>	NA															
9. _____	_____	<input type="checkbox"/>	NA															
10. _____	_____	<input type="checkbox"/>	NA															
11. _____	_____	<input type="checkbox"/>	NA															
<u>98.0</u> = Total Cover 50% of total cover: <u>49.0</u> 20% of total cover: <u>19.6</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	<input type="checkbox"/>	NA	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	<input type="checkbox"/>	NA															
3. _____	_____	<input type="checkbox"/>	NA															
4. _____	_____	<input type="checkbox"/>	NA															
5. _____	_____	<input type="checkbox"/>	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
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Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-18  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Rutted field access road Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR or MLRA): LRR N Lat: 36.880358 Long: -85.68164 Datum: NAD 83 KY S  
 Soil Map Unit Name: CrB - Crider silt loam, 2 to 6 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland 10 wet data point. Feature is in rutted outfield access road		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<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>        </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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-18

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	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>100.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>20</u></td> <td>x 3 = <u>60</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>40</u> (A)</td> <td><u>100</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.5</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>20</u>	x 2 = <u>40</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>40</u> (A)	<u>100</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>20</u>	x 2 = <u>40</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>40</u> (A)	<u>100</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Echinocloa crus-galli</u>	<u>15</u>	<u>✓</u>	FAC	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 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> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u>Persicaria longiseta</u>	<u>5</u>	_____	FAC															
3. <u>Persicaria lapathifolia</u>	<u>20</u>	<u>✓</u>	FACW															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>40.0</u> = Total Cover 50% of total cover: <u>20.0</u> 20% of total cover: <u>8.0</u>																		
<b>Woody Vine Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	NA	<b>Hydrophytic Vegetation Present?</b> Yes <u>✓</u> No _____														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		



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

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

Hydric Soil Present? Yes ✓ No       

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# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Reference to 1-69  
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Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-19  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Ag field Local relief (concave, convex, none): None Slope (%): 0  
 Subregion (LRR or MLRA): LRR N Lat: 36.880342 Long: -85.681542 Datum: NAD 83 KY S  
 Soil Map Unit Name: CrB - Crider silt loam, 2 to 6 percent slopes NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks: Wetland 10 upland data point. Cultivated ag field planted in corn			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-19

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</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>33.3</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>22</u></td> <td>x 4 = <u>88</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>75</u></td> </tr> <tr> <td>Column Totals: <u>47</u> (A)</td> <td><u>193</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.1</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>10</u>	x 3 = <u>30</u>	FACU species <u>22</u>	x 4 = <u>88</u>	UPL species <u>15</u>	x 5 = <u>75</u>	Column Totals: <u>47</u> (A)	<u>193</u> (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>10</u>	x 3 = <u>30</u>																	
FACU species <u>22</u>	x 4 = <u>88</u>																	
UPL species <u>15</u>	x 5 = <u>75</u>																	
Column Totals: <u>47</u> (A)	<u>193</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <u>Digitaria sanguinalis</u>	<u>15</u>	<input checked="" type="checkbox"/>	FACU															
2. <u>Rumex crispus</u>	<u>10</u>	<input checked="" type="checkbox"/>	FAC															
3. <u>Zea mays</u>	<u>10</u>	<input checked="" type="checkbox"/>	UPL															
4. <u>Sida rhombifolia</u>	<u>5</u>	_____	UPL															
5. <u>Trifolium repens</u>	<u>2</u>	_____	FACU															
6. <u>Amaranthus palmeri</u>	<u>5</u>	_____	FACU															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>47.0</u> = Total Cover 50% of total cover: <u>23.5</u> 20% of total cover: <u>9.4</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

**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)

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No ☒

[illegible]

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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

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## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
Reference to 1-69  
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Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-20  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Floodplain associated with stream Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR or MLRA): LRR N Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD 83 KY S  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☒, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: WTL-11 Wet Data point. Site heavily impacted by cattle. For Upland Data Point see WTL-09-UP/WAS-17 Upland Data Point.			

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ 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:			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-20

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: <u>0</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>3</u></td> <td>x 3 = <u>9</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>3</u> (A)</td> <td><u>9</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.0</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>3</u>	x 3 = <u>9</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>3</u> (A)	<u>9</u> (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>3</u>	x 3 = <u>9</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>3</u> (A)	<u>9</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <i>Echinocloa crus-galli</i>	<u>3</u>	_____	FAC	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>3.0</u> = Total Cover 50% of total cover: <u>1.5</u> 20% of total cover: <u>0.6</u>																		
<b>Woody Vine Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	NA	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Hydrophytic Vegetation Present?</b> Yes <u>✓</u> No _____																		
Remarks: (Include photo numbers here or on a separate sheet.) <b>Veg disturbed due to cattle.</b>																		



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

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

Hydric Soil Present? Yes ✓ No       

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 130 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-21  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.879987 Long: -85.683169 Datum: NAD 83 KY S  
 Soil Map Unit Name: CrB - Crider silt loam, 2 to 6 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Wetland 12 wet data point. For Upland Data Point see WTL-09-UP/WAS-17 Upland Data Point.			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ 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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-21

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	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>100.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>35</u></td> <td>x 1 = <u>35</u></td> </tr> <tr> <td>FACW species <u>5</u></td> <td>x 2 = <u>10</u></td> </tr> <tr> <td>FAC species <u>45</u></td> <td>x 3 = <u>135</u></td> </tr> <tr> <td>FACU species <u>8</u></td> <td>x 4 = <u>32</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>93</u> (A)</td> <td><u>212</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.3</u>	Total % Cover of:	Multiply by:	OBL species <u>35</u>	x 1 = <u>35</u>	FACW species <u>5</u>	x 2 = <u>10</u>	FAC species <u>45</u>	x 3 = <u>135</u>	FACU species <u>8</u>	x 4 = <u>32</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>93</u> (A)	<u>212</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>35</u>	x 1 = <u>35</u>																	
FACW species <u>5</u>	x 2 = <u>10</u>																	
FAC species <u>45</u>	x 3 = <u>135</u>																	
FACU species <u>8</u>	x 4 = <u>32</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>93</u> (A)	<u>212</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <i>Persicaria longiseta</i>	<u>25</u>	<input checked="" type="checkbox"/>	FAC															
2. <i>Persicaria puctata</i>	<u>30</u>	<input checked="" type="checkbox"/>	OBL															
3. <i>Rumex crispus</i>	<u>10</u>	<input type="checkbox"/>	FAC															
4. <i>Echinocloa crus-galli</i>	<u>10</u>	<input type="checkbox"/>	FAC															
5. <i>Trifolium repens</i>	<u>5</u>	<input type="checkbox"/>	FACU															
6. <i>Ranunculus sceleratus</i>	<u>5</u>	<input type="checkbox"/>	OBL															
7. <i>Digitaria sanguinalis</i>	<u>3</u>	<input type="checkbox"/>	FACU															
8. <i>Persicaria lapathifolia</i>	<u>5</u>	<input type="checkbox"/>	FACW															
9. _____	_____	<input type="checkbox"/>	NA															
10. _____	_____	<input type="checkbox"/>	NA															
11. _____	_____	<input type="checkbox"/>	NA															
<u>93.0</u> = Total Cover 50% of total cover: <u>46.5</u> 20% of total cover: <u>18.6</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

**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)

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐



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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 133 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-22  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Ag field Local relief (concave, convex, none): Concave Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.880543 Long: -85.682834 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☒, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland 13 wet data point. Site heavily impacted by cattle. For Upland Data Point see WTL-09-UP/WAS-17 Upland Data Point.		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<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>        </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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-22

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: <u>0</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>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>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>0</u> (A)</td> <td><u>0</u> (B)</td> </tr> </table> Prevalence Index = B/A = _____	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>0</u>	x 5 = <u>0</u>	Column Totals: <u>0</u> (A)	<u>0</u> (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>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>0</u> (A)	<u>0</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.) <b>No vegetation due to impacts from cattle</b>																		

**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)

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No ☒



[illegible]

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 136 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-23  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Level Slope (%):           
 Subregion (LRR or MLRA): LRR N Lat: 36.881278 Long: -85.681877 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Wetland 14 wet data point - riparian wetland associated with STR-104	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>
<input type="checkbox"/> Surface Water (A1) <input checked="" 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"/> 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"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>        </u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>        </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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-23

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	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>100.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>30</u></td> <td>x 1 = <u>30</u></td> </tr> <tr> <td>FACW species <u>10</u></td> <td>x 2 = <u>20</u></td> </tr> <tr> <td>FAC species <u>40</u></td> <td>x 3 = <u>120</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>80</u> (A)</td> <td><u>170</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.1</u>	Total % Cover of:	Multiply by:	OBL species <u>30</u>	x 1 = <u>30</u>	FACW species <u>10</u>	x 2 = <u>20</u>	FAC species <u>40</u>	x 3 = <u>120</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>80</u> (A)	<u>170</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>30</u>	x 1 = <u>30</u>																	
FACW species <u>10</u>	x 2 = <u>20</u>																	
FAC species <u>40</u>	x 3 = <u>120</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>80</u> (A)	<u>170</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <i>Persicaria longiseta</i>	<u>20</u>	<input checked="" type="checkbox"/>	FAC															
2. <i>Leersia orizoides</i>	<u>30</u>	<input checked="" type="checkbox"/>	OBL															
3. <i>Microstegium vimineum</i>	<u>20</u>	<input checked="" type="checkbox"/>	FAC															
4. <i>Impatiens capensis</i>	<u>10</u>	_____	FACW															
5. <i>Carex sp</i>	<u>10</u>	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>90.0</u> = Total Cover 50% of total cover: <u>45.0</u> 20% of total cover: <u>18.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

**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)

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐



[illegible]

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 139 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-24  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): \_\_\_\_\_ Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.8813327 Long: -85.6819517 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks: Wetland 14 upland data point			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-24

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	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>50.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>20</u></td> <td>x 3 = <u>60</u></td> </tr> <tr> <td>FACU species <u>65</u></td> <td>x 4 = <u>260</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>320</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.8</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>20</u>	x 3 = <u>60</u>	FACU species <u>65</u>	x 4 = <u>260</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>85</u> (A)	<u>320</u> (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>20</u>	x 3 = <u>60</u>																	
FACU species <u>65</u>	x 4 = <u>260</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>85</u> (A)	<u>320</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <i>Andropogon virginicus</i>	<u>15</u>	_____	FACU	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <i>Digitaria sanguinalis</i>	<u>30</u>	✓	FACU															
3. <i>Solidago rugosa</i>	<u>20</u>	✓	FAC															
4. <i>Schedonorus arundinaceus</i>	<u>10</u>	_____	FACU															
5. <i>Trifolium repens</i>	<u>5</u>	_____	FACU															
6. <i>Lespedeza cuneata</i>	<u>5</u>	_____	FACU															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>85.0</u> = Total Cover 50% of total cover: <u>42.5</u> 20% of total cover: <u>17.0</u>																		
<b>Woody Vine Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	NA	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>✓</u>														



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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 142 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-25  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Level Slope (%): 0  
 Subregion (LRR or MLRA): LRR N Lat: 36.881013 Long: -85.681981 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland 15 wet data point		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input checked="" type="checkbox"/> Surface Water (A1) <input checked="" 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"/> 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"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
<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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</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:			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-25

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	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>100.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>20</u></td> <td>x 1 = <u>20</u></td> </tr> <tr> <td>FACW species <u>70</u></td> <td>x 2 = <u>140</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>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>190</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.9</u>	Total % Cover of:	Multiply by:	OBL species <u>20</u>	x 1 = <u>20</u>	FACW species <u>70</u>	x 2 = <u>140</u>	FAC species <u>10</u>	x 3 = <u>30</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>190</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>20</u>	x 1 = <u>20</u>																	
FACW species <u>70</u>	x 2 = <u>140</u>																	
FAC species <u>10</u>	x 3 = <u>30</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>190</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <i>Juncus effusus</i>	<u>70</u>	<input checked="" type="checkbox"/>	FACW	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 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> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <i>Leersia oryzoides</i>	<u>20</u>	_____	OBL															
3. <i>Carex sp</i>	<u>15</u>	_____	NA															
4. <i>Microstegium vimineum</i>	<u>10</u>	_____	FAC															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>115.0</u> = Total Cover 50% of total cover: <u>57.5</u> 20% of total cover: <u>23.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____														



[illegible]

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 145 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-26  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.881159 Long: -85.682121 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: Wetland 15 upland data point		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-26

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u><i>Juniperus virginiana</i></u>	<u>15</u>	<input checked="" type="checkbox"/>	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	NA	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	NA	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7</u> (A/B)
4. _____	_____	_____	NA	
5. _____	_____	_____	NA	
6. _____	_____	_____	NA	
7. _____	_____	_____	NA	
<u>15.0</u> = Total Cover 50% of total cover: <u>7.5</u> 20% of total cover: <u>3.0</u>				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>90</u> x 3 = <u>270</u> FACU species <u>15</u> x 4 = <u>60</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>115</u> (A) <u>350</u> (B) Prevalence Index = B/A = <u>3.0</u>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. _____	_____	_____	NA	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. <b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
2. _____	_____	_____	NA	
3. _____	_____	_____	NA	
4. _____	_____	_____	NA	
5. _____	_____	_____	NA	
6. _____	_____	_____	NA	
7. _____	_____	_____	NA	
8. _____	_____	_____	NA	
9. _____	_____	_____	NA	
10. _____	_____	_____	NA	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				
<b>Herb Stratum</b> (Plot size: <u>5</u> )				
1. <u><i>Solidago rugosa</i></u>	<u>20</u>	<input checked="" type="checkbox"/>	FAC	
2. <u><i>Microstegium vimineum</i></u>	<u>70</u>	<input checked="" type="checkbox"/>	FAC	
3. <u><i>Impatiens capensis</i></u>	<u>10</u>	_____	FACW	
4. _____	_____	_____	NA	
5. _____	_____	_____	NA	
6. _____	_____	_____	NA	
7. _____	_____	_____	NA	
8. _____	_____	_____	NA	
9. _____	_____	_____	NA	
10. _____	_____	_____	NA	
11. _____	_____	_____	NA	
<u>100.0</u> = Total Cover 50% of total cover: <u>50.0</u> 20% of total cover: <u>20.0</u>				
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )				
1. _____	_____	_____	NA	
2. _____	_____	_____	NA	
3. _____	_____	_____	NA	
4. _____	_____	_____	NA	
5. _____	_____	_____	NA	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
Remarks: (Include photo numbers here or on a separate sheet.)				



[illegible]

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 148 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-27  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR or MLRA): LRR N Lat: 36.881298 Long: -85.683119 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks: Wetland 15 wet data point					

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)	<input type="checkbox"/> Crayfish Burrows (C8)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input checked="" type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<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"/> Water-Stained Leaves (B9)					
<input type="checkbox"/> Aquatic Fauna (B13)					
<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 checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>6</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:					

## VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-27

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	NA
2. _____	_____	_____	NA
3. _____	_____	_____	NA
4. _____	_____	_____	NA
5. _____	_____	_____	NA
6. _____	_____	_____	NA
7. _____	_____	_____	NA
0.0 = Total Cover			
50% of total cover: <u>0.0</u>		20% of total cover: <u>0.0</u>	
Sapling/Shrub Stratum (Plot size: <u>15</u> )			
1. _____	_____	_____	NA
2. _____	_____	_____	NA
3. _____	_____	_____	NA
4. _____	_____	_____	NA
5. _____	_____	_____	NA
6. _____	_____	_____	NA
7. _____	_____	_____	NA
8. _____	_____	_____	NA
9. _____	_____	_____	NA
0.0 = Total Cover			
50% of total cover: <u>0.0</u>		20% of total cover: <u>0.0</u>	
Herb Stratum (Plot size: <u>5</u> )			
1. <u>Juncus effusus</u>	<u>30</u>	<input checked="" type="checkbox"/>	FACW
2. <u>Leersia oryzoides</u>	<u>60</u>	<input checked="" type="checkbox"/>	OBL
3. <u>Carex sp</u>	<u>10</u>	_____	NA
4. <u>Boehmeria cylindrica</u>	<u>5</u>	_____	FACW
5. _____	_____	_____	NA
6. _____	_____	_____	NA
7. _____	_____	_____	NA
8. _____	_____	_____	NA
9. _____	_____	_____	NA
10. _____	_____	_____	NA
11. _____	_____	_____	NA
105.0 = Total Cover			
50% of total cover: <u>52.5</u>		20% of total cover: <u>21.0</u>	
Woody Vine Stratum (Plot size: <u>15</u> )			
1. _____	_____	_____	NA
2. _____	_____	_____	NA
3. _____	_____	_____	NA
4. _____	_____	_____	NA
5. _____	_____	_____	NA
0.0 = Total Cover			
50% of total cover: <u>0.0</u>		20% of total cover: <u>0.0</u>	
Remarks: (Include photo numbers here or on a separate sheet.)			

**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: 100.0 (A/B)

**Prevalence Index worksheet:**  
Total % Cover of: Multiply by:  
OBL species 60 x 1 = 60  
FACW species 35 x 2 = 70  
FAC species 0 x 3 = 0  
FACU species 0 x 4 = 0  
UPL species 0 x 5 = 0  
Column Totals: 95 (A) 130 (B)  
Prevalence Index = B/A = 1.4

**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.

**Definitions of Four Vegetation Strata:**  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐



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

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

Hydric Soil Present? Yes ✓ No       

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Reference to 1-69  
 Page 151 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-28  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR or MLRA): LRR N Lat: 36.881339 Long: -85.683183 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: Wetland 16 upland data point					

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<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"/> Saturation (A3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<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"/> Water-Stained Leaves (B9)					
<input type="checkbox"/> Aquatic Fauna (B13)					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____			Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-28

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</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>33.3</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>95</u></td> <td>x 4 = <u>380</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>125</u> (A)</td> <td><u>470</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.8</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>30</u>	x 3 = <u>90</u>	FACU species <u>95</u>	x 4 = <u>380</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>125</u> (A)	<u>470</u> (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>30</u>	x 3 = <u>90</u>																	
FACU species <u>95</u>	x 4 = <u>380</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>125</u> (A)	<u>470</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <u>Sorghum halepense</u>	<u>70</u>	<input checked="" type="checkbox"/>	FACU	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u>Rumex crispus</u>	<u>10</u>	_____	FAC															
3. <u>Microstegium vimineum</u>	<u>20</u>	<input checked="" type="checkbox"/>	FAC															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>100.0</u> = Total Cover 50% of total cover: <u>50.0</u> 20% of total cover: <u>20.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>30</u> )																		
1. <u>Rubus flagellaris</u>	<u>25</u>	<input checked="" type="checkbox"/>	FACU	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>25.0</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5.0</u>																		
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		



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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Referred to 1-69  
 Page 154 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-29  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR or MLRA): LRR N Lat: 36.885284 Long: -85.680955 Datum: NAD 83 KY S  
 Soil Map Unit Name: BaE2 - Baxter gravelly silt loam, 20 to 30 percent slopes, eroded NWI classification: PUBH, Freshwater Pond

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland 17 wet data point. Old farm pond		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-29

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	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>100.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th style="width: 40%;">Total % Cover of:</th> <th style="width: 60%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>25</u></td> <td>x 1 = <u>25</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</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>40</u> (A)</td> <td><u>70</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.8</u>	Total % Cover of:	Multiply by:	OBL species <u>25</u>	x 1 = <u>25</u>	FACW species <u>0</u>	x 2 = <u>0</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>40</u> (A)	<u>70</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>25</u>	x 1 = <u>25</u>																	
FACW species <u>0</u>	x 2 = <u>0</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>40</u> (A)	<u>70</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <i>Echinocloa crus-galli</i>	<u>15</u>	<input checked="" type="checkbox"/>	FAC	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 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> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <i>Eleocharis obtusa</i>	<u>20</u>	<input checked="" type="checkbox"/>	OBL															
3. <i>Ranunculus sceleratus</i>	<u>5</u>	_____	OBL															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>40.0</u> = Total Cover 50% of total cover: <u>20.0</u> 20% of total cover: <u>8.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		



[illegible]

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 157 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-30  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 10  
 Subregion (LRR or MLRA): LRR N Lat: 36.885237 Long: -85.680985 Datum: NAD 83 KY S  
 Soil Map Unit Name: BaE2 - Baxter gravelly silt loam, 20 to 30 percent slopes, eroded NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: Wetland 17 upland data point - hillslope in pasture					

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-30

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>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>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>60</u></td> <td>x 5 = <u>300</u></td> </tr> <tr> <td>Column Totals: <u>80</u> (A)</td> <td><u>380</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.8</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>20</u>	x 4 = <u>80</u>	UPL species <u>60</u>	x 5 = <u>300</u>	Column Totals: <u>80</u> (A)	<u>380</u> (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>20</u>	x 4 = <u>80</u>																	
UPL species <u>60</u>	x 5 = <u>300</u>																	
Column Totals: <u>80</u> (A)	<u>380</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <u>Sida rhombifolia</u>	<u>60</u>	<input checked="" type="checkbox"/>	UPL	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Ambrosia artemisiifolia</u>	<u>5</u>	_____	FACU															
3. <u>Schedonorus arundinaceus</u>	<u>15</u>	_____	FACU															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>80.0</u> = Total Cover 50% of total cover: <u>40.0</u> 20% of total cover: <u>16.0</u>																		
<b>Woody Vine Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	NA	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.) <b>Vegetation grazed by cattle</b>				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>														



[illegible]

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 160 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-31  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.881374 Long: -85.678893 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland 18 wet data point		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____		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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-31

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Salix nigra</u>	<u>20</u>	<input checked="" type="checkbox"/>	OBL	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	NA	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____	_____	_____	NA	
4. _____	_____	_____	NA	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0</u> (A/B)
5. _____	_____	_____	NA	
6. _____	_____	_____	NA	
7. _____	_____	_____	NA	
<u>20.0</u> = Total Cover 50% of total cover: <u>10.0</u> 20% of total cover: <u>4.0</u>				<b>Prevalence Index worksheet:</b> 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>45</u> x 3 = <u>135</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>85</u> (A) <u>175</u> (B) Prevalence Index = B/A = <u>2.1</u>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 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> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
1. _____	_____	_____	NA	
2. _____	_____	_____	NA	
3. _____	_____	_____	NA	
4. _____	_____	_____	NA	
5. _____	_____	_____	NA	
6. _____	_____	_____	NA	
7. _____	_____	_____	NA	
8. _____	_____	_____	NA	
9. _____	_____	_____	NA	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
<b>Herb Stratum</b> (Plot size: <u>5</u> )				
1. <u>Persicaria longiseta</u>	<u>40</u>	<input checked="" type="checkbox"/>	FAC	
2. <u>Persicaria punctata</u>	<u>20</u>	<input checked="" type="checkbox"/>	OBL	
3. <u>Panicum capillare</u>	<u>5</u>	_____	FAC	
4. _____	_____	_____	NA	
5. _____	_____	_____	NA	
6. _____	_____	_____	NA	
7. _____	_____	_____	NA	
8. _____	_____	_____	NA	
9. _____	_____	_____	NA	
10. _____	_____	_____	NA	
11. _____	_____	_____	NA	
<u>65.0</u> = Total Cover 50% of total cover: <u>32.5</u> 20% of total cover: <u>13.0</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )				
1. _____	_____	_____	NA	
2. _____	_____	_____	NA	
3. _____	_____	_____	NA	
4. _____	_____	_____	NA	
5. _____	_____	_____	NA	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				
Remarks: (Include photo numbers here or on a separate sheet.)				



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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 163 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-32  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.881409 Long: -85.679033 Datum: NAD 83 KY S  
 Soil Map Unit Name: Ls - Lindside silt loam NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<b>Is the Sampled Area within a Wetland?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Wetland 18 upland data point	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is 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"/> 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"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____		<b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

## VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-32

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<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>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0</u> (A/B)
1. <u>Morus alba</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>UPL</u>	
2. <u>Celtis occidentalis</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FACU</u>	
3. _____	_____	_____	<u>NA</u>	
4. _____	_____	_____	<u>NA</u>	
5. _____	_____	_____	<u>NA</u>	
6. _____	_____	_____	<u>NA</u>	
7. _____	_____	_____	<u>NA</u>	
<u>50.0</u> = Total Cover 50% of total cover: <u>25.0</u> 20% of total cover: <u>10.0</u>				
<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>80</u> x 3 = <u>240</u> FACU species <u>50</u> x 4 = <u>200</u> UPL species <u>10</u> x 5 = <u>50</u> Column Totals: <u>140</u> (A) <u>490</u> (B)  Prevalence Index = B/A = <u>3.5</u>				
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>				
1. <u>Juniperus virginiana</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>NA</u>	
2. <u>Acer rubrum</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. _____	_____	_____	<u>NA</u>	
4. _____	_____	_____	<u>NA</u>	
5. _____	_____	_____	<u>NA</u>	
6. _____	_____	_____	<u>NA</u>	
7. _____	_____	_____	<u>NA</u>	
8. _____	_____	_____	<u>NA</u>	
9. _____	_____	_____	<u>NA</u>	
<u>15.0</u> = Total Cover 50% of total cover: <u>7.5</u> 20% of total cover: <u>3.0</u>				
<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)				
<b>Herb Stratum (Plot size: <u>5</u> )</b>				
1. <u>Microstegium viminium</u>	<u>50</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. <u>Viola sp</u>	<u>20</u>	_____	<u>NA</u>	
3. <u>Persicaria longiseta</u>	<u>5</u>	_____	<u>FAC</u>	
4. <u>Potentilla simplex</u>	<u>10</u>	_____	<u>FACU</u>	
5. _____	_____	_____	<u>NA</u>	
6. _____	_____	_____	<u>NA</u>	
7. _____	_____	_____	<u>NA</u>	
8. _____	_____	_____	<u>NA</u>	
9. _____	_____	_____	<u>NA</u>	
10. _____	_____	_____	<u>NA</u>	
11. _____	_____	_____	<u>NA</u>	
<u>85.0</u> = Total Cover 50% of total cover: <u>42.5</u> 20% of total cover: <u>17.0</u>				
<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.				
<b>Woody Vine Stratum (Plot size: <u>15</u> )</b>				
1. <u>Toxicodendron radican</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
2. _____	_____	_____	<u>NA</u>	
3. _____	_____	_____	<u>NA</u>	
4. _____	_____	_____	<u>NA</u>	
5. _____	_____	_____	<u>NA</u>	
<u>15.0</u> = Total Cover 50% of total cover: <u>7.5</u> 20% of total cover: <u>3.0</u>				
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>				
Remarks: (Include photo numbers here or on a separate sheet.)				



[illegible]

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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 166 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-33  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Pond margin Local relief (concave, convex, none): Concave Slope (%): 0  
 Subregion (LRR or MLRA): LRR N Lat: 36.884199 Long: -85.683868 Datum: NAD 83 KY S  
 Soil Map Unit Name: BaC2 - Baxter gravelly silt loam, 6 to 12 percent slopes, eroded NWI classification: PUBHh, Freshwater Pond

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Wetland 19 wetland point - wetland fringe around farm pond			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<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"/> 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"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
<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>          </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:			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-33

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	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>100.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>60</u></td> <td>x 1 = <u>60</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>25</u></td> <td>x 3 = <u>75</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>85</u> (A)</td> <td><u>135</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.6</u>	Total % Cover of:	Multiply by:	OBL species <u>60</u>	x 1 = <u>60</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>25</u>	x 3 = <u>75</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>85</u> (A)	<u>135</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>60</u>	x 1 = <u>60</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>25</u>	x 3 = <u>75</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>85</u> (A)	<u>135</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum (Plot size: <u>5</u> )</b>																		
1. <i>Persicaria punctata</i>	<u>45</u>	<input checked="" type="checkbox"/>	OBL															
2. <i>Persicaria longiseta</i>	<u>25</u>	<input checked="" type="checkbox"/>	FAC															
3. <i>Ranunculus sceleratus</i>	<u>15</u>	_____	OBL															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>85.0</u> = Total Cover 50% of total cover: <u>42.5</u> 20% of total cover: <u>17.0</u>																		
<b>Woody Vine Stratum (Plot size: <u>15</u> )</b>																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b>														
				Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														

**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.

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.



