Exhibit S Wetland and Waterbody Delineation Report Stantec

February 22, 2021





Marion County Solar Project, Marion County, Ohio

Wetland and Waterbody Delineation Report

February 22, 2021

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Sign-off Sheet

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1.0 INTRODUCTION

1.1 PURPOSE

Marion County Solar Project, LLC (Marion County Solar) plans to construct a new 100-megawatt (MW) solar energy facility including photovoltaic solar modules mounted on a racking system, inverters, an electrical collection system transferring power from the inverters to a new project substation and switchyard, a generation tie-line, and internal access roads with perimeter fence securing the project area (The Project). The Project will also include construction of an operations and maintenance building and will contain a battery energy storage system. The Project area includes 970 acres of existing agriculture, grasslands, and second growth deciduous forested areas. The Project is located north of the City of Marion in Marion Township in Marion County, Ohio (Appendix A, Figure 1).

Stantec Consulting Services Inc. (Stantec) was retained by Marion County Solar to conduct a delineation of potential waters of the United States (WOUS), including wetlands, waterbodies, and potentially isolated wetlands within the Project area. The purpose of this delineation was to identify potential jurisdictional features present within the Project area.

Stantec completed the delineation of wetlands and waterbodies on September 9 through 11, 2020. The information contained in this report reflects the current site conditions that were observed during the field delineation. Datasheets and photographs of features delineated within the Project area are included in Appendices B and C, respectively.

1.2 LOCATION OF PROJECT

The Project is located in Marion Township in Marion County, Ohio (Appendix A, Figure 1). The Project area is depicted on the Morral, Ohio and Marion West, Ohio U.S. Geological Survey (USGS) 7.5-minute series topographic maps and the approximate center points of the Project in latitude and longitude coordinates is 40.626071°N, -83.150937°W. The Project area is located in the Rock Fork watershed (HUC 12: 050600010301) and the City of Marion – Little Scioto River watershed (HUC 12: 050600010303), both of which drain into the Little Scioto River.

2.0 METHODS

2.1 WETLAND DELINEATION

Prior to completing the survey, a desktop review of the Project area was conducted using the Morral, Ohio and Marion West, Ohio USGS 7.5 Minute Series topographic maps (Appendix A, Figure 1), U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey of Marion County, Ohio (USDA, 1989; Appendix A, Figure 2), the National Wetlands Inventory map (USFWS 2019; Appendix A, Figure 3), and aerial imagery mapping were reviewed to assess the likelihood of occurrence and probable location of wetlands and waterbodies within the Project area.



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Following this desktop review, Stantec conducted field surveys within the Project area on September 9 through 11, 2020. Wetland boundaries were assessed using the "Routine On-site Determination Method" as described in the U.S. Army Corps of Engineers (USACE) Wetland Delineation Manual (USACE Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0) (USACE 2010). 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 Clean Water Act (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 2016 National Wetland Plant List (Lichvar et al. 2016). 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 uppermost 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), and Ohio Rapid Assessment Method v 5.0 forms (ORAM; Mack 2001). Datasheets are provided in Appendix B.

2.2 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 definition in the 22250 Federal Register/Vol. 85, No. 77 (effective June 22, 2020; USACE 2020). Functional assessment of streams within the Project area was based on completion of the Ohio Environmental Protection Agency's (OEPA) Headwater Habitat Evaluation Index (HHEI; OEPA 2018) and/or Qualitative Habitat Evaluation Index (QHEI; OEPA 2006). Datasheets are provided in Appendix B. The centerline of each waterway, or both banks for streams 15 feet or wider, were identified and surveyed using a sub-meter accurate handheld GPS unit and mapped with GIS software.

2.3 OPEN WATER DELINEATION

Open water boundaries were assessed using the definition described in the "Classification of Wetlands and Deepwater Habitats of the United States" (Cowardin et al. 1979) which includes wetland and deepwater habitats with most of the following characteristics: (1) situated in a topographic depression or a dammed river channel; (2) lacking trees, shrubs, persistent emergents, emergent mosses or lichens with greater than 30 percent areal coverage; and (3) total area exceeds 20 acres (8 hectares [ha]). Similar wetland and deepwater habitats totaling less than 20 acres (8 ha) are also included in the Lacustrine System if an active wave-formed or bedrock shoreline feature makes up most or part of the boundary, or if the water depth in the deepest part of the basin exceeds 6.6 feet (2 meters) at low water (estimated).



3.0 OVERVIEW OF PROJECT AREA

3.1 GEOLOGY AND TOPOGRAPHY

The Project is located in Marion County, Ohio and lies within the Till Plains section of the Central Lowland physiographic province. The Project lies within the Central Ohio Clayey Till Plain region, which is characterized by: (1) a surface of clayey till; (2) well-defined moraines with intervening flat-lying ground moraine and intermorainal lake basins; (3) no boulder belts; (4) silt-, clay-, and till-filled lake basins; and (5) few large streams and limited sand and gravel outwashes. The geology of the region consists of clayey, high-lime Wisconsinan-age till from a northeastern source and lacustrine materials over Lower Paleozoicage carbonate rocks. The Project is in the eastern part of the region, which also contains shales. Elevation ranges from 700 to 1,150 feet with moderate relief (ODGS 1998).

3.2 CLIMATE

The average winter temperature in Marion County is 27°F, and the average daily minimum temperature is 19°F. The average summer temperature is 71°F, and the average daily maximum temperature is 84°F. Precipitation in Marion County averages 34 inches per year. Usually 60% of the annual rainfall occurring in April through September (USDA 1989).

3.3 SOILS

The Soil Survey of Marion County, Ohio (USDA 1989) and the Natural Resources Conservation Service (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, Figure 2. Soils within the Project area with respective acreages and percentages are included in Table 1. Three soils listed within the Project area were considered to be hydric as shown in Table 1.

Table 1. Soil Types Known to Occur within the Marion County Solar Project Area, Marion County, Ohio

Map Unit Symbol	Map Unit Name	Acres in the Hydric? Project Area		Percent within Project Area
AqUXA	Aquents, clayey-Urban land complex, 0-3% slopes	No*	1.7	0.2%
Ble1B1	Blount silt loam, end moraine, 2-4 % slopes	No*	3.1	0.3%
Blg1A1	Blount silt loam, ground moraine, 0-2 % slopes	No*	143.0	14.7%
Blg1B1	Blount silt loam, ground moraine, 2-4 % slopes	No*	2.2	0.2%
FoA	Fox loam, till plain, 0-2% slopes	No*	8.1	0.8%
FoB	Fox loam, till plain, 2-6% slopes	No*	7.6	0.8%
Gwe5B2	Glynwood clay loam, end moraine, 2-6% slopes, eroded	No*	4.9	0.5%
Gwg1B1	Glynwood silt loam, ground moraine, 2-6% slopes	No*	67.0	6.9%



Map Unit Symbol	Map Unit Name	Hydric?	Acres in the Project Area	Percent within Project Area
KeB	Kendalville loam, 2-6% slopes	No	2.5	0.3%
MaA	Martinsville loam, 0-2% slopes	No	14.4	1.5%
MaB	Martinsville loam, 2-6% slopes	No	57.7	6.0%
Me	Medway clay loam, rarely flooded	No*	362.9	37.4%
Mf	Milford sitly clay loam, 0-2% slopes	Yes	28.0	2.9%
MnB	Milton silt loam, 1-4% slopes	No	9.0	0.9%
OcB	Ockley loam, 2-6% slopes	No	5.9	0.6%
Pk	Pewamo silty clay loam, 0-1% slopes	Yes	83.7	8.6%
Sa	Saranac silty clay loam, occasionally flooded	No	85.1	8.8%
SkA	Sleeth loam, 0-3% slopes	No*	47.0	4.8%
So	Sloan silty clay loam, occasionally flooded	Yes	1.2	0.1%
W	Water	No	4.9	0.5%
WhA	Whitaker loam, 0-3% slopes	30.5	3.1%	
	Total Acreage in I	Project Area	970.2	100.0%

^{*}Contains Hydric inclusions

4.0 RESULTS

4.1 EXISTING CONDITIONS

Upland habitat within the Project area consists of maintained lawn, agricultural fields, new field, old field, grassland, and second growth deciduous forests. The maintained lawn habitat was dominated by alsike clover (Trifolium hybridum), great plantain (Plantago major), common dandelion (Taraxacum officinale), Kentucky bluegrass (*Poa pratensis*), box elder (*Acer negundo*), sugar maple (*Acer saccharum*), crab grass (Digitaria sanguinalis.), and yellow bristle grass (Setaria pumila). The agricultural field habitat was dominated by soybean (Glycine max). The new field habitat consisted of poison ivy (Toxicodendron radicans), Canada thistle (Cirsium arvense), Kentucky bluegrass, field bindweed (Convolculus arvensis), Japanese bristle grass (Setaria faberi), reed canary grass (Phalaris arundinacea), red clover (Trifolium pratense), Queen Anne's lace (Daucus carota), and spreading dogbane (Apocynum cannabinum). The old field habitat was dominated by Canada goldenrod (Solidago canadensis), wingstem (Verbesina alterniflora), perennial ryegrass (Lolium perenne), farewell-summer aster (Symphyotrichum lateriflorum), yellow bristle grass, yellow Indian grass (Sorghastrum nutans), great ragweed (Ambrosia trifida), box elder, crab grass, Japanese honeysuckle (Lonicera japonica), blue mistflower (Conoclinium coelestinum), Amur honeysuckle (Lonicera maackii), Kentucky bluegrass, red clover, and Queen Anne's lace. The grassland habitat was dominated by big bluestem (Andropogon gerardii), yellow Indian grass, Canada goldenrod, blackberry (Rubus sp.), raspberry (Rubus sp.), and spreading dogbane. The second growth deciduous



forest habitat was dominated by honey locust (*Gleditsia triacanthos*), box elder, silver maple (*Acer saccharinum*), wingstem, Canada goldenrod, sunflower (*Helianthus* sp.), and common hackberry (*Celtis occidentalis*).

4.2 WETLAND HABITAT

Four wetlands were identified within the Project area, totaling approximately 3.62 acres (Appendix A, Figure 4). Appendix B contains the WDF and ORAM forms for the wetlands identified within the Project area. Representative photographs of the wetlands are provided in Appendix C. The wetlands are described below and summarized in Table 2.

Wetland 1

Wetland 1 is a palustrine emergent (PEM) wetland approximately 0.76 acre in size within the Project area. The functional assessment (ORAM) of Wetland 1 yielded a score of 25 and identifies this wetland as a Category 1 wetland, indicating it is a wetland of "poor" quality. Wetland 1 is potentially jurisdictional due to a physical connection to Rock Fork outside the Project area. A WDF (Sample Point [SP]01) was completed, and the first soil horizon was 2 inches of silty clay with a low chroma matrix of 10YR 2/1. The following 12 inches were silty clay with a low chroma matrix of 10YR 3/1 and 10YR 4/2 and redox concentrations in the matrix (10 YR 4/6, 7.5 YR 5/8, and 10YR 6/6), meeting the Depleted Matrix (F3) hydric soil indicator. Primary hydrological indicators included surface water. Vegetation identified within the sample plot was dominated by hydrophytic vegetation including yellow bristle grass (FAC), barnyard grass (*Echinocloa crus-galli*; FACW), and common panic grass (*Panicum capillare*; FAC) in the herb stratum.

Wetland 2

Wetland 2 is a palustrine forested (PFO) wetland approximately 0.24 acre in size within the Project area. The functional assessment (ORAM) of Wetland 2 yielded a score of 45 and identifies this wetland as a Category 2 wetland, indicating it is a wetland of "moderate" quality. Wetland 2 is potentially jurisdictional due to a physical connection to Stream 1 (Little Scioto River) within the Project area. A WDF (SP04) was completed, and the first soil horizon was 3 inches of loam with a low chroma matrix of 10YR 3/2. The following 7 inches were loam with a low chroma matrix of 10YR 3/2 and redox concentrations in the pore linings (5YR 4/6 and 10YR 3/6), meeting the Redox Dark Surface (F6) hydric soil indicator. Primary hydrological indicators included sediment deposits and oxidized rhizospheres on living roots. Vegetation identified within the sample plot was dominated by hydrophytic vegetation including silver maple (FACW) in the tree stratum, silver maple (FACW) in the sapling/shrub stratum, and dotted smartweed (*Persicaria punctata*; OBL) and Canadian clearweed (*Pilea pumila*; FACW) in the herb stratum.

Wetland 3

Wetland 3 is a PEM wetland approximately 0.008 acre in size within the Project area. The functional assessment (ORAM) of Wetland 3 yielded a score of 33 and identifies this wetland as a Category 2 wetland, indicating it is a wetland of "poor-fair" quality. Wetland 3 is potentially jurisdictional due



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to a physical connection to Stream 1 (Little Scioto River). A WDF (SP06) was completed, and the first soil horizon was 3 inches of silty clay with a low chroma matrix of 10YR 2/1 and redox concentrations in the pore linings (7.5YR 4/6). The following 5 inches were silty clay with a low chroma matrix of 10YR 2/1 and redox concentrations in the matrix (7.5YR 5/6) and the pore linings (7.5YR 4/6), meeting the Redox Dark Surface (F6) hydric soil indicator. Primary hydrological indicators oxidized rhizospheres on living roots. Vegetation identified within the sample plot was dominated by hydrophytic vegetation including creeping-jenny (*Lysimachia nummuaria*; FACW) in the herb stratum.

Wetland 4

Wetland 4 is a PEM/palustrine scrub-shrub (PSS) wetland approximately 2.62 acres in size within the Project area. The functional assessment (ORAM) of Wetland 4 yielded a score of 44 and identifies this wetland as a Category 2 wetland, indicating it is a wetland of "fair-moderate" quality. Wetland 4 is a potentially hydrologically isolated wetland. Two sample points were completed, one for the PEM community (SP08), and one for the PSS community (SP10). At SP08, the first soil horizon was 3 inches of silty clay loam with a low chroma matrix of 10YR 2/2. The following 4 inches were silty clay loam with a low chroma matrix of 10YR 3/2 and redox concentrations in the pore linings (5YR 4/6), meeting the Redox Dark Surface (F6) hydric soil indicator. Primary hydrological indicators included oxidized rhizospheres on living roots. Vegetation identified within the sample plot was dominated by hydrophytic vegetation including barnyard grass (FACW) and reed canary grass (FACW) in the herb stratum.