[illegible]

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Report to 1-69  
 Page 169 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/Metcalf Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-34  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.884266 Long: -85.683839 Datum: NAD 83 KY S  
 Soil Map Unit Name: BaC2 - Baxter gravelly silt loam, 6 to 12 percent slopes, eroded NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: WTL-19 Upland point					

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>			<u>Secondary Indicators (minimum of two required)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Drainage Patterns (B10)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<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"/> Saturation (A3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	<input type="checkbox"/> Geomorphic Position (D2)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Microtopographic Relief (D4)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<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"/> Water-Stained Leaves (B9)					
<input type="checkbox"/> Aquatic Fauna (B13)					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____			Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-34

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>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>50</u></td> <td>x 4 = <u>200</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>300</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.3</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>50</u>	x 4 = <u>200</u>	UPL species <u>20</u>	x 5 = <u>100</u>	Column Totals: <u>70</u> (A)	<u>300</u> (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>50</u>	x 4 = <u>200</u>																	
UPL species <u>20</u>	x 5 = <u>100</u>																	
Column Totals: <u>70</u> (A)	<u>300</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <i>Trifolium repens</i>	<u>25</u>	<input checked="" type="checkbox"/>	FACU															
2. <i>Digitaria sanguinalis</i>	<u>25</u>	<input checked="" type="checkbox"/>	FACU															
3. <i>Sida rhombifolia</i>	<u>20</u>	<input checked="" type="checkbox"/>	UPL															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>70.0</u> = Total Cover 50% of total cover: <u>35.0</u> 20% of total cover: <u>14.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

**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)

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No ☒



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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 172 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/ Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-35  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Convex Slope (%): 1  
 Subregion (LRR or MLRA): LRR N Lat: 36.886209 Long: -85.685998 Datum: NAD 83 KY S  
 Soil Map Unit Name: Hu - Huntington silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Wetland 20 wet data point - associated with stream 165			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u>		<u>Secondary Indicators (minimum of two required)</u>	
<input type="checkbox"/> Surface Water (A1) <input checked="" 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"/> 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"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>10</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:			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-35

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	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>100.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>40</u></td> <td>x 1 = <u>40</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</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>90</u> (A)</td> <td><u>190</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.1</u>	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>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>90</u> (A)	<u>190</u> (B)
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>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>90</u> (A)	<u>190</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <i>Persicaria punctata</i>	<u>40</u>	<input checked="" type="checkbox"/>	OBL															
2. <i>Persicaria longiseta</i>	<u>20</u>	<input checked="" type="checkbox"/>	FAC															
3. <i>Microstegium vimineum</i>	<u>20</u>	<input checked="" type="checkbox"/>	FAC															
4. <i>Echinocloa crus-galli</i>	<u>10</u>	_____	FAC															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>90.0</u> = Total Cover 50% of total cover: <u>45.0</u> 20% of total cover: <u>18.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

**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)

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐



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

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

Hydric Soil Present? Yes ✓ No       

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
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Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/ Sampling Date: 10-09-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-36  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR or MLRA): LRR N Lat: 36.886246 Long: -85.686019 Datum: NAD 83 KY S  
 Soil Map Unit Name: Hu - Huntington silt loam NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: Wetland 20 upland data point					

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is 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"/> 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"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-36

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</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>33.3</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>30</u></td> <td>x 3 = <u>90</u></td> </tr> <tr> <td>FACU species <u>60</u></td> <td>x 4 = <u>240</u></td> </tr> <tr> <td>UPL species <u>10</u></td> <td>x 5 = <u>50</u></td> </tr> <tr> <td>Column Totals: <u>100</u> (A)</td> <td><u>380</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.8</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>30</u>	x 3 = <u>90</u>	FACU species <u>60</u>	x 4 = <u>240</u>	UPL species <u>10</u>	x 5 = <u>50</u>	Column Totals: <u>100</u> (A)	<u>380</u> (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>30</u>	x 3 = <u>90</u>																	
FACU species <u>60</u>	x 4 = <u>240</u>																	
UPL species <u>10</u>	x 5 = <u>50</u>																	
Column Totals: <u>100</u> (A)	<u>380</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <u>Ambrosia artemisifolia</u>	<u>40</u>	<input checked="" type="checkbox"/>	FACU	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
2. <u>Microstegium vimineum</u>	<u>30</u>	<input checked="" type="checkbox"/>	FAC															
3. <u>Perilla frutescens</u>	<u>20</u>	<input checked="" type="checkbox"/>	FACU															
4. <u>Sida rhombifolia</u>	<u>10</u>	_____	UPL															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>100.0</u> = Total Cover 50% of total cover: <u>50.0</u> 20% of total cover: <u>20.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)																		



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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 178 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/ Sampling Date: 10-10-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-37  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR or MLRA): LRR N Lat: 36.882505 Long: -85.686194 Datum: NAD 83 KY S  
 Soil Map Unit Name: Hu - Huntington silt loam NWI classification: PUBH-Freshwater Pond

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland 21 wet data point		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-37

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	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>100.0</u> (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species <u>15</u></td> <td>x 1 = <u>15</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>45</u></td> <td>x 3 = <u>135</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>60</u> (A)</td> <td><u>150</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.5</u>	Total % Cover of:	Multiply by:	OBL species <u>15</u>	x 1 = <u>15</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>45</u>	x 3 = <u>135</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>60</u> (A)	<u>150</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>15</u>	x 1 = <u>15</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>45</u>	x 3 = <u>135</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>60</u> (A)	<u>150</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <i>Persicaria punctata</i>	<u>15</u>	<input checked="" type="checkbox"/>	OBL															
2. <i>Persicaria longistea</i>	<u>10</u>	<input type="checkbox"/>	FAC															
3. <i>Rumex crispus</i>	<u>15</u>	<input checked="" type="checkbox"/>	FAC															
4. <i>Panicum capillare</i>	<u>20</u>	<input checked="" type="checkbox"/>	FAC															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>60.0</u> = Total Cover 50% of total cover: <u>30.0</u> 20% of total cover: <u>12.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 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> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.														
				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														



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

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

Hydric Soil Present? Yes ✓ No       

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Report to 1-69  
 Page 181 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/ Sampling Date: 10-10-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-38  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD 83 KY S  
 Soil Map Unit Name: \_\_\_\_\_ NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks: Wetland 21upland data point			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		<b>Wetland Hydrology Present?</b> Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-38

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	NA	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>100.0</u> (A/B)																
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>35</u></td> <td>x 3 = <u>105</u></td> </tr> <tr> <td>FACU species <u>8</u></td> <td>x 4 = <u>32</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>43</u> (A)</td> <td><u>137</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.2</u></td> </tr> </table> <b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	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>35</u>	x 3 = <u>105</u>	FACU species <u>8</u>	x 4 = <u>32</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>43</u> (A)	<u>137</u> (B)	Prevalence Index = B/A = <u>3.2</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>35</u>	x 3 = <u>105</u>																			
FACU species <u>8</u>	x 4 = <u>32</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>43</u> (A)	<u>137</u> (B)																			
Prevalence Index = B/A = <u>3.2</u>																				
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
<b>Sapling/Shrub Stratum (Plot size: <u>15</u> )</b>																				
1. _____	_____	_____	NA																	
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
8. _____	_____	_____	NA																	
9. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
<b>Herb Stratum (Plot size: <u>5</u> )</b>																				
1. <i>Sorghum halepense</i>	<u>5</u>	_____	FACU																	
2. <i>Rumex crispus</i>	<u>10</u>	<input checked="" type="checkbox"/>	FAC																	
3. <i>Panicum capillare</i>	<u>15</u>	<input checked="" type="checkbox"/>	FAC																	
4. <i>Persicaria longista</i>	<u>10</u>	<input checked="" type="checkbox"/>	FAC																	
5. <i>Trifolium repens</i>	<u>3</u>	_____	FACU																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
8. _____	_____	_____	NA																	
9. _____	_____	_____	NA																	
10. _____	_____	_____	NA																	
11. _____	_____	_____	NA																	
<u>43.0</u> = Total Cover 50% of total cover: <u>21.5</u> 20% of total cover: <u>8.6</u>																				
<b>Woody Vine Stratum (Plot size: <u>15</u> )</b>																				
1. _____	_____	_____	NA																	
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																



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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
 Page 184 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/ Sampling Date: 10-10-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-39  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Valley Local relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR or MLRA): LRR N Lat: 36.8819838 Long: -85.6909466 Datum: NAD 83 KY S  
 Soil Map Unit Name: Nk - Newark silt loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: Wetland 22 wet data point		

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-39

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	NA	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: <u>0</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)														
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>5</u></td> <td>x 1 = <u>5</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>12</u></td> <td>x 3 = <u>36</u></td> </tr> <tr> <td>FACU species <u>3</u></td> <td>x 4 = <u>12</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>20</u> (A)</td> <td><u>53</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.7</u>	Total % Cover of:	Multiply by:	OBL species <u>5</u>	x 1 = <u>5</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>12</u>	x 3 = <u>36</u>	FACU species <u>3</u>	x 4 = <u>12</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>20</u> (A)	<u>53</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>5</u>	x 1 = <u>5</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>12</u>	x 3 = <u>36</u>																	
FACU species <u>3</u>	x 4 = <u>12</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>20</u> (A)	<u>53</u> (B)																	
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																		
1. <u>Black willow</u>	<u>3</u>	_____	NA															
2. <u>Green ash</u>	<u>3</u>	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
6. _____	_____	_____	NA															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
<u>6.0</u> = Total Cover 50% of total cover: <u>3.0</u> 20% of total cover: <u>1.2</u>																		
<b>Herb Stratum</b> (Plot size: <u>5</u> )																		
1. <u>Juncus SAMPLE</u>	<u>25</u>	_____	NA															
2. <u>Carex sp.</u>	<u>50</u>	_____	NA															
3. <u>Conoclinium coelestinum</u>	<u>10</u>	_____	FAC															
4. <u>Vernonia gigantea</u>	<u>2</u>	_____	FAC															
5. <u>Persicaria punctata</u>	<u>5</u>	_____	OBL															
6. <u>Erigeron canadensis</u>	<u>3</u>	_____	FACU															
7. _____	_____	_____	NA															
8. _____	_____	_____	NA															
9. _____	_____	_____	NA															
10. _____	_____	_____	NA															
11. _____	_____	_____	NA															
<u>95.0</u> = Total Cover 50% of total cover: <u>47.5</u> 20% of total cover: <u>19.0</u>																		
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																		
1. _____	_____	_____	NA															
2. _____	_____	_____	NA															
3. _____	_____	_____	NA															
4. _____	_____	_____	NA															
5. _____	_____	_____	NA															
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes <u>✓</u> No _____														

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.



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

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

Hydric Soil Present? Yes ✓ No       

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Replaces to 1-69  
 Page 187 of 794

Project/Site: Summer Shade Solar Site City/County: Summer Shade, KY/ Sampling Date: 10-10-2021  
 Applicant/Owner: Candela State: KY Sampling Point: WAS-40  
 Investigator(s): Mike Williams / Chris Golden Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2%  
 Subregion (LRR or MLRA): LRR N Lat: 36.8818519 Long: -85.6909117 Datum: NAD 83 KY S  
 Soil Map Unit Name: Nk - Newark silt loam NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks: Wetland 22 upland data point			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-40

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	NA	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0</u> (A/B)																
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>				<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>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>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>10</u></td> <td>x 3 = <u>30</u></td> </tr> <tr> <td>FACU species <u>117</u></td> <td>x 4 = <u>468</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>127</u> (A)</td> <td><u>498</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>3.9</u></td> </tr> </table>	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>10</u>	x 3 = <u>30</u>	FACU species <u>117</u>	x 4 = <u>468</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>127</u> (A)	<u>498</u> (B)	Prevalence Index = B/A = <u>3.9</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>10</u>	x 3 = <u>30</u>																			
FACU species <u>117</u>	x 4 = <u>468</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>127</u> (A)	<u>498</u> (B)																			
Prevalence Index = B/A = <u>3.9</u>																				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15</u> )																				
1. _____	_____	_____	NA																	
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
8. _____	_____	_____	NA																	
9. _____	_____	_____	NA																	
<u>0.0</u> = Total Cover 50% of total cover: <u>0.0</u> 20% of total cover: <u>0.0</u>																				
<b>Herb Stratum</b> (Plot size: <u>5</u> )																				
1. <u>Schedonorus arundinaceus</u>	<u>90</u>	<input checked="" type="checkbox"/>	FACU	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Paspalum dilatatum</u>	<u>10</u>	_____	FAC																	
3. <u>Andropogon virginicus</u>	<u>2</u>	_____	FACU																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
6. _____	_____	_____	NA																	
7. _____	_____	_____	NA																	
8. _____	_____	_____	NA																	
9. _____	_____	_____	NA																	
10. _____	_____	_____	NA																	
11. _____	_____	_____	NA																	
<u>102.0</u> = Total Cover 50% of total cover: <u>51.0</u> 20% of total cover: <u>20.4</u>																				
<b>Woody Vine Stratum</b> (Plot size: <u>15</u> )																				
1. <u>Rubus flagelaris</u>	<u>25</u>	<input checked="" type="checkbox"/>	FACU	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.																
2. _____	_____	_____	NA																	
3. _____	_____	_____	NA																	
4. _____	_____	_____	NA																	
5. _____	_____	_____	NA																	
<u>25.0</u> = Total Cover 50% of total cover: <u>12.5</u> 20% of total cover: <u>5.0</u>																				
<b>Hydrophytic Vegetation Present?</b> Yes _____ No <input checked="" type="checkbox"/>																				
Remarks: (Include photo numbers here or on a separate sheet.)																				



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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ✓

Eastern Mountains and Piedmont – Version 2.0

**WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region**

Project/Site: Summer Shade KY 306 and KY 358 Improvements - Item No. 4-8202-00 City/County: Paducah/McCracken Sampling Date: 7/18/22  
Applicant/Owner: KYTE Candela renewables State: KY Sampling Point: T01-WAS-03  
Investigator(s): Shane Kelley, Zac Hammond CK Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 2  
Subregion (LRR or MLRA): LRR P Lat: 36.852996 Long: 88.685116 Datum: NAD1983 (KY FIPS)  
Soil Map Unit Name: Crb3 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes \_\_\_\_\_ No \_\_\_\_\_  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ 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 <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks: <p style="text-align: center;">T01 - WET-02</p> <p style="text-align: right;">PEM</p>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>
<b>Primary Indicators (minimum of one is required; check all that apply)</b>		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Marl Deposits (B15) (LRR U)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
		<input type="checkbox"/> Sphagnum moss (D8) (LRR T, U)
<b>Field Observations:</b>		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____
Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____	
Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: T01-WA5-03

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u>N/A</u>				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum</b> (Plot size: _____)				
1. _____				
2. _____				
3. _____				
4. <u>N/A</u>				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum</b> (Plot size: <u>5FK</u> )				
1. <u>Juncus effusus</u>	<u>10</u>		<u>FACW</u>	
2. <u>Poa pratensis</u>	<u>15</u>		<u>FACW</u>	
3. <u>Solidago gigantea</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
4. <u>Lonicera japonica</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
5. <u>Onoclea sensibilis</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
6. <u>Carex vulpencidia</u>	<u>5</u>		<u>OBL</u>	
7. <u>Vernonia gigantea</u>	<u>3</u>		<u>FAC</u>	
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
<u>98</u> = Total Cover				
50% of total cover: <u>49</u> 20% of total cover: <u>19.6</u>				
<b>Woody Vine Stratum</b> (Plot size: _____)				
1. _____				
2. _____				
3. <u>N/A</u>				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Remarks:</b> (If observed, list morphological adaptations below).				

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

**Hydrophytic Vegetation Indicators:**

☒ 1 - Rapid Test for Hydrophytic Vegetation

☒ 2 - Dominance Test is >50%

☐ 3 - Prevalence Index is ≤3.0<sup>1</sup>

☐ Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes ☒ No ☐



Atlantic and Gulf Coastal Plain Region – Version 2.0

### WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summershade Solar City/County: Sumner Shale Sampling Date: 4/12/22  
Applicant/Owner: Sumner Shale - Candela State: KY Sampling Point: T01-WK-06  
Investigator(s): SL, CR Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): CONVEX Slope (%): 3  
Subregion (LRR or MLRA): LARN Lat: 36.849256 Long: 95.696551 Datum: NAD83(KYFP5)  
Soil Map Unit Name: BACA NWI classification: N/A  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>Upland point associated w/ T01-WET-03 &amp; T01-WET-04</u>	

#### HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>          </u>	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (includes capillary fringe)	Depth (inches): <u>          </u>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: T01-L1A5-05

Tree Stratum (Plot size: <u>30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Fagus grandifolia</u>	<u>10</u>		<u>FACW</u>	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>75.0</u> (A/B)
2. <u>Liriodendron tulipifera</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACW</u>	
3. <u>Liquidambar styraciflua</u>	<u>40</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
50% of total cover: <u>35</u> 70 = Total Cover 20% of total cover: <u>14</u>				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15ft</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. <u>N/A</u>	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
50% of total cover: _____ 20% of total cover: _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Herb Stratum</b> (Plot size: <u>5ft</u> )				
1. <u>Stellaria media</u>	<u>15</u>		<u>UPL</u>	
2. <u>Ranunculus hispidus</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. <u>Ranunculus abortivus</u>	<u>15</u>		<u>FACW</u>	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
4. <u>Microstegium vimineum</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
50% of total cover: <u>40</u> 80 = Total Cover 20% of total cover: <u>16</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<b>Woody Vine Stratum</b> (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. <u>N/A</u>	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
50% of total cover: _____ 20% of total cover: _____				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: (Include photo numbers here or on a separate sheet.)				
_____				
_____				





### WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summershade solar City/County: Summershade Sampling Date: 4/12/22  
Applicant/Owner: Summershade - canceled State: KY Sampling Point: T1-WP5-07  
Investigator(s): SK, CK Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): Depression, scarp Local relief (concave, convex, none): concave Slope (%): 2  
Subregion (LRR or MLRA): LRRN Lat: 36.71993 Long: 85.640573 Datum: NAD83(ky tips)  
Soil Map Unit Name: BaC2, Hu NWI classification: NA  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks: <u>wetland point associated w/ T01-WET-04</u> <u>REM/PFO</u>	

#### HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>13</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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: T01-WAS-07

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Fagus grandifolia</u>	<u>5</u>		<u>FACU</u>	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)
2. <u>Liquidambar styraciflua</u>	<u>15</u>	✓	<u>FAC</u>	
3. <u>Acer rubrum</u>	<u>20</u>	✓	<u>FAC</u>	
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
50% of total cover: <u>40</u> = Total Cover 20% of total cover: <u>8</u>				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
<b>Sapling/Shrub Stratum</b> (Plot size: _____) 1. _____ 2. _____ 3. <u>NA</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____				
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum</b> (Plot size: _____) 1. <u>Pakera glabella</u> <u>60</u> ✓ <u>OBL</u> 2. <u>Ranunculus hispidus</u> <u>10</u> <u>FAC</u> 3. <u>Trifolium repens</u> <u>5</u> <u>FACU</u> 4. <u>Lespedeza cuneata</u> <u>2</u> <u>FACU</u> 5. <u>Alliaria petiolata</u> <u>2</u> <u>FACU</u> 6. <u>Lonicera japonica</u> <u>2</u> <u>FACU</u> 7. _____ 8. _____ 9. _____ 10. _____ 11. _____				
_____ = Total Cover 50% of total cover: <u>40.5</u> 20% of total cover: <u>16.2</u>				
<b>Woody Vine Stratum</b> (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____ 10. _____ 11. _____				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____				
Remarks: (Include photo numbers here or on a separate sheet.)				





# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shale City/County: Smithland / Livingston County Sampling Date: 4/10/22  
 Applicant/Owner: KDFWR State: KY Sampling Point: T01-WAS-05  
 Investigator(s): W. Cunningham, N. Burnett SK Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR or MLRA): LRRN Lat: 36.84690 Long: 85.687282 Datum: NAD 83  
 Soil Map Unit Name: Babi NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐ Soil ☐ or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  <div style="text-align: center;"> <p>T01-WET-05</p> <p>Sinkhole depression</p> <p>DEM</p> </div>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>8</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:  		

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: TQ-WAS-08

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u>N/A</u>	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> 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)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. <u>N/A</u>	_____	_____	_____	
5. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: <u>5A</u>)</b>				
1. <u>Ludwigia palustris</u>	<u>65</u>	<input checked="" type="checkbox"/>	<u>OBL</u>	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
2. <u>Ranunculus hispidus</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FAC</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: <u>47.5</u> 20% of total cover: <u>19</u>				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. <u>N/A</u>	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				





# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade City/County: Summer Shade Sampling Date: 4-19-22  
Applicant/Owner: Candle Renewables State: Ky Sampling Point: TOI-WA2-10  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0  
Subregion (LRR or MLRA): LRRN Lat: 36.847794 Long: 85.703446 Datum: NAD83(ky)  
Soil Map Unit Name: BaDZ, W, CrC2 NWI classification: PUBHh  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes J No      (If no, explain in Remarks.)  
Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No       
Are Vegetation     , Soil     , or Hydrology      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 X No       
Hydric Soil Present? Yes X No       
Wetland Hydrology Present? Yes X No     

Is the Sampled Area  
within a Wetland?

Yes X No     

Wetland point associated w/ wetland TOI-WET-06  
PEM

## HYDROLOGY

### Wetland Hydrology Indicators:

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

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ 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)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present? Yes X No      Depth (inches): 2  
Water Table Present? Yes X No      Depth (inches): 0  
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:

### Response to 1-6

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

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

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

Hydric Soil Present? Yes X No       

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# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
Response to 1-69  
Page 204 of 794

Project/Site: Summer Shack Solar City/County: Summer Shack Sampling Date: 4-19-22  
Applicant/Owner: Candela renewables State: Ky Sampling Point: 701 WAS-11  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): Tree Slope Local relief (concave, convex, none): Concave Slope (%): 2  
Subregion (LRR or MLRA): LRRN Lat: 36.847753 Long: 95.203572 Datum: NAD83 Ky AP  
Soil Map Unit Name: BaD2 NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  <u>upland point associated w/ 701-WET-06</u>	

## HYDROLOGY

### Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ 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)
- ☐ 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)
- ☐ Other (Explain in Remarks)

### Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
Saturation Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

## VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 701-2-115-11

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. <u>N/A</u>	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			
Sapling/Shrub Stratum (Plot size: _____)			
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. <u>N/A</u>	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			
Herb Stratum (Plot size: _____)			
1. <u>Skullcap media</u>	<u>10</u>	_____	<u>UPL</u>
2. <u>Tribulus terrestris</u>	<u>70</u>	<u>X</u>	<u>FACU</u>
3. <u>Ranunculus hispidus</u>	<u>2</u>	_____	<u>FAC</u>
4. <u>Solidago canadensis</u>	<u>5</u>	_____	<u>FACU</u>
5. <u>Schedonorus arundinaceus</u>	<u>13</u>	_____	<u>FACU</u>
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: <u>51</u> 20% of total cover: <u>20.5</u>			
Woody Vine Stratum (Plot size: _____)			
1. _____	_____	_____	_____
2. <u>N/A</u>	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			
Remarks: (Include photo numbers here or on a separate sheet.)			

Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC:	<u>6</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)
Prevalence Index worksheet:	
Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____
Prevalence Index = B/A = _____	
Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Four Vegetation Strata:	
<b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.	
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	

Case No. 2025-00064  
Response to 1-69  
Sampling Point: T01-WAS-11  
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# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
Response to 1-69  
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Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4-15-21  
Applicant/Owner: Cundin State: Ky Sampling Point: Ta-WAS 12  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0  
Subregion (LRR or MLRA): LRRN Lat: 36.8410871 Long: 85.699023 Datum: NAD83 (GAP)  
Soil Map Unit Name: DeB 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 X, Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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>	Is the Sampled Area within a Wetland? 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>	
Remarks: <u>Wetland point associated w/ Tol-WET-07</u> <u>Veg. Disturbed heavily. Wetland is within Cowpen.</u> <u>PEM</u>	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<u>X</u> Surface Water (A1)	<u>    </u> True Aquatic Plants (B14)	<u>    </u> Surface Soil Cracks (B6)
<u>    </u> High Water Table (A2)	<u>    </u> Hydrogen Sulfide Odor (C1)	<u>    </u> Sparsely Vegetated Concave Surface (B8)
<u>    </u> Saturation (A3)	<u>X</u> Oxidized Rhizospheres on Living Roots (C3)	<u>    </u> Drainage Patterns (B10)
<u>    </u> Water Marks (B1)	<u>    </u> Presence of Reduced Iron (C4)	<u>    </u> Moss Trim Lines (B16)
<u>    </u> Sediment Deposits (B2)	<u>    </u> Recent Iron Reduction in Tilled Soils (C6)	<u>    </u> Dry-Season Water Table (C2)
<u>    </u> Drift Deposits (B3)	<u>    </u> Thin Muck Surface (C7)	<u>    </u> Crayfish Burrows (C8)
<u>    </u> Algal Mat or Crust (B4)	<u>    </u> Other (Explain in Remarks)	<u>X</u> Saturation Visible on Aerial Imagery (C9)
<u>    </u> Iron Deposits (B5)		<u>    </u> Stunted or Stressed Plants (D1)
<u>    </u> Inundation Visible on Aerial Imagery (B7)		<u>X</u> Geomorphic Position (D2)
<u>    </u> Water-Stained Leaves (B9)		<u>    </u> Shallow Aquitard (D3)
<u>    </u> Aquatic Fauna (B13)		<u>    </u> Microtopographic Relief (D4)
		<u>    </u> FAC-Neutral Test (D5)

Field Observations:		Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>
Surface Water Present? Yes <u>X</u> No <u>    </u>	Depth (inches): <u>1</u>	
Water Table Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>0</u>	
Saturation Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>0</u>	
(includes capillary fringe)		

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

Remarks: <u>Sinkhole directly adjacent to wetland</u>
--

## VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 781-WAS-12

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. <u>NA</u>	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. <u>NA</u>	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>5ft</u> )				
1. <u>Poa annua</u>	<u>20</u>	<u>J</u>	<u>FACU</u>	
2. <u>Ranunculus hispidus</u>	<u>40</u>	<u>J</u>	<u>FAC</u>	
3. <u>Tribulus terrestris</u>	<u>5</u>		<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: <u>65</u> 20% of total cover: <u>13</u>				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. <u>NA</u>	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

## Prevalence Index worksheet:

Total % Cover of: \_\_\_\_\_ Multiply by:

OBL species 0 x 1 = 0

FACW species 0 x 2 = 0

FAC species 40 x 3 = 120

FACU species 45 x 4 = 180

UPL species 0 x 5 = 0

Column Totals: 65 (A) 220 (B)

Prevalence Index = B/A = 3.3

## 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.

## Definitions of Four Vegetation Strata:

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes \_\_\_\_\_ No X

Case No. 2025-00064  
Response to 1-69  
Sampling Point: T01-WAB-12  
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US Army Corps of Engineers Eastern Mountains and Piedmont – Version 2.0



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Sol. City/County: Summer Shade Sampling Date: 4-19-22  
Applicant/Owner: Candela State: KY Sampling Point: TDI-WAS-13  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): hillside Local relief (concave, convex, none): Concave Slope (%): 2  
Subregion (LRR or MLRA): LRR N Lat: 36.846720 Long: 85.649906 Datum: NAD83(KY, KY)  
Soil Map Unit Name: DeB NWI classification: NA  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Upland point associated with wetland, TDI-WET-07

## HYDROLOGY

### Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ 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)
- ☐ 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)
- ☐ Other (Explain in Remarks)

#### Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):

(includes capillary fringe)

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

Wetland Hydrology Present? Yes ☐ No ☒

Remarks:

# VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: FOR WAS-13

**Tree Stratum** (Plot size: \_\_\_\_\_) Absolute % Cover Dominant Species? Indicator Status

1.			
2.			
3.			
4.	N/A		
5.			
6.			
7.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Sapling/Shrub Stratum** (Plot size: \_\_\_\_\_)

1.			
2.			
3.			
4.	N/A		
5.			
6.			
7.			
8.			
9.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Herb Stratum** (Plot size: 5ft)

1.	<u>Trifolium repens</u>	<u>60</u>	<u>X</u>	<u>FACU</u>
2.	<u>Schedonorus arundinaceus</u>	<u>30</u>	<u>X</u>	<u>FACU</u>
3.	<u>Taraxacum officinale</u>	<u>5</u>		<u>FACU</u>
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				

\_\_\_\_\_ = Total Cover  
 50% of total cover: 47.5 20% of total cover: 19

**Woody Vine Stratum** (Plot size: \_\_\_\_\_)

1.			
2.			
3.	N/A		
4.			
5.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  
 Total Number of Dominant Species Across All Strata: 2 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 = _____
FACW species	x 2 = _____
FAC species	x 3 = _____
FACU species	x 4 = _____
UPL species	x 5 = _____
Column Totals:	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

## 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.

## Definitions of Four Vegetation Strata:

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes \_\_\_\_\_ No X

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



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade City/County: Summershade Sampling Date: 4-19-22  
Applicant/Owner: Candela Remunables State: KY Sampling Point: TOI-WAS-14  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): The Slope Local relief (concave, convex, none): Concave Slope (%): 6  
Subregion (LRR or MLRA): LRR N Lat: 36.836163 Long: 85.649938 Datum: NAD83 CK/LD  
Soil Map Unit Name: Ne 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     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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 X No       
Hydric Soil Present? Yes X No       
Wetland Hydrology Present? Yes X No     

Is the Sampled Area  
within a Wetland?

Yes X No     

Remarks:

Wetland point associated w/ wetland: TOI-WET-08

## HYDROLOGY

PEM

### Wetland Hydrology Indicators:

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

Secondary Indicators (minimum of two required)

- ☒ Surface Water (A1)  
☒ High Water Table (A2)  
☒ 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)  
☒ 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)  
☐ Other (Explain in Remarks)

- ☒ Surface Soil Cracks (B6)  
☒ Sparsely Vegetated Concave Surface (B8)  
☐ Drainage Patterns (B10)  
☐ Moss Trim Lines (B16)  
☐ Dry-Season Water Table (C2)  
☐ Crayfish Burrows (C8)  
☐ Saturation Visible on Aerial Imagery (C9)  
☐ Stunted or Stressed Plants (D1)  
☒ Geomorphic Position (D2)  
☐ Shallow Aquitard (D3)  
☒ Microtopographic Relief (D4)  
☒ FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present? Yes X No      Depth (inches): 1  
Water Table Present? Yes      No X Depth (inches):       
Saturation Present? Yes X No      Depth (inches): 2  
(includes capillary fringe)

Wetland Hydrology Present? Yes X No     

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

Remarks:

# VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: T01-WAS-H

**Tree Stratum** (Plot size: \_\_\_\_\_)

	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			

**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)

50% of total cover: \_\_\_\_\_ = Total Cover  
 20% of total cover: \_\_\_\_\_

**Sapling/Shrub Stratum** (Plot size: \_\_\_\_\_)

1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A = \_\_\_\_\_

50% of total cover: 5 ft = Total Cover  
 20% of total cover: \_\_\_\_\_

**Herb Stratum** (Plot size: 5 ft)

1.	<u>Ranunculus hispidus</u>	<u>15</u>	<u>X</u>	<u>FAC</u>
2.	<u>Carex vulpinoidea</u>	<u>5</u>	<u>X</u>	<u>OBL</u>
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				

- 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.

## Definitions of Four Vegetation Strata:

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

50% of total cover: 10 = Total Cover  
 20% of total cover: 4

**Woody Vine Stratum** (Plot size: \_\_\_\_\_)

1.			
2.			
3.			
4.			
5.			

**Hydrophytic Vegetation Present?**

Yes X No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

Sparsely vegetated

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

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

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

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

Hydric Soil Present? Yes X No       

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# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shimmer Shade Solar City/County: Summer Shade Sampling Date: 4-19-22  
Applicant/Owner: Candela renewables State: Ky Sampling Point: TOI-WAS-15  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 2  
Subregion (LRR or MLRA): LREN Lat: 36.836091 Long: 85.1049861 Datum: NAD83(US-IP)  
Soil Map Unit Name: N1 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     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present?	Yes <u>    </u> No <u>X</u>	
Wetland Hydrology Present?	Yes <u>    </u> No <u>X</u>	

Remarks:

upland point associated w/ wetland - TOI-WET-08

## HYDROLOGY

### Wetland Hydrology Indicators:

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

Secondary Indicators (minimum of two required)

- Surface Water (A1)
- High Water Table (A2)
- 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)
- 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)
- Other (Explain in Remarks)

- Surface Soil Cracks (B6)
- Sparsely Vegetated Concave Surface (B8)
- Drainage Patterns (B10)
- Moss Trim Lines (B16)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Stunted or Stressed Plants (D1)
- Geomorphic Position (D2)
- Shallow Aquitard (D3)
- Microtopographic Relief (D4)
- FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present?	Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>
Water Table Present?	Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>
Saturation Present? (includes capillary fringe)	Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>

Wetland Hydrology Present? Yes      No X

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

Remarks:

# VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 701-WAS-15

Tree Stratum (Plot size: 30 Ft)			
	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Carya ovata</i>	15	X	FACU
2. <i>Acer rubrum</i>	5	X	FACU
3.			
4.			
5.			
6.			
7.			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20 (A/B)

Sapling/Shrub Stratum (Plot size: )			
	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Herb Stratum (Plot size: 5 Ft)			
	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Tribolium repens</i>	25	X	FACU
2. <i>Setaria media</i>	30	X	FACU
3. <i>Scheuchzeria palustris</i>	30	X	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

**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.

Woody Vine Stratum (Plot size: )			
	Absolute % Cover	Dominant Species?	Indicator Status
1. NA			
2.			
3.			
4.			
5.			

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

50% of total cover: 47.5 = Total Cover  
 20% of total cover: 17

**Hydrophytic Vegetation Present?** Yes No X

Remarks: (Include photo numbers here or on a separate sheet.)

[illegible]

No Hydric Soil



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summerhawk Solar City/County: Summerhawk Sampling Date: 4-19-22  
Applicant/Owner: Candela renewables State: IN Sampling Point: TOI-UNS-16  
Investigator(s): CK, LD Section, Township, Range: N12  
Landform (hillslope, terrace, etc.): Toe slope Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRR N Lat: 36.936955 Long: 85.699735 Datum: NAD83  
Soil Map Unit Name: N1, Nk NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
Are Vegetation       , Soil       , or Hydrology        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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Remarks:

Wetland point associated w/ wetland - TOI-WET-09  
PEM / PFO

## HYDROLOGY

### Wetland Hydrology Indicators:

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

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ 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)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☒ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☒ FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>1</u>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

# VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: T01-WAS-10

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. <u>NA</u>			
5. _____			
6. _____			
7. _____			

50% of total cover: \_\_\_\_\_ = Total Cover  
 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. _____			
5. <u>NA</u>			
6. _____			
7. _____			
8. _____			
9. _____			

50% of total cover: \_\_\_\_\_ = Total Cover  
 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>5ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juncus effusus</u>	<u>30</u>	<u>X</u>	<u>FACW</u>
2. <u>Juncus tenuis</u>	<u>15</u>	<u>X</u>	<u>FACW</u>
3. <u>Rumex crispus</u>	<u>15</u>	<u>X</u>	<u>FAC</u>
4. <u>Scheuchzeria palustris</u>	<u>10</u>		<u>FAC</u>
5. <u>Carex vulpinoidea</u>	<u>10</u>		<u>GBL</u>
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			

50% of total cover: 40 80 = Total Cover  
 20% of total cover: 10

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. <u>NA</u>			
5. _____			

50% of total cover: \_\_\_\_\_ = Total Cover  
 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)  
 Total Number of Dominant Species Across All Strata: 3 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

## Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = \_\_\_\_\_

## 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.

## Definitions of Four Vegetation Strata:

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes X No \_\_\_\_\_

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

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

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4/19/22  
Applicant/Owner: Carolina Renewables State: Ky Sampling Point: TDI-WAS-17  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): hillslope / toeslope Local relief (concave, convex, none): Concave Slope (%): 3  
Subregion (LRR or MLRA): LORN Lat: 36.836979 Long: 85.644276 Datum: NAD83 (G, AP3)  
Soil Map Unit Name: Ne, Nk NWI classification: NA  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks: <u>Upland point associated w/ wetland - TDI-WET-04</u>	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <input type="text"/>	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: 701-WAS-17

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. <u>N/A</u>	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. <u>N/A</u>	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: <u>5 ft</u>)</b>				
1. <u>Schizanthus arundinaceae</u>	<u>50</u>	<u>X</u>	<u>FAC</u>	
2. <u>Trifolium ripens</u>	<u>40</u>	<u>X</u>	<u>FACU</u>	
3. <u>Poa annua</u>	<u>5</u>		<u>FACU</u>	
4. <u>Rumex crispus</u>	<u>2</u>		<u>FAC</u>	
5. <u>Achropogon virginicus</u>	<u>2</u>		<u>FACU</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: <u>97.5</u> 20% of total cover: <u>19.8</u>				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. <u>N/A</u>	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

[illegible]

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

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

- ☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Restrictive Layer (if observed):

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: SummerShade Solar City/County: Summershale Sampling Date: 4/20/22  
 Applicant/Owner: Complete renewables State: Ky Sampling Point: TD1-WAS-18  
 Investigator(s): CK, LB Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Toe Slope Local relief (concave, convex, none): Concave Slope (%): 1  
 Subregion (LRR or MLRA): LRR N Lat: 36.838967 Long: 85.693564 Datum: NAD83 (Ky f.p.s)  
 Soil Map Unit Name: BaB 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     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation     , Soil     , or Hydrology      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>    </u>	Is the Sampled Area within a Wetland? 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>	
Remarks:  <u>Wetland point associated w/ - TD1-WET-10</u> <u>DEM</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <u>X</u> No <u>    </u> Depth (inches): <u>2</u> Water Table Present? Yes <u>X</u> No <u>    </u> Depth (inches): <u>4</u> Saturation Present? Yes <u>X</u> No <u>    </u> Depth (inches): <u>0</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

Sampling Point: TOP WAS-18

**VEGETATION (Four Strata) – Use scientific names of plants.**

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)																
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)																
3. <u>NA</u>	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____	(A) _____ (B) _____	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____	(A) _____ (B) _____																			
Prevalence Index = B/A = _____																				
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)																
<b>Sapling/Shrub Stratum (Plot size: _____)</b> 1. _____ 2. _____ 3. _____ 4. <u>NA</u> 5. _____ 6. _____ 7. _____ 8. _____ 9. _____																				
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____																				
<b>Herb Stratum (Plot size: <u>5ft</u>)</b> 1. <u>Lythrum palustris</u> <u>10</u> <u>FACU</u> 2. <u>Schedonorus arundinacea</u> <u>15</u> <u>FACU</u> 3. <u>Ranunculus hispidus</u> <u>35</u> <u>X</u> <u>FAC</u> 4. <u>Juncus effusus</u> <u>10</u> <u>FACU</u> 5. <u>Anthoxanthum odoratum</u> <u>5</u> <u>FACU</u> 6. <u>Syntherisma pilosum</u> <u>2</u> <u>FACU</u> 7. _____ 8. _____ 9. _____ 10. _____ 11. _____																				
_____ = Total Cover 50% of total cover: <u>36.5</u> 20% of total cover: <u>15.4</u>				<b>Definitions of Four Vegetation Strata:</b> <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.																
<b>Woody Vine Stratum (Plot size: _____)</b> 1. _____ 2. _____ 3. <u>NA</u> 4. _____ 5. _____																				
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____																				
<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____																				
Remarks: (Include photo numbers here or on a separate sheet.) <div style="text-align: center; font-size: 1.2em; margin-top: 20px;">Vegetation is mowed.</div>																				

## SOIL

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

[illegible]

<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 Soil Indicators:

- \_\_\_ Histosol (A1)
- \_\_\_ Histic Epipedon (A2)
- \_\_\_ Black Histic (A3)
- \_\_\_ Hydrogen Sulfide (A4)
- \_\_\_ Stratified Layers (A5)
- \_\_\_ 2 cm Muck (A10) (**LRR N**)
- \_\_\_ Depleted Below Dark Surface (A11)
- \_\_\_ Thick Dark Surface (A12)
- \_\_\_ Sandy Mucky Mineral (S1) (**LRR N, MLRA 147, 148**)
- \_\_\_ Sandy Gleyed Matrix (S4)
- \_\_\_ Sandy Redox (S5)
- \_\_\_ Stripped Matrix (S6)

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbritic Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

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

- \_\_\_ 2 cm Muck (A10) **(MLRA 147)**  
 \_\_\_ Coast Prairie Redox (A16)  
     **(MLRA 147, 148)**  
 \_\_\_ Piedmont Floodplain Soils (F19)  
     **(MLRA 136, 147)**  
 \_\_\_ 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 observed):

Type: N/A  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes X No       

Remarks:



# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: SummerShade Solar City/County: SummerShade Sampling Date: 4/20/22  
Applicant/Owner: Candela Renewables State: ky Sampling Point: T01-WHS-19  
Investigator(s): CK LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): hillside Local relief (concave, convex, none): Concave Slope (%): 2  
Subregion (LRR or MLRA): LRR N Lat: 36.838934 Long: 85.693550 Datum: NAD83(k/r/p2)  
Soil Map Unit Name: BaB 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     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present? Yes <u>    </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	
Remarks: <u>upland point associated w/ wetland - T01-WET-10</u>	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>	Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>
Water Table Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>	
Saturation Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>	
(Includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 701-whs-19

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

NA

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

NA

Herb Stratum (Plot size: 5ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Schedonorus arundinacea</i>	30	X	FACU
2. <i>Salicaria pilosum</i>	30	X	FACU
3. <i>Anthoxanthum odoratum</i>	40	X	FACU
4. <i>Lonicera japonica</i>	2		FACU
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: 51 100 20% of total cover: 20.5			

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

NA

**Dominance Test worksheet:**  
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  
Total Number of Dominant Species Across All Strata: 3 (B)  
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**  
Total % Cover of: Multiply by:  
OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

Remarks: (Include photo numbers here or on a separate sheet.)

Vegetation is mowed

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

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

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

- ☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Restrictive Layer (if observed):

Hydric Soil Present? Yes \_\_\_\_\_ No ^

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WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summerchalo Solar City/County: Summerchalo Sampling Date: 4/20/22  
Applicant/Owner: Candela Renewable State: Ky Sampling Point: 701-WAS-20  
Investigator(s): CK LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2  
Subregion (LRR or MLRA): LRRN Lat: 36.837965 Long: -85.695416 Datum: NAD83/Ky F.17  
Soil Map Unit Name: Hu, B&B, CKC2 NWI classification: QUBH  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ 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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: <u>Wetland point associated w/ Wetland - 701-WET-11</u> <u>PEM</u>	

HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b>			
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input checked="" type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b>			
Surface Water Present? Yes <u>X</u> No _____	Depth (inches): <u>3</u>	Wetland Hydrology Present? Yes <u>X</u> No _____	
Water Table Present? Yes <u>X</u> No _____	Depth (inches): <u>0</u>		
Saturation Present? Yes <u>X</u> No _____	Depth (inches): <u>2</u>		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: TOI-WAS-20

Tree Stratum (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Robinia pseudoacacia</u>	<u>2</u>		<u>FACU</u>
2.			
3.			
4.			
5.			
6.			
7.			

2 = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3. <u>NA</u>			
4.			
5.			
6.			
7.			
8.			
9.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>5</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Nymphaea odorata</u>	<u>5</u>		<u>OBL</u>
2. <u>Juncus effusus</u>	<u>30</u>	<u>X</u>	<u>FACW</u>
3. <u>Juncus tenuis</u>	<u>5</u>		<u>FACW</u>
4. <u>Carex vulpinoidea</u>	<u>15</u>	<u>X</u>	<u>OBL</u>
5. <u>Andropogon virginicus</u>	<u>2</u>		<u>FACU</u>
6. <u>Schedonorus arundinaceus</u>	<u>5</u>		<u>FACU</u>
7.			
8.			
9.			
10.			
11.			

62 = Total Cover

50% of total cover: 31 20% of total cover: 12.4

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

\_\_\_ 1 - Rapid Test for Hydrophytic Vegetation

X 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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

Sampling Point: 401-WAS-20

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# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4-20-22  
Applicant/Owner: Canale Renewable State: Ky Sampling Point: TO1-WAS-21  
Investigator(s): OK, LP Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): Hillside, Berm Local relief (concave, convex, none): Concave Slope (%): 2  
Subregion (LRR or MLRA): LRRN Lat: 36.837939 Long: 95.10951023 Datum: NAD83 (KyrApd)  
Soil Map Unit Name: flu, BaB, cKc2 NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks:

Uplandpoint associated w/ Wetland - TO1 - WET-11

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):             
Water Table Present? Yes ☐ No ☒ Depth (inches):             
Saturation Present? Yes ☐ No ☒ Depth (inches):             
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Hydric Soil Present? Yes \_\_\_\_\_ No X

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# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4-20-22  
Applicant/Owner: Complete renewables State: Ky Sampling Point: 701-WHS-22  
Investigator(s): CK LD Section, Township, Range: NR  
Landform (hillslope, terrace, etc.): Toe Slope Local relief (concave, convex, none): Concave Slope (%): 3  
Subregion (LRR or MLRA): LRR N Lat: 36.837964 Long: 85.695748 Datum: NAD83(K, Gp)  
Soil Map Unit Name: Hu NWI classification: N<sub>4</sub>

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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>	Is the Sampled Area within a Wetland? 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>	
Remarks: <u>Wetland point associated w / - TOTWET-12</u> <u>PEM</u>	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <u>X</u> No <u>    </u> Depth (inches): <u>2</u>	Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>	
Water Table Present? Yes <u>X</u> No <u>    </u> Depth (inches): <u>0</u>		
Saturation Present? Yes <u>X</u> No <u>    </u> Depth (inches): <u>0</u> (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



Sampling Point: TO1-WAS-22

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

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

- ☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ 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.

Hydric Soil Present? Yes X No

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4-20-22  
Applicant/Owner: Candela Renewables State: KY Sampling Point: TO1-WHS-23  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): hillside Local relief (concave, convex, none): Concave Slope (%):  
Subregion (LRR or MLRA): LRRN Lat: 36.837804 Long: 85.645508 Datum: NAD83(KYDPS)  
Soil Map Unit Name: Hu 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 \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ 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 _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks:

upland point associated w - TO1-WET-12

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |
| <input checked="" type="checkbox"/> Drainage Patterns (B10)        |
| <input type="checkbox"/> Moss Trim Lines (B16)                     |
| <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 type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> Microtopographic Relief (D4)              |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |

**Field Observations:**

Surface Water Present?	Yes _____ No <u>X</u>	Depth (inches): _____
Water Table Present?	Yes _____ No <u>X</u>	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____ No <u>X</u>	Depth (inches): _____

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

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

Remarks:

Sampling Point: TO1-WAS 23

**Dominance Test worksheet:**

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 2 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:	
Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B)

Prevalence Index =  $B/A =$  \_\_\_\_\_

- \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation
- \_\_\_ 2 - Dominance Test is  $>50\%$
- \_\_\_ 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.

**Tree** – Woody plants, excluding vines, 3.in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☐ No ☒

**Hydrophytic Vegetation Indicators:**

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 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.

### Definitions of Four Vegetation Strata:

**Tree** – Woody plants, excluding vines, 3.in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks: (Include photo numbers here or on a separate sheet.)



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

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4-20-22  
Applicant/Owner: Candela renewables State: Ky Sampling Point: TO1-W1A5-24  
Investigator(s): CK, LP Section, Township, Range: NH  
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Convex Slope (%): 2  
Subregion (LRR or MLRA): LRRN Lat: 36.837657 Long: 85.695289 Datum: NAD83 (K, R, P)  
Soil Map Unit Name: Hu, 8-B 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 \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ 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 _____	Hydric Soil Present? Yes <u>X</u> No _____	Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks:  <u>Wetland point associated w/ - PEM TO1-WET-13</u>			

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b>			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b>			
Surface Water Present? Yes <u>X</u> No <u>1</u> Depth (inches): _____		Wetland Hydrology Present? Yes <u>X</u> No _____	
Water Table Present? Yes <u>X</u> No <u>0</u> Depth (inches): _____			
Saturation Present? Yes <u>X</u> No <u>0</u> Depth (inches): _____ (includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: T01-WAS-24

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. <u>NA</u>			
5. _____			
6. _____			
7. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. <u>NA</u>			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>5ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juncus effusus</u>	<u>40</u>	<u>X</u>	<u>FACW</u>
2. <u>Juncus tenuis</u>	<u>15</u>		<u>FACW</u>
3. <u>Andropogon virginicus</u>	<u>15</u>		<u>FACU</u>
4. <u>Carex umbinoides</u>	<u>15</u>		<u>OBL</u>
5. <u>Xanthium spinosum</u>	<u>2</u>		<u>FACU</u>
6. <u>Viola bicolor</u>	<u>2</u>		<u>FACU</u>
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: 44.5 20% of total cover: 17.8

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. <u>NA</u>			
3. _____			
4. _____			
5. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 1 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes ☒ No \_\_\_\_\_



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

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

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

Hydric Soil Present? Yes X No

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4/20/22  
Applicant/Owner: Candela renewables State: KY Sampling Point: 701-WBS-25  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): linear, toeslope Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRRN Lat: 36.840647 Long: 85.617145 Datum: NAD83 (K142)  
Soil Map Unit Name: Hu 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     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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 X No       
Hydric Soil Present? Yes X No       
Wetland Hydrology Present? Yes X No     

Is the Sampled Area  
within a Wetland? Yes X No     

Remarks:

WETLAND point for wetland - 701-WET-14  
DEM

## HYDROLOGY

### Wetland Hydrology Indicators:

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

X Surface Water (A1)      True Aquatic Plants (B14)  
X High Water Table (A2)      Hydrogen Sulfide Odor (C1)  
X Saturation (A3)      Oxidized Rhizospheres on Living Roots (C3)  
     Water Marks (B1)      Presence of Reduced Iron (C4)  
     Sediment Deposits (B2)      Recent Iron Reduction in Tilled Soils (C6)  
     Drift Deposits (B3)      Thin Muck Surface (C7)  
     Algal Mat or Crust (B4)      Other (Explain in Remarks)  
     Iron Deposits (B5)  
     Inundation Visible on Aerial Imagery (B7)  
     Water-Stained Leaves (B9)  
     Aquatic Fauna (B13)

### Secondary Indicators (minimum of two required)

     Surface Soil Cracks (B6)  
     Sparsely Vegetated Concave Surface (B8)  
X Drainage Patterns (B10)  
     Moss Trim Lines (B16)  
     Dry-Season Water Table (C2)  
     Crayfish Burrows (C8)  
     Saturation Visible on Aerial Imagery (C9)  
     Stunted or Stressed Plants (D1)  
X Geomorphic Position (D2)  
     Shallow Aquitard (D3)  
     Microtopographic Relief (D4)  
X FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present? Yes X No      Depth (inches): 1  
Water Table Present? Yes X No      Depth (inches): 14  
Saturation Present? Yes X No      Depth (inches): 6  
(includes capillary fringe)

Wetland Hydrology Present? Yes X No     

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

Remarks:

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: Tol-WAS-25

Tree Stratum (Plot size: <u>30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Quercus phellos</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2.				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3.				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4.				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5.				
6.				
7.				
8.				
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				
1.				
2.				
3.				
4. <u>NA</u>				
5.				
6.				
7.				
8.				
9.				
10.				
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: _____)</b>				
1. <u>Juncus effusus</u>	<u>35</u>	<u>X</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 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.
2. <u>Lonicera japonica</u>	<u>10</u>		<u>FACU</u>	
3. <u>Juncus tenuis</u>	<u>5</u>		<u>FACW</u>	
4. <u>Lytidopsis alternifolia</u>	<u>30</u>	<u>X</u>	<u>FACW</u>	
5. <u>Andropogon virginicus</u>	<u>2</u>		<u>FACU</u>	
6. <u>Schodbruecus arundinaceus</u>	<u>10</u>		<u>FACU</u>	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
7.				
8.				
9.				
10.				
_____ = Total Cover 50% of total cover: <u>46</u> 20% of total cover: <u>18.2</u>				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1.				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
2. <u>NA</u>				
3.				
4.				
5.				
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				

Remarks: (Include photo numbers here or on a separate sheet.)



Sampling Point: T01-WAS-25

Sampling Point: T01-WAS-25

Sampling Point: T01-WAS-25

Sampling Point: T01-WAS-25

Sampling Point: T01-WAS-25

Sampling Point: T01-WAS-25

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Sampling Point: T01-WAS-25

Sampling Point: T01-WAS-25

Sampling Point: T01-WAS-25

Sampling Point: T01-WAS-25

Sampling Point: T01-WAS-25

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4/20/22  
Applicant/Owner: Candela renewables State: Ky Sampling Point: TOI-WHS-26  
Investigator(s): CK, LD Section, Township, Range: NR  
Landform (hillslope, terrace, etc.): hillside Local relief (concave, convex, none): Concave Slope (%): 9  
Subregion (LRR or MLRA): LRRN Lat: 36.410648 Long: 95.697191 Datum: NAD83 (K&F)  
Soil Map Unit Name: Hu NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No \_\_\_\_\_  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ 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 _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	

Remarks:

Upland point associated w/ TOI-WET-H

## HYDROLOGY

### Wetland Hydrology Indicators:

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

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

#### Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Moss Trim Lines (B16)                     |
| <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 type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> Microtopographic Relief (D4)              |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |

### Field Observations:

Surface Water Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____
Saturation Present? Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____

(includes capillary fringe)

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

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

Remarks:

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: 701-WAS-26

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>5ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Schizanthus arundinaceus</i>	70	X	FACU
2. <i>Stellaria media</i>	35	X	UPL
3. <i>Conium maculatum</i>	5		FACU
4. <i>Alliaria petiolata</i>	2		FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: 56 20% of total cover: 22.4

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)



Sampling Point: T01-WAS-26

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Shummershale Sol City/County: Summers Sampling Date: 4/21/22  
Applicant/Owner: Candela Renewable State: KY Sampling Point: 701-WHS-27  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%):  
Subregion (LRR or MLRA): LRR N Lat: 36.845708 Long: 85.688144 Datum: NAD83/KyHPD  
Soil Map Unit Name: BaD2 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 \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ 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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: <u>Wetland point associated w/- 701-WET-15</u> <u>PEM</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>
<b>Primary Indicators (minimum of one is required; check all that apply)</b>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Water Table Present? Yes _____ No <u>X</u>	Depth (inches): _____	
Saturation Present? Yes _____ No <u>X</u>	Depth (inches): _____	
(includes capillary fringe)		<b>Wetland Hydrology Present? Yes <u>X</u> No _____</b>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: T01-WA3-27

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:														
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)														
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)														
3. <u>N/A</u>	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> <table style="width: 100%;"> <tr> <th>Total % Cover of:</th> <th>Multiply by:</th> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)
Total % Cover of:	Multiply by:																	
OBL species _____	x 1 = _____																	
FACW species _____	x 2 = _____																	
FAC species _____	x 3 = _____																	
FACU species _____	x 4 = _____																	
UPL species _____	x 5 = _____																	
Column Totals: _____ (A)	_____ (B)																	
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				Prevalence Index = B/A = _____														
<b>Sapling/Shrub Stratum (Plot size: _____)</b>				<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. <u>N/A</u>	_____	_____	_____															
4. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.														
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
_____ = Total Cover 50% of total cover: <u>50.25</u> 20% of total cover: <u>20.4</u>				<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____														
<b>Herb Stratum (Plot size: <u>584</u>)</b>																		
1. <u>Ludwigia palustris</u>	<u>80</u>	<u>X</u>	<u>FACW</u>															
2. <u>Alliaria petiolata</u>	<u>2</u>		<u>FACU</u>															
3. <u>Ranunculus lasperis</u>	<u>10</u>		<u>FAC</u>															
4. <u>Stellaria media</u>	<u>10</u>		<u>UPL</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____																		
<b>Woody Vine Stratum (Plot size: _____)</b>																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. <u>N/A</u>	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____																		
Remarks: (Include photo numbers here or on a separate sheet.)																		