At SP10, the first soil horizon was 3 inches of silty clay loam with a low chroma matrix of 10YR 2/2. The following 3 inches were silty clay loam with a low chroma matrix of 10YR 2/2 and redox concentrations in the pore linings (5YR 4/6). The following 8 inches were silty clay loam with a low chroma matrix of 10 YR 2/2 and redox concentrations in the matrix (7.5YR 5/6 and 7.5YR 4/4), meeting the Redox Dark Surface (F6) hydric soil indicator. Primary hydrological indicators included oxidized rhizospheres on living roots. Vegetation identified within the sample plot was dominated by hydrophytic vegetation including green hawthorn (*Crataegus viridis*; FACW) in the tree stratum and the sapling/shrub stratum, and devil's pitchfork (*Bidens frondosa*; FACW), Canadian clearweed (FACW), and farewell-summer aster (FACW) in the herb stratum.



Table 2. Wetlands Identified in the Marion County Solar Project Area, Marion County, Ohio

Wetland Name	Latitude	Longitude	Classification	ORAM Score	ORAM Regulatory Category	Total Acres in Project Area
Wetland 1	40.635171	-83.149788	PEM	25	1	0.76
Wetland 2	40.629728	-83.165697	PFO	45	2	0.24
Wetland 3	40.631353	-83.165457	PEM	33	2	0.008
Wetland 4	40.634849	-83.163334	PEM/PSS	44	2	2.62
Total Delineated Wetland						

4.3 STREAM HABITAT

Three streams were identified within the Project area, totaling approximately 10,442 linear feet (Appendix A, Figure 4). Appendix B contains the QHEI and HHEI datasheets. Representative photographs of the streams are provided in Appendix C. The streams are described below and summarized in Table 3.

Stream 1

Stream 1 (Little Scioto River) is a perennial stream with approximately 4,072 linear feet within the Project area. The functional assessment (QHEI) of Stream 1 yielded a score of 76, indicating it is an "excellent" quality stream. The stream had a bankfull width of 45 feet and a bankfull depth of 4.5 feet and was flowing at the time of site visit. Substrates observed were primarily cobble and gravel. Stream 1 drains into the Scioto River approximately 10 miles downstream outside the Project area.

Stream 2

Stream 2 is a perennial stream with approximately 4,975 linear feet within the Project area. The functional assessment (QHEI) of Stream 2 yielded a score of 59, indicating it is a "good" quality stream. The stream had a bankfull width of 7 feet and a bankfull depth of 1.5 feet and was flowing at the time of site visit. Substrates observed were primarily sand and gravel. Stream 2 drains into Stream 1 (Little Scioto River) outside the Project area.

Stream 3

Stream 3 is an intermittent stream with approximately 1,395 linear feet within the Project area. The functional assessment (QHEI) of Stream 3 yielded a score of 51, indicating it is a "fair" quality stream. The stream had a bankfull width of 6 feet and a bankfull depth of 2.5 feet and was flowing at the time of site visit. The substrate observed was primarily silt and sand. Stream 3 drains into Stream 2 within the Project area.



Table 3. Streams Identified in the Marion County Solar Project Area, Marion County, Ohio

Stream Name	Latitude	Longitude	OHWM Width (feet)	OHWM Depth (feet)	Classification	Evaluation Method	Score	Total Linear feet in Project Area
Stream 1 (Little Scioto River)	40.632826	-83.162017	41	4.0	Perennial	QHEI	76	4,072
Stream 2 (Rock Swale)	40.616860	-83.143026	6	0.75	Perennial	QHEI	59	4,975
Stream 3	40.615611	-83.142462	5	1	Intermittent	QHEI	51	1,395
Total Linear Feet in Project Area								10,442

4.4 OPEN WATERS

No open water features were identified within the Project area during field delineations on September 9 through 11, 2020.

5.0 CONCLUSION

Stantec conducted a delineation of potential WOUS within the Project area located in Marion Township, Marion County, Ohio. The purpose and objective of the wetland and waterbody delineation was to identify the extent and spatial arrangement of potential jurisdictional wetlands and waterbodies within the Project area so that the site design can be developed to avoid those features.

Three potentially USACE-jurisdictional wetlands and three potentially USACE-jurisdictional streams were identified within the Project area. A total of approximately 0.76 acres of Category 1 PEM wetlands, 0.008 acres of Category 2 PEM wetlands, 0.24 acres of Category 2 PFO wetlands, for a total of 1.008 acres of wetlands were identified as potentially USACE-jurisdictional. Wetland 4, an approximately 2.62 acre Category 2 PEM/PSS wetland, was identified as potentially hydrologically isolated and would be under the jurisdiction of the OEPA. Wetland 4 has no direct connection to other potentially USACE-jurisdictional features.

Three streams, with a total of 9,047 linear feet of perennial stream and 1,395 linear feet of intermittent stream, were delineated within the Project area. All three streams, for a total length of 10,442 linear feet, are potentially WOUS and therefore likely USACE-jurisdictional streams. No open water features were identified within the Project area.

Stantec's opinion regarding the presence/absence of jurisdictional WOUS and isolated wetlands is preliminary. Only the USACE can provide an official determination of the presence and extent of jurisdictional WOUS. Wetlands that are considered WOUS are subject to regulation under Section 404 of the CWA and the jurisdictional regulatory authority lies with the Huntington District USACE. Additionally,



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the OEPA has regulatory authority over isolated wetlands (Ohio Revised Code 6111.021) and ephemeral stream (OEPA Public Notice on June 25, 2020 and Ohio General Permit for Filling Category 1 and Category 2 Isolated Wetlands and Ephemeral Streams, revised June 25, 2020). Stantec recommends that Marion County Solar contact the USACE for an approved jurisdictional review and concurrence with Stantec's opinion regarding the presence/absence of WOUS within the Project area prior to construction activities associated with this Project.



6.0 REFERENCES

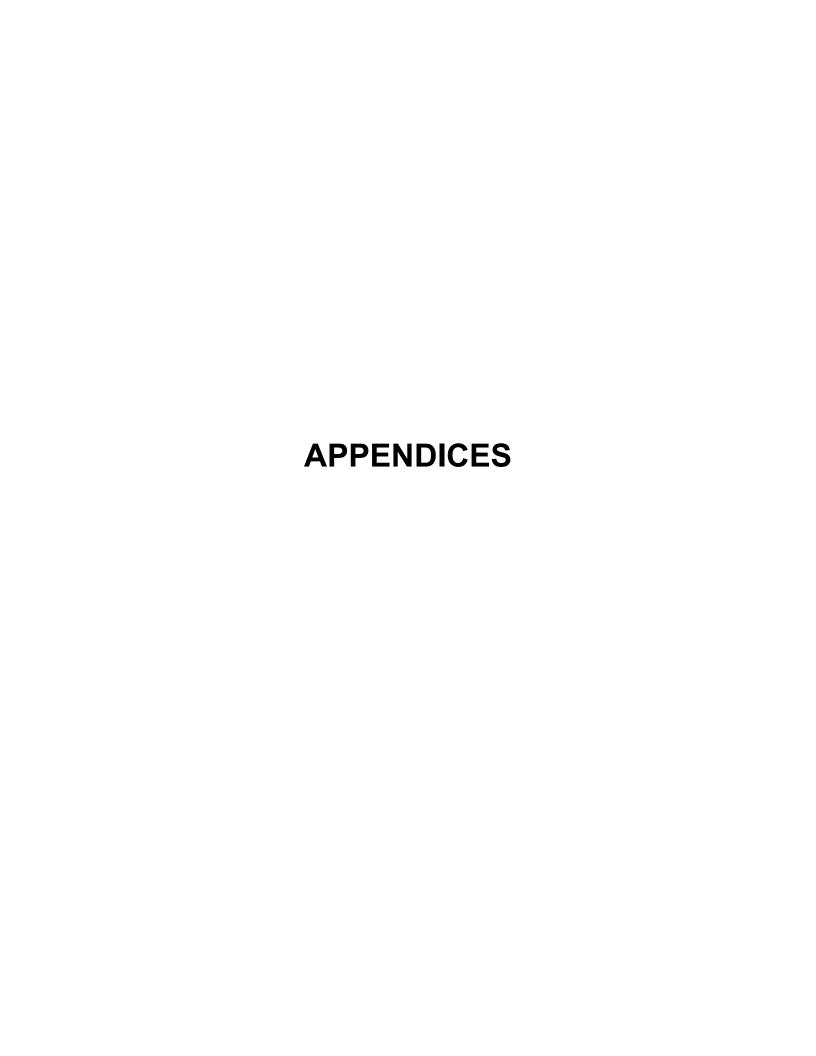
- Cowardin, L.M., V. Carter, F.C. Golet, E.T. La Roe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington D.C. Jamestown, ND: Northern Prairie Wildlife Research Center Home Page. Retrieved from: http://www.npwrc.usgs.gov/resources/1998/classwet/classwet.htm (Version 04DEC98).
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Retrieved from: http://rsgisias.crrel.usace.army.mil/NWPL
- Mack, J.J. 2001. Ohio Rapid Assessment Method for Wetlands, Manual for Using Version 5.0. Ohio EPA Technical Bulletin Wetland/2001-1-1. Ohio Environmental Protection Agency, Division of Surface Water, 401 Wetland Ecology Unit. Columbus, Ohio. 72 pp.
- Munsell Color. 2009. Munsell Soil Color Charts. Kollmorgen Instruments Corporation, Newburgh, New York.
- Ohio Division of Geological Survey (ODGS). 1998. Physiographic regions of Ohio: Ohio Department of Natural Resources, Division of Geological Survey, page-size map with text. 2 pp.
- Ohio Environmental Protection Agency (OEPA). 2006. Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI).
- OEPA. 2018. Field Methods for Evaluating Primary Headwater Streams in Ohio, Version 4.0. Ohio EPA Division of Surface Water, Columbus, Ohio. 129 pp.
- United States Army Corps of Engineers (USACE) Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi.
- USACE. 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- USACE. 2005. Guidance on Ordinary High Water Mark Identification. (Regulatory Guidance Letter, No. 05-05). Retrieved from: http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/GuidanceLetters.asp x
- USACE. 2020. The Navigable Waters Protection Rule: Definition of "Waters of the United States"; Vol 85, No. 77. Fed. Reg. 22250. April 21, 2020. Federal Register: The Daily Journal of the United States. Available at https://www.federalregister.gov/documents/2020/04/21/2020-02500/the-navigable-waters-protection-rule-definition-of-waters-of-the-united-states.



MARION COUNTY SOLAR PROJECT WETLAND AND WATERBODY DELINEATION REPORT

- United States Department of Agriculture (USDA). 1989. Soil Survey of Marion County, Ohio. United States Department of Agriculture, Natural Resource Conservation Service, in cooperation with the Ohio Department of Natural Resources, Division of Soil and Water Conservation.
- USDA, Natural Resource Conservation Service (USDA, NRCS). 2010. Field Indicators of Hydric Soils in the United States, Version 7.0. L.M. Vasilas, G.W. Hurt, and C.V. Noble (eds.). USDA, NRCS in cooperation with the National Technical Committee for Hydric Soils.
- USDA. Web Soil Survey. Retrieved from: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed September 2020.
- United States Geological Survey (USGS). *Ohio 7.5 Minute Series (Topographic) Maps.* 1:24,000. Reston, VA: United States Department of the Interior, USGS.
- United States Fish and Wildlife Service (USFWS). 2019 National Wetlands Inventory, Web Mapper. Retrieved from: http://www.fws.gov/wetlands/Data/Mapper.html