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

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

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

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

Hydric Soil Present? Yes X No     

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shale Solar City/County: Summershale Sampling Date: 4/21/22  
Applicant/Owner: Candle renewables State: KY Sampling Point: 701-WAS-28  
Investigator(s): CK, LD Section, Township, Range: NH  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRRN Lat: 36.845597 Long: 85.689947 Datum: NAD83 (KAPs)  
Soil Map Unit Name: Hu NWI classification: PUBH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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>	Is the Sampled Area within a Wetland? 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>	
Remarks: <u>Wetland point associated w - 701-WET-110</u> <u>PEM</u> <u>Inland point is 702-WET-01</u>	

## HYDROLOGY

### Wetland Hydrology Indicators:

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

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

#### Secondary Indicators (minimum of two required)

- |   |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6)                             |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)              |
| <input type="checkbox"/> Drainage Patterns (B10)                              |
| <input type="checkbox"/> Moss Trim Lines (B16)                                |
| <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"/> Shallow Aquitard (D3)                                |
| <input type="checkbox"/> Microtopographic Relief (D4)                         |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5)                     |

### Field Observations:

Surface Water Present? Yes X No      Depth (inches): 2  
Water Table Present? Yes X No      Depth (inches): 0  
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:

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: Tol-WNS-28

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>8ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juncus roemerianus</u>	<u>5</u>		<u>FACW</u>
2. <u>Lythrum palustris</u>	<u>55</u>	<u>X</u>	<u>FACW</u>
3. <u>Ranunculus hispidus</u>	<u>30</u>	<u>X</u>	<u>FA</u>
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

\_\_\_\_\_ = Total Cover

50% of total cover: 45 20% of total cover: 16.5

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of 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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes ☒ No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)



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

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

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

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

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4-22-22  
Applicant/Owner: Candela renewables State: KY Sampling Point: Tol-WK-29  
Investigator(s): OK, LD Section, Township, Range: NR  
Landform (hillslope, terrace, etc.): Toe Slope / Terrace Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRRN Lat: 36.849383 Long: 85.1099908 Datum: NAD83 (KyAp)  
Soil Map Unit Name: S-B, T- NWI classification: N/A  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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>	Is the Sampled Area within a Wetland? 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>	
Remarks: <u>Wetland point associated w/ TOL -WET-17</u> <u>PEM/PFO</u>	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		<u>    </u> Surface Soil Cracks (B6)
<u>X</u> Surface Water (A1)	<u>    </u> True Aquatic Plants (B14)	<u>X</u> Sparsely Vegetated Concave Surface (B8)
<u>X</u> High Water Table (A2)	<u>X</u> Hydrogen Sulfide Odor (C1)	<u>X</u> Drainage Patterns (B10)
<u>X</u> Saturation (A3)	<u>    </u> Oxidized Rhizospheres on Living Roots (C3)	<u>    </u> Moss Trim Lines (B16)
<u>    </u> Water Marks (B1)	<u>    </u> Presence of Reduced Iron (C4)	<u>    </u> Dry-Season Water Table (C2)
<u>    </u> Sediment Deposits (B2)	<u>    </u> Recent Iron Reduction in Tilled Soils (C6)	<u>X</u> Crayfish Burrows (C8)
<u>    </u> Drift Deposits (B3)	<u>    </u> Thin Muck Surface (C7)	<u>    </u> Saturation Visible on Aerial Imagery (C9)
<u>X</u> Algal Mat or Crust (B4)	<u>    </u> Other (Explain in Remarks)	<u>    </u> Stunted or Stressed Plants (D1)
<u>    </u> Iron Deposits (B5)		<u>X</u> Geomorphic Position (D2)
<u>    </u> Inundation Visible on Aerial Imagery (B7)		<u>    </u> Shallow Aquitard (D3)
<u>X</u> Water-Stained Leaves (B9)		<u>    </u> Microtopographic Relief (D4)
<u>    </u> Aquatic Fauna (B13)		<u>X</u> FAC-Neutral Test (D5)

Field Observations:		Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>
Surface Water Present? Yes <u>X</u> No <u>    </u>	Depth (inches): <u>2</u>	
Water Table Present? Yes <u>X</u> No <u>    </u>	Depth (inches): <u>0</u>	
Saturation Present? Yes <u>X</u> No <u>    </u>	Depth (inches): <u>0</u>	

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

Remarks:

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: 701-W45-29

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus pennsylvanica</u>	<u>10</u>	<u>X</u>	<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

50% of total cover: 5 10 = Total Cover  
 20% of total cover: 2

Sapling/Shrub Stratum (Plot size: <u>1</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fraxinus pennsylvanica</u>	<u>2</u>	_____	<u>FACW</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____

50% of total cover: 1 2 = Total Cover  
 20% of total cover: .15

Herb Stratum (Plot size: <u>5 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Carex vulpinoidea</u>	<u>5</u>	_____	<u>OBL</u>
2. <u>Ranunculus hispidus</u>	<u>20</u>	<u>X</u>	<u>FAC</u>
3. <u>Juncus tenuis</u>	<u>20</u>	<u>X</u>	<u>FACW</u>
4. <u>Juncus effusus</u>	<u>10</u>	_____	<u>FACW</u>
5. <u>Ranunculus abortivus</u>	<u>10</u>	_____	<u>FACW</u>
6. <u>Ludwigia palustris</u>	<u>5</u>	_____	<u>FACW</u>
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

50% of total cover: 35 70 = Total Cover  
 20% of total cover: 14

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

- \_\_\_\_\_ 1 - Rapid Test for Hydrophytic Vegetation
- X 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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No \_\_\_\_\_



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

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

Hydric Soil Present? Yes X No     

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4/21/22  
Applicant/Owner: Canale renewables State: Ky Sampling Point: TOI-WAS-30  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): hill Local relief (concave, convex, none): convex Slope (%): 2  
Subregion (LRR or MLRA): LRR N Lat: 31.849845 Long: 95.700016 Datum: NAD83 Ky 82  
Soil Map Unit Name: SaB 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     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present? Yes <u>X</u> No <u>    </u>	
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	
Remarks: <u>upland point associated w/ wetland - TOI-WET-17</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>
<b>Primary Indicators (minimum of one is required; check all that apply)</b>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>	Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>
Water Table Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>	
Saturation Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: TOI-WAS-30

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. <u>NA</u>			
5. _____			
6. _____			
7. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. _____			
4. <u>NA</u>			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ranunculus hispidus</u>	<u>10</u>		<u>FAC</u>
2. <u>Schizanthus arundinacea</u>	<u>20</u>	<u>X</u>	<u>FACU</u>
3. <u>Trifolium repens</u>	<u>35</u>	<u>X</u>	<u>FACU</u>
4. <u>Andropogon virginicus</u>	<u>15</u>		<u>FACU</u>
5. <u>Ranunculus abortivus</u>	<u>2</u>		<u>FACU</u>
6. <u>Houstonia caerulea</u>	<u>2</u>		<u>FACU</u>
7. <u>Taraxacum officinale</u>	<u>5</u>		<u>FACU</u>
8. <u>Rubus alleghaniensis</u>	<u>2</u>		
9. <u>Juncus tenuis</u>	<u>5</u>		
10. _____			
11. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: 48 20% of total cover: 19.2

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____			
2. _____			
3. <u>NA</u>			
4. _____			
5. _____			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes \_\_\_\_\_ No X



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

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

- ☐ 2 cm Muck (A10) (**MLRA 147**)  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ 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.

Type: NA  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes X No   

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4/21/22  
Applicant/Owner: Candela Renewable State: KY Sampling Point: TOI-WAS-31  
Investigator(s): CK, LD Section, Township, Range: NH  
Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRRN Lat: 36.850045 Long: 85.701004 Datum: NAD83 KyDPS  
Soil Map Unit Name: SaB, TA NWI classification: NH

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ 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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: <u>Wetland point associated w/ Wetland - TOI-WET-18</u> <u>PEM</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>
<b>Primary Indicators (minimum of one is required; check all that apply)</b>		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input checked="" type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <u>X</u> No _____	Depth (inches): <u>2</u>	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes <u>X</u> No _____	Depth (inches): <u>4</u>	
Saturation Present? (includes capillary fringe) Yes <u>X</u> No _____	Depth (inches): <u>0</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 701-WAS-31

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: 5ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ranunculus abortivus	30	X	FACW
2. Ranunculus hispidus	20	X	FAC
3. Juncus effusus	10		FACW
4. Juncus tenuis	15	X	FACW
5. Schedonorus arundinacea	5		FACW
6. Poa annua	2		FACW
7. Trifolium repens	5		FACW
8. Ludwigia palustris	2		FACW
9.			
10.			
11.			

79 = Total Cover  
 50% of total cover: 38 20% of total cover: 15

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

grazed by cattle

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals:	(A) (B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- X 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.

Definitions of Four Vegetation Strata:

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes X No



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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4/21/22  
Applicant/Owner: Candle - renewables State: Ky Sampling Point: TO1-WAS-02  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 2  
Subregion (LRR or MLRA): LRR N Lat: 36.850213 Long: 85.700903 Datum: NAD83 Ky/US  
Soil Map Unit Name: S.B., Ta 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 \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ 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 _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: <u>Upland point associated w/ Wetland - TO1-WET-18 And TO2-WET-02</u>	

**HYDROLOGY**

**Wetland Hydrology Indicators:**

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

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

Secondary Indicators (minimum of two required)

- |  |
|--|
| <input type="checkbox"/> Surface Soil Cracks (B6)                  |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)   |
| <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Moss Trim Lines (B16)                     |
| <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 type="checkbox"/> Geomorphic Position (D2)                  |
| <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> Microtopographic Relief (D4)              |
| <input type="checkbox"/> FAC-Neutral Test (D5)                     |

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: TOL-Whs-22

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Trifolium repens</u>	<u>40</u>	<u>X</u>	<u>FACW</u>
2. <u>Schizanthus arundinacea</u>	<u>25</u>	<u>X</u>	<u>FACW</u>
3. <u>Andropogon virginicus</u>	<u>15</u>	_____	<u>FACU</u>
4. <u>Stellaria media</u>	<u>10</u>	_____	<u>UPL</u>
5. <u>Potentilla indica</u>	<u>10</u>	_____	<u>FACU</u>
6. <u>Houstonia coccinea</u>	<u>5</u>	_____	<u>FACU</u>
7. <u>poa annua</u>	<u>5</u>	_____	<u>FACU</u>
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

50% of total cover: 50 20% of total cover: 20

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

graze veg

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes \_\_\_\_\_ No X



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

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

<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) ( <b>LRR N</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR N, MLRA 147, 148</b> ) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>MLRA 147, 148</b> ) <input type="checkbox"/> Thin Dark Surface (S9) ( <b>MLRA 147, 148</b> ) <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"/> Iron-Manganese Masses (F12) ( <b>LRR N, MLRA 136</b> ) <input type="checkbox"/> Umbric Surface (F13) ( <b>MLRA 136, 122</b> ) <input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 148</b> ) <input type="checkbox"/> Red Parent Material (F21) ( <b>MLRA 127, 147</b> )	<input type="checkbox"/> 2 cm Muck (A10) ( <b>MLRA 147</b> ) <input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 147, 148</b> ) <input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 136, 147</b> ) <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.

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

Hydric Soil Present? Yes X No \_\_\_\_\_

US Army Corps of Engineers Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summershade Solar City/County: Summershade Sampling Date: 4/22/22  
Applicant/Owner: Candle renewables State: KY Sampling Point: TO1-WHS-33  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): None Slope (%): 3  
Subregion (LRR or MLRA): LRR N Lat: 36.851572 Long: 85.649699 Datum: NAD83 (Kyl-PS)  
Soil Map Unit Name: S.B 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 \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ 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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks:

Wetland point associated w - TO1-WET-19  
PEM

## HYDROLOGY

### Wetland Hydrology Indicators:

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

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

### Secondary Indicators (minimum of two required)

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Moss Trim Lines (B16)
<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"/> Shallow Aquitard (D3)
<input type="checkbox"/> Microtopographic Relief (D4)
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present?	Yes <u>X</u> No _____	Depth (inches): <u>1</u>
Water Table Present?	Yes <u>X</u> No _____	Depth (inches): <u>9</u>
Saturation Present? (includes capillary fringe)	Yes <u>X</u> No _____	Depth (inches): <u>0</u>

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

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

Remarks:

Wetland is grazed by cows

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: T01-WHS-33

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>5ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ranunculus h. sp.</u>	<u>60</u>	<u>X</u>	<u>FAC</u>
2. <u>Juncus tenuis</u>	<u>5</u>	_____	<u>FACW</u>
3. <u>Schizanthus arvensis</u>	<u>10</u>	_____	<u>FACU</u>
4. <u>Ludwigia palustris</u>	<u>15</u>	_____	<u>FACU</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover  
 50% of total cover: 45 20% of total cover: 18

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 1 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No \_\_\_\_\_



## Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4/22/22  
Applicant/Owner: Candela Removables State: Ky Sampling Point: TOI-WAS-34  
Investigator(s): CK, LD Section, Township, Range: pk  
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): None Slope (%): 3  
Subregion (LRR or MLRA): LRR N Lat: 36.851635 Long: 85.691649 Datum: NAD83 (K, fips)  
Soil Map Unit Name: S.3 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     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present? Yes <u>X</u> No <u>    </u>	
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	

Remarks:

upland point associated w/ - TOI-WET-19

## HYDROLOGY

### Wetland Hydrology Indicators:

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

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

### Secondary Indicators (minimum of two required)

     Surface Soil Cracks (B6)  
     Sparsely Vegetated Concave Surface (B8)  
     Drainage Patterns (B10)  
     Moss Trim Lines (B16)  
     Dry-Season Water Table (C2)  
     Crayfish Burrows (C8)  
     Saturation Visible on Aerial Imagery (C9)  
     Stunted or Stressed Plants (D1)  
     Geomorphic Position (D2)  
     Shallow Aquitard (D3)  
     Microtopographic Relief (D4)  
     FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present?	Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>
Water Table Present?	Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>
Saturation Present? (includes capillary fringe)	Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>

Wetland Hydrology Present? Yes      No X

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

Remarks:

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: 701-WAS-34

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>5 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Trifolium repens</u>	<u>50</u>	<u>X</u>	<u>FACU</u>
2. <u>Taraxacum officinale</u>	<u>20</u>		<u>FACW</u>
3. <u>Stellaria media</u>	<u>30</u>	<u>X</u>	<u>UPL</u>
4. <u>Th. xacum officinale</u>	<u>2</u>		<u>FACU</u>
5.			
6.			
7.			
8.			
9.			
10.			
11.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: 51 20% of total cover: 20.75

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes \_\_\_\_\_ No X





# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4/22/22  
Applicant/Owner: Candela renewables State: Ky Sampling Point: 01-WA5-35  
Investigator(s): OK, LD Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Toe Slope Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRRN Lat: 36.853993 Long: 85.649692 Datum: NAD83 (K/48)  
Soil Map Unit Name: BaC, NK NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  <u>Wetland point associated w/ 1-70 HWET-20</u> <u>PEM/PSS</u>	

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
<b>Primary Indicators (minimum of one is required; check all that apply)</b>		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2</u>		
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: TD1-WAS-35

**Tree Stratum** (Plot size: \_\_\_\_\_ )

	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Sapling/Shrub Stratum** (Plot size: \_\_\_\_\_ )

1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Herb Stratum** (Plot size: ft )

1.	<u>Carex vulpinoidea</u>	<u>30</u>	<u>X</u>	<u>OBL</u>
2.	<u>Juncus effusus</u>	<u>20</u>	<u>X</u>	<u>FACW</u>
3.	<u>Ludwigia palustris</u>	<u>30</u>	<u>X</u>	<u>FACW</u>
4.	<u>Schlotheimia arundinacea</u>	<u>15</u>		<u>FACW</u>
5.	<u>Ranunculus hispidus</u>	<u>5</u>		
6.				
7.				
8.				
9.				
10.				
11.				

\_\_\_\_\_ = Total Cover

50% of total cover: 50 20% of total cover: 20

**Woody Vine Stratum** (Plot size: \_\_\_\_\_ )

1.			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)



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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>MLRA 147, 148</b> )
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>MLRA 147, 148</b> )
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR N</b> )	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR N, MLRA 147, 148</b> )	<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR N, MLRA 136</b> )
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) ( <b>MLRA 136, 122</b> )
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 148</b> )
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21) ( <b>MLRA 127, 147</b> )

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Restrictive Layer (if observed):

Type: 217

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

Hydric Soil Present? Yes   X   No       

Eastern Mountains and Piedmont – Version

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer shade Solar City/County: Sumner County Sampling Date: 4/22/22  
Applicant/Owner: Candela renewables State: KY Sampling Point: T01-WAS-30  
Investigator(s): CKLD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): hillside Local relief (concave, convex, none): None Slope (%): 4  
Subregion (LRR or MLRA): LRN Lat: 36.853981 Long: 85.648891 Datum: NAD83 (K&F43)  
Soil Map Unit Name: BuC, NK 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     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present? Yes <u>X</u> No <u>    </u>	
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	
Remarks: <u>Upland point associated w/ - T01-WET-20 and T01-WET-21</u>	

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>	Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>
Water Table Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>	
Saturation Present? Yes <u>    </u> No <u>X</u> (includes capillary fringe)	Depth (inches): <u>    </u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: TOT-WAS-36

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

Sapling/Shrub Stratum (Plot size: <u>15ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Liquidambar styraciflua</u>	<u>20</u>	<u>X</u>	<u>FAC</u>
2. <u>Juniperus virginiana</u>	<u>5</u>	<u>X</u>	<u>FACU</u>
3.			
4.			
5.			
6.			
7.			
8.			
9.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: 12.5 20% of total cover: 5

Herb Stratum (Plot size: <u>5ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Anthoxanthum odoratum</u>	<u>30</u>	<u>X</u>	<u>FACU</u>
2. <u>Rubus allegheniensis</u>	<u>20</u>	<u>X</u>	<u>FACU</u>
3. <u>Scheuchzeria palustris</u>	<u>30</u>	<u>X</u>	<u>FACU</u>
4. <u>Claytonia virginica</u>	<u>5</u>		<u>FAC</u>
5. <u>Patchoulla indica</u>	<u>5</u>		<u>FACU</u>
6.			
7.			
8.			
9.			
10.			
11.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: 45 20% of total cover: 18

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)



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

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

- \_\_\_ Dark Surface (S7)
- \_\_\_ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- \_\_\_ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☒ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- \_\_\_ Redox Dark Surface (F6)
- \_\_\_ Depleted Dark Surface (F7)
- \_\_\_ Redox Depressions (F8)
- \_\_\_ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- \_\_\_ Umbric Surface (F13) **(MLRA 136, 122)**
- \_\_\_ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- \_\_\_ Red Parent Material (F21) **(MLRA 127, 147)**

- ☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Restrictive Layer (if observed):

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar  
Applicant/Owner: Candela renewables  
Investigator(s): CK, LD  
City/County: Summer Shade  
Landform (hillslope, terrace, etc.): Top Slope, Streambed  
Section, Township, Range: NA  
State: KY  
Sampling Date: NA  
Subregion (LRR or MLRA): LRR N  
Lat: 36.854033  
Local relief (concave, convex, none): Concave  
Sampling Point: NA  
Soil Map Unit Name: BaC  
Long: 85.699455  
Slope: NA  
Datum: NA

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

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

Hydrophytic Vegetation Present? Yes X No NA  
Hydric Soil Present? Yes X No NA  
Wetland Hydrology Present? Yes X No NA

Remarks:

Wetland point associated with  
PFO

Is the Sampled Area within a Wetland?

Yes X No NA

WETland - 701-WET-21

## HYDROLOGY

### Wetland Hydrology Indicators:

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

- ☒ Surface Water (A1)
- ☒ High Water Table (A2)
- ☒ 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)
- ☒ 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)
- ☐ Other (Explain in Remarks)

### Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☒ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☒ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☒ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present? Yes X No NA Depth (inches): NA  
Water Table Present? Yes X No NA Depth (inches): NA  
Saturation Present? Yes X No NA Depth (inches): NA  
(includes capillary fringe)

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

Remarks:

Wetland Hydrology Present? Yes X No NA

upland point is 701-whs-6

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: 701-WHS-37

Tree Stratum (Plot size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Liquidambar styraciflua</u>	<u>25</u>	<u>X</u>	<u>FAC</u>
2. <u>Liriodendron tulipifera</u>	<u>10</u>	<u>X</u>	<u>FACU</u>
3. <u>Acer rubrum</u>	<u>15</u>	<u>X</u>	<u>FAC</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

50% of total cover: 25 50 = Total Cover  
 20% of total cover: 10

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Sorrel albidum</u>	<u>5</u>	<u>X</u>	<u>FACU</u>
2. <u>Liquidambar styraciflua</u>	<u>10</u>	<u>X</u>	<u>FAC</u>
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____

50% of total cover: 7.5 15 = Total Cover  
 20% of total cover: 3

Herb Stratum (Plot size: <u>5 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Carex vulpinoidea</u>	<u>20</u>	<u>X</u>	<u>OBL</u>
2. <u>Cardamine bulbosa</u>	<u>25</u>	<u>X</u>	<u>OBL</u>
3. <u>Ludwigia palustris</u>	<u>15</u>	<u>X</u>	<u>FACW</u>
4. <u>Juncus effusus</u>	<u>5</u>	_____	<u>FACW</u>
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

50% of total cover: 32.5 65 = Total Cover  
 20% of total cover: 13

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. <u>N/A</u>	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

50% of total cover: \_\_\_\_\_ = Total Cover  
 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)  
 Total Number of Dominant Species Across All Strata: 8 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by:  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = \_\_\_\_\_

**Hydrophytic Vegetation Indicators:**

- \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation
- X 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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No \_\_\_\_\_



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

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

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summershade Sampling Date: 4-22-22  
Applicant/Owner: Candela renewables State: Ky Sampling Point: T01-WAD-38  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): To Slope Local relief (concave, convex, none): Concave Slope (%): 2  
Subregion (LRR or MLRA): LRRN Lat: 36.854468 Long: 85.6097348 Datum: NAD83(Kyle)  
Soil Map Unit Name: B0C 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 \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ 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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks:  <u>Wetland point associated w/ - T01-WET-22</u> <u>PEM</u>	

HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>
<b>Primary Indicators (minimum of one is required; check all that apply)</b>		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input checked="" type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <u>X</u> No _____	Depth (inches): <u>1</u>	Wetland Hydrology Present? Yes <u>X</u> No _____
Water Table Present? Yes <u>X</u> No _____	Depth (inches): <u>10</u>	
Saturation Present? Yes <u>X</u> No _____	Depth (inches): <u>0</u>	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: 701-WAS-38

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>5ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juncus effusus</u>	<u>80</u>	<u>X</u>	<u>FACW</u>
2. <u>Andropogon virginicus</u>	<u>5</u>		<u>FACU</u>
3. <u>Solidago gigantea</u>	<u>15</u>		<u>FACW</u>
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
 Total Number of Dominant Species Across All Strata: 1 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes X No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)



[illegible]

# WETLAND DETERMINATION

## DATA FORM - Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar  
Applicant/Owner: Candela renewables City/County: Summer Shade  
Investigator(s): CK, LD State: Ky Sampling Date: 4/22  
Landform (hillslope, terrace, etc.): hillslope Section, Township, Range: NA Sampling Point: TO1-WH  
Subregion (LRR or MLRA): LRR N Lat: 36.954619 Local relief (concave, convex, none): CONCAVE Slope (%): 3  
Soil Map Unit Name: S.B Long: 85.697354 Datum: NAD83  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      NWI classification: NA  
Are Vegetation     , Soil     , or Hydrology      significantly disturbed? (If no, explain in Remarks.)  
Are Vegetation     , Soil     , or Hydrology      naturally problematic? Are "Normal Circumstances" present? Yes X No       
(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>    </u> No <u>X</u>
Wetland Hydrology Present?	Yes <u>    </u> No <u>X</u>

Remarks: upland point associated w/ wetland-TO1-WET-22

Is the Sampled Area within a Wetland? Yes      No X

### HYDROLOGY

**Wetland Hydrology Indicators:**

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

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

**Secondary Indicators (minimum of two required)**

<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Moss Trim Lines (B16)
<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 type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present?	Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>
Water Table Present?	Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>
Saturation Present?	Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>

(includes capillary fringe)

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

Wetland Hydrology Present? Yes      No X

Remarks:

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point: T01-WHS-39

Tree Stratum (Plot size: <u>13</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fagus grandifolia</u>	<u>20</u>	<u>X</u>	<u>FACU</u>
2.			
3.			
4.			
5.			
6.			

20 = Total Cover

50% of total cover: 10 20% of total cover: 4

Shrub Stratum (Plot size: <u>13</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fagus grandifolia</u>	<u>5</u>	<u>X</u>	<u>FACU</u>
2. <u>Liquidambar styraciflua</u>	<u>10</u>	<u>X</u>	<u>FAC</u>
3. <u>Juniperus virginiana</u>	<u>5</u>	<u>X</u>	<u>FACU</u>
4.			
5.			
6.			

20 = Total Cover

50% of total cover: 10 20% of total cover: 4

Herb Stratum (Plot size: <u>13</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Schizanthus arvensis</u>	<u>20</u>	<u>X</u>	<u>FACU</u>
2. <u>Anthraxos hespidus</u>	<u>50</u>	<u>X</u>	<u>FAC</u>
3. <u>Claytonia virginiana</u>	<u>5</u>		<u>FACU</u>
4.			
5.			
6.			