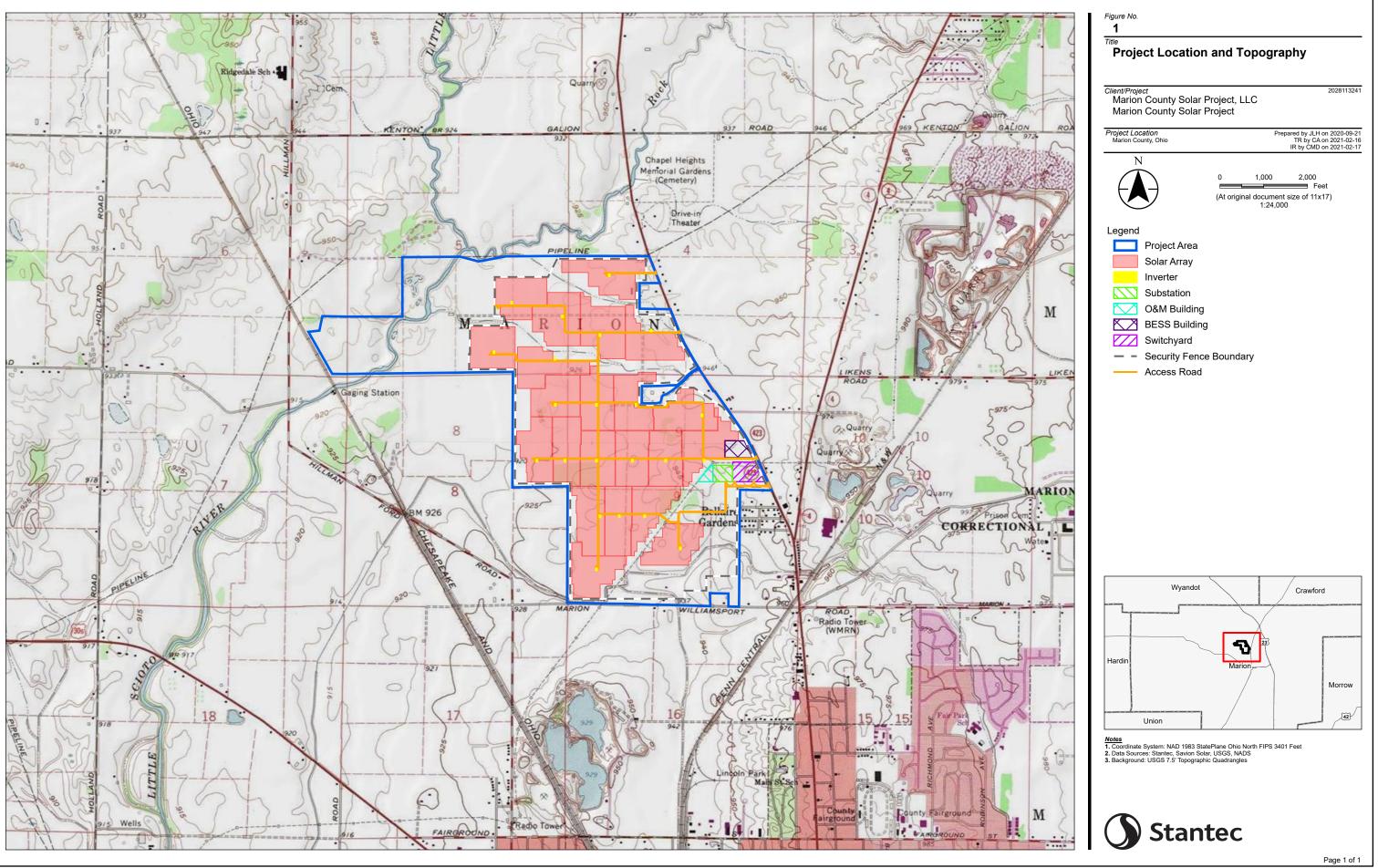




Appendix A FIGURES

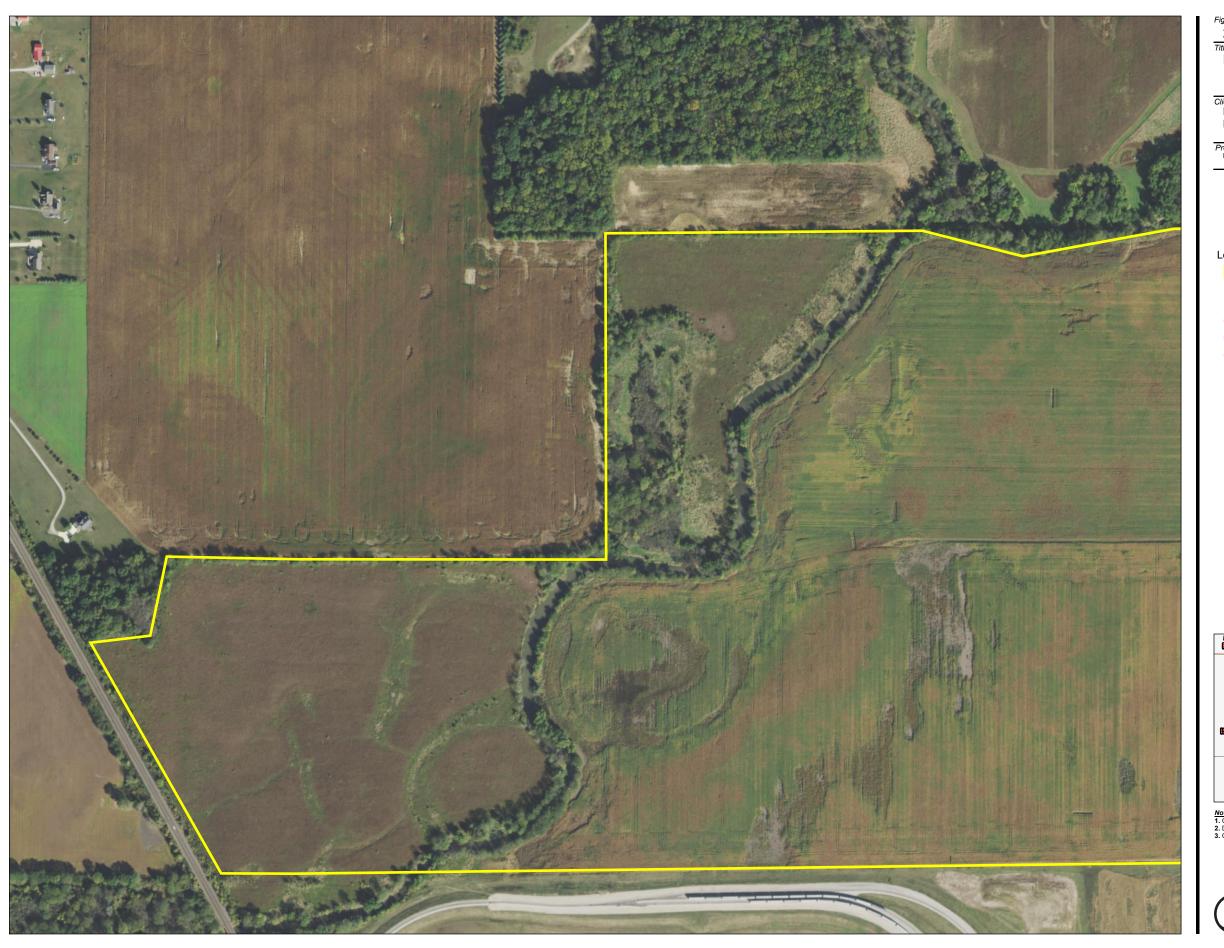
A.1 FIGURE 1 – PROJECT LOCATION AND TOPOGRAPHY MAP





A.2 FIGURE 2 – NRCS SOIL SURVEY DATA AND HYDRIC RATINGS MAP





Title
NRCS Soil Survey Map

Client/Project
Marion County Solar Project, LLC
Marion County Solar Project

Project Location Marion County, Ohio

Prepared by JLH on 2020-09-21 TR by CA on 2021-02-16 IR by CMD on 2021-02-17



(At original document size of 11x17) 1:4,800

Project Area

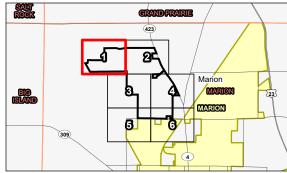
NRCS Soil Survey Data

Hydric Rating

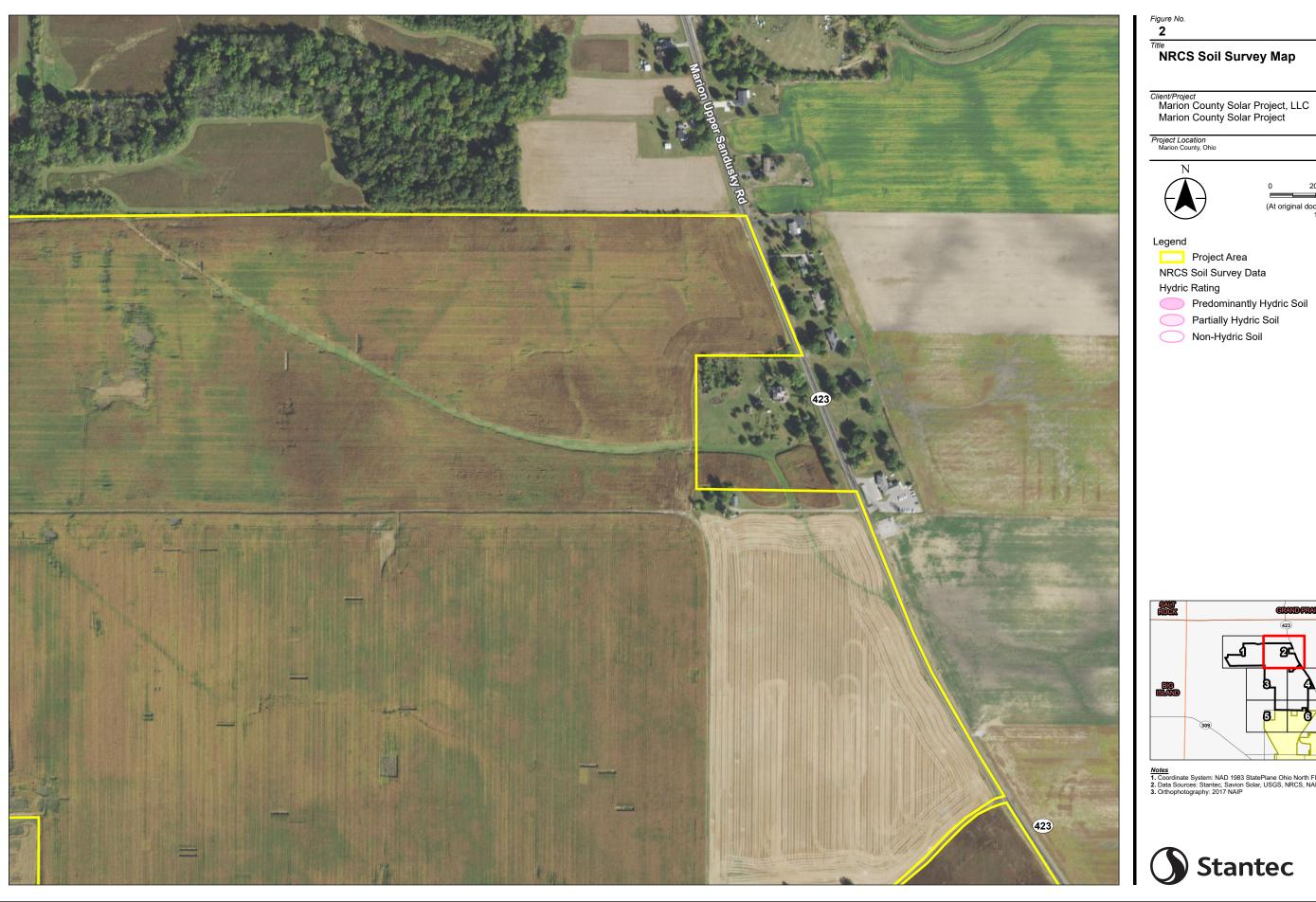
Predominantly Hydric Soil

Partially Hydric Soil

Non-Hydric Soil







Title NRCS Soil Survey Map

Prepared by JLH on 2020-09-21 TR by CA on 2021-02-16 IR by CMD on 2021-02-17

2028113241



(At original document size of 11x17) 1:4,800

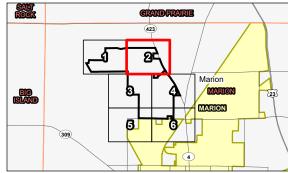
Project Area

NRCS Soil Survey Data

Predominantly Hydric Soil

Partially Hydric Soil

Non-Hydric Soil







Title
NRCS Soil Survey Map

Client/Project
Marion County Solar Project, LLC
Marion County Solar Project

Project Location
Marion County, Ohio

Prepared by JLH on 2020-09-21 TR by CA on 2021-02-16 IR by CMD on 2021-02-17

2028113241



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Project Area

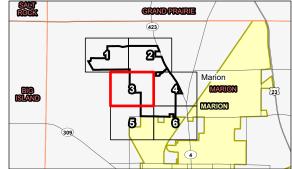
NRCS Soil Survey Data

Hydric Rating

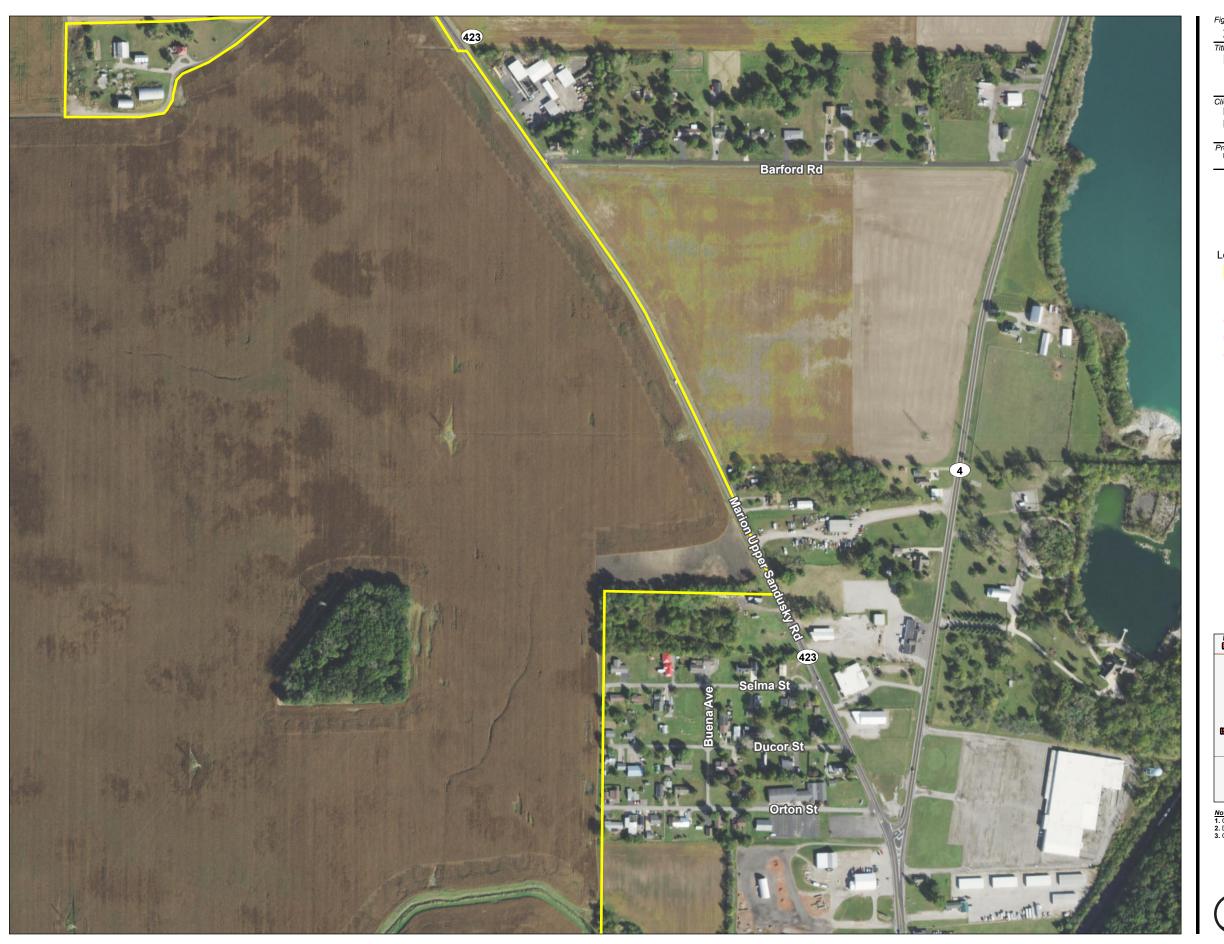
Predominantly Hydric Soil

Partially Hydric Soil

Non-Hydric Soil







Title NRCS Soil Survey Map

Client/Project
Marion County Solar Project, LLC
Marion County Solar Project

Project Location Marion County, Ohio

Prepared by JLH on 2020-09-21 TR by CA on 2021-02-16 IR by CMD on 2021-02-17



(At original document size of 11x17) 1:4,800

Project Area

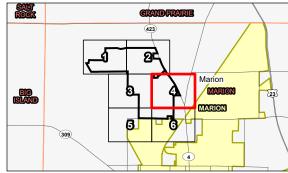
NRCS Soil Survey Data

Hydric Rating

Predominantly Hydric Soil

Partially Hydric Soil

Non-Hydric Soil







Title
NRCS Soil Survey Map

Client/Project
Marion County Solar Project, LLC
Marion County Solar Project

Project Location
Marion County, Ohio

Prepared by JLH on 2020-09-21 TR by CA on 2021-02-16 IR by CMD on 2021-02-17

2028113241



(At original document size of 11x17) 1:4,800

Project Area

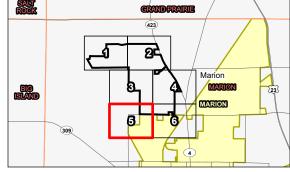
NRCS Soil Survey Data

Hydric Rating

Predominantly Hydric Soil

Partially Hydric Soil

Non-Hydric Soil







NRCS Soil Survey Map

Client/Project
Marion County Solar Project, LLC
Marion County Solar Project

Project Location Marion County, Ohio

Prepared by JLH on 2020-09-21 TR by CA on 2021-02-16 IR by CMD on 2021-02-17

2028113241



(At original document size of 11x17) 1:4,800

Project Area

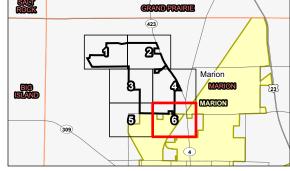
NRCS Soil Survey Data

Hydric Rating

Predominantly Hydric Soil

Partially Hydric Soil

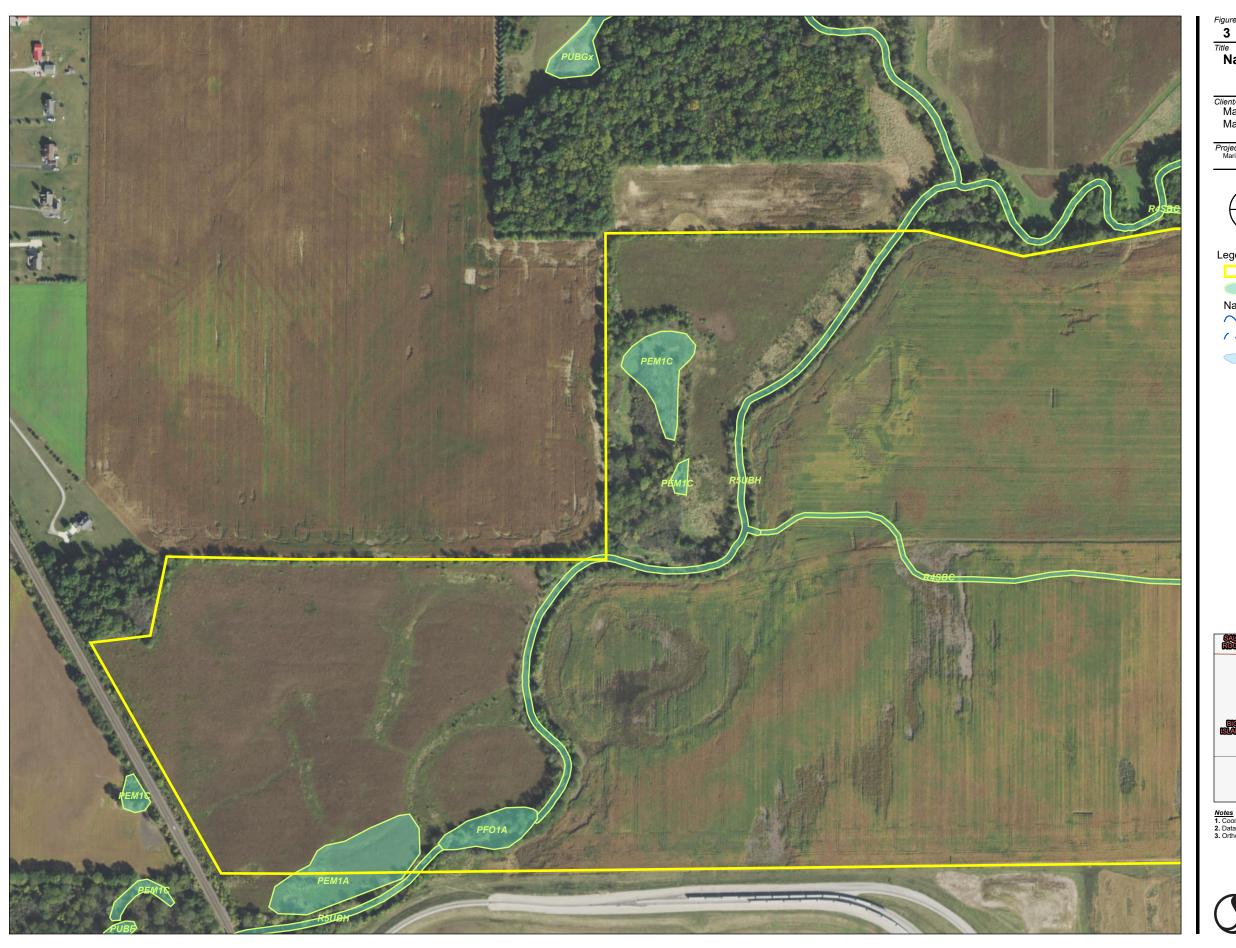
Non-Hydric Soil





A.3 FIGURE 3 – NATIONAL WETLANDS INVENTORY MAP





Title National Wetlands Inventory Map

Client/Project
Marion County Solar Project, LLC
Marion County Solar Project

Project Location Marion County, Ohio

Prepared by JLH on 2020-09-21 TR by CA on 2021-02-16 IR by CMD on 2021-02-17

2028113241



(At original document size of 11x17) 1:4,800

Project Area

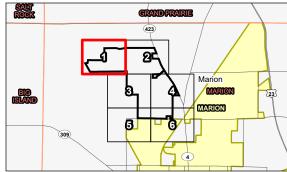
National Wetlands Inventory Feature

National Hydrography Dataset

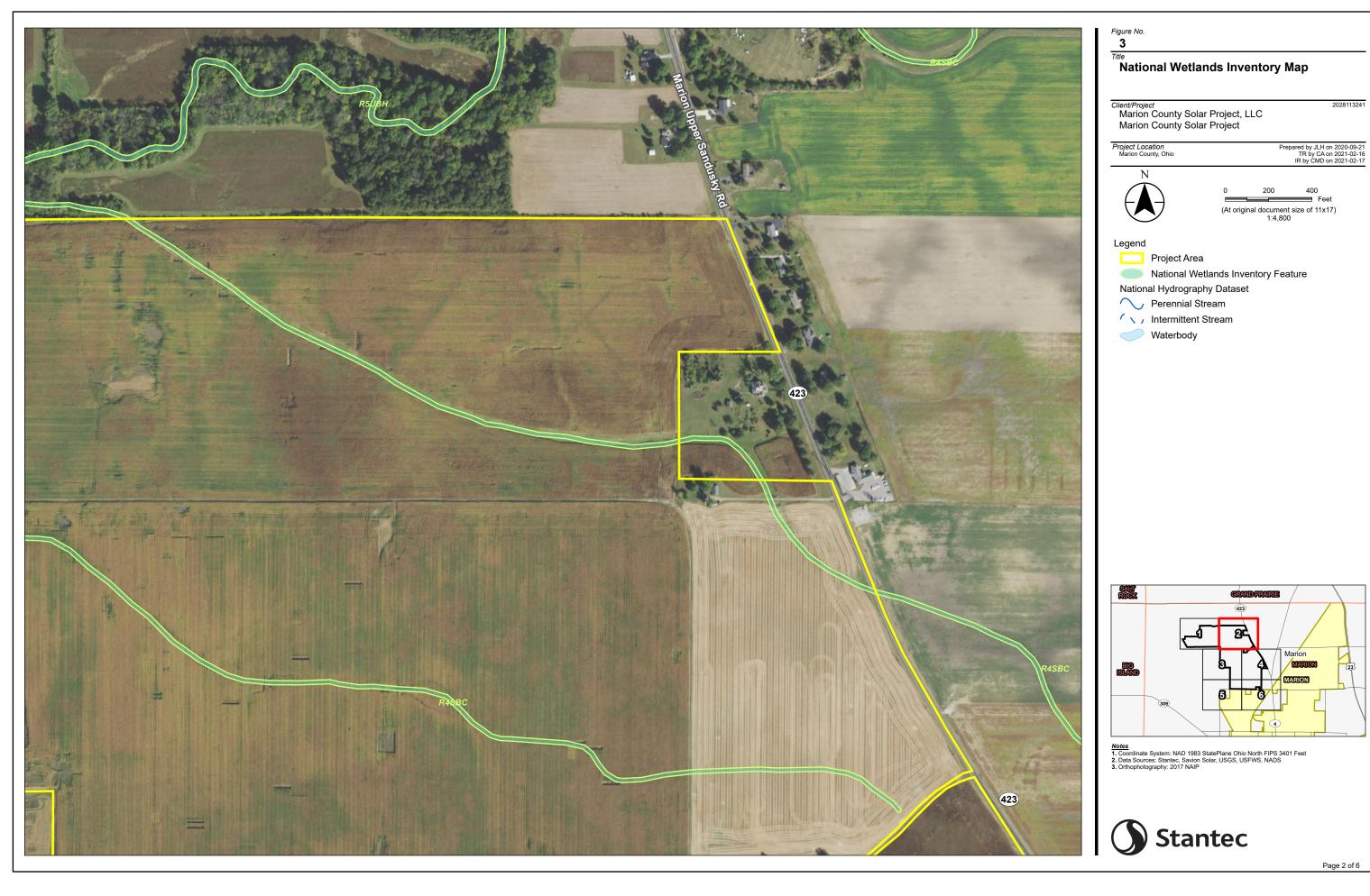
Perennial Stream

/ \ , Intermittent Stream

Waterbody







2028113241



Title National Wetlands Inventory Map

Client/Project
Marion County Solar Project, LLC
Marion County Solar Project

Project Location
Marion County, Ohio

Prepared by JLH on 2020-09-21 TR by CA on 2021-02-16 IR by CMD on 2021-02-17

2028113241



(At original document size of 11x17) 1:4,800

Project Area

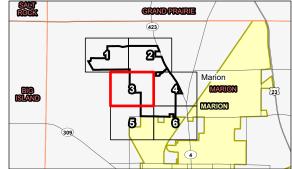
National Wetlands Inventory Feature

National Hydrography Dataset

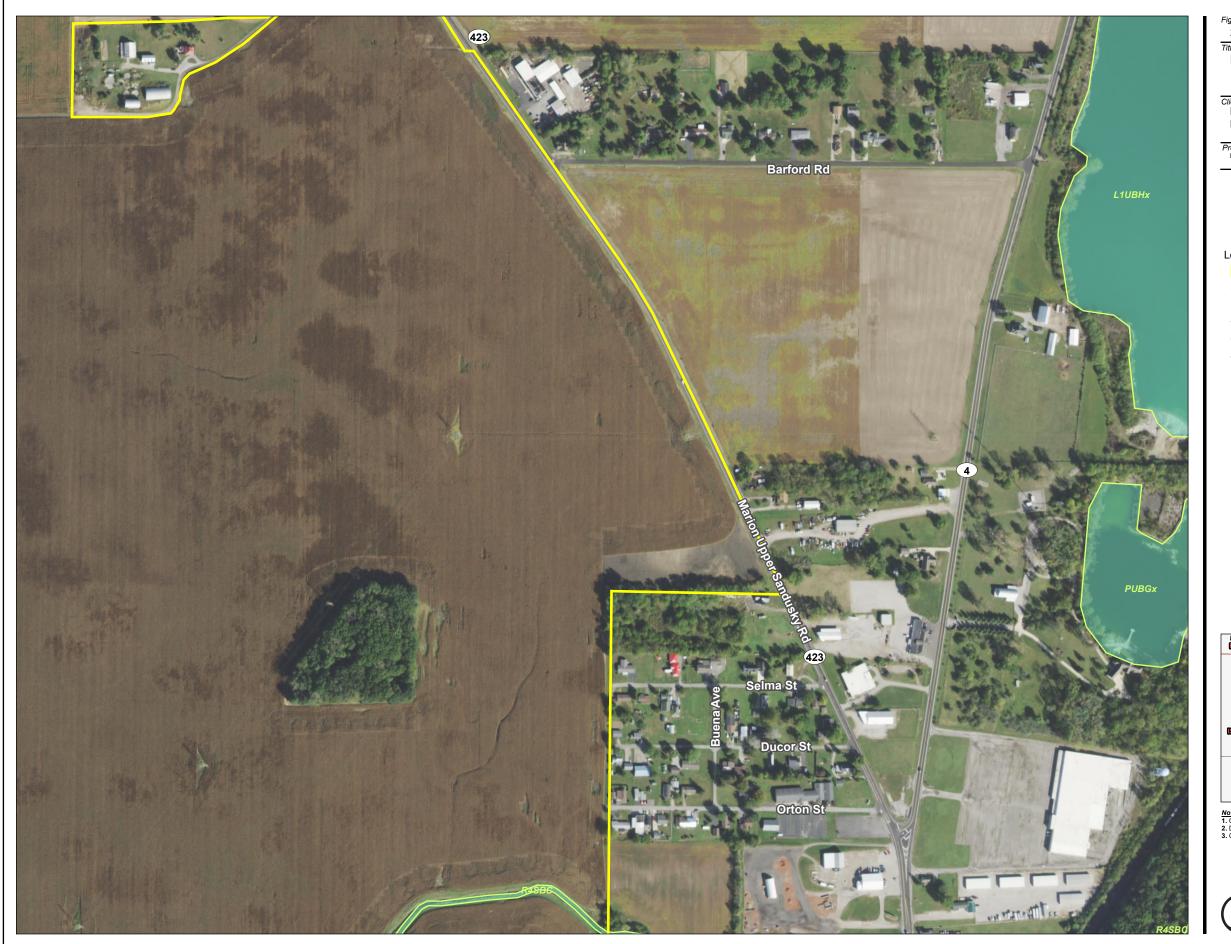
Perennial Stream

/ \ , Intermittent Stream