75 = Total Cover

50% of total cover: 37.5 20% of total cover: 15

Woody Vine Stratum (Plot size: <u>13</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>13</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 0 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?**

Yes \_\_\_\_\_ No X



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

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

- \_\_\_ Dark Surface (S7)
- \_\_\_ Polyvalue Below Surface (S8) (**MLRA 147, 148**)
- \_\_\_ Thin Dark Surface (S9) (**MLRA 147, 148**)
- \_\_\_ Loamy Gleyed Matrix (F2)
- \_\_\_ Depleted Matrix (F3)
- \_\_\_ Redox Dark Surface (F6)
- \_\_\_ Depleted Dark Surface (F7)
- \_\_\_ Redox Depressions (F8)
- \_\_\_ Iron-Manganese Masses (F12) (**LRR N, MLRA 136**)
- \_\_\_ Umbric Surface (F13) (**MLRA 136, 122**)
- \_\_\_ Piedmont Floodplain Soils (F19) (**MLRA 148**)
- \_\_\_ Red Parent Material (F21) (**MLRA 127, 147**)

- ☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ 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.

Type: NA  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes            No   /  

Remarks:			

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: SummerShade Solar City/County: Summer Shade Sampling Date: 4-22-22  
Applicant/Owner: Candela Renewables State: Ky Sampling Point: TDI-WAS-40  
Investigator(s): CK, LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): Flat Slope Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRRN Lat: 36.954120 Long: 85.696958 Datum: NAD83 (11/1/11)  
Soil Map Unit Name: NK 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     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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>	Is the Sampled Area within a Wetland? 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>	
Remarks: <u>Wetland point associated w/ wetland - TDI-WET-23</u> <u>PEM</u>		

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input checked="" type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input checked="" type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present?	Yes <u>X</u> No <u>    </u> Depth (inches): <u>1</u>	Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>
Water Table Present?	Yes <u>X</u> No <u>    </u> Depth (inches): <u>0</u>	
Saturation Present? (includes capillary fringe)	Yes <u>X</u> No <u>    </u> Depth (inches): <u>0</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point: TD1-WAS-46

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. <i>Cardamine bulbosa</i>	25	X	OBL
2. <i>Juncus effusus</i>	20	X	FACW
3. <i>Carex vulpinoidea</i>	40	X	OBL
4. <i>Ludwigia p. lustrus</i>	10		FACW
5. <i>Arthraxon hispidus</i>	5		FAC
6.			
7.			
8.			
9.			
10.			
11.			

100 = Total Cover

50% of total cover: 50 20% of total cover: 20

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?**

Yes X No \_\_\_\_\_



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

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

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☒ Loamy Gleyed Matrix (F2)
- ☒ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

- ☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ 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.

Type: Backhoe  
Depth (inches): 6

Hydric Soil Present? Yes   X   No       

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4/22/22  
 Applicant/Owner: Chadler, remanley State: Ky Sampling Point: TO1-WAS-41  
 Investigator(s): CK, LB Section, Township, Range: NA  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 4  
 Subregion (LRR or MLRA): LRR N Lat: 36.853955 Long: 85.697044 Datum: NAD83 (GAP)  
 Soil Map Unit Name: NK 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     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
 Are Vegetation     , Soil     , or Hydrology      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>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present? Yes <u>    </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	
Remarks:  <u>upland point associated w/ wetland TO1-WET-23</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>
<b>Primary Indicators (minimum of one is required; check all that apply)</b>		
<u>    </u> Surface Water (A1)	<u>    </u> True Aquatic Plants (B14)	<u>    </u> Surface Soil Cracks (B6)
<u>    </u> High Water Table (A2)	<u>    </u> Hydrogen Sulfide Odor (C1)	<u>    </u> Sparsely Vegetated Concave Surface (B8)
<u>    </u> Saturation (A3)	<u>    </u> Oxidized Rhizospheres on Living Roots (C3)	<u>    </u> Drainage Patterns (B10)
<u>    </u> Water Marks (B1)	<u>    </u> Presence of Reduced Iron (C4)	<u>    </u> Moss Trim Lines (B16)
<u>    </u> Sediment Deposits (B2)	<u>    </u> Recent Iron Reduction in Tilled Soils (C6)	<u>    </u> Dry-Season Water Table (C2)
<u>    </u> Drift Deposits (B3)	<u>    </u> Thin Muck Surface (C7)	<u>    </u> Crayfish Burrows (C8)
<u>    </u> Algal Mat or Crust (B4)	<u>    </u> Other (Explain in Remarks)	<u>    </u> Saturation Visible on Aerial Imagery (C9)
<u>    </u> Iron Deposits (B5)		<u>    </u> Stunted or Stressed Plants (D1)
<u>    </u> Inundation Visible on Aerial Imagery (B7)		<u>    </u> Geomorphic Position (D2)
<u>    </u> Water-Stained Leaves (B9)		<u>    </u> Shallow Aquitard (D3)
<u>    </u> Aquatic Fauna (B13)		<u>    </u> Microtopographic Relief (D4)
		<u>    </u> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u>	Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	
Water Table Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u>		
Saturation Present? Yes <u>    </u> No <u>X</u> Depth (inches): <u>    </u> (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

101-WAS-41

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point:

Tree Stratum (Plot size: <u>36 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Liquidambar styraciflua</u>	<u>10</u>	<u>X</u>	<u>FAC</u>
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

10 = Total Cover

50% of total cover: 5 20% of total cover: 2

**Sapling Stratum** (Plot size: \_\_\_\_\_)

1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. <u>NA</u>	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Shrub Stratum** (Plot size: \_\_\_\_\_)

1. _____	_____	_____	_____
2. <u>NA</u>	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Herb Stratum** (Plot size: 5 ft)

1. <u>Achillea virginica</u>	<u>5</u>	_____	<u>FACU</u>
2. <u>Schizanthus bracteatus</u>	<u>30</u>	<u>X</u>	<u>FACU</u>
3. <u>Arthraxon hispidus</u>	<u>40</u>	<u>X</u>	<u>FAC</u>
4. <u>Rumex crispus</u>	<u>5</u>	_____	<u>FAC</u>
5. <u>Solidago canadensis</u>	<u>5</u>	_____	<u>FAC</u>
6. <u>Anthoxanthum odoratum</u>	<u>15</u>	_____	<u>FACU</u>
7. <u>Geranium carolinianum</u>	<u>2</u>	_____	<u>UPL</u>
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

102 = Total Cover

50% of total cover: 51 20% of total cover: 20

**Woody Vine Stratum** (Plot size: \_\_\_\_\_)

1. _____	_____	_____	_____
2. <u>NA</u>	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

\_\_\_\_\_ = Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 6 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?**

Yes \_\_\_\_\_ No X





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

## HYDROLOGY

### Wetland Hydrology Indicators:

Secondary Indicators (minimum of two required)

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

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

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☒ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes      No X Depth (inches):       
Water Table Present? Yes X No      Depth (inches): 16  
Saturation Present? Yes X No      Depth (inches): 2  
(includes capillary fringe)

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

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

Remarks:

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: 761-LWS-42

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Asimina triloba</u>	<u>2</u>		<u>FACW</u>
2. <u>Celtis occidentalis</u>	<u>5</u>	<u>X</u>	<u>FACW</u>
3.			
4.			
5.			
6.			
7.			
8.			
9.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: 3.5 20% of total cover: 1.4

Herb Stratum (Plot size: <u>5 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Ranunculus alabris</u>	<u>30</u>	<u>X</u>	<u>FACW</u>
2. <u>Persicaria virginiana</u>	<u>20</u>	<u>X</u>	<u>FAC</u>
3. <u>Valerianella radiata</u>	<u>20</u>	<u>X</u>	<u>FAC</u>
4. <u>Erigeron strigosus</u>	<u>15</u>		<u>FACW</u>
5.			
6.			
7.			
8.			
9.			
10.			
11.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: 42.5 20% of total cover: 17

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover  
 50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)  
 Total Number of Dominant Species Across All Strata: 4 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of: \_\_\_\_\_ Multiply by:  
 OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
 FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
 FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
 FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
 UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
 Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
 Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes ☒ No ☐

Remarks: (Include photo numbers here or on a separate sheet.)



Sampling Point: 201-443-412

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summerdale Solar City/County: Summerdale Sampling Date: 4/26/22  
Applicant/Owner: Candela renewables State: Ky Sampling Point: T01-WHS-13  
Investigator(s): CK LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): Top Slope Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRRN Lat: 36.862717 Long: 85.699976 Datum: NAD83 (EPSG:31433)  
Soil Map Unit Name: CrB 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     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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      No X  
Hydric Soil Present? Yes      No X  
Wetland Hydrology Present? Yes      No X

Is the Sampled Area  
within a Wetland? Yes      No X

Remarks:

upland point associated w/ - T01-WET-24

## HYDROLOGY

### Wetland Hydrology Indicators:

### Secondary Indicators (minimum of two required)

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

     Surface Water (A1)  
     High Water Table (A2)  
     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)  
     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)  
     Other (Explain in Remarks)

     Surface Soil Cracks (B6)  
     Sparsely Vegetated Concave Surface (B8)  
     Drainage Patterns (B10)  
     Moss Trim Lines (B16)  
     Dry-Season Water Table (C2)  
     Crayfish Burrows (C8)  
     Saturation Visible on Aerial Imagery (C9)  
     Stunted or Stressed Plants (D1)  
     Geomorphic Position (D2)  
     Shallow Aquitard (D3)  
     Microtopographic Relief (D4)  
     FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present? Yes      No X Depth (inches):       
Water Table Present? Yes      No X Depth (inches):       
Saturation Present? Yes      No X Depth (inches):       
(includes capillary fringe)

Wetland Hydrology Present? Yes      No X

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: TOLMAS-43

Tree Stratum (Plot size: <u>30</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Liquidambar styraciflua</i>	30	X	FACU
2.	<i>Taxodium nigra</i>	20	X	FACU
3.	<i>Allanthurus altissimus</i>	20	X	FACU
4.	<i>Juniperus virginiana</i>	10		FACU
5.	<i>Celtis occidentalis</i>	5		
6.				
7.				

50% of total cover: 47.5 20% of total cover: 17  
Total Cover = 45

Sapling/Shrub Stratum (Plot size: <u>15</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Allanthurus altissimus</i>	10	X	FACU
2.	<i>Juniperus virginiana</i>	5	X	FACU
3.				
4.				
5.				
6.				
7.				
8.				
9.				

50% of total cover: 7.5 20% of total cover: 3  
Total Cover = 15

Herb Stratum (Plot size: <u>5</u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.	<i>Pennisetum virginicum</i>	15		FAC
2.	<i>Rumex crispus</i>	40	X	FACW
3.	<i>Allium canadense</i>	10		FACU
4.	<i>Rubus allegheniensis</i>	10		FACU
5.	<i>Eragrostis strigosus</i>	5		FACU
6.				
7.				
8.				
9.				
10.				
11.				

50% of total cover: 40 20% of total cover: 10  
Total Cover = 80

Woody Vine Stratum (Plot size: <u>          </u> )		Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
5.				

50% of total cover:            20% of total cover:             
Total Cover =           

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
Total Number of Dominant Species Across All Strata: 6 (B)  
Percent of Dominant Species That Are OBL, FACW, or FAC: 16.7 (A/B)

Prevalence Index worksheet:

Total % Cover of:            Multiply by:  
OBL species            x 1 =             
FACW species            x 2 =             
FAC species            x 3 =             
FACU species            x 4 =             
UPL species            x 5 =             
Column Totals:            (A)            (B)  
Prevalence Index = B/A =           

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 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.

Definitions of Four Vegetation Strata:

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

Hydrophytic  
Vegetation  
Present?

Yes            No X

Remarks: (Include photo numbers here or on a separate sheet.)



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

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

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summershade Sampling Date: 4/26/22  
Applicant/Owner: Canale renewables State: Ky Sampling Point: Tbl-WHS-4/4  
Investigator(s): CK LD Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 4  
Subregion (LRR or MLRA): LRR N Lat: 36.859639 Long: 85.699148 Datum: NAD83 (KyG)  
Soil Map Unit Name: OaC2 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <u>wetland point associated w/ wetland - Tbl-WET-25</u> <u>PEM</u>			

## HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input checked="" type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u>		
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</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: <u>Area is grazed by cows</u>		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: T61-W45-441

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)
4. <u>NA</u>	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
_____ = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> ___ 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 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)
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u>)</b>				
1. <u>Salix nigra</u>	<u>5</u>	<u>X</u>	<u>FACW</u>	
2. _____	_____	_____	_____	<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum (Plot size: <u>5 A</u>)</b>				
1. <u>Rubus cuneifolius</u>	<u>40</u>	<u>X</u>	<u>FAC</u>	
2. <u>Triplaris repens</u>	<u>15</u>	<u>X</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Present?</b> Yes <input checked="" type="checkbox"/> No _____
3. <u>Carex vulpinoidea</u>	<u>15</u>	<u>X</u>	<u>OBL</u>	
4. <u>Stellaria media</u>	<u>5</u>	_____	<u>UPL</u>	
5. _____	_____	_____	_____	
_____ = Total Cover				<b>Remarks: (Include photo numbers here or on a separate sheet.)</b>  <div style="text-align: center; font-size: 1.2em;">grazed by cows</div>
50% of total cover: <u>37.5</u> 20% of total cover: <u>15</u>				
<b>Woody Vine Stratum (Plot size: _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. <u>NA</u>	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				



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

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

Hydric Soil Present? Yes ✓ No   

Transposed by Cowley

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4-26-22  
Applicant/Owner: Comdel renewables State: Ky Sampling Point: TDI-WMS-45  
Investigator(s): OK LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3  
Subregion (LRR or MLRA): LRRN Lat: 36.859647 Long: 85.699093 Datum: NAD83 Ky, Pa  
Soil Map Unit Name: BAC2 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     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present? Yes <u>    </u> No <u>X</u>	
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	
Remarks: <u>Upland point associated w/ - TDI-WET-25</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>
<b>Primary Indicators (minimum of one is required; check all that apply)</b>		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b>		
Surface Water Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>	Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>
Water Table Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>	
Saturation Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>	
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

**VEGETATION (Four Strata) – Use scientific names of plants.**

Sampling Point: T01-UAS-45

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Gleditsia triacanthos</u>	<u>25</u>	<u>X</u>	<u>FAC</u>
2. <u>Robinia pseudoacacia</u>	<u>30</u>	<u>X</u>	<u>FACU</u>
3. <u>Celtis occidentalis</u>	<u>15</u>	<u>X</u>	<u>FACU</u>
4. <u>Acer rubrum</u>	<u>5</u>		<u>FAC</u>
5.			
6.			
7.			

75 = Total Cover  
 50% of total cover: 37.5 20% of total cover: 15

Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Gleditsia triacanthos</u>	<u>5</u>	<u>X</u>	<u>FAC</u>
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

5 = Total Cover  
 50% of total cover: 2.5 20% of total cover: 1

Herb Stratum (Plot size: <u>5 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Stellaria media</u>	<u>60</u>	<u>X</u>	<u>UPL</u>
2. <u>Ranunculus hispidus</u>	<u>15</u>		<u>FAC</u>
3. <u>Schizanthus arvensis</u>	<u>10</u>		<u>FACU</u>
4. <u>Rumex crispus</u>	<u>5</u>		<u>FAC</u>
5. <u>Persicaria virginiana</u>	<u>2</u>		<u>FAC</u>
6.			
7.			
8.			
9.			
10.			
11.			

92 = Total Cover  
 50% of total cover: 46 20% of total cover: 18.4

Woody Vine Stratum (Plot size: <u>          </u> )	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

           = Total Cover  
 50% of total cover:            20% of total cover:           

Remarks: (Include photo numbers here or on a separate sheet.)

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)  
 Total Number of Dominant Species Across All Strata: 5 (B)  
 Percent of Dominant Species That Are OBL, FACW, or FAC: 40 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:            Multiply by:             
 OBL species            x 1 =             
 FACW species            x 2 =             
 FAC species            x 3 =             
 FACU species            x 4 =             
 UPL species            x 5 =             
 Column Totals:            (A)            (B)  
 Prevalence Index = B/A =           

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**

Yes            No X



Sampling Point: T01-WHS-43

Eastern Mountains and Piedmont – Version 2.0

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4-26-22  
Applicant/Owner: Candela Renewables State: Ky Sampling Point: TDI-WAS-46  
Investigator(s): CK LD Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0  
Subregion (LRR or MLRA): LRR N Lat: 36.858477 Long: 85.697199 Datum: NAD83 (EPSG: 31433)  
Soil Map Unit Name: BADZ, BACZ 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 \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ 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 _____	Hydric Soil Present? Yes <u>X</u> No _____	Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: <u>Wetland point associated w/ wetland - TDI-WET-26</u> <u>PEM</u>			

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>	
<b>Primary Indicators (minimum of one is required; check all that apply)</b>			
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b>			
Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u>		Wetland Hydrology Present? Yes <u>X</u> No _____	
Water Table Present? Yes <u>X</u> No _____ Depth (inches): <u>12</u>			
Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>10</u> (includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: T01-WAS-46

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			

\_\_\_\_\_ = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			

\_\_\_\_\_ = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>5 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juncus effusus</u>	<u>30</u>	<u>X</u>	<u>FACW</u>
2. <u>Ranunculus hirsutus</u>	<u>15</u>	<u>X</u>	<u>FAC</u>
3. <u>Ludwigia palustris</u>	<u>10</u>		<u>FACW</u>
4. <u>Scheuchzeria palustris</u>	<u>5</u>		<u>FACU</u>
5.			
6.			
7.			
8.			
9.			
10.			
11.			

60 = Total Cover  
50% of total cover: 30 20% of total cover: 12

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			

\_\_\_\_\_ = Total Cover  
50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

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 _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

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.

Definitions of Four Vegetation Strata:

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes X No \_\_\_\_\_



[illegible]

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4-26-22  
Applicant/Owner: Campbell State: Ky Sampling Point: TO1-WHS-47  
Investigator(s): CK LB Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): hillside Local relief (concave, convex, none): Concave Slope (%): 5  
Subregion (LRR or MLRA): LQRN Lat: 36.858430 Long: 85.697187 Datum: NAD83 (EPS)  
Soil Map Unit Name: C.DZ, C.B2 NWI classification: N/A  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No      (If no, explain in Remarks.)  
Are Vegetation     , Soil     , or Hydrology      significantly disturbed? Are "Normal Circumstances" present? Yes X No       
Are Vegetation     , Soil     , or Hydrology      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>	Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u>
Hydric Soil Present? Yes <u>X</u> No <u>    </u>	
Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	
Remarks: <u>upland point associated w/ wetland</u> <u>TO1-WET-200</u>	

HYDROLOGY

<b>Wetland Hydrology Indicators:</b>		<b>Secondary Indicators (minimum of two required)</b>	
<u>Primary Indicators (minimum of one is required; check all that apply)</u>			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b>			
Surface Water Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>	Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>	
Water Table Present? Yes <u>    </u> No <u>X</u>	Depth (inches): <u>    </u>		
Saturation Present? Yes <u>    </u> No <u>X</u> (includes capillary fringe)	Depth (inches): <u>    </u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

**VEGETATION (Five Strata) – Use scientific names of plants.**

Sampling Point: 101-wks 47

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Sapling Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. <u>NA</u>	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. <u>NA</u>	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

Herb Stratum (Plot size: <u>5ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Trifolium repens</u>	<u>30</u>	<u>X</u>	<u>FACW</u>
2. <u>Schizanthus arundinacea</u>	<u>30</u>	<u>X</u>	<u>FACW</u>
3. <u>Plantago lanceolata</u>	<u>2</u>		<u>UPL</u>
4. <u>Rumex crispus</u>	<u>10</u>		<u>FAC</u>
5. <u>Juncus tenuis</u>	<u>2</u>		<u>FACW</u>
6. <u>Sphryphylactis arvensis</u>	<u>10</u>		<u>FAC</u>
7. <u>Andropogon virginicus</u>	<u>2</u>		<u>FACW</u>
8. <u>Juncus effusus</u>	<u>2</u>		<u>FACW</u>
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
<u>88</u> = Total Cover			
50% of total cover: <u>44</u> 20% of total cover: <u>17.6</u>			

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. <u>NA</u>	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
_____ = Total Cover			
50% of total cover: _____ 20% of total cover: _____			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____	(A) _____ (B) _____

Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Five Vegetation Strata:**

**Tree** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and 3 in. (7.6 cm) or larger in diameter at breast height (DBH).

**Sapling** – Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** – Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** – All herbaceous (non-woody) plants, including herbaceous vines, regardless of size, and woody plants, except woody vines, less than approximately 3 ft (1 m) in height.

**Woody vine** – All woody vines, regardless of height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

Remarks: (Include photo numbers here or on a separate sheet.)



[illegible]

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

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

### Hydric Soil Indicators:

- ☐ Dark Surface (S7)
- ☐ Polyvalue Below Surface (S8) **(MLRA 147, 148)**
- ☐ Thin Dark Surface (S9) **(MLRA 147, 148)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☒ Redox Depressions (F8)
- ☐ Iron-Manganese Masses (F12) **(LRR N, MLRA 136)**
- ☐ Umbric Surface (F13) **(MLRA 136, 122)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 148)**
- ☐ Red Parent Material (F21) **(MLRA 127, 147)**

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
                   **(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
                   **(MLRA 136, 147)**  
☐ 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.

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

Hydric Soil Present? Yes ☒ No

Remarks:

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4/2/22  
Applicant/Owner: Camela Renewables State: KY Sampling Point: T02-W15-02  
Investigator(s): Shane Kelley, C. Knebel, L. Downs Section, Township, Range: NA  
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 2  
Subregion (LRR or MLRA): LRRN Lat: 36.845624 Long: -85.690497 Datum: NAD83 (NAD83)  
Soil Map Unit Name: BaD2 NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	

Remarks:

Upland point ass. w/ T02-WET-01 & T01-WET-16

## HYDROLOGY

### Wetland Hydrology Indicators:

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

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ 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)
- ☐ 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)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

### Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):   
Water Table Present? Yes ☐ No ☒ Depth (inches):   
Saturation Present? Yes ☐ No ☒ Depth (inches):   
(includes capillary fringe)

Wetland Hydrology Present? Yes ☐ No ☒

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

Remarks:



## VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 102 WAS 02

Tree Stratum (Plot size: <u>30F+</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Juniperus virginiana</u>	<u>10</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
2. <u>Prunus serotina</u>	<u>5</u>	<input checked="" type="checkbox"/>	<u>FACW</u>
3. <u>Sassafras albidum</u>	<u>3</u>		<u>FACU</u>
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____

50% of total cover: 9 18 = Total Cover  
20% of total cover: 3.6

Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. <u>N/A</u>	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____

50% of total cover: \_\_\_\_\_ \_\_\_\_\_ = Total Cover  
20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: <u>5F+</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Trifolium repense</u>	<u>25</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
2. <u>Erigeron strigosus</u>	<u>3</u>		<u>FACW</u>
3. <u>Stellaria media</u>	<u>10</u>		<u>UPL</u>
4. <u>Scheldarous arundinacea</u>	<u>17</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
5. <u>Ranunculus hispidus</u>	<u>15</u>	<input checked="" type="checkbox"/>	<u>FAC</u>
6. <u>Purys calleryana</u>	<u>5</u>		<u>FACU</u>
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____

50% of total cover: 37.5 75 = Total Cover  
20% of total cover: 15

Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. <u>N/A</u>	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

50% of total cover: \_\_\_\_\_ \_\_\_\_\_ = Total Cover  
20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A)

Total Number of Dominant Species Across All Strata: \_\_\_\_\_ (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: \_\_\_\_\_ (A/B)

## Prevalence Index worksheet:

Total % Cover of: \_\_\_\_\_ Multiply by: \_\_\_\_\_

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = \_\_\_\_\_

## Hydrophytic Vegetation Indicators:

- \_\_\_ 1 - Rapid Test for Hydrophytic Vegetation
- \_\_\_ 2 - Dominance Test is >50%
- \_\_\_ 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.

## Definitions of Four Vegetation Strata:

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes \_\_\_\_\_ No ☒

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 Response No. 69  
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<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

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

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

Hydric Soil Present? Yes \_\_\_\_\_ No ☒

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

Eastern Mountains and Piedmont – Version 2.0

# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
Region to 1-69  
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Project/Site: Summer Shade Solor City/County: Summer Shade Sampling Date: 4/21/22  
Applicant/Owner: Candela State: KY Sampling Point: 02-WAS-03  
Investigator(s): Shave Kelley Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): seep Local relief (concave, convex, none): Concave Slope (%): 2  
Subregion (LRR or MLRA): LRRN Lat: 36.050611 Long: -85.701527 Datum: NAD83 (KY FIPS)  
Soil Map Unit Name: SaB: NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Remarks:  <p style="text-align: center;">02-WET-02</p> <p style="text-align: right;">PFO</p>	

## HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
<u>Primary Indicators (minimum of one is required; check all that apply)</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"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> True Aquatic Plants (B14)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<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"/> Other (Explain in Remarks)	

<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>3</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</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"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:



Case No. 2025-00064  
Response to 1-69  
Sampling Point: T62-WLAS-D6  
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# WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Case No. 2025-00064  
 Response to 1-69  
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Project/Site: Summer Shade Solar City/County: Summer Shade Sampling Date: 4/21/22  
 Applicant/Owner: Candela Renewables State: K-1 Sampling Point: T02-WA5-05  
 Investigator(s): Shane Kelley, C. Kappel, L. Downs Section, Township, Range: N/A  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 3  
 Subregion (LRR or MLRA): LRN Lat: 36.851112 Long: -85.70254 Datum: NAD83 (KMER)  
 Soil Map Unit Name: SAB NWI classification: N/A  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Remarks:  <u>Upland point associated w/ T02-WET-03</u>	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

## VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: 103-4145-05

Tree Stratum (Plot size: <u>30ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Fagus grandifolia</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
2. <u>Prunus serotina</u>	<u>15</u>		<u>FACU</u>
3. <u>Betula nigra</u>	<u>10</u>		<u>FACW</u>
4. <u>Liriodendron tulipifera</u>	<u>30</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
5. _____	_____		
6. _____	_____		
7. _____	_____		

= Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Sapling/Shrub Stratum (Plot size: \_\_\_\_\_)

1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. <u>N/A</u>	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____

= Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Herb Stratum (Plot size: 5ft )

1. <u>Podophyllum peltatum</u>	<u>20</u>	<input checked="" type="checkbox"/>	<u>FACU</u>
2. <u>Oxalis violacea</u>	<u>3</u>		<u>UPL</u>
3. <u>Lonicera japonica</u>	<u>4</u>		<u>FACU</u>
4. <u>Claytonia virginica</u>	<u>5</u>		<u>FAC</u>
5. <u>Stellaria media</u>	<u>7</u>	<input checked="" type="checkbox"/>	<u>UPL</u>
6. _____	_____		
7. _____	_____		
8. _____	_____		
9. _____	_____		
10. _____	_____		
11. _____	_____		

= Total Cover

50% of total cover: 20.5 20% of total cover: 8.2

Woody Vine Stratum (Plot size: \_\_\_\_\_)

1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. <u>N/A</u>	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____

= Total Cover

50% of total cover: \_\_\_\_\_ 20% of total cover: \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

## Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

## Prevalence Index worksheet:

Total % Cover of: \_\_\_\_\_ Multiply by:

OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_

FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_

FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_

FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_

UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_

Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)

Prevalence Index = B/A = \_\_\_\_\_

## Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☐ 2 - Dominance Test is >50%
- ☐ 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.

## Definitions of Four Vegetation Strata:

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present?

Yes \_\_\_\_\_ No ☒



[illegible]

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

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

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Histosol (A1)  | <input type="checkbox"/> Dark Surface (S7)                                      | <input type="checkbox"/> 2 cm Muck (A10) ( <b>MLRA 147</b> ) |
| <input type="checkbox"/> Histic Epipedon (A2)                                     | <input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>MLRA 147, 148</b> )  | <input type="checkbox"/> Coast Prairie Redox (A16)           |
| <input type="checkbox"/> Black Histic (A3)  | <input type="checkbox"/> Thin Dark Surface (S9) ( <b>MLRA 147, 148</b> )        | <input type="checkbox"/> ( <b>MLRA 147, 148</b> )            |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                                    | <input type="checkbox"/> <del>Loamy Gleyed Matrix (F2)</del>                    | <input type="checkbox"/> Piedmont Floodplain Soils (F19)     |
| <input type="checkbox"/> Stratified Layers (A5)                                   | <input checked="" type="checkbox"/> Depleted Matrix (F3)                        | <input type="checkbox"/> ( <b>MLRA 136, 147</b> )            |
| <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR N</b> )                         | <input type="checkbox"/> Redox Dark Surface (F6)                                | <input type="checkbox"/> Very Shallow Dark Surface (TF12)    |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                        | <input type="checkbox"/> Depleted Dark Surface (F7)                             | <input type="checkbox"/> Other (Explain in Remarks)          |
| <input type="checkbox"/> Thick Dark Surface (A12)                                 | <input type="checkbox"/> Redox Depressions (F8)                                 |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR N, MLRA 147, 148</b> ) | <input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR N, MLRA 136</b> ) |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                                 | <input type="checkbox"/> Umbric Surface (F13) ( <b>MLRA 136, 122</b> )          |  |
| <input type="checkbox"/> Sandy Redox (S5)   | <input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 148</b> )    |  |
| <input type="checkbox"/> Stripped Matrix (S6)                                     | <input type="checkbox"/> Red Parent Material (F21) ( <b>MLRA 127, 147</b> )     |  |
- <sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

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

Hydric Soil Present? Yes ☒ No ☐

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/28/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-44  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0  
Subregion (LRR or MLRA): LRR Lat: 36.851176 Long: -85.692892 Datum: NAD83  
Soil Map Unit Name: BaE2, CkC2 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Wetland point for W-25. Depressional wetland in floodplain of stream	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>2</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-44

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Herb Stratum (Plot size: <u>5 ft</u> )			
1. <u>Rannunculus hispidus</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>
2. <u>Juncus effusus</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
3. <u>Echinochloa crus-galli</u>	<u>60</u>	<u>N</u>	<u>FACW</u>
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u></div>			
Woody Vine Stratum (Plot size: <u>5 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)



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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/28/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-45  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): None Local relief (concave, convex, none): Linear Slope (%): 0  
Subregion (LRR or MLRA): LRR Lat: 36.851268 Long: -85.693020 Datum: NAD83  
Soil Map Unit Name: BaE2 NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks:

Upland point for W-25 located in mown field

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-45

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Angropogodon virginicus</u>	<u>70</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Cynodon dactylon</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
3. <u>Schedonorus arundinaceus</u>	<u>25</u>	<u>N</u>	<u>FACU</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>				
Woody Vine Stratum (Plot size: <u>5 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>



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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Hydric Soil Present? Yes \_\_\_\_\_ No X

Eastern Mountains and Piedmont – Version 2.0

## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/28/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-91  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRR Lat: 36.848738 Long: -85.698698 Datum: NAD83  
Soil Map Unit Name: SaB, Nk 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Wetland point for W-55a. Depressional wetland in floodplain of stream	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" 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 type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1.5</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>4</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-91

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Herb Stratum (Plot size: <u>5 ft</u> )			
1. <u>Rannunculus occidentalis</u>	<u>15</u>	<u>N</u>	<u>FACW</u>
2. <u>Juncus effusus</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
3. <u>Echinochloa grus-galli</u>	<u>70</u>	<u>Y</u>	<u>FACW</u>
4. <u>Juncus tenuis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<div style="text-align: right;"><u>100</u> = Total Cover</div> <div>50% of total cover: <u>50</u> 20% of total cover: <u>20</u></div>			
Woody Vine Stratum (Plot size: <u>5 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)



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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

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

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

Remarks:

## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Metcalfe/ Monroe Sampling Date: 2/28/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-92  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRR Lat: 36.849314 Long: -85.698191 Datum: NAD83  
Soil Map Unit Name: SaB 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks:

Wetland point for W-55b. Depressional PFO portion of wetland

### HYDROLOGY

#### Wetland Hydrology Indicators:

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

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

#### Secondary Indicators (minimum of two required)

- |   |
|---|
| <input type="checkbox"/> Surface Soil Cracks (B6)                           |
| <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |
| <input type="checkbox"/> Drainage Patterns (B10)                            |
| <input type="checkbox"/> Moss Trim Lines (B16)                              |
| <input type="checkbox"/> Dry-Season Water Table (C2)                        |
| <input checked="" 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 type="checkbox"/> Shallow Aquitard (D3)                              |
| <input type="checkbox"/> Microtopographic Relief (D4)                       |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5)                   |

#### Field Observations:

Surface Water Present? Yes X No \_\_\_\_\_ Depth (inches): 0.25  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes X No \_\_\_\_\_ Depth (inches): 2  
(includes capillary fringe)

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

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

Remarks:



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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Hydric Soil Present? Yes X No       

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## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Metcalfe/ Monroe Sampling Date: 2/28/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-93  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): None Local relief (concave, convex, none): Linear Slope (%): 0  
Subregion (LRR or MLRA): LRR Lat: 36.848666 Long: -85.698217 Datum: NAD83  
Soil Map Unit Name: Nk NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Upland point for W-55a and 55b, located in mown field	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-93

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Herb Stratum (Plot size: <u>5 ft</u> )			
1. <u>Angropogodon virginicus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>
2. <u>Cynodon dactylon</u>	<u>85</u>	<u>Y</u>	<u>FACU</u>
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<div style="text-align: right;"><u>90</u> = Total Cover</div> <div>50% of total cover: <u>45</u> 20% of total cover: <u>18</u></div>			
Woody Vine Stratum (Plot size: <u>5 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

Remarks: (Include photo numbers here or on a separate sheet.)

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

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

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

Hydric Soil Present? Yes \_\_\_\_\_ No X

Eastern Mountains and Piedmont – Version 2.0

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalfe/ Monroe Sampling Date: 2/28/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-94  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRR Lat: 36.848248 Long: -85.697927 Datum: NAD83  
Soil Map Unit Name: SaB, Nk 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:

Wetland point for W-56, located in floodplain depression

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes X No \_\_\_\_\_ Depth (inches): 0.75  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes X No \_\_\_\_\_ Depth (inches): 2  
(includes capillary fringe)

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

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

Remarks:



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-94

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: <u>27.5</u>      20% of total cover: <u>11</u></div>			
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____      20% of total cover: _____</div>			
Herb Stratum (Plot size: <u>5 ft</u> )			
1. <u>Ranunculus hispidus</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
2. <u>Echinochloa crus-galli</u>	<u>80</u>	<u>Y</u>	<u>FACW</u>
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: <u>45</u>      20% of total cover: <u>18</u></div>			
Woody Vine Stratum (Plot size: <u>5 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____      20% of total cover: _____</div>			
Remarks: (Include photo numbers here or on a separate sheet.)			

**Dominance Test worksheet:**  
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
  
Total Number of Dominant Species Across All Strata: 1 (B)  
  
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**  
Total % Cover of: \_\_\_\_\_ Multiply by:  
OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
  
Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?**      Yes X      No \_\_\_\_\_

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ 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.

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0

## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Metcalfe/ Monroe Sampling Date: 2/28/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-96  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRR Lat: 36.848110 Long: -85.697615 Datum: NAD83  
Soil Map Unit Name: Nk 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Wetland point for W-57, located in floodplain depression	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input checked="" 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 type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>3</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <u>X</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-96

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
_____ = Total Cover				
50% of total cover: <u>27.5</u> 20% of total cover: <u>11</u>				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. <u>N/A</u>				<b>Hydrophytic Vegetation Indicators:</b> ___ 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)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. _____				
8. _____				
9. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Ranunculus hispidus</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
2. <u>Echinochloa grus-galli</u>	<u>70</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Juncus effusus</u>	<u>3</u>	<u>N</u>	<u>FAACW</u>	
4. _____				
5. _____				
6. _____				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
50% of total cover: <u>39</u> 20% of total cover: <u>15.6</u>				
Woody Vine Stratum (Plot size: <u>5 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				



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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalfe/ Monroe Sampling Date: 2/28/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-95  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): None Local relief (concave, convex, none): Linear Slope (%): 0  
Subregion (LRR or MLRA): LRR Lat: 36.848222 Long: -85.697743 Datum: NAD83  
Soil Map Unit Name: Nk NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks:

Upland point for W-56 and W-57, located in mown field

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-95

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. <u>N/A</u>				<b>Hydrophytic Vegetation Indicators:</b> ___ 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)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. _____				
8. _____				
9. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Angropogodon virginicus</u>	<u>20</u>	<u>N</u>	<u>FACU</u>	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
2. <u>Cynodon dactylon</u>	<u>70</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Trifolium pratense</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. _____				
5. _____				
6. _____				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover	<u>100</u>			
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>				
Woody Vine Stratum (Plot size: <u>5 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Type: Rock

Depth (inches): 12

Hydric Soil Present? Yes \_\_\_\_\_ No X

Eastern Mountains and Piedmont – Version 2.0



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/28/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-96  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRR Lat: 36.848110 Long: -85.697615 Datum: NAD83  
Soil Map Unit Name: Nk 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks:

Wetland point for W-58, located in depression along power line ROW

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes X No \_\_\_\_\_ Depth (inches): 3  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-96

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
_____ = Total Cover 50% of total cover: <u>27.5</u> 20% of total cover: <u>11</u>				
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )</b>				
1. <u>Acer rubrum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	<b>Hydrophytic Vegetation Indicators:</b> ___ 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.
2. <u>Liquidambar styraciflua</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
_____ = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>				
<b>Herb Stratum (Plot size: <u>5 ft</u> )</b>				
1. <u>Microstegium vimineum</u>	<u>75</u>	<u>Y</u>	<u>FAC</u>	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.   <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
2. <u>Cyperus esculentus</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
3. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>FAACW</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover 50% of total cover: <u>45</u> 20% of total cover: <u>18</u>				
<b>Woody Vine Stratum (Plot size: <u>5 ft</u> )</b>				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover 50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalfe/ Monroe Sampling Date: 2/28/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-97  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Linear Slope (%): 0  
Subregion (LRR or MLRA): LRR Lat: 36.849929 Long: -85.698730 Datum: NAD83  
Soil Map Unit Name: Nk NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks:

Upland point for W-58

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

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

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

Remarks:



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-97

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. <u>Juniperus virginiana</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Liquidambar styraciflua</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
_____ = Total Cover				
50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Angropogodon virginicus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
2. <u>Juniperus virginiana</u>	<u>25</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Microstegium vimineum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
4. <u>Solidago canadensis</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
5. <u>Vernonia gigantea</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
50% of total cover: <u>25</u> 20% of total cover: <u>10</u>				
Woody Vine Stratum (Plot size: <u>5 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Hydric Soil Present? Yes \_\_\_\_\_ No X

Eastern Mountains and Piedmont – Version 2.0

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalfe/ Monroe Sampling Date: 2/28/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-99  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRR Lat: 36.849321 Long: -85.695467 Datum: NAD83  
Soil Map Unit Name: SaB, NK 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Wetland point for W-59a. PFO portion of W-59	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input checked="" type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>0.5</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>4</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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-99

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Platanus occidentalis</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>	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)
2. <u>Acer rubrum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>	
3. <u>Fagus frandifoloia</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>50</u> = Total Cover 50% of total cover: <u>25</u> 20% of total cover: <u>10</u>				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A)      _____ (B)  Prevalence Index = B/A = _____
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )				
1. <u>Acer rubrum</u>	<u>5</u>	<u>N</u>	<u>FAC</u>	
2. <u>Lindera benzoin</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Acer negundo</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. <u>Salix nigra</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> ___ 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.
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
<u>30</u> = Total Cover 50% of total cover: <u>15</u> 20% of total cover: <u>6</u>				
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>Microstegium vimineum</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Carex pennsylvanica</u>	<u>-</u>	<u>-</u>	<u>Not listed</u>	
3. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. <u>Sphagnum sp</u>	<u>-</u>	<u>-</u>	<u>-</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>15</u> = Total Cover 50% of total cover: <u>7.5</u> 20% of total cover: <u>3</u>				
<b>Woody Vine Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>N/A</u>	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover 50% of total cover: _____      20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				



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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalfe/ Monroe Sampling Date: 2/28/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-101  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRR Lat: 36.849674 Long: -85.694727 Datum: NAD83  
Soil Map Unit Name: Nk NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:

Wetland point for W-59b. PSS portion of W-59

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes X No \_\_\_\_\_ Depth (inches): 0.5  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes X No \_\_\_\_\_ Depth (inches): 4  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-101

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
<u>Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )</u>			
1. <u>Salix nigra</u>	<u>30</u>	<u>Y</u>	<u>OBL</u>
2. <u>Alnus serrulata</u>	<u>25</u>	<u>Y</u>	<u>OBL</u>
3. <u>Liquidambar styraciflua</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: <u>40</u> 20% of total cover: <u>16</u></div>			
<u>Herb Stratum (Plot size: <u>5 ft</u> )</u>			
1. <u>Microstegium vimineum</u>	<u>10</u>	<u>N</u>	<u>FAC</u>
2. <u>Symphitrychum pilosum</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>
3. <u>Juncus effusus</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>
4. <u>Scirpus atrovirens</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
5. <u>Salix nigra</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
6. <u>Lysimachia nummularia</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: <u>35</u> 20% of total cover: <u>14</u></div>			
<u>Woody Vine Stratum (Plot size: <u>5 ft</u> )</u>			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Remarks: (Include photo numbers here or on a separate sheet.)			

**Dominance Test worksheet:**  
Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)  
  
Total Number of Dominant Species Across All Strata: 5 (B)  
  
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**  
Total % Cover of: \_\_\_\_\_ Multiply by:  
OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
  
Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ 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.

Hydric Soil Present? Yes X No       

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**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/28/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-102  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0  
Subregion (LRR or MLRA): LRR Lat: 36.849392 Long: -85.695604 Datum: NAD83  
Soil Map Unit Name: Nk NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: Upland point for W-59a and W-59b	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes _____ No <u>X</u> Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-102

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>6</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>17</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )				
1. <u>Lindera benzoin</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Fagus grandifolia</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
_____ = Total Cover				
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>Rosa multiflora</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Juniperus virginiana</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Alium vineale</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Lonicera japonica</u>	<u>5</u>	<u>Y</u>	<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				
<b>Woody Vine Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

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

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

Hydric Soil Present? Yes \_\_\_\_\_ No X

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## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-103  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRR Lat: 36.859848 Long: -85.678154 Datum: NAD83  
Soil Map Unit Name: Nk, BaD2, DkB 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 Y, Soil N, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks:

Wetland point for W-60. depressional PEM. Open field area frequently mown causing disturbance to veg. Area has been used for ag fields in the past causing disturbance to soils

### HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

#### Field Observations:

Surface Water Present? Yes X No \_\_\_\_\_ Depth (inches): 0.5  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes X No \_\_\_\_\_ Depth (inches): 4  
(includes capillary fringe)

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

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

Remarks:



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-103

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Herb Stratum (Plot size: <u>5 ft</u> )			
1. <u>Echinochloa crus-galli</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>
2. <u>Juncus tenuis</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
3. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
4. <u>Carex sp*</u>	<u>10</u>	<u>-</u>	<u>-</u>
5. <u>Packera glabella</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
6. <u>Elymus virginicus</u>	<u>60</u>		
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<div style="text-align: right;"><u>95</u> = Total Cover</div> <div>50% of total cover: <u>42.5</u> 20% of total cover: <u>19</u></div>			
Woody Vine Stratum (Plot size: <u>5 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

Carex unidentifiable due to mowing

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ 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.

Hydric Soil Present? Yes X No       

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## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-105  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 3  
Subregion (LRR or MLRA): LRR Lat: 36.858322 Long: -85.680255 Datum: NAD83  
Soil Map Unit Name: Nk NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation Y, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks:

Upland point for W-61. Open field area frequently mown causing disturbance to veg.

### HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> FAC-Neutral Test (D5)

#### Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-105

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				<b>Hydrophytic Vegetation Indicators:</b> ___ 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.
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
10. _____				
11. _____				
_____ = Total Cover				
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>Andropogodon virginicus</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
2. <u>Setaria pumila</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Alium vineale</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. <u>Schedonorus arundinaceus</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
50% of total cover: <u>45</u> 20% of total cover: <u>18</u>				
<b>Woody Vine Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				
Area has been previously used as corn field				



[illegible]

## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-105  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRR Lat: 36.858499 Long: -85.680106 Datum: NAD83  
Soil Map Unit Name: Nk, BaB 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:

Wetland point for W-61. PEM along fringe of open water pond

### HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input checked="" type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

#### Field Observations:

Surface Water Present? Yes X No \_\_\_\_\_ Depth (inches): 0.75  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes X No \_\_\_\_\_ Depth (inches): 2  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-105

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Herb Stratum (Plot size: <u>5 ft</u> )			
1. <u>Echinochloa grus-galli</u>	<u>30</u>	<u>Y</u>	<u>FACW</u>
2. <u>Typha latifolia</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
3. <u>Juncus effusus</u>	<u>25</u>	<u>Y</u>	<u>FACW</u>
4. <u>Carex lurida</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
5. <u>Packera glabella</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
6. <u>Rumex crispus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<div style="text-align: right;"><u>85</u> = Total Cover</div> <div>50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u></div>			
Woody Vine Stratum (Plot size: <u>5 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Remarks: (Include photo numbers here or on a separate sheet.)			

**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 \_\_\_\_\_ x 1 = \_\_\_\_\_  
FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
  
Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ 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.

Hydric Soil Present? Yes X No       

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**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-106  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 3  
Subregion (LRR or MLRA): LRR Lat: 36.858322 Long: -85.680255 Datum: NAD83  
Soil Map Unit Name: Nk NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation Y, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks:

Upland point for W-61. Open field area frequently mown causing disturbance to veg.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-106

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				<b>Hydrophytic Vegetation Indicators:</b> ___ 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.
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
10. _____				
11. _____				
_____ = Total Cover				
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>Andropogodon virginicus</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
2. <u>Setaria pumila</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Alium vineale</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. <u>Schedonorus arundinaceus</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
50% of total cover: <u>45</u> 20% of total cover: <u>18</u>				
<b>Woody Vine Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				
Area has been previously used as corn field				

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

Hydric Soil Present? Yes \_\_\_\_\_ No X

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**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalfe/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-107  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRR Lat: 36.859284 Long: -85.680805 Datum: NAD83  
Soil Map Unit Name: Nk, BaC2, SaB, CrB 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 Y, Soil N, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks:

Wetland point for W-62 (test pit 1/2). Large depressional wetland bordering INT stream through open field

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes X No \_\_\_\_\_ Depth (inches): 1  
(includes capillary fringe)

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

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

Remarks:



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-107

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )				
1. <u>N/A</u>				<b>Hydrophytic Vegetation Indicators:</b> ___ 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)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
7. _____				
8. _____				
9. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Herb Stratum (Plot size: <u>5 ft</u> )				
1. <u>Microstegium vimineum</u>	<u>15</u>	<u>N</u>	<u>FAC</u>	<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
2. <u>Andropogodon virginicus</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
3. <u>Juncus effusus</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>	
4. <u>Elymus virginicus</u>	<u>15</u>	<u>N</u>	<u>FACW</u>	
5. _____				
6. _____				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover	<u>95</u>			
50% of total cover: <u>47.5</u> 20% of total cover: <u>19</u>				
Woody Vine Stratum (Plot size: <u>5 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ 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.

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-108  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 2  
Subregion (LRR or MLRA): LRR Lat: 36.858050 Long: -85.681751 Datum: NAD83  
Soil Map Unit Name: Nk NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation Y, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks:

Upland point for W-62 (test pit 1/2). Open field area frequently mown causing disturbance to veg.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-108

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				<b>Hydrophytic Vegetation Indicators:</b> ___ 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.
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
10. _____				
11. _____				
_____ = Total Cover				
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>Andropogodon virginicus</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
2. <u>Setaria pumila</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
3. <u>Trifolium repens</u>	<u>40</u>	<u>N</u>	<u>FACU</u>	
4. <u>Schedonorus arundinaceus</u>	<u>10</u>	<u>Y</u>	<u>FACU</u>	
5. <u>Lamium purpureum</u>	<u>20</u>	<u>Y</u>	<u>FACU</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
50% of total cover: <u>45</u> 20% of total cover: <u>18</u>				
<b>Woody Vine Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				
Area has been previously used as corn field				



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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ 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.

Hydric Soil Present? Yes \_\_\_\_\_ No X

Eastern Mountains and Piedmont – Version 2.0

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-109  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRR Lat: 36.858185 Long: -85.681487 Datum: NAD83  
Soil Map Unit Name: Nk, BaC2, SaB, CrB 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 Y, Soil N, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
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Remarks:

Wetland point for W-62 (test pit 2/2). Large depressional wetland bordering INT stream through open field

**HYDROLOGY**

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes X No \_\_\_\_\_ Depth (inches): 1  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-109

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				<b>Hydrophytic Vegetation Indicators:</b> ___ 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)
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>Microstegium vimineum</u>	<u>15</u>	<u>N</u>	<u>FAC</u>	
2. <u>Packera glabella</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
3. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>	
4. <u>Elymus virginicus</u>	<u>75</u>	<u>Y</u>	<u>FACW</u>	
5. _____				
6. _____				
7. _____				<b>Woody Vine Stratum</b> (Plot size: <u>5 ft</u> )
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				<b>Remarks:</b> (Include photo numbers here or on a separate sheet.)
50% of total cover: <u>50</u> 20% of total cover: <u>20</u>				
<b>Woody Vine Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ 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.

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0



**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalfe/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-110  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 2  
Subregion (LRR or MLRA): LRR Lat: 36.858050 Long: -85.681751 Datum: NAD83  
Soil Map Unit Name: Nk NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation Y, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks:

Upland (test pit 2/2) point for W-62. Open field area frequently mown causing disturbance to veg.

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-110

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>N/A</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
5. _____				
6. _____				
7. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				<b>Hydrophytic Vegetation Indicators:</b> ___ 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.
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
10. _____				
11. _____				
_____ = Total Cover				
50% of total cover: <u>10</u> 20% of total cover: <u>4</u>				
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>Andropogodon virginicus</u>	<u>15</u>	<u>N</u>	<u>FACU</u>	
2. <u>Setaria pumila</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Alium vineale</u>	<u>5</u>	<u>N</u>	<u>FACU</u>	
4. <u>Schedonorus arundinaceus</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
_____ = Total Cover				
50% of total cover: <u>45</u> 20% of total cover: <u>18</u>				
<b>Woody Vine Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
50% of total cover: _____ 20% of total cover: _____				
Remarks: (Include photo numbers here or on a separate sheet.)				
Area has been previously used as corn field				

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 4/4	98	10YR 2/2	2	C	M	clay loam	
6-15	10YR 4/3	100					clay loam	Soils disturbed by ag use
<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 Soil Indicators:</b>			<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>					
<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) ( <b>LRR N</b> ) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR N,</b> <b>MLRA 147, 148</b> ) <input type="checkbox"/> Sandy Gleyed Matrix (S4) <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Dark Surface (S7) <input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>MLRA 147, 148</b> ) <input type="checkbox"/> Thin Dark Surface (S9) ( <b>MLRA 147, 148</b> ) <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"/> Iron-Manganese Masses (F12) ( <b>LRR N,</b> <b>MLRA 136</b> ) <input type="checkbox"/> Umbric Surface (F13) ( <b>MLRA 136, 122</b> ) <input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 148</b> ) <input type="checkbox"/> Red Parent Material (F21) ( <b>MLRA 127, 147</b> )			<input type="checkbox"/> 2 cm Muck (A10) ( <b>MLRA 147</b> ) <input type="checkbox"/> Coast Prairie Redox (A16) ( <b>MLRA 147, 148</b> ) <input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 136, 147</b> ) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks)		
<b>Restrictive Layer (if observed):</b>  Type: _____  Depth (inches): _____								
			Hydric Soil Present?   Yes ____ No <u>X</u>					
Remarks:  								

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-111  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-3  
Subregion (LRR or MLRA): LRR Lat: 36.853358 Long: -85.679434 Datum: NAD83  
Soil Map Unit Name: CbB, BaC2 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Wetland point for W-63a and W-64a (PEM). Linear wetland following perennial stream channel	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>6</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:		



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-111

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Herb Stratum (Plot size: <u>5 ft</u> )			
1. <u>Typha latifolia</u>	<u>100</u>	<u>Y</u>	<u>OBL</u>
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: <u>50</u> 20% of total cover: <u>20</u></div>			
Woody Vine Stratum (Plot size: <u>5 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			

**Dominance Test worksheet:**  
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
  
Total Number of Dominant Species Across All Strata: 1 (B)  
  
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**  
Total % Cover of: \_\_\_\_\_ Multiply by:  
OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
  
Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ 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.

Hydric Soil Present? Yes X No       

Eastern Mountains and Piedmont – Version 2.0

## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-113  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Linear Local relief (concave, convex, none): Concave Slope (%): 0  
Subregion (LRR or MLRA): LRR Lat: 36.853243 Long: -85.678846 Datum: NAD83  
Soil Map Unit Name: CbB NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Wetland point for W-63b and W-64b (PSS). Linear wetland following perennial stream channel	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input checked="" type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <u>X</u> No _____ Depth (inches): <u>1</u> Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>4</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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-113

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )</b>			
1. <u>Salix nigra</u>			
2. <u>Alnus serrulata</u>			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
<b>Herb Stratum (Plot size: <u>5 ft</u> )</b>			
1. <u>Microstegium vimineum</u>	<u>90</u>	<u>Y</u>	<u>FAC</u>
2. <u>Onoclea sensibilis</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
3. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<div style="text-align: right;"><u>100</u> = Total Cover</div> <div>50% of total cover: <u>50</u> 20% of total cover: <u>20</u></div>			
<b>Woody Vine Stratum (Plot size: <u>5 ft</u> )</b>			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)



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 5/1	80	7.5 YR 4/4	20	C, PL	M	silty clay loam	
3-10	10YR 6/1	85	7.5YR 4/6	15	C	M	clay loam	
10-16	10YR 6/1	85	7.5 YR 4/4	15	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 Soil Indicators:</b>						<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Dark Surface (S7)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>MLRA 147</b> )		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>MLRA 147, 148</b> )			<input type="checkbox"/> Coast Prairie Redox (A16)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Thin Dark Surface (S9) ( <b>MLRA 147, 148</b> )			<input checked="" type="checkbox"/> <b>(MLRA 147, 148)</b>		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Piedmont Floodplain Soils (F19)		
<input type="checkbox"/> Stratified Layers (A5)			<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input checked="" type="checkbox"/> <b>(MLRA 136, 147)</b>		
<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR N</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR N,</b>			<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR N,</b>					
<input type="checkbox"/> <b>    MLRA 147, 148)</b>			<input type="checkbox"/> <b>    MLRA 136)</b>					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Umbric Surface (F13) ( <b>MLRA 136, 122)</b>			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 148</b> )					
<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (F21) ( <b>MLRA 127, 147)</b>					
<b>Restrictive Layer (if observed):</b>								
Type: _____								
Depth (inches): _____						<b>Hydric Soil Present?   Yes <u>X</u>   No ____</b>		
Remarks:   								

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-112  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0  
Subregion (LRR or MLRA): LRR Lat: 36.853301 Long: -85.679515 Datum: NAD83  
Soil Map Unit Name: CbB NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks:

Upland point for W-63a, W-63b, W-64a, and W-64b

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-112

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: <u>10</u> 20% of total cover: <u>4</u></div>			
Herb Stratum (Plot size: <u>5 ft</u> )			
1. <u>Lamium purpureum</u>	<u>60</u>	<u>Y</u>	<u>FACU</u>
2. <u>Euonymus fortunei</u>	<u>40</u>	<u>N</u>	<u>FACU</u>
3. <u>Glycine max*</u>	<u>-</u>	<u>-</u>	<u>-</u>
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: <u>50</u> 20% of total cover: <u>20</u></div>			
Woody Vine Stratum (Plot size: <u>5 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

Remarks: (Include photo numbers here or on a separate sheet.)