Waterbody







Title
National Wetlands Inventory Map

Client/Project
Marion County Solar Project, LLC
Marion County Solar Project

Project Location
Marion County, Ohio

Prepared by JLH on 2020-09-21 TR by CA on 2021-02-16 IR by CMD on 2021-02-17

2028113241



(At original document size of 11x17) 1:4,800

Project Area

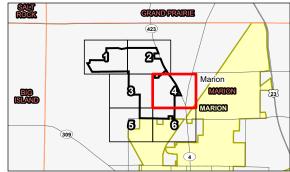
National Wetlands Inventory Feature

National Hydrography Dataset

Perennial Stream

/ \ , Intermittent Stream

Waterbody







2028113241





Client/Project
Marion County Solar Project, LLC
Marion County Solar Project

Project Location Marion County, Ohio

Prepared by JLH on 2020-09-21 TR by CA on 2021-02-16 IR by CMD on 2021-02-17

2028113241



(At original document size of 11x17) 1:4,800

Project Area

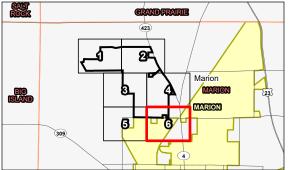
National Wetlands Inventory Feature

National Hydrography Dataset

Perennial Stream

/ \ , Intermittent Stream

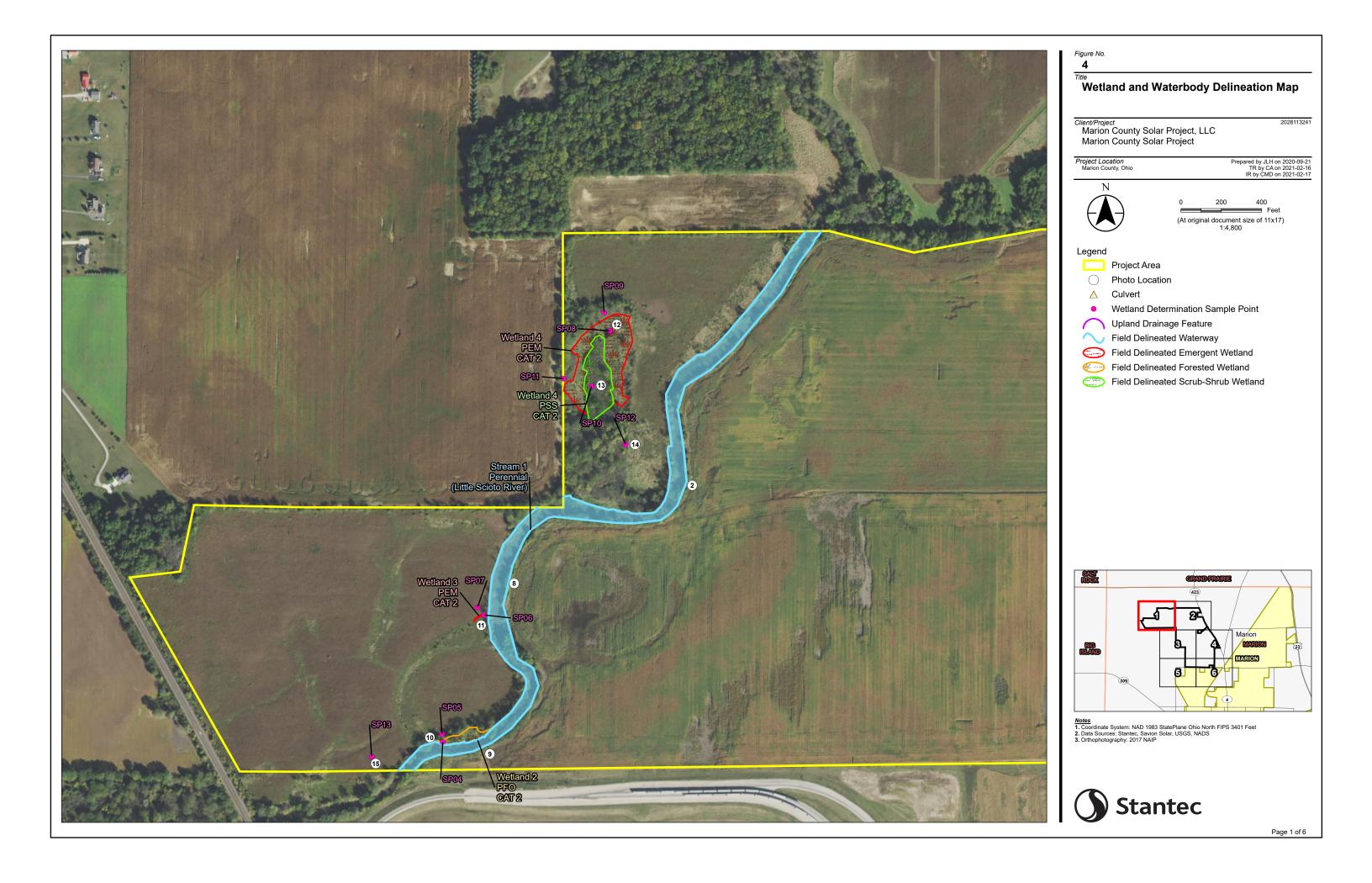
Waterbody

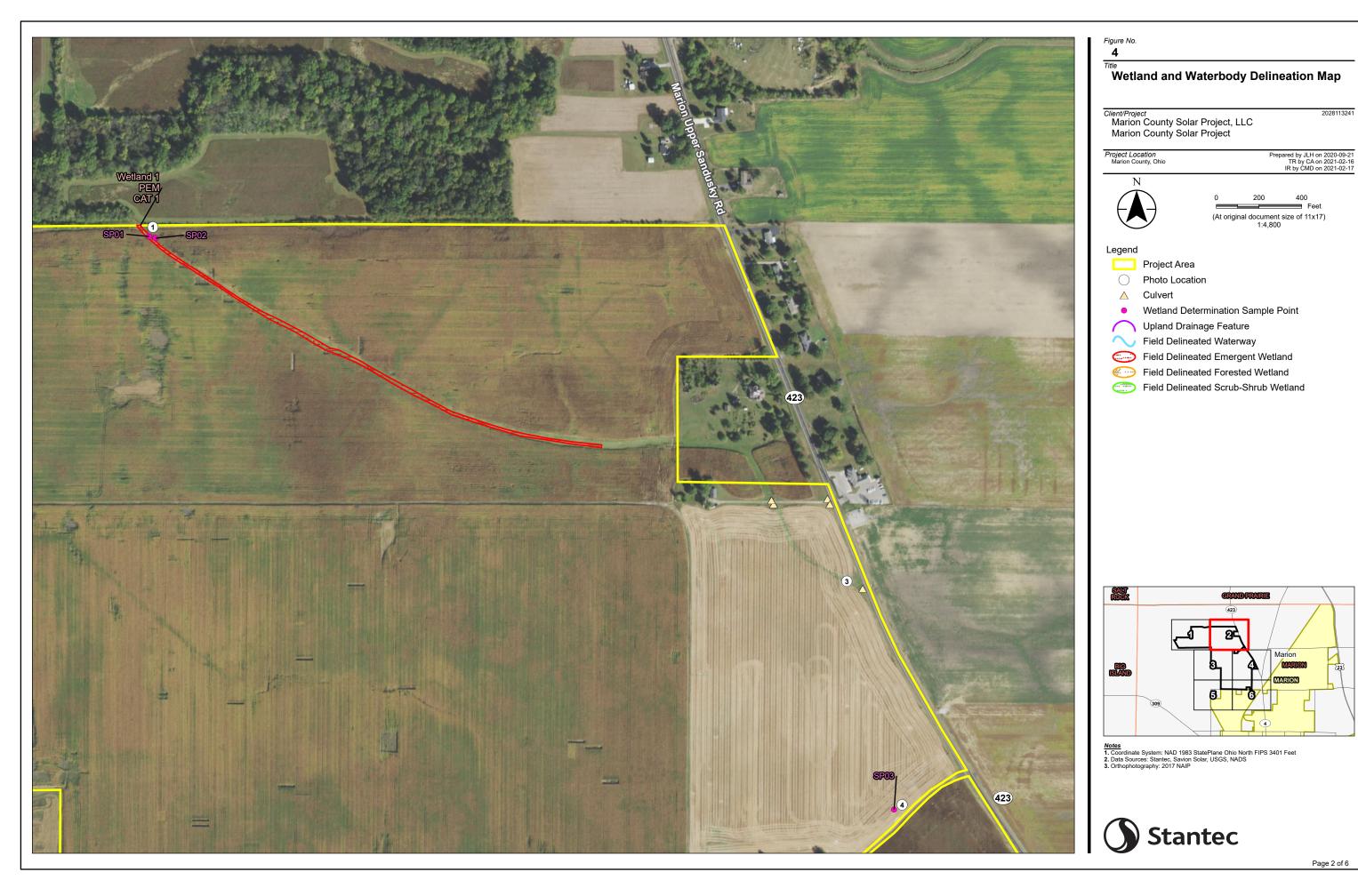




A.4 FIGURE 4 – WETLAND AND WATERBODY DELINEATION MAP













Wetland and Waterbody Delineation Map

Client/Project
Marion County Solar Project, LLC
Marion County Solar Project

Project Location
Marion County, Ohio

Prepared by JLH on 2020-09-21 TR by CA on 2021-02-16 IR by CMD on 2021-02-17



(At original document size of 11x17) 1:4,800

Project Area

Photo Location

Culvert

Wetland Determination Sample Point

Upland Drainage Feature Field Delineated Waterway

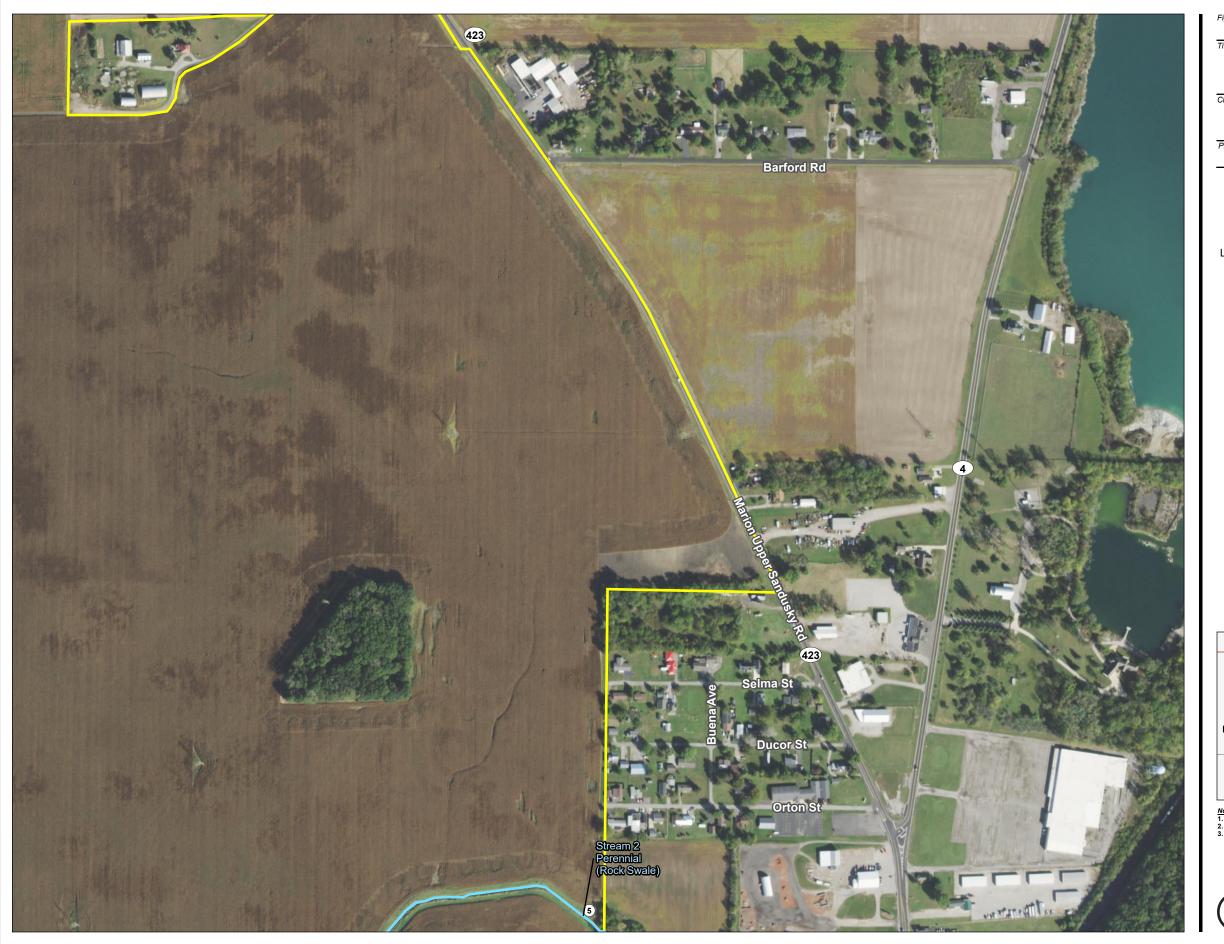
Field Delineated Emergent Wetland

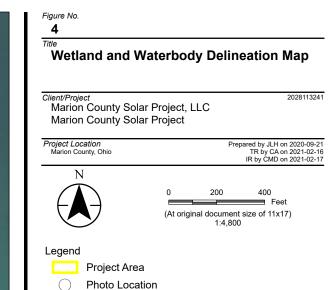
Field Delineated Forested Wetland

Field Delineated Scrub-Shrub Wetland





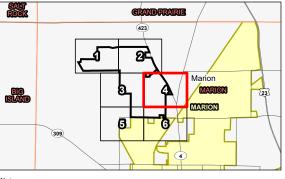




Wetland Determination Sample Point

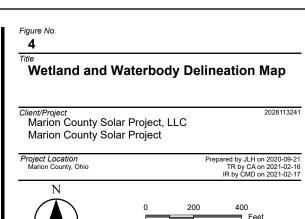
Culvert

Upland Drainage Feature
Field Delineated Waterway
Field Delineated Emergent Wetland
Field Delineated Forested Wetland
Field Delineated Scrub-Shrub Wetland









(At original document size of 11x17) 1:4,800

Project Area

Photo Location

Culvert

Wetland Determination Sample Point

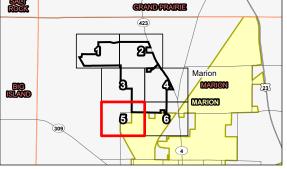
Upland Drainage Feature

Field Delineated Waterway

Field Delineated Emergent Wetland

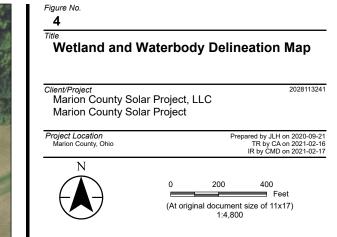
Field Delineated Forested Wetland

Field Delineated Scrub-Shrub Wetland









Project Area

Photo Location

Culvert

Wetland Determination Sample Point

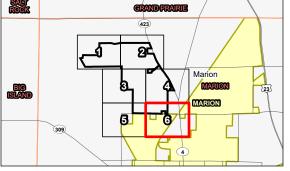
Upland Drainage Feature

Field Delineated Waterway

Field Delineated Emergent Wetland

Field Delineated Forested Wetland

Field Delineated Scrub-Shrub Wetland





Appendix B DATA FORMS

B.1 WETLAND DETERMINATION FORMS





Project/Site:	Marion Co.	unty Solar Project					Stantec Project #:	2028113241		Date:	09/08/2	n	
Applicant:		inty Solar Project, L	LC				Otanico i rojectii.	2020110241		County:	Marion	O	
Investigator #1:				Investi	gator #2:	Julie Sla	iter			State:	Ohio		
Soil Unit:		ay loam, rarely flood	led	IIIVCOL	gator #2.		WI/WWI Classification	· R4SBC		Wetland ID:	Wetlan	- 1	
Landform:	Depression		iou	Loc	al Relief:			. 111000		Sample Point:		u 1	
Slope (%):	2	Latitude:	40 6366		ongitude:			Datum:		Community ID			
		ditions on the site ty					ain in remarks)		No	Section:	S5		
		or Hydrology ☑ sig				(11 110, 0701	Are normal circumsta			Township:	T5S		
		or Hydrology □ sig or Hydrology □ nat					✓ Yes	N□	•	Range:	R15	Dir: E	=
SUMMARY OF		or riyarology in hat	uruny pr	obicinat	10:					range.	1110	DII.	
Hydrophytic Ve		sent?			□ No			Hydric Soils	Drocont?		Г	I Yes □	I No
Wetland Hydrol				☑ Yes						Within A Wetl		Yes C	
Remarks:			n interm				a grassy swale. It is pe						
Remarks.	it appears i	illat laitilei bulleu a	II IIILEIIII	illerit Sir	eam, and	It is now	a grassy swale. It is pe	Houldary mov	veu. There	was significal	il rairiiaii	overnign	IL
HVPPOLOOV													
HYDROLOGY													
		ators (Check here i	f indicate	ors are r	ot preser	nt□):							
Primary:				_	DO 14/	o			Secondary:				
	A1 - Surface A2 - High Wa				B9 - Wate B13 - Aqu					B6 - Surface So B10 - Drainage			
	A3 - Saturation				B14 - True					C2 - Dry-Seaso		able	
	B1 - Water M				C1 - Hydro					C8 - Crayfish B		ub.0	
	B2 - Sedimer	nt Deposits					spheres on Living Roots			C9 - Saturation		Aerial Ima	agery
	B3 - Drift Dep						educed Iron			D1 - Stunted or			
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorph		ו	
	B5 - Iron Dep	oosits on Visible on Aerial Ima	ngory.		C7 - Thin D9 - Gaug				Ц	D5 - FAC-Neut	rai i est		
		/ Vegetated Concave S			Other (Ex								
		, 		_	(,						
Field Observat	ions:												
Surface Water		☑ Yes ☐ No	Depth:	2	(in.)								
Water Table Pr		☐ Yes ☑ No	Depth:	0	(in.)			Wetland Hy	drology Pı	resent? 🗵	Yes [] No	
Saturation Pres		☐ Yes ☑ No		0	, ,								
			Depth:		(in.)								
Describe Record	ed Data (str	eam gauge, monitori	ng well, a	erial pho	tos, previ	ous inspe	ctions), if available:		N/A				
Remarks:													
Remarks:													
SOILS Map Unit Name		Medway clay loam,											
SOILS Map Unit Name Profile Descrip					f indicators.) (Typ	pe: C=Concentra	tion, D=Depletion, RM=Reduced Matrix, CS-	=Covered/Coated Sand Gr.	ains; Location: PL=F	Pore Lining, M=Matrix)			
SOILS Map Unit Name						pe: C=Concentra		=Covered/Coated Sand Gr.	ains; Location: PL=F	ore Lining, M=Matrix)	_	Texture	
SOILS Map Unit Name Profile Descrip	tion (Describe to		dicator or confirm	n the absence of	of indicators.) (Type of the original of the o	pe: C=Concentra			ains; Location: PL=F	Pore Lining, M=Matrix) Location	_	Texture ay, sand,	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth	the depth needed to document the inc Horizon 1	Color 10YR	Matrix (Moist)	% 100		Color (Moist)	ox Features % 	Type 	•	(e.g. cla		loam)
SOILS Map Unit Name Profile Descrip Top Depth	Bottom (Describe to Bottom Depth	the depth needed to document the inc	dicator or confirm	Matrix (Moist)	%		Color (Moist)	ox Features %	Туре	Location	(e.g. cla	ay, sand,	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth	the depth needed to document the inc Horizon 1	Color 10YR	Matrix (Moist)	% 100		Color (Moist)	ox Features % 	Type 	Location 	(e.g. cla	ay, sand, silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2	Bottom Depth 2 14	the depth needed to document the inc Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 2/1 3/1	% 100 20	 10YR	Color (Moist) 4/6	ox Features % 8	Type C	Location M	(e.g. cla	ay, sand, silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2	Bottom Depth 2 14	Horizon 1 2	Color 10YR 10YR 10YR	Matrix (Moist) 2/1 3/1 4/2	% 100 20 69	 10YR 7.5YR	Color (Moist) 4/6 5/8	% 8 1	Type C C	Location M M	(e.g. cla	ay, sand, silty clay silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2	Bottom Depth 2 14	Horizon 1 2 2	Color 10YR 10YR 10YR	Matrix (Moist) 2/1 3/1 4/2	% 100 20 69	 10YR 7.5YR 10YR 10YR	Redd Color (Moist) 4/6 5/8 6/6 3/1	% 8 1 2 5	Type C C C	Location M M M M	(e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14	btion (Describe to Bottom Depth 2 14 20	Horizon 1 2 2 3	Color 10YR 10YR 10YR 10YR 2.5Y	Matrix (Moist) 2/1 3/1 4/2 5/1	% 100 20 69 75	 10YR 7.5YR 10YR 10YR	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8	x Features	Type C C C C C	Location M M M M M	(e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14	Bottom Depth 2 14 20	Horizon 1 2 2 3	Color 10YR 10YR 10YR 10YR 2.5Y	Matrix (Moist) 2/1 3/1 4/2 5/1	% 100 20 69 75	10YR 7.5YR 10YR 10YR 10YR	Redd Color (Moist) 4/6 5/8 6/6 3/1	% 8 1 2 5	Type C C C	Location M M M M	(e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14	btion (Describe to Bottom Depth 2 14 20	Horizon 1 2 2 2 3	Color 10YR 10YR 10YR 10YR 2.5Y	Matrix (Moist) 2/1 3/1 4/2 5/1 	% 100 20 69 75 	 10YR 7.5YR 10YR 10YR 10YR	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8	% 8 1 2 5 20	Type C C C C	Location M M M M M M	(e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	btion (Describe to Bottom Depth 2 14 20 Soil Field In	Horizon 1 2 2 3	Color 10YR 10YR 10YR 10YR 2.5Y	Matrix (Moist) 2/1 3/1 4/2 5/1 cicators a	% 100 20 69 75 re not pre	 10YR 7.5YR 10YR 10YR 10YR esent □	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8):	% % % % % % % % % %	Type C C C C C D C for Problem	Location M M M M M matic Soils ¹	(e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	btion (Describe to Bottom Depth 2 14 20 Soil Field Ir A1- Histosol	Horizon 1 2 2 2 3 ndicators (check he	Color 10YR 10YR 10YR 10YR 2.5Y	Matrix (Moist) 2/1 3/1 4/2 5/1 cators a	% 100 20 69 75 re not pre S4 - Sand		Red Color (Moist) 4/6 5/8 6/6 3/1 5/8):	ox Features	Type C C C D for Problen A16 - Coast	Location M M M M M natic Soils ¹ Prairie Redox	(e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	btion (Describe to Bottom Depth 2 14 20 Soil Field In	Horizon 1 2 2 2 3 ndicators (check he	Color 10YR 10YR 10YR 10YR 2.5Y	m the absence of Matrix (Moist) 2/1 3/1 4/2 5/1 icators a	% 100 20 69 75 re not pre	10YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8): Matrix	% 8 1 2 5 20 Indicators	Type C C C D C for Problen S7 - Dark S	Location M M M M M matic Soils Prairie Redox urface	(e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	btion (Describe to Bottom Depth 2 14 20 Soil Field Ir A1- Histosol A2 - Histic Ep	Horizon 1 2 2 2 3 ndicators (check here)	Color 10YR 10YR 10YR 10YR 2.5Y	m the absence or Matrix (Moist) 2/1 3/1 4/2 5/1 icators a	% 100 20 69 75 re not pre S4 - Sand S5 - Sand	10YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8): Matrix	0x Features	Type C C C D C For Problen A16 - Coast S7 - Dark S F12 - Iron-N	Location M M M M M natic Soils ¹ Prairie Redox	(e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	btion (Describe to Depth 2 14 20 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifier	Horizon 1 2 2 2 3 ndicators (check he objeedon stic an Sulfide it Layers	Color 10YR 10YR 10YR 10YR 2.5Y	m the absence of Matrix (Moist) 2/1 3/1 4/2 5/1 icators a	% 100 20 69 75 re not pre \$4 - Sand \$5 - Sand \$6 - Strip F1 - Loam F2 - Loam	10YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR y Gleyed ly Redox y Redox y Muck Marix y Muck May Gleyed	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8): Matrix	Section Sect	Type C C C C D C for Problen A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M M M M M natic Soils ¹ P Prairie Redox urface	(e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	Partial Provided High Provided	Horizon 1 2 2 2 3 ndicators (check he objeedon stic stic Suffide d Layers fluck	Color 10YR 10YR 10YR 10YR 2.5Y	m the absence of Matrix (Moist) 2/1 3/1 4/2 5/1 cators a	% 100 20 69 75 re not pre S4 - Sand S5 - Sand S6 - Stript F1 - Loam F3 - Deple	10YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8): Matrix ineral Matrix	Section Sect	Type C C C D C for Problen A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M M M M M matic Soils Prairie Redox urface langanese Mass	(e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	btion (Describe to Bottom Depth 2 14 20 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A1 - Deplete A11 - Deplete A11 - Deplete A11 - Deplete A5 - Stratified A11 - Deplete	Horizon 1 2 2 2 3 ndicators (check here) bipedon stic en Sulfide d Layers luck ed Below Dark Surface	Color 10YR 10YR 10YR 10YR 2.5Y	m the absence or Matrix (Moist) 2/1 3/1 4/2 5/1 icators a	% 100 20 69 75 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp \$1 - Loam \$72 - Loam \$73 - Deple \$74 - Redo	10YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8): Matrix ineral Matrix crface	Section Sect	Type C C C D C for Problen A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M M M M M matic Soils Prairie Redox urface langanese Mass	(e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	Bottom Depth 2 14 20 Soil Field Ir A1- Histosol A2 - Histosel A3 - Black Hi A4 - Hydroge A5 - Stratifie A11 - Deplett A12 - Thick I	Horizon 1 2 2 2 3 ndicators (check here) bipedon stic en Sulfide d Layers fluck ed Below Dark Surface Dark Surface	Color 10YR 10YR 10YR 10YR 2.5Y	m the absence of Matrix (Moist) 2/1 3/1 4/2 5/1 icators a	% 100 20 69 75 re not pre S4 - Sand S6 - Stripp F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	10YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8): Matrix ineral Matrix (rface Surface	Section Sect	Type C C C D C for Problen A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M M M M M matic Soils Prairie Redox urface langanese Mass	(e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay	loam)
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	Prior (Describe to Depth 2 14 20 20 20 A1 - Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M S1 - Sandy	Horizon 1 2 2 2 3 ndicators (check he bipedon stic an Sulfide d Layers fluck ed Below Dark Surface bluck Mineral	Color 10YR 10YR 10YR 10YR 2.5Y	m the absence of Matrix (Moist) 2/1 3/1 4/2 5/1 icators a	% 100 20 69 75 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp \$1 - Loam \$72 - Loam \$73 - Deple \$74 - Redo	10YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8): Matrix ineral Matrix (rface Surface	ox Features	Type C C C D C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M M M M M natic Soils ¹ 1 Prairie Redox urface Manganese Mass Shallow Dark S ain in Remarks)	e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay 	
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	Prince (Describe to Bottom Depth 2 14 20 20 Soil Field Ir A1 - Histosol A2 - Histosol A3 - Black Hi A4 - Hydroge A5 - Strattiee A10 - 2 cm M 11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm M 10 - 5 cm	Horizon 1 2 2 2 3 ndicators (check here) bipedon stic en Sulfide d Layers duck ded Below Dark Surface Dark Surface fluck Mineral ucky Peat or Peat	Color 10YR 10YR 10YR 10YR 2.5Y	m the absence of Matrix (Moist) 2/1 3/1 4/2 5/1 icators a	% 100 20 69 75 re not pre S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo	10YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8): Matrix ineral Matrix (rface Surface	ox Features % 8 1 2 5 20 Indicators Indicators of hydrophy	Type C C C D C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M M M M M strice Soils 1 Prairie Redox urface langanese Mass Shallow Dark S ain in Remarks)	eses surface	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay 	
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	Prior (Describe to Depth 2 14 20 20 20 A1 - Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifier A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M S1 - Sandy	Horizon 1 2 2 2 3 ndicators (check here) bipedon stic en Sulfide d Layers duck ded Below Dark Surface Dark Surface fluck Mineral ucky Peat or Peat	Color 10YR 10YR 10YR 10YR 2.5Y	m the absence of Matrix (Moist) 2/1 3/1 4/2 5/1 icators a	% 100 20 69 75 re not pre S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo	10YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8): Matrix ineral Matrix (rface Surface	ox Features	Type C C C D C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M M M M M strice Soils 1 Prairie Redox urface langanese Mass Shallow Dark S ain in Remarks)	e.g. cla	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay 	
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	Prince (Describe to Bottom Depth 2 14 20 20 Soil Field Ir A1 - Histosol A2 - Histosol A3 - Black Hi A4 - Hydroge A5 - Strattiee A10 - 2 cm M 11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm M 10 - 5 cm	Horizon 1 2 2 2 3 ndicators (check here) bipedon stic en Sulfide d Layers duck ded Below Dark Surface Dark Surface fluck Mineral ucky Peat or Peat	Color 10YR 10YR 10YR 10YR 2.5Y	m the absence of Matrix (Moist) 2/1 3/1 4/2 5/1 icators a	% 100 20 69 75 re not pre S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo	10YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8): Matrix ineral Matrix (rface Surface	ox Features % 8 1 2 5 20 Indicators Indicators of hydrophy	Type C C C D C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M M M M M strice Soils 1 Prairie Redox urface langanese Mass Shallow Dark S ain in Remarks)	eses surface	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay 	
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	Prince (Describe to Bottom Depth 2 14 20 20 Soil Field Ir A1 - Histosol A2 - Histosol A3 - Black Hi A4 - Hydroge A5 - Strattiee A10 - 2 cm M 11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm M 10 - 5 cm	Horizon 1 2 2 2 3 ndicators (check here) bipedon stic en Sulfide d Layers duck ded Below Dark Surface Dark Surface fluck Mineral ucky Peat or Peat	Color 10YR 10YR 10YR 10YR 2.5Y	m the absence of Matrix (Moist) 2/1 3/1 4/2 5/1 icators a	% 100 20 69 75 re not pre S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo	10YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8): Matrix ineral Matrix (rface Surface	ox Features % 8 1 2 5 20 Indicators Indicators of hydrophy	Type C C C D C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M M M M M strice Soils 1 Prairie Redox urface langanese Mass Shallow Dark S ain in Remarks)	eses surface	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay 	
SOILS Map Unit Name Profile Descrip Top Depth 0 2 14 NRCS Hydric	Prince (Describe to Bottom Depth 2 14 20 20 Soil Field Ir A1 - Histosol A2 - Histosol A3 - Black Hi A4 - Hydroge A5 - Strattiee A10 - 2 cm M 11 - Deplete A12 - Thick E S1 - Sandy M S3 - 5 cm M 10 - 5 cm	Horizon 1 2 2 2 3 ndicators (check here) bipedon stic en Sulfide d Layers duck ded Below Dark Surface Dark Surface fluck Mineral ucky Peat or Peat	Color 10YR 10YR 10YR 10YR 2.5Y	m the absence of Matrix (Moist) 2/1 3/1 4/2 5/1 icators a	% 100 20 69 75 re not pre S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redo	10YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10	Red Color (Moist) 4/6 5/8 6/6 3/1 5/8): Matrix ineral Matrix (rface Surface	ox Features % 8 1 2 5 20 Indicators Indicators of hydrophy	Type C C C D C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M M M M M strice Soils 1 Prairie Redox urface langanese Mass Shallow Dark S ain in Remarks)	eses surface	ay, sand, silty clay silty clay silty clay silty clay silty clay silty clay 	