\*Old soybeans present

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ 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.

Hydric Soil Present? Yes \_\_\_\_\_ No X

Eastern Mountains and Piedmont – Version 2.0



## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Metcalfe/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-115  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1  
Subregion (LRR or MLRA): LRR Lat: 36.851337 Long: -85.680048 Datum: NAD83  
Soil Map Unit Name: LS, BaC2 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 N, Soil N, or Hydrology Y significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ Hydric Soil Present? Yes <u>X</u> No _____ Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Remarks: Wetland point for W-65	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> True Aquatic Plants (B14) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13)		<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <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 type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>1</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:		

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-115

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
<b>Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )</b>			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
<b>Herb Stratum (Plot size: <u>5 ft</u> )</b>			
1. <u>Echinochloa crus-galli</u>	<u>10</u>	<u>N</u>	<u>FACW</u>
2. <u>Elymus virginicus</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>
3. <u>Juncus effusus</u>	<u>20</u>	<u>N</u>	<u>FACW</u>
4. <u>Juncus tenius</u>	<u>5</u>	<u>N</u>	<u>FAC</u>
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<div style="text-align: right;"><u>85</u> = Total Cover</div> <div>50% of total cover: <u>42.5</u> 20% of total cover: <u>17</u></div>			
<b>Woody Vine Stratum (Plot size: <u>5 ft</u> )</b>			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			

**Dominance Test worksheet:**

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)
Prevalence Index = B/A = _____	

**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.

**Definitions of Four Vegetation Strata:**

**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_

Remarks: (Include photo numbers here or on a separate sheet.)

Carex unidentifiable due to mowing

[illegible]

## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Metcalfe/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-116  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 0  
Subregion (LRR or MLRA): LRR Lat: 36.858322 Long: -85.680255 Datum: NAD83  
Soil Map Unit Name: BaC2 NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks:

Upland point for W-65. Open field area frequently mown causing disturbance to veg.

### HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> FAC-Neutral Test (D5)

#### Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

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

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

Remarks:



VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-116

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>0</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>0</u> (A/B)
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
<u>        </u> = Total Cover 50% of total cover: <u>        </u> 20% of total cover: <u>        </u>				<b>Prevalence Index worksheet:</b> <u>        </u> Total % Cover of: <u>        </u> Multiply by: OBL species <u>        </u> x 1 = <u>        </u> FACW species <u>        </u> x 2 = <u>        </u> FAC species <u>        </u> x 3 = <u>        </u> FACU species <u>        </u> x 4 = <u>        </u> UPL species <u>        </u> x 5 = <u>        </u> Column Totals: <u>        </u> (A) <u>        </u> (B)  Prevalence Index = B/A = <u>        </u>
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
<u>        </u> = Total Cover 50% of total cover: <u>10</u> 20% of total cover: <u>4</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.
<b>Herb Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>Plantago lanceolata</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
2. <u>Lamium purpureum</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>	
3. <u>Glycine max*</u>	<u>-</u>	<u>-</u>	<u>-</u>	
4. <u>Schedonorus arundinaceus</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	
5. <u>Lamium amplexicaule</u>	<u>20</u>	<u>N</u>	<u>FACU</u>	
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
<u>        </u> = Total Cover 50% of total cover: <u>50</u> 20% of total cover: <u>20</u>				<b>Definitions of Four Vegetation Strata:</b>  <b>Tree</b> – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/Shrub</b> – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vine</b> – All woody vines greater than 3.28 ft in height.
<b>Woody Vine Stratum</b> (Plot size: <u>5 ft</u> )				
1. <u>N/A</u>				
2. _____				
3. _____				
4. _____				
5. _____				
<u>        </u> = Total Cover 50% of total cover: <u>        </u> 20% of total cover: <u>        </u>				<b>Hydrophytic Vegetation Present?</b> Yes <u>        </u> No <u>X</u>
Remarks: (Include photo numbers here or on a separate sheet.)  Area has been previously used as soybean field				

[illegible]

## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: Summer Shade Solar City/County: Metcalf/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-117  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-3  
Subregion (LRR or MLRA): LRR Lat: 36.856320 Long: -85.681103 Datum: NAD83  
Soil Map Unit Name: CbB, BaC2 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	

Remarks:

Wetland point for W-66. Depression with standing water downslope from pond

### HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

#### Field Observations:

Surface Water Present? Yes X No \_\_\_\_\_ Depth (inches): 2  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes X No \_\_\_\_\_ Depth (inches): 4  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-117

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Herb Stratum (Plot size: <u>5 ft</u> )			
1. <u>Microstegium vimineum</u>	<u>40</u>	<u>Y</u>	<u>FAC</u>
2. <u>Typha latifolia</u>	<u>10</u>	<u>N</u>	<u>OBL</u>
3. <u>Juncus effusus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
4. <u>Elymus virginicus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
5. <u>Packera glabella</u>	<u>5</u>	<u>N</u>	<u>OBL</u>
6. <u>Lysimachia nummularia</u>	<u>5</u>	<u>N</u>	<u>FACW</u>
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<div style="text-align: right;"><u>70</u> = Total Cover</div> <div>50% of total cover: <u>35</u> 20% of total cover: <u>14</u></div>			
Woody Vine Stratum (Plot size: <u>5 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Remarks: (Include photo numbers here or on a separate sheet.)			

**Dominance Test worksheet:**  
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)  
Total Number of Dominant Species Across All Strata: 1 (B)  
Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

**Prevalence Index worksheet:**  
Total % Cover of: \_\_\_\_\_ Multiply by:  
OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes X No \_\_\_\_\_



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 4/2	90	7.5 YR 4/4	10	C, PL	M	silty clay loam	
2-10	10YR 6/1	85	7.5YR 4/6	15	C	M	clay loam	
10-16	10YR 5/1	85	7.5 YR 4/4	15	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 Soil Indicators:						Indicators for Problematic Hydric Soils <sup>3</sup> :		
<input type="checkbox"/> Histosol (A1)			<input type="checkbox"/> Dark Surface (S7)			<input type="checkbox"/> 2 cm Muck (A10) ( <b>MLRA 147</b> )		
<input type="checkbox"/> Histic Epipedon (A2)			<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>MLRA 147, 148</b> )			<input type="checkbox"/> Coast Prairie Redox (A16)		
<input type="checkbox"/> Black Histic (A3)			<input type="checkbox"/> Thin Dark Surface (S9) ( <b>MLRA 147, 148</b> )			<input checked="" type="checkbox"/> ( <b>MLRA 147, 148</b> )		
<input type="checkbox"/> Hydrogen Sulfide (A4)			<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Piedmont Floodplain Soils (F19)		
<input type="checkbox"/> Stratified Layers (A5)			<input checked="" type="checkbox"/> Depleted Matrix (F3)			<input checked="" type="checkbox"/> ( <b>MLRA 136, 147</b> )		
<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR N</b> )			<input type="checkbox"/> Redox Dark Surface (F6)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)			<input type="checkbox"/> Depleted Dark Surface (F7)			<input type="checkbox"/> Other (Explain in Remarks)		
<input type="checkbox"/> Thick Dark Surface (A12)			<input type="checkbox"/> Redox Depressions (F8)					
<input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR N,</b> <b>MLRA 147, 148</b> )			<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR N,</b> <b>MLRA 136</b> )					
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			<input type="checkbox"/> Umbric Surface (F13) ( <b>MLRA 136, 122</b> )			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.		
<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 148</b> )					
<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (F21) ( <b>MLRA 127, 147</b> )					
Restrictive Layer (if observed):								
Type: _____						Hydric Soil Present? Yes <u>X</u> No _____		
Depth (inches): _____								
Remarks:     								

**WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region**

Project/Site: Summer Shade Solar City/County: Metcalfe/ Monroe Sampling Date: 2/29/24  
Applicant/Owner: Summer Shade Solar, LLC State: KY Sampling Point: WAS-118  
Investigator(s): Kristen Clemens, Tim Grabenstein Section, Township, Range: N/A  
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): None Slope (%): 0  
Subregion (LRR or MLRA): LRR Lat: 36.856162 Long: -85.681116 Datum: NAD83  
Soil Map Unit Name: BaC2 NWI classification: Upland

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation Y, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
Are Vegetation N, Soil N, or Hydrology N 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 _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	

Remarks:

Upland point for W-66

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>		<u>Secondary Indicators (minimum of two required)</u>
<u>Primary Indicators (minimum of one is required; check all that apply)</u>		<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Microtopographic Relief (D4)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> FAC-Neutral Test (D5)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No X Depth (inches): \_\_\_\_\_  
(includes capillary fringe)

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

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

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WAS-118

Tree Stratum (Plot size: <u>30 ft</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Sapling/Shrub Stratum (Plot size: <u>15 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: <u>10</u> 20% of total cover: <u>4</u></div>			
Herb Stratum (Plot size: <u>5 ft</u> )			
1. <u>Andropogodon virginicus</u>	<u>40</u>	<u>N</u>	<u>FACU</u>
2. <u>Setaria pumila</u>	<u>10</u>	<u>N</u>	<u>FACU</u>
3. <u>Schedonorus arundinaceus</u>	<u>50</u>	<u>Y</u>	<u>FACU</u>
4. _____			
5. _____			
6. _____			
7. _____			
8. _____			
9. _____			
10. _____			
11. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: <u>45</u> 20% of total cover: <u>18</u></div>			
Woody Vine Stratum (Plot size: <u>5 ft</u> )			
1. <u>N/A</u>			
2. _____			
3. _____			
4. _____			
5. _____			
<div style="text-align: right;">_____ = Total Cover</div> <div>50% of total cover: _____ 20% of total cover: _____</div>			
Remarks: (Include photo numbers here or on a separate sheet.)			

**Dominance Test worksheet:**  
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)  
  
Total Number of Dominant Species Across All Strata: 1 (B)  
  
Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

**Prevalence Index worksheet:**  
Total % Cover of: \_\_\_\_\_ Multiply by:  
OBL species \_\_\_\_\_ x 1 = \_\_\_\_\_  
FACW species \_\_\_\_\_ x 2 = \_\_\_\_\_  
FAC species \_\_\_\_\_ x 3 = \_\_\_\_\_  
FACU species \_\_\_\_\_ x 4 = \_\_\_\_\_  
UPL species \_\_\_\_\_ x 5 = \_\_\_\_\_  
Column Totals: \_\_\_\_\_ (A) \_\_\_\_\_ (B)  
  
Prevalence Index = B/A = \_\_\_\_\_

**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.

**Definitions of Four Vegetation Strata:**  
  
**Tree** – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  
  
**Sapling/Shrub** – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  
  
**Herb** – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height.  
  
**Woody vine** – All woody vines greater than 3.28 ft in height.

**Hydrophytic Vegetation Present?** Yes \_\_\_\_\_ No X

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

☐ 2 cm Muck (A10) **(MLRA 147)**  
☐ Coast Prairie Redox (A16)  
**(MLRA 147, 148)**  
☐ Piedmont Floodplain Soils (F19)  
**(MLRA 136, 147)**  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

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

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

Remarks:



SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

## Appendix C TABLES

**Table 1. Soil Types Known to Occur within the Summer Shade Solar Project, Metcalfe and Monroe Counties, Kentucky**

Map Unit Symbol	Map Unit Name	Hydric (Yes/No)	Acres in AOI	Percent of AOI
BaB	Baxter gravelly silt loam, 2 to 6 percent slopes	No	74.7	5.1%
BaB2	Baxter gravelly silt loam, 2 to 6 percent slopes, eroded	No	1.8	0.1%
BaC	Baxter gravelly silt loam, 6 to 12 percent slopes	No	59.9	4.1%
BaC2	Baxter gravelly silt loam, 6 to 12 percent slopes, eroded	No	254.3	17.3%
BaD	Baxter gravelly silt loam, 12 to 20 percent slopes	No	20.1	1.4%
BaD2	Baxter gravelly silt loam, 12 to 20 percent slopes, eroded	No	197.6	13.5%
BaE	Baxter gravelly silt loam, 20 to 30 percent slopes	No	94.8	6.5%
BaE2	Baxter gravelly silt loam, 20 to 30 percent slopes, eroded	No	240.7	16.4%
BcC3	Baxter cherty silty clay loam, 6 to 12 percent slopes, severely eroded	No	5	0.3%
BcD3	Baxter cherty silty clay loam, 12 to 20 percent slopes, severely eroded	No	8.1	0.6%
BcE3	Baxter cherty silty clay loam, 20 to 30 percent slopes, severely eroded	No	2.7	0.2%
BoD	Bodine cherty silt loam, 12 to 20 percent slopes	No	3.2	0.2%
BoE	Bodine cherty silt loam, 20 to 35 percent slopes	No	8.8	0.6%
CbB	Captina silt loam, 2 to 6 percent slopes	No	6.1	0.4%
CkB	Clarksville cherty silt loam, 2 to 6 percent slopes	No	16.6	1.1%
CkC2	Clarksville cherty silt loam, 6 to 12 percent slopes, eroded	No	35.6	2.4%
CkD2	Clarksville cherty silt loam, 12 to 20 percent slopes, eroded	No	6.8	0.5%
CkE2	Clarksville cherty silt loam, 20 to 30 percent slopes, eroded	No	9.2	0.6%
CrB	Crider silt loam, 2 to 6 percent slopes	No	93	6.3%
CrB2	Crider silt loam, 2 to 6 percent slopes, eroded	No	5.1	0.3%
CrC2	Crider silt loam, 6 to 12 percent slopes, eroded	No	12.1	0.8%
CuB2	Cumberland cherty silt loam, 2 to 6 percent slopes, eroded (frederick)	No	1	0.1%
DaD	Dandridge and Westmoreland shaly silt loams, 12 to 20 percent slopes (dandridge, garmon)	No	11.2	0.8%

# SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

Map Unit Symbol	Map Unit Name	Hydric (Yes/No)	Acres in AOI	Percent of AOI
DaF	Dandridge and Westmoreland shaly silt loams, 20 to 50 percent slopes (dandridge, garmon)	No	34.6	2.4%
DcB	Dandridge and Westmoreland silt loams, 2 to 6 percent slopes (dandridge, garmon)	No	2.3	0.2%
DcC	Dandridge and Westmoreland silt loams, 6 to 12 percent slopes (dandridge, garmon)	No	4.3	0.3%
DeB	Dewey silt loam, 2 to 6 percent slopes	No	13.7	0.9%
DeC2	Dewey silt loam, 6 to 12 percent slopes, eroded	No	0.2	0.0%
DkB	Dickson silt loam, 2 to 6 percent slopes	No	12.9	0.9%
HcB	Humphreys cherty silt loam, 2 to 6 percent slopes	No	1.5	0.1%
HcC2	Humphreys cherty silt loam, 6 to 12 percent slopes, eroded	No	5.5	0.4%
Hg	Huntington gravelly silt loam (sensabaugh)	No	21.9	1.5%
Hu	Huntington silt loam	No	43.9	3.0%
Ls	Lindside silt loam	No	20.9	1.4%
MoB	Mountview silt loam, 2 to 6 percent slopes	No	0.3	0.0%
Nk	Newark silt loam	Yes	49	3.3%
PmB	Pembroke silt loam, 2 to 6 percent slopes	No	9.2	0.6%
Pt	Pits, quarries	No	2.4	0.2%
Rk	Rock land (rock outcrop)	No	12.8	0.9%
SaB	Sango silt loam, 2 to 6 percent slopes	No	26.4	1.8%
Ta	Taft silt loam	Yes	21.3	1.5%
W	Water	No	2.1	0.1%
FrD	Frederick cherty silt loam, 12 to 20 percent slopes	No	4.9	0.3%
Hu	Huntington silt loam	No	0.9	0.1%
Ne	Newark silt loam	Yes	6.4	0.4%
TrC	Trimble cherty silt loam, 6 to 12 percent slopes	No	1.6	0.1%
<b>Totals for Area of Interest</b>			<b>1,467.4</b>	<b>100.0%</b>

SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

**Table 2. Wetlands Identified at the Summer Shade Solar Project, Metcalfe and Monroe Counties, Kentucky**

Wetland Name	Latitude	Longitude	Cowardin Classification	Preliminary Jurisdictional Class	Total Area (Acres)
W-01	36.872039	-85.684335	PEM	RPW	0.08
W-02a	36.875907	-85.684275	PEM	NRPW	0.36
W-02b	36.876135	-85.683519	PEM	NRPW	0.02
W-03	36.876697	-85.680776	PEM	NRPW	0.01
W-04	36.879302	-85.682514	PEM	NRPW	0.28
W-05	36.879680	-85.682086	PEM	NRPW	0.14
W-06a	36.879495	-85.683829	PEM	NRPW	0.79
W-06b	36.879249	-85.684853	PEM	NRPW	0.40
W-06c	36.879646	-85.684289	PEM	NRPW	0.01
W-07	36.878640	-85.685301	PEM	NRPW	0.18
W-08	36.880449	-85.684397	PEM	NRPW	0.03
W-09	36.880292	-85.683240	PEM	NRPW	0.29
W-10	36.880170	-85.681664	PEM	NRPW	0.05
W-11	36.880365	-85.682584	PEM	NRPW	0.02
W-12	36.880143	-85.682987	PEM	NRPW	0.06
W-13	36.880563	-85.682761	PEM	NRPW	0.06
W-14	36.881340	-85.681855	PEM	NRPW	0.02
W-15	36.880960	-85.681942	PEM	NRPW	0.22
W-16a	36.881192	-85.682946	PEM	NRPW	0.51
W-16b	36.881855	-85.682065	PFO	NRPW	0.02
W-16c	36.882186	-85.681416	PEM	NRPW	0.18
W-17	36.885457	-85.680928	PEM	NRPW	0.44
W-18a	36.881400	-85.678854	PFO	NRPW	0.05
W-18b	36.881344	-85.678902	PEM	NRPW	0.01
W-19	36.884139	-85.684102	PEM	NRPW	0.19
W-20	36.886187	-85.685987	PEM	NRPW	0.01
W-21	36.882102	-85.686428	PEM	NRPW	1.37
W-22a	36.882297	-85.691037	PEM	RPW	1.38
W-22b	36.882297	-85.691583	PEM	RPW	0.01
W-22c	36.883194	-85.692906	PEM	RPW	0.11
W-23	36.851625	-85.685255	PSS	RPW	1.17
W-24	36.852966	-85.685075	PEM	RPW	0.03
W-25	36.851137	-85.692906	PEM	NRPW	0.06
W-26	36.849475	-85.690660	PFO	NRPW	0.25
W-27	36.848948	-85.690524	PFO	NRPW	0.35
W-28	36.845763	-85.687263	PEM	NRPW	0.01
W-29a	36.838989	-85.693404	PEM	NRPW	0.00
W-29b	36.838964	-85.693560	PEM	NRPW	0.00

# SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

Wetland Name	Latitude	Longitude	Cowardin Classification	Preliminary Jurisdictional Class	Total Area (Acres)
W-29c	36.838798	-85.694341	PEM	NRPW	0.01
W-29d	36.838549	-85.694609	PEM	NRPW	0.04
W-30	36.838167	-85.695278	PEM	NRPW	0.83
W-31	36.837878	-85.695740	PEM	NRPW	0.04
W-32	36.837644	-85.695096	PEM	NRPW	0.22
W-33	36.840634	-85.697127	PEM	NRPW	0.03
W-34	36.845719	-85.688096	PEM	NRPW	0.04
W-35	36.845604	-85.689923	PEM	NRPW	0.01
W-36	36.850207	-85.701280	PEM	RPW	0.41
W-37	36.845826	-85.690824	PEM	NRPW	0.07
W-38	36.850723	-85.701711	PFO	RPW	0.35
W-39	36.851151	-85.702339	PFO	RPW	0.42
W-40	36.851548	-85.699686	PEM	RPW	0.10
W-41	36.853992	-85.698259	PEM	RPW	0.48
W-42	36.853910	-85.699784	PFO	RPW	0.47
W-43	36.854466	-85.697164	PEM	RPW	0.05
W-44	36.854158	-85.696891	PEM	RPW	0.14
W-45	36.862732	-85.699934	PFO	NRPW	0.01
W-46	36.859722	-85.699105	PEM	NRPW	0.00
W-47	36.858517	-85.697229	PEM	NRPW	0.15
W-48	36.858235	-85.698866	PEM	NRPW	0.02
W-49a	36.855579	-85.695487	PFO	RPW	0.42
W-49b	36.855846	-85.695160	PEM	RPW	0.01
W-50	36.836089	-85.700010	PFO	NRPW	0.07
W-51a	36.836518	-85.699320	PFO	NRPW	0.44
W-51b	36.837288	-85.698827	PEM	NRPW	0.76
W-52	36.847819	-85.703470	PEM	NRPW	0.04
W-53	36.846846	-85.699039	PEM	NRPW	0.01
W-54	36.849956	-85.699786	PEM	RPW	2.02
W-55a	36.848826	-85.698511	PEM	RPW	1.16
W-55b	36.849331	-85.698137	PFO	RPW	0.17
W-56	36.848392	-85.697633	PEM	RPW	0.13
W-57	36.848133	-85.697503	PEM	RPW	0.04
W-58	36.849475	-85.698957	PEM	NRPW	0.38
W-59a	36.849464	-85.695339	PFO	RPW	0.23
W-59b	36.849982	-85.694082	PSS	RPW	3.60
W-60	36.860078	-85.678587	PEM	NRPW	1.00
W-61	36.858278	-85.680398	PEM	NRPW	0.13
W-62	36.859379	-85.682642	PEM	NRPW	3.17
W-63a	36.853625	-85.680810	PEM	RPW	0.47
W-63b	36.853278	-85.679326	PSS	RPW	0.01



# SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

Wetland Name	Latitude	Longitude	Cowardin Classification	Preliminary Jurisdictional Class	Total Area (Acres)
W-64a	36.853340	-85.678891	PEM	RPW	0.08
W-64b	36.853315	-85.678885	PSS	RPW	0.06
W-65	36.851245	-85.680053	PEM	NRPW	0.31
W-66	36.856254	-85.681449	PEM	NRPW	0.57

<sup>1</sup> Pending official determination by the USACE

**Table 3. Streams Identified at the Summer Shade Solar Project, Metcalfe and Monroe Counties, Kentucky**

Stream Name	Latitude	Longitude	Flow Class	Preliminary Jurisdictional Class <sup>1</sup>	Width (ft)	Total Linear Feet
S-001-iii	36.866866	-85.688626	PER	RPW	18	6714.40
S-002-i	36.867287	-85.694996	PER	RPW	11	653.84
S-003-i	36.866778	-85.695635	EPH	NRPW	2	132.52
S-004-i	36.865632	-85.694134	EPH	RPW	2	43.69
S-004-i	36.865765	-85.693799	INT	RPW	3.5	198.59
S-004-ii	36.865802	-85.693185	INT	RPW	3.5	195.25
S-005-i	36.865898	-85.693881	EPH	NRPW	1	116.68
S-006-ii	36.865575	-85.692655	INT	RPW	4	1145.74
S-007-i	36.865386	-85.692130	INT	RPW	3	308.24
S-008-i	36.865136	-85.691861	EPH	NRPW	1.5	126.61
S-009-i	36.864659	-85.692580	EPH	NRPW	2	170.3
S-010-i	36.867892	-85.691743	EPH	NRPW	1.5	274.12
S-011-i	36.869472	-85.689397	EPH	RPW	2	77.93
S-011-i	36.868995	-85.689870	INT	RPW	4	402.31
S-011-ii	36.867946	-85.690455	INT	RPW	4	638.14
S-012-i	36.868681	-85.689306	EPH	NRPW	2	140.05
S-012-i	36.868568	-85.689690	INT	NRPW	3	108.61
S-013-i	36.868431	-85.689591	EPH	NRPW	2	180.53
S-014-i	36.868385	-85.689481	EPH	NRPW	1	26.47
S-015-i	36.868305	-85.690500	EPH	NRPW	1	94.7
S-016-i	36.868196	-85.690478	EPH	NRPW	1	128.16
S-017-i	36.864673	-85.692979	EPH	NRPW	2	83.38
S-018-i	36.865110	-85.693812	EPH	RPW	1.5	76.92
S-018-i	36.865453	-85.693612	INT	RPW	2	205.85
S-019-i	36.866946	-85.694018	EPH	RPW	2	92.56

# SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

Stream Name	Latitude	Longitude	Flow Class	Preliminary Jurisdictional Class <sup>1</sup>	Width (ft)	Total Linear Feet
S-019-i	36.867181	-85.693647	INT	RPW	2	189.4
S-020-i	36.868546	-85.695221	EPH	NRPW	1.5	175.68
S-021-i	36.868664	-85.695322	EPH	NRPW	2	170.98
S-022-i	36.869124	-85.696718	EPH	NRPW	3	435.15
S-023-i	36.869731	-85.697217	INT	RPW	4	230.79
S-024-i	36.870355	-85.695555	EPH	NRPW	3	267.96
S-025-i	36.869972	-85.694410	INT	NRPW	1	50.71
S-026-i	36.870073	-85.694401	EPH	NRPW	3	70.98
S-026-ii	36.869755	-85.694730	EPH	NRPW	3	243.65
S-027-i	36.869198	-85.691552	PER	RPW	2	287.29
S-027-i	36.869259	-85.692239	INT	RPW	10	184.14
S-027-ii	36.868754	-85.693560	INT	RPW	10	768.7
S-028-i	36.869042	-85.692422	EPH	NRPW	1.5	53.5
S-029-i	36.869027	-85.692544	EPH	NRPW	2	60.47
S-030-i	36.869441	-85.691978	EPH	NRPW	1.5	75.74
S-031-i	36.869205	-85.693692	INT	NRPW	3	470.09
S-032-i	36.869351	-85.688133	EPH	NRPW	1	95.47
S-032-i	36.869210	-85.688108	INT	NRPW	4	8.79
S-032-ii	36.868010	-85.688415	INT	RPW	4	1036.34
S-033-i	36.869240	-85.687992	EPH	NRPW	1.5	76.46
S-034-i	36.869013	-85.688268	EPH	NRPW	1	57.23
S-035-i	36.868672	-85.687721	EPH	NRPW	2.5	316.45
S-036-i	36.867482	-85.687829	EPH	NRPW	2.5	218.94
S-037-i	36.866141	-85.689117	INT	RPW	11	591.73
S-038-i	36.865678	-85.687189	EPH	NRPW	3	256.41
S-039-i	36.867138	-85.689431	PER	RPW	2	73.22
S-040-i	36.866656	-85.691202	EPH	NRPW	1.5	135.13
S-041-i	36.863158	-85.693680	EPH	NRPW	4	191.29
S-042-i	36.863351	-85.693777	EPH	NRPW	2.5	90.85
S-043-i	36.864093	-85.691777	EPH	NRPW	3	534.17
S-044-i	36.864329	-85.691472	EPH	NRPW	2	135.04
S-045-i	36.864614	-85.690798	EPH	NRPW	3	37.33
S-046-i	36.864898	-85.690825	EPH	NRPW	1	166.91
S-047-i	36.863585	-85.691809	EPH	NRPW	2	202.18
S-048-i	36.863567	-85.691999	EPH	NRPW	2	126.28
S-049-i	36.863350	-85.691788	EPH	NRPW	2	120.73

# SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

Stream Name	Latitude	Longitude	Flow Class	Preliminary Jurisdictional Class <sup>1</sup>	Width (ft)	Total Linear Feet
S-050-i	36.862491	-85.692269	EPH	NRPW	2.5	140.35
S-051-i	36.861401	-85.691895	EPH	NRPW	2	176.83
S-052-i	36.861226	-85.692036	EPH	NRPW	2	73.03
S-053-i	36.860356	-85.691538	EPH	NRPW	2.5	141.91
S-054-i	36.860128	-85.691608	EPH	NRPW	2.5	180.43
S-055-i	36.859757	-85.691308	EPH	NRPW	2.5	226.97
S-055-i	36.860149	-85.691379	INT	NRPW	5	87.15
S-055-ii	36.860430	-85.691175	INT	NRPW	5	158.4
S-056-i	36.859393	-85.692933	EPH	NRPW	1.5	71.57
S-057-ii	36.871818	-85.684508	PER	RPW	10	607.98
S-057-iii	36.870778	-85.690115	PER	RPW	10	1411.45
S-058-i	36.869760	-85.690404	EPH	RPW	3.5	138.1
S-058-i	36.869935	-85.690471	INT	NRPW	4	11.1
S-058-ii	36.870138	-85.690716	INT	RPW	4	218.25
S-059-i	36.869729	-85.690387	EPH	NRPW	1.5	31.22
S-060-i	36.869959	-85.690327	EPH	NRPW	2	105.42
S-061-i	36.869345	-85.686229	EPH	NRPW	1.5	272.25
S-062-i	36.869715	-85.684472	EPH	NRPW	1.5	174.04
S-062-i	36.869613	-85.684789	INT	NRPW	3.5	47.02
S-062-ii	36.868304	-85.686212	INT	NRPW	3.5	1455.09
S-063-i	36.868566	-85.686534	EPH	NRPW	1	162.14
S-064-i	36.868336	-85.686132	INT	NRPW	2	52.01
S-064-i	36.868332	-85.685904	EPH	NRPW	2	87.37
S-065-i	36.867889	-85.686717	EPH	NRPW	1	128.37
S-066-i	36.867163	-85.686348	EPH	NRPW	1.5	165.73
S-067-i	36.866365	-85.687267	EPH	NRPW	2.5	60.87
S-068-i	36.866241	-85.686647	EPH	NRPW	3	41.14
S-069-i	36.866227	-85.686547	EPH	NRPW	2	37.79
S-070-i	36.866895	-85.686301	EPH	NRPW	1	66.68
S-071-i	36.866755	-85.686080	EPH	NRPW	1.5	74.3
S-072-i	36.866865	-85.685763	EPH	NRPW	1	178.81
S-073-i	36.866791	-85.685638	EPH	NRPW	1.5	155.29
S-074-i	36.866729	-85.685563	EPH	NRPW	1	44.01
S-075-i	36.866761	-85.685473	EPH	NRPW	1.5	43.47
S-076-ii	36.867140	-85.683797	PER	RPW	12	343.16
S-077-i	36.868839	-85.684105	INT	RPW	2	134.79

# SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

Stream Name	Latitude	Longitude	Flow Class	Preliminary Jurisdictional Class <sup>1</sup>	Width (ft)	Total Linear Feet
S-077-ii	36.867941	-85.684306	INT	RPW	2	581.21
S-078-i	36.868231	-85.684555	EPH	NRPW	1	97.78
S-079-i	36.868841	-85.684266	EPH	NRPW	1	96.14
S-080-i	36.869729	-85.684854	EPH	NRPW	1	112.01
S-081-i	36.870897	-85.685061	EPH	NRPW	1.5	76.16
S-082-i	36.871028	-85.684199	EPH	NRPW	1.5	45.64
S-082-ii	36.871163	-85.684868	PER	RPW	2	71.81
S-082-ii	36.871142	-85.684560	INT	RPW	1.5	123.51
S-082-ii	36.871129	-85.684312	EPH	RPW	1.5	53.72
S-083-i	36.871348	-85.683512	EPH	NRPW	1	35.17
S-083-ii	36.871118	-85.683850	EPH	NRPW	1	236.50
S-084-i	36.871163	-85.683571	EPH	NRPW	4	125.15
S-085-i	36.872789	-85.684035	EPH	NRPW	1.5	271.08
S-086-i	36.872645	-85.683826	EPH	NRPW	1.5	182.07
S-087-i	36.872271	-85.683666	EPH	NRPW	3	279.32
S-088-i	36.871568	-85.683759	EPH	NRPW	1	77.32
S-089-i	36.871316	-85.683445	EPH	NRPW	1	74.48
S-090-i	36.871071	-85.683491	EPH	NRPW	2	30.59
S-091-i	36.870980	-85.683523	EPH	NRPW	1.5	171.07
S-092-i	36.879249	-85.681509	INT	NRPW	4	33.99
S-092-ii	36.879325	-85.681995	INT	NRPW	4	288.04
S-093-i	36.879322	-85.681401	EPH	NRPW	1	94.96
S-094-i	36.878431	-85.681881	EPH	NRPW	1.5	738.52
S-095-i	36.879485	-85.680334	EPH	NRPW	1.5	136.5
S-096-i	36.879052	-85.683480	INT	NRPW	3	142.66
S-097-ii	36.879967	-85.683704	PER	NRPW	4.5	2052.4
S-098-i	36.883376	-85.680488	INT	NRPW	1.5	279.06
S-098-ii	36.881575	-85.682361	INT	NRPW	1.5	1110.81
S-099-i	36.880813	-85.684070	EPH	NRPW	0.5	102.94
S-100-i	36.880453	-85.680210	EPH	NRPW	0.5	432.92
S-101-i	36.880122	-85.684973	INT	NRPW	1.5	523.95
S-102-i	36.881045	-85.684809	EPH	NRPW	1	51.89
S-103-i	36.870086	-85.682478	EPH	NRPW	1.5	371.12
S-104-i	36.869556	-85.682505	EPH	NRPW	1	173.49
S-105-i	36.869469	-85.682490	EPH	NRPW	1.5	150.85
S-105-ii	36.869377	-85.682122	EPH	NRPW	1.5	95.06



# SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

Stream Name	Latitude	Longitude	Flow Class	Preliminary Jurisdictional Class <sup>1</sup>	Width (ft)	Total Linear Feet
S-106-i	36.869334	-85.682217	EPH	NRPW	1.5	23.13
S-107-i	36.869011	-85.682470	EPH	NRPW	1	129.5
S-108-iii	36.870321	-85.681528	PER	RPW	6	1647.91
S-109-i	36.869780	-85.682116	EPH	NRPW	1	123.73
S-110-i	36.870492	-85.682366	EPH	NRPW	1.5	365.33
S-110-ii	36.870229	-85.681797	INT	RPW	2	36.06
S-111-i	36.871834	-85.680219	PER	RPW	3.5	346.57
S-112-i	36.870556	-85.682326	EPH	NRPW	1.5	323.11
S-113-i	36.870643	-85.682183	EPH	NRPW	1.5	338
S-114-i	36.872287	-85.681904	EPH	NRPW	2	169.48
S-114-ii	36.870819	-85.681784	PER	RPW	4	426.5
S-114-ii	36.871562	-85.681946	INT	RPW	2.5	182.88
S-114-ii	36.871939	-85.681946	EPH	RPW	2	101.02
S-115-i	36.871273	-85.681111	EPH	NRPW	1	182.12
S-116-i	36.870832	-85.682258	EPH	NRPW	1.5	278.32
S-117-i	36.870990	-85.682241	EPH	NRPW	1	283.83
S-118-i	36.871166	-85.682083	EPH	NRPW	1	185.59
S-119-i	36.872093	-85.681974	EPH	NRPW	2.5	37.34
S-120-i	36.873861	-85.679998	EPH	NRPW	3	84.02
S-120-ii	36.873516	-85.680859	PER	NRPW	3	410.35
S-120-ii	36.873791	-85.680157	EPH	NRPW	3	32.1
S-121-i	36.873859	-85.680108	EPH	NRPW	2	32.54
S-122-i	36.873692	-85.681325	EPH	NRPW	2	31.2
S-123-i	36.873947	-85.681127	EPH	NRPW	1	69.4
S-124-i	36.874483	-85.682232	EPH	NRPW	1	45.91
S-125-i	36.874263	-85.682771	EPH	NRPW	4	74.76
S-126-i	36.874635	-85.683832	EPH	NRPW	4	148.25
S-127-i	36.874659	-85.683934	EPH	NRPW	1.5	64.39
S-128-i	36.877078	-85.684334	EPH	NRPW	3	738.96
S-129-i	36.876084	-85.683293	EPH	NRPW	2	78.26
S-130-i	36.876410	-85.682496	EPH	NRPW	2	508.44
S-131-i	36.875772	-85.681564	EPH	NRPW	3	171.04
S-132-i	36.879486	-85.685991	EPH	NRPW	1	38.91
S-133-i	36.879252	-85.686342	EPH	NRPW	1.5	90.25
S-134-i	36.879316	-85.686200	EPH	NRPW	1.5	50.6
S-135-i	36.879341	-85.686388	EPH	NRPW	1	69.72

# SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

Stream Name	Latitude	Longitude	Flow Class	Preliminary Jurisdictional Class <sup>1</sup>	Width (ft)	Total Linear Feet
S-136-i	36.879333	-85.686446	EPH	NRPW	1	30.11
S-137-i	36.879715	-85.686035	EPH	NRPW	1	124.17
S-138-i	36.879876	-85.685988	EPH	NRPW	1	72.21
S-139-i	36.879917	-85.686037	EPH	NRPW	1.5	56.4
S-140-i	36.880208	-85.684881	EPH	NRPW	1	100.01
S-141-i	36.880368	-85.683901	EPH	NRPW	1	69.78
S-142-i	36.880301	-85.682465	EPH	NRPW	2.5	87.67
S-143-i	36.880384	-85.682319	EPH	NRPW	1.5	74.45
S-144-i	36.880533	-85.679185	INT	NRPW	2	1727.53
S-145-i	36.881060	-85.683134	EPH	NRPW	1	28.07
S-146-i	36.883102	-85.679163	EPH	NRPW	1.5	81.09
S-147-i	36.883535	-85.679588	EPH	NRPW	2	131.72
S-148-i	36.883073	-85.680583	INT	NRPW	4	38.54
S-149-i	36.884398	-85.679140	EPH	NRPW	1.5	226.83
S-150-i	36.884777	-85.678652	EPH	NRPW	1	94.08
S-151-i	36.886210	-85.675423	EPH	NRPW	1.5	55.48
S-152-i	36.886198	-85.675551	EPH	NRPW	1.5	60.06
S-153-i	36.883439	-85.678728	EPH	NRPW	3	111.06
S-154-i	36.884977	-85.675531	EPH	NRPW	1	196.03
S-155-i	36.881768	-85.678837	EPH	NRPW	2	210.36
S-156-i	36.883564	-85.675645	EPH	NRPW	1.5	65.81
S-157-i	36.882101	-85.677081	EPH	NRPW	2	66.25
S-158-i	36.881511	-85.677237	EPH	NRPW	1.5	65.82
S-159-i	36.885499	-85.686735	EPH	NRPW	3	262.81
S-160-i	36.885588	-85.687130	EPH	NRPW	1.5	21.02
S-161-i	36.885617	-85.686288	EPH	NRPW	1	39.63
S-162-i	36.886231	-85.685827	INT	NRPW	1	236.71
S-163-i	36.886134	-85.685577	INT	NRPW	1.5	67.77
S-163-i	36.886135	-85.685462	INT	NRPW	1.5	32.29
S-164-i	36.886306	-85.684147	EPH	NRPW	3	884.14
S-165-i	36.886324	-85.682809	EPH	NRPW	1	119.22
S-166-i	36.885076	-85.683027	EPH	NRPW	1.5	123.52
S-167-i	36.884390	-85.682909	EPH	NRPW	1.5	334.39
S-168-i	36.884399	-85.682761	EPH	NRPW	1	50.15
S-169-i	36.883230	-85.684412	EPH	NRPW	2	496.59
S-170-i	36.882503	-85.682792	EPH	NRPW	2	422.06

# SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

Stream Name	Latitude	Longitude	Flow Class	Preliminary Jurisdictional Class <sup>1</sup>	Width (ft)	Total Linear Feet
S-171-i	36.883072	-85.692534	INT	RPW	3	589.67
S-172-i	36.874945	-85.681468	EPH	NRPW	1	119.21
S-173-i	36.879936	-85.687155	EPH	NRPW	3	50.89
S-174-ii	36.853967	-85.682412	PER	RPW	4	2017.99
S-175-i	36.852618	-85.685679	PER	RPW	3	42.19
S-175-ii	36.853182	-85.685581	PER	RPW	3	414.83
S-176-i	36.852472	-85.685516	INT	RPW	4	162.49
S-177-i	36.853047	-85.685312	INT	RPW	1	148.55
S-178-i	36.849188	-85.683329	EPH	NRPW	4	267.05
S-178-ii	36.849930	-85.683446	EPH	NRPW	4	463.55
S-179-i	36.849362	-85.683699	EPH	NRPW	3	102.75
S-180-i	36.850157	-85.682680	EPH	NRPW	1.5	236.71
S-181-i	36.848989	-85.690829	INT	NRPW	2	184.15
S-182-i	36.843698	-85.698668	EPH	NRPW	2	206
S-183-i	36.842916	-85.699189	INT	NRPW	5	223.75
S-184-i	36.840379	-85.699559	INT	NRPW	4	740.27
S-185-i	36.839865	-85.697840	EPH	NRPW	1.5	63.64
S-186-i	36.838668	-85.700947	INT	NRPW	4	407.46
S-187-i	36.838967	-85.701018	INT	NRPW	3	66.86
S-188-i	36.837988	-85.695838	EPH	NRPW	2	190.5
S-189-i	36.839069	-85.698337	PER	NRPW	5	59.89
S-189-ii	36.838180	-85.696798	PER	NRPW	5	1128.24
S-190-i	36.840150	-85.696185	INT	NRPW	3	109.84
S-190-i	36.839949	-85.696445	INT	NRPW	3	24.79
S-190-ii	36.839784	-85.697149	EPH	NRPW	2	501.15
S-190-ii	36.839997	-85.696345	INT	NRPW	3	57.73
S-191-i	36.839985	-85.696210	INT	NRPW	1	41.21
S-192-i	36.839084	-85.698202	EPH	NRPW	0.5	36.38
S-193-i	36.839815	-85.697719	EPH	NRPW	1.5	39.85
S-194-i	36.841714	-85.697604	EPH	NRPW	3	110.13
S-195-i	36.843710	-85.693652	EPH	NRPW	2	602.19
S-196-i	36.849312	-85.699768	INT	RPW	3	289.5
S-197-i	36.849846	-85.700786	INT	RPW	3	125.93
S-198-i	36.862363	-85.698857	PER	RPW	6	207.47
S-199-i	36.864179	-85.698372	EPH	NRPW	0.5	374.39
S-200-i	36.864014	-85.697734	EPH	NRPW	1	47.96

# SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

Stream Name	Latitude	Longitude	Flow Class	Preliminary Jurisdictional Class <sup>1</sup>	Width (ft)	Total Linear Feet
S-201-iii	36.864490	-85.703173	PER	RPW	4	1281.5
S-202-i	36.864550	-85.702383	EPH	NRPW	1.5	124.97
S-203-i	36.863890	-85.703232	INT	RPW	3	125.69
S-203-ii	36.864326	-85.703545	INT	RPW	4	285.9
S-204-i	36.863802	-85.703393	EPH	NRPW	1	135.06
S-205-i	36.863921	-85.703580	EPH	NRPW	1	95.78
S-206-i	36.864926	-85.703944	INT	RPW	3	95.98
S-207-i	36.864095	-85.704653	PER	RPW	4.5	237.7
S-207-ii	36.864632	-85.704529	PER	RPW	5	177.29
S-208-i	36.864261	-85.704747	INT	RPW	3.5	143.29
S-209-i	36.858442	-85.697521	EPH	NRPW	2	47.97
S-210-i	36.858071	-85.698812	EPH	NRPW	2.5	124.13
S-211-i	36.847586	-85.692378	EPH	NRPW	3	64.89
S-212-i	36.847698	-85.692377	INT	NRPW	4	85.06
S-212-ii	36.847728	-85.693139	INT	NRPW	4	459.1
S-213-ii	36.850079	-85.701829	PER	RPW	8	1327.63
S-213-ii	36.850988	-85.703182	INT	RPW	4	84.59
S-214-i	36.851484	-85.702580	PER	RPW	5.5	418.97
S-215-ii	36.853832	-85.698449	PER	RPW	5.5	1957.22
S-216-i	36.850942	-85.702687	INT	RPW	3	103.89
S-217-i	36.850624	-85.702098	INT	RPW	2	65.01
S-218-i	36.851038	-85.700670	INT	RPW	2	1021.98
S-219-i	36.851848	-85.700028	INT	RPW	2	86.05
S-220-i	36.853528	-85.701055	INT	RPW	4	239.86
S-221-i	36.853692	-85.700479	EPH	RPW	1	45.3
S-222-i	36.853857	-85.699615	INT	RPW	5.5	96.06
S-223-i	36.853857	-85.699062	EPH	RPW	0.5	29.55
S-224-i	36.853918	-85.698817	INT	RPW	1.5	92.33
S-225-i	36.854292	-85.697365	INT	RPW	2	101.49
S-226-i	36.854182	-85.697181	INT	RPW	1.5	65.86
S-227-i	36.854459	-85.696755	INT	RPW	1	104.99
S-228-i	36.854640	-85.696633	INT	RPW	3	41.58
S-229-i	36.854731	-85.696135	INT	RPW	3	215.93
S-230-i	36.854646	-85.695930	INT	RPW	3	19.33
S-231-i	36.855515	-85.696020	INT	RPW	3	225.55
S-232-i	36.855536	-85.696173	INT	RPW	3	97.06



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Stream Name	Latitude	Longitude	Flow Class	Preliminary Jurisdictional Class <sup>1</sup>	Width (ft)	Total Linear Feet
S-233-i	36.889454	-85.687807	EPH	NRPW	4	271.23
S-233-i	36.889118	-85.687557	INT	NRPW	6	15.16
S-233-ii	36.888448	-85.687371	INT	RPW	6	508.49
S-234-i	36.889211	-85.687318	EPH	NRPW	2	150.52
S-235-i	36.888805	-85.687647	EPH	NRPW	8	44.32
S-236-i	36.888759	-85.687617	EPH	NRPW	0.5	27.53
S-236-ii	36.888787	-85.687553	EPH	NRPW	0.5	17.51
S-237-i	36.888961	-85.678060	EPH	NRPW	6	341.08
S-238-i	36.887638	-85.681528	EPH	NRPW	10	471.03
S-239-i	36.886163	-85.687442	EPH	NRPW	5	80.42
S-240-i	36.886292	-85.689091	EPH	NRPW	10	305.26
S-241-i	36.886957	-85.689902	EPH	NRPW	6	131.53
S-242-i	36.889222	-85.690759	EPH	NRPW	5	67.83
S-243-i	36.889497	-85.690555	EPH	NRPW	6	242.49
S-243-ii	36.889203	-85.693689	PER	RPW	17	1334.44
S-243-ii	36.889059	-85.691226	EPH	RPW	6	280.42
S-243-ii	36.888646	-85.691821	INT	RPW	8	217.68
S-243-iii	36.890647	-85.695093	PER	RPW	6	510.91
S-244-i	36.888323	-85.690964	EPH	NRPW	8	650.88
S-245-i	36.888375	-85.691904	INT	RPW	6	173.82
S-245-i	36.888525	-85.692021	INT	RPW	6	98.72
S-246-i	36.888261	-85.693409	EPH	NRPW	6	514.79
S-247-i	36.890803	-85.691079	INT	RPW	15	103.08
S-247-i	36.890742	-85.691617	PER	RPW	5	281.36
S-247-ii	36.890527	-85.693216	PER	RPW	5	964.74
S-248-i	36.890531	-85.691618	EPH	NRPW	5	253.43
S-249-i	36.890712	-85.692423	EPH	NRPW	3.5	47.65
S-250-i	36.890663	-85.692878	INT	RPW	1.5	111.48
S-251-i	36.851226	-85.680137	INT	NRPW	8	757.61
S-252-i	36.848181	-85.697971	INT	RPW	3	37.03
S-252-ii	36.848059	-85.697694	PER	RPW	10	2666.49
S-253-i	36.851617	-85.691627	PER	RPW	5	496.5
S-254-i	36.849072	-85.699694	INT	RPW	10	378.51
S-255-i	36.848824	-85.699980	EPH	NRPW	8	44.84
S-256-i	36.848724	-85.699709	EPH	NRPW	8	88.98
S-257-i	36.848742	-85.699425	EPH	NRPW	3	83.44

# SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

Stream Name	Latitude	Longitude	Flow Class	Preliminary Jurisdictional Class <sup>1</sup>	Width (ft)	Total Linear Feet
S-258-i	36.849178	-85.695453	INT	RPW	12	74.31
S-258-ii	36.848674	-85.695841	INT	RPW	12	400.46
S-259-i	36.849229	-85.695524	INT	RPW	5	69.59
S-260-i	36.849213	-85.695036	EPH	NRPW	6	130.87
S-261-i	36.849307	-85.695176	EPH	NRPW	4	21.25
S-262-i	36.850330	-85.697799	EPH	RPW	2	936.27
S-263-i	36.862471	-85.683584	EPH	NRPW	3	195.21
S-264-i	36.862371	-85.683633	EPH	NRPW	5	180.13
S-265-i	36.862318	-85.683907	PER	RPW	30	106.3
S-265-ii	36.864302	-85.684901	PER	RPW	30	1633.59
S-266-i	36.863143	-85.682777	INT	RPW	11	799.64
S-267-i	36.863759	-85.683849	EPH	NRPW	3	136.08
S-268-i	36.863867	-85.684072	EPH	NRPW	3	110.36
S-269-i	36.863913	-85.684103	EPH	NRPW	3	94.94
S-270-i	36.863994	-85.684160	EPH	NRPW	5	102.02
S-271-i	36.864048	-85.684257	EPH	NRPW	5	137
S-272-i	36.864144	-85.684478	EPH	NRPW	4	71.51
S-273-i	36.864200	-85.684482	EPH	NRPW	4	85.67
S-274-i	36.864312	-85.684678	EPH	NRPW	2	68.01
S-275-i	36.864456	-85.684774	EPH	NRPW	8	128.45
S-276-i	36.864805	-85.685085	EPH	NRPW	6	233.24
S-277-i	36.865208	-85.685471	EPH	NRPW	8	206.8
S-278-i	36.865825	-85.683956	EPH	NRPW	8	174.38
S-279-i	36.863969	-85.681892	INT	RPW	4	35.05
S-279-i	36.863827	-85.681642	EPH	NRPW	3.5	166.25
S-279-ii	36.864861	-85.682473	INT	RPW	4	797.51
S-280-i	36.864752	-85.682372	EPH	NRPW	1	73.39
S-281-i	36.864550	-85.682605	EPH	NRPW	5	88.56
S-282-i	36.864318	-85.682350	EPH	NRPW	4	10.17
S-283-i	36.863965	-85.681428	EPH	NRPW	3.5	170.02
S-284-i	36.863815	-85.681836	EPH	NRPW	6	144.63
S-285-i	36.865334	-85.682001	EPH	NRPW	3	303.82
S-286-i	36.864819	-85.679609	EPH	NRPW	5	132.95
S-287-i	36.864921	-85.679108	INT	RPW	4	241.99
S-288-i	36.864714	-85.678704	EPH	NRPW	6	140.55
S-289-i	36.864129	-85.678053	PER	RPW	8	343.22

# SUMMER SHADE SOLAR WETLAND AND WATERBODY DELINEATION REPORT

Stream Name	Latitude	Longitude	Flow Class	Preliminary Jurisdictional Class <sup>1</sup>	Width (ft)	Total Linear Feet
S-290-i	36.861969	-85.678831	EPH	NRPW	5	96.64
S-290-ii	36.863864	-85.678583	PER	RPW	10	736.28
S-290-ii	36.862673	-85.678926	INT	RPW	8	497.12
S-291-i	36.863275	-85.678998	INT	NRPW	3	155.43
S-291-i	36.862824	-85.679690	EPH	NRPW	4	431.26
S-292-i	36.863108	-85.678923	EPH	NRPW	4	41.4
S-293-i	36.862872	-85.678459	EPH	NRPW	5	187.22
S-294-i	36.861942	-85.678903	EPH	NRPW	3	101.68
S-295-i	36.860461	-85.678970	INT	NRPW	1.5	802.1
S-296-i	36.861396	-85.680633	EPH	NRPW	4	176.74
S-297-i	36.859107	-85.682203	INT	NRPW	2	1217.26
S-298-i	36.859563	-85.680843	INT	NRPW	2	644.1
S-298-ii	36.860739	-85.680757	INT	NRPW	2	242.76
UDF-01-i	36.858590	-85.678999	UDF	NRPW	3	556
UDF-02-i	36.857708	-85.679429	UDF	NRPW	4	548.09

<sup>1</sup> Pending official determination by the USACE

**Table 4. Open Water Features Identified at the Summer Shade Solar Project, Metcalfe and Monroe Counties, Kentucky**

Open Water Name	Latitude	Longitude	Cowardin Classification	Preliminary Jurisdictional Class <sup>1</sup>	Total Area in Acres
OW-01	36.858923	-85.692985	PUBGx	NRPW	0.55
OW-02	36.879122	-85.682864	PUBGx	NRPW	0.91
OW-03	36.874828	-85.682013	PUBGx	NRPW	0.49
OW-04	36.881741	-85.677064	PUBGx	NRPW	0.24
OW-05	36.882172	-85.679519	PUBGx	NRPW	0.45
OW-06	36.883919	-85.684058	PUBGx	NRPW	0.42
OW-07	36.882213	-85.687183	PUBGx	NRPW	0.86
OW-08	36.882695	-85.691421	PUBGx	RPW	0.28
OW-09	36.849583	-85.690780	PUBGx	NRPW	0.01
OW-10	36.848598	-85.690723	PUBGx	NRPW	0.03
OW-11	36.845855	-85.698990	PUBGx	NRPW	0.35
OW-12	36.845050	-85.692011	PUBGx	NRPW	0.67
OW-13	36.845895	-85.690134	PUBGx	NRPW	0.86
OW-14	36.854976	-85.696187	PUBGx	RPW	0.15
OW-15	36.855154	-85.695702	PUBGx	RPW	0.46

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Open Water Name	Latitude	Longitude	Cowardin Classification	Preliminary Jurisdictional Class <sup>1</sup>	Total Area in Acres
OW-16	36.862245	-85.699475	PUBGx	NRPW	0.05
OW-17	36.889072	-85.678143	PUBGx	NRPW	0.06
OW-18	36.850513	-85.697690	PUBGx	RPW	0.00
OW-19	36.849903	-85.694836	PUBGx	RPW	0.03
OW-20	36.858601	-85.680492	PUBGx	NRPW	0.60
OW-21	36.856612	-85.680765	PUBGx	NRPW	0.54
OW-22	36.851555	-85.680813	PUBGx	NRPW	0.53

<sup>1</sup> Pending official determination by the USACE