Project/Site: Wetland ID: Wetland 1 Sample Point: SP01 Marion County Solar Project **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) % Cover Dominant Ind.Status Dominance Test Worksheet Species Name 2 Number of Dominant Species that are OBL, FACW, or FAC: 3 (A) 3. 4. Total Number of Dominant Species Across All Strata: 3 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Prevalence Index Worksheet 8. 9. Total % Cover of: __ Multiply by: 10. OBL spp. x 1 = FACW spp. 0 Total Cover = x 2 = FAC spp. 0 x 3 =Sapling/Shrub Stratum (Plot size: 15 ft radius) x 4 = FACU spp. UPL spp. 0 x 5= 2. 3. 0 ___(A) 4. 5. Prevalence Index = B/A = 6. 7. **Hydrophytic Vegetation Indicators:** 8. 9. Rapid Test for Hydrophytic Vegetation ☐ Yes ✓ No 10. ✓ Yes ☐ No Dominance Test is > 50% Total Cover = 0 ☐ Yes ☐ No Prevalence Index is ≤ 3.0 * □ No ☐ Yes Morphological Adaptations (Explain) * Herb Stratum (Plot size: 5 ft radius) ☐ Yes □ No Problem Hydrophytic Vegetation (Explain) * Setaria pumila 35 FAC * Indicators of hydric soil and wetland hydrology must be 2. Echinochloa crus-galli 25 Υ **FACW** present, unless disturbed or problematic. Υ FAC 3. Panicum capillare 20 Bidens frondosa 18 **FACW Definitions of Vegetation Strata:** 4. Ν 5. Ambrosia artemisiifolia 2 FACU Tree - Woody plants 3 in. (7.6cm) or more in diameter at 6 breast height (DBH), regardless of height. 7. 8. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 9 10. 11. Herb - All herbaceous (non-woody) plants, regardless of size, 12 and woody plants less than 3.28 ft. tall. 13 14. Woody Vines - All woody vines greater than 3.28 ft. in height. 15. Total Cover = 100 Woody Vine Stratum (Plot size: 30 ft radius) 1. --2. 3. Hydrophytic Vegetation Present ☑ Yes ☐ No 4. 5. Total Cover = Vegetation disturbed from mowing Remarks:

Additional Remarks:		



Designat/Cite.												
Project/Site:	Marion Co	unty Solar Project					Stantec Project #:	2028113241		Date:	09/08/20	
Applicant:	Marion Cou	unty Solar Project, L	LC							County:	Marion	
Investigator #1				Investi	gator #2:	Julie Sla	ater			State:	Ohio	
Soil Unit:		ay loam, rarely flood	led		J		IWI/WWI Classification:	R4SBC		Wetland ID:	Wetland 1	
Landform:	Terrace	ay louin, ruloly floor	ica	Loc	al Relief:		Wijwwwi Olassinoation.	ТЧОВО		Sample Point:		
		والمرافق المالية	40.0005					Deture				
Slope (%):	<u>1</u>	Latitude:			ongitude:			Datum:		Community ID:	•	
		ditions on the site ty				(If no, expl		☑ Yes □		Section:	S5	
Are Vegetation	ı☑ , Soil ☑,	or Hydrology ☑ sig	nificantly	y disturb	ed?		Are normal circumstar	nces present?	?	Township:	T5S	
Are Vegetation	□, Soil □,	or Hydrology na	turally pr	oblemati	ic?		☑ Yes	N□		Range:	R15 Dir:	E
SUMMARY OF	FINDINGS	, 0,	,									
Hydrophytic Ve		cont?		☐ Yes	☑ No			Hydric Soils	Drocont?		☐ Yes □	7 No
	•									\		
Wetland Hydro				☐ Yes				is This Sam	oling Point	Within A Wetl	and? ■ Yes ■	■ No
Remarks:	There was	significant rainfall o	vernight	. Sample	point on	the edge	e of agricultural field					
HYDROLOGY												
	and a sure leading	-t (Obb	e :			4						
_		ators (Check here i	it indicat	ors are n	ot preser	ιτ☑):						
Primary		147.1			DO 14/ /	01 : 1			Secondary:	D0 0 (0	".0 .	
	A1 - Surface				B9 - Wate					B6 - Surface So		
	A2 - High Wa				B13 - Aqu					B10 - Drainage		
	A3 - Saturati B1 - Water M				B14 - True				片	C2 - Dry-Seaso C8 - Crayfish B	n vvater rable	
l					C1 - Hydr						urrows Visible on Aerial Im	
l							spheres on Living Roots educed Iron				Stressed Plants	lagery
lä							educed from			D2 - Geomorph		
					C7 - Thin					D5 - FAC-Neutr		
		on Visible on Aerial Ima	ngon/		D9 - Gaug				ш	D3 - FAC-Neuti	ai iesi	
l H		Vegetated Concave S			Other (Ex							
l	Do - Oparson	y vegetated contains t	Juliacc		Other (EX	piaiii iii i t	marks)					
Field Observa												
Surface Water	Present?	☐ Yes ☑ No	Depth:	0	(in.)			Wetland Uv	dralagy Dr	rocent2 -	Yes ☑ No	
Water Table Pi	resent?	☐ Yes ☑ No	Depth:	0	(in.)			Wetland Hy	arology Pr	esentr	res 🖭 No	
Saturation Pres	sent?	☐ Yes ☑ No	Depth:		(in.)							
					. ,							
Describe Record	ded Data (str	eam gauge, monitori	ng well, a	aerial pho	tos, previ	ous inspe	ctions), if available:		N/A			
Remarks:												
Remarks:												
SOILS	٥٠	Medway clay loam	rarely fl	ooded								
SOILS Map Unit Name		Medway clay loam,										
SOILS Map Unit Name Profile Descri	ption (Describe to			m the absence o	f indicators.) (Ty	oe: C=Concentra	ntion, D=Depletion, RM=Reduced Matrix, CS=		ains; Location: PL=P	Pore Lining, M=Matrix)		
SOILS Map Unit Name					•	oe: C=Concentra	Redo	Covered/Coated Sand Gro	ains; Location: PL=P	Pore Lining, M=Matrix)	Texture	
SOILS Map Unit Name Profile Descri	ption (Describe to		dicator or confin	m the absence o	f indicators.) (Type of the second of the se	pe: C=Concentra			ains; Location: PL=P	Pore Lining, M=Matrix) Location	Texture (e.g. clay, sand,	, loam)
SOILS Map Unit Name Profile Descri Top Depth	ption (Describe to Bottom Depth	the depth needed to document the in	Color	Matrix (Moist)	%	pe: C=Concentra	Redo	x Features	1	1	(e.g. clay, sand,	
SOILS Map Unit Name Profile Descri Top Depth 0	Bottom Depth	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist)	% 100		Color (Moist)	% Features	Type 	Location 	(e.g. clay, sand, silty clay loa	
SOILS Map Unit Name Profile Descri Top Depth 0	Bottom Depth 20	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist) 2/2	% 100 		Redo Color (Moist)	%	Type	Location 	(e.g. clay, sand, silty clay loa	
SOILS Map Unit Name Profile Descri Top Depth 0	Bottom Depth	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist) 2/2	% 100 		Color (Moist)	% Features	Type 	Location 	(e.g. clay, sand, silty clay loa	
SOILS Map Unit Name Profile Descri Top Depth 0	Bottom Depth 20	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist) 2/2	% 100 		Redo Color (Moist)	%	Type	Location 	(e.g. clay, sand, silty clay loa	
SOILS Map Unit Name Profile Descri Top Depth 0	ption (Describe to Bottom Depth 20 	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist) 2/2	% 100 		Redo	% Features	Type 	Location 	(e.g. clay, sand, silty clay loa	
SOILS Map Unit Name Profile Descri Top Depth 0	ption (Describe to Bottom Depth 20	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist) 2/2	% 100 	 	Redo	% Features	Type	Location	(e.g. clay, sand, silty clay loa 	
SOILS Map Unit Name Profile Descri Top Depth 0	ption (Describe to Bottom Depth 20	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist) 2/2	% 100 	 	Redo Color (Moist)				(e.g. clay, sand, silty clay loa 	
SOILS Map Unit Name Profile Descri Top Depth 0	ption (Describe to Bottom Depth 20	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist) 2/2	% 100 		Redo Color (Moist)	%	Type	Location	(e.g. clay, sand, silty clay loa 	
SOILS Map Unit Name Profile Descri Top Depth 0	ption (Describe to Bottom Depth 20	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist) 2/2	% 100 	 	Redo Color (Moist)				(e.g. clay, sand, silty clay loa 	
SOILS Map Unit Name Profile Descri Top Depth 0	ption (Describe to Bottom Depth 20	the depth needed to document the in Horizon 1	clicator or confinence of the	m the absence of Matrix (Moist) 2/2 -	% 100 		Redo Color (Moist)	%	Type		(e.g. clay, sand, silty clay loa 	
SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	ption (Describe to Bottom Depth 20	the depth needed to document the in Horizon 1	clicator or confinence of the	m the absence or Matrix (Moist) 2/2 icators a	% 100 	 esent 🗹	Redo Color (Moist)	%	Type for Problem		(e.g. clay, sand, silty clay loa 	
SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	ption (Describe to Bottom Depth 20 Soil Field II	Horizon 1	clicator or confinence of the	m the absence or Matrix (Moist) 2/2	% 100	y Gleyed	Redo Color (Moist)	Section	Type for Problem	Location	(e.g. clay, sand, silty clay loa 	
SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	ption (Describe to Bottom Depth 20 Soil Field II A1- Histosol A2 - Histic E	the depth needed to document the in Horizon 1 ndicators (check he	clicator or confinence of the	m the absence or Matrix (Moist) 2/2	% 100 re not pre		Redo Color (Moist)	x Features % Indicators	Type for Problem S7 - Dark S6	Location	(e.g. clay, sand, silty clay loa	
SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	ption (Describe to Bottom Depth 20 Soil Field II A1- Histosol A2 - Histic E A3 - Black H	Horizon 1	clicator or confinence of the	m the absence or Matrix (Moist) 2/2 icators a	% 100		Redo Color (Moist)	% Features %	Type	Location	(e.g. clay, sand, silty clay loa es	
SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	ption (Describe to Bottom Depth 20	Horizon 1	clicator or confinence of the	m the absence or Matrix (Moist) 2/2 icators a	% 100 re not pre \$4 - Sand \$6 - Stripi		Redo Color (Moist)): Matrix	x Features	Type	Location	(e.g. clay, sand, silty clay loa es	
SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	ption (Describe to Bottom Depth 20	the depth needed to document the in Horizon 1	clicator or confinence of the	m the absence or Matrix (Moist) 2/2 icators a	% 100		Redo Color (Moist)	x Features	Type	Location	(e.g. clay, sand, silty clay loa es	
SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	ption (Describe to Bottom Depth 20	the depth needed to document the in Horizon 1	Color 10YR	m the absence or Matrix (Moist) 2/2 icators a	% 100	esent y Gleyed y Redox y Gleyed Matrix yy Gleyed Matrix yy Gleyed	Redo Color (Moist)	x Features	Type	Location	(e.g. clay, sand, silty clay loa es	
SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	ption (Describe to Bottom Depth 20	Horizon 1	Color 10YR	m the absence or Matrix (Moist) 2/2 icators a	% 100	esent gy Gleyed y Redox bed Matrix y Muck M y Muck M ted Matrix x Dark Su	Redo Color (Moist)): Matrix ineral Matrix c rface	x Features	Type	Location	(e.g. clay, sand, silty clay loa es	
SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	ption (Describe to Bottom Depth 20	Horizon 1	Color 10YR	m the absence or Matrix (Moist) 2/2 icators a	% 100		Redo Color (Moist)): Matrix ineral Matrix (rface Surface	x Features	Type	Location	(e.g. clay, sand, silty clay loa es	
SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	ption (Describe to Bottom Depth 20	Horizon 1	Color 10YR	m the absence or Matrix (Moist) 2/2 icators a	% 100		Redo Color (Moist)): Matrix ineral Matrix c rface Surface sions	x Features % Indicators	Type	Location	(e.g. clay, sand, silty clay loa es	am
SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	ption (Describe to Bottom Depth 20	Horizon 1	Color 10YR	m the absence or Matrix (Moist) 2/2 icators a	% 100		Redo Color (Moist)): Matrix ineral Matrix c rface Surface sions	% Features %	Type	Location	(e.g. clay, sand, silty clay loa es surface	am
SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	ption (Describe to Bottom Depth 20	Horizon 1	Color 10YR	m the absence or Matrix (Moist) 2/2 icators a	% 100		Redo Color (Moist)): Matrix ineral Matrix c rface Surface sions	x Features % Indicators	Type	Location	(e.g. clay, sand, silty clay load	am
SOILS Map Unit Name Profile Descri Top Depth O NRCS Hydric	ption (Describe to Bottom Depth 20	Horizon 1	Color 10YR	m the absence or Matrix (Moist) 2/2 icators a	% 100		Redo Color (Moist)): Matrix ineral Matrix c rface Surface sions	% Features %	Type	Location	(e.g. clay, sand, silty clay loa es surface	am
SOILS Map Unit Name Profile Descri Top Depth 0 NRCS Hydric	ption (Describe to Bottom Depth 20	Horizon 1	Color 10YR	m the absence or Matrix (Moist) 2/2 icators a	% 100		Redo Color (Moist)): Matrix ineral Matrix c rface Surface sions	% Features %	Type	Location	(e.g. clay, sand, silty clay loa es surface	am
SOILS Map Unit Name Profile Descri Top Depth O NRCS Hydric	ption (Describe to Bottom Depth 20	Horizon 1	Color 10YR	m the absence or Matrix (Moist) 2/2 icators a	% 100		Redo Color (Moist)): Matrix ineral Matrix c rface Surface sions	% Features %	Type	Location	(e.g. clay, sand, silty clay loa es surface	am
SOILS Map Unit Name Profile Descri Top Depth O NRCS Hydric	ption (Describe to Bottom Depth 20	Horizon 1	Color 10YR	m the absence or Matrix (Moist) 2/2 icators a	% 100		Redo Color (Moist)): Matrix ineral Matrix c rface Surface sions	% Features %	Type	Location	(e.g. clay, sand, silty clay loa es surface	am



Project/Site: Wetland ID: Wetland 1 Sample Point: SP02 Marion County Solar Project **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) % Cover Dominant Ind.Status Dominance Test Worksheet Species Name 2 Number of Dominant Species that are OBL, FACW, or FAC: (A) 3. 4. Total Number of Dominant Species Across All Strata: 2 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B) Prevalence Index Worksheet 8 9. Total % Cover of: __ Multiply by: 10. OBL spp. x 1 = Total Cover = 0 FACW spp. 0 x 2 = 0 x 3 = FAC spp. 35 105 Sapling/Shrub Stratum (Plot size: 15 ft radius) x 4 = FACU spp. 50 200 UPL spp. 15 x 5= 2. 3. 380 Total 100 (A) 4 5. Prevalence Index = B/A = 3.800 6. 7. **Hydrophytic Vegetation Indicators:** 8. 9. ☐ Yes ✓ No Rapid Test for Hydrophytic Vegetation 10. ☐ Yes ✓ No Dominance Test is > 50% Total Cover = ☑ No 0 ☐ Yes Prevalence Index is ≤ 3.0 * □ No ☐ Yes Morphological Adaptations (Explain) * Herb Stratum (Plot size: 5 ft radius) ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) * FACU Setaria faberi 40 * Indicators of hydric soil and wetland hydrology must be 2. 30 Υ **FAC** Setaria pumila present, unless disturbed or problematic. UPL 3. Glycine max 15 Ν 10 FACU **Definitions of Vegetation Strata:** 4. Erigeron canadensis Ν 5. 5 Ν FAC Xanthium strumarium Tree - Woody plants 3 in. (7.6cm) or more in diameter at 6 breast height (DBH), regardless of height. 7. 8. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 9 10. 11.

Total Cover = 100

Woody Vine Stratum (Plot size: 30 ft radius)

1. -- -- -- -2. -- -- -- -3. -- -- -- -4. -- -- -- -5. -- Total Cover = 0

Vegetation disturbed from mowing and agriculture

Hydrophytic Vegetation Present ☐ Yes ☑ No

Herb - All herbaceous (non-woody) plants, regardless of size,

and woody plants less than 3.28 ft. tall.

Woody Vines - All woody vines greater than 3.28 ft. in height.

Additional Remarks:

12

13. 14.

15.

Remarks:



Project/Site:		unty Solar Project					Stantec Project #:	2028113241		Date:	09/09/2		
Applicant:	Marion Cou	unty Solar Project, L	LC							County:	Marion		
Investigator #1					gator #2:					State:	Ohio		
Soil Unit:	Glynwood silf	t loam, ground moraine	e, 2-6% slo	opes		N	IWI/WWI Classification	: R4SBC		Wetland ID:	N/A		
Landform:	Terrace			Loc	al Relief:	Linear				Sample Point:	SP03		
Slope (%):	1	Latitude:			ongitude:			Datum:		Community ID:	Upland	l	
Are climatic/hy	drologic cond	ditions on the site ty	pical for	this time	of year?	(If no, expl	ain in remarks)	Yes □	No	Section:	S5		
Are Vegetation	ı ☑ , Soil ☑,	or Hydrology ☑ sig	nificantly	disturbe	ed?		Are normal circumsta	ances present?	?	Township:	T5S		
Are Vegetation	ı□ , Soil □,	or Hydrology □ na	turally pr	oblemati	ic?		☑ Yes	NΦ		Range:	R15	Dir:	E
SUMMARY OF	FINDINGS												
Hydrophytic Ve	egetation Pre	sent?		☐ Yes	☑ No			Hydric Soils	Present?			□ Yes	☑ No
Wetland Hydro				☐ Yes				Is This Samp	oling Point	Within A Wetl	and? [■ Yes	■ No
Remarks:	There was	significant rainfall o	vernight	. Sample	point is	in an agr	icultural field						
HYDROLOGY													
Wetland Hyd	rology Indic	ators (Check here i	if indicate	ors are n	ot preser	nt☑):							
Primar		`			•	,			Secondary:				
	A1 - Surface				B9 - Wate					B6 - Surface So			
	A2 - High Wa				B13 - Aqu					B10 - Drainage			
	l A3 - Saturation				B14 - Tru					C2 - Dry-Seaso C8 - Crayfish B		rable	
	B2 - Sedime						spheres on Living Roots			C9 - Saturation		n Aerial Ir	magery
	B3 - Drift De	posits					educed Iron			D1 - Stunted or			3 ,
							duction in Tilled Soils			D2 - Geomorph		n	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neuti	ral Test		
		on Visible on Aerial Ima VVegetated Concave S			D9 - Gauo Other (Ex								
_	, be epareer	, regulated consults t	Juliuoo		Outor (Ex	piairiiri	markoj						
Field Observa	tions:												
Surface Water		☐ Yes ☑ No	Depth:	0	(in.)					_			
Water Table P		☐ Yes ☑ No	Depth:		(in.)			Wetland Hy	drology Pi	resent?	Yes [☑ No	
Saturation Pre		☐ Yes ☑ No	Depth:		(in.)								
					` '		-4:\ if! - -		NI/A				
Describe Recor	ded Data (str	eam gauge, monitori	ng weii, a	aeriai pno	itos, previ	ous inspe	ections), if available:		N/A				
Remarks:													
SOILS					0.00/								
SOILS Map Unit Nam		Glynwood silt loam											
SOILS Map Unit Nam Profile Descri	ption (Describe to			n the absence o			ation, D=Depletion, RM=Reduced Matrix, CS		ains; Location: PL=F	Pore Lining, M=Matrix)	1		
SOILS Map Unit Nam Profile Descri	ption (Describe to Bottom	the depth needed to document the in	dicator or confin	m the absence o	f indicators.) (Ty		Red	ox Features	,	1	(Texture	
SOILS Map Unit Nam Profile Descri Top Depth	ption (Describe to Bottom Depth	the depth needed to document the in	Color	Matrix (Moist)	f indicators.) (Ty	pe: C=Concentra		ox Features %	ains; Location: PL=F	Pore Lining, M=Matrix) Location		ay, sand	d, loam)
SOILS Map Unit Nam Profile Descri Top Depth 0	Ption (Describe to Bottom Depth	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist)	f indicators.) (Ty	pe: C=Concentra	Color (Moist)	ox Features % 	Type 	Location 	silt	ay, sand ty clay lo	d, loam) oam
SOILS Map Unit Nam Profile Descri Top Depth 0 12	Bottom Depth 12 18	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 3/2 3/2	% 100 95	pe: C=Concentra	Color (Moist) 5/4	ox Features % 5	Type C	Location M	silt	ay, sand ty clay lo silty cla	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0	Ption (Describe to Bottom Depth	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist)	f indicators.) (Ty	pe: C=Concentra	Color (Moist)	ox Features % 	Type 	Location 	silt	ay, sand ty clay lo	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12	Bottom Depth 12 18	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 3/2 3/2	% 100 95	pe: C=Concentra	Color (Moist) 5/4	ox Features % 5	Type C	Location M	silt	ay, sand ty clay lo silty cla	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18	Ption (Describe to Bottom Depth 12 18 20	the depth needed to document the in Horizon 1 2 3	Color 10YR 10YR 10YR	Matrix (Moist) 3/2 3/2 4/2	% 100 95 70	 10YR 10YR	Color (Moist) 5/4 5/4	% 5 30	Type C C	Location M M	silt	ay, sand ty clay lo silty cla silty cla	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18	ption (Describe to Bottom Depth 12 18 20	Horizon 1 2 3	Color 10YR 10YR 10YR	Matrix (Moist) 3/2 3/2 4/2	% 100 95 70	 10YR 10YR	Color (Moist) 5/4 5/4	ox Features	Type C C	Location M M	silt	ay, sand ty clay lo silty cla silty cla	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18	ption (Describe to Bottom Depth 12 18 20	Horizon 1 2 3	Color 10YR 10YR 10YR	Matrix (Moist) 3/2 3/2 4/2	% 100 95 70	10YR 10YR	Red Color (Moist) 5/4 5/4 	ox Features	Type C C	Location M M	silt	ay, sand ty clay lo silty cla silty cla 	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18	ption (Describe to Bottom Depth 12 18 20	Horizon 1 2 3	Color 10YR 10YR 10YR	m the absence of Matrix (Moist) 3/2 3/2 4/2	% 100 95 70		Red Color (Moist) 5/4 5/4 	ox Features	Type C C	Location M M	silt	ay, sand ty clay lo silty cla silty cla 	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	ption (Describe to Bottom Depth 12 18 20	Horizon 1 2 3	Color 10YR 10YR 10YR	m the absence of Matrix (Moist) 3/2 3/2 4/2 icators a	9% 100 95 70 re not pre		Red Color (Moist) 5/4 5/4):	x Features	Type C C	Location M M	silt	ay, sand ty clay lo silty cla silty cla 	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	ption (Describe to Bottom Depth 12 18 20	Horizon 1 2 3 ndicators (check he	Color 10YR 10YR 10YR	m the absence of Matrix (Moist) 3/2 3/2 4/2 icators a	9% 100 95 70 re not pre	10YR 10YR 10YR	Red Color (Moist) 5/4 5/4):	ox Features	Type C C for Problen	Location M M Prairie Redox	silt	ay, sand ty clay lo silty cla silty cla 	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	ption (Describe to Bottom Depth 12 18 20	Horizon 1 2 3 ndicators (check he	Color 10YR 10YR 10YR	m the absence of Matrix (Moist) 3/2 3/2 4/2 icators a	% 100 95 70 re not pre S4 - Sanc S5 - Sanc	10YR 10YR 10YR	Red Color (Moist) 5/4 5/4): Matrix	ox Features	Type C C	Location M M	silt	ay, sand ty clay lo silty cla silty cla 	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	ption (Describe to Bottom Depth 12 18 20	Horizon 1 2 3 ndicators (check he	Color 10YR 10YR 10YR	m the absence or Matrix (Moist) 3/2 3/2 4/2 icators a	% 100 95 70 re not pre S4 - Sanc S6 - Stripi	10YR 10YR 10YR	Red Color (Moist) 5/4 5/4): Matrix	ox Features	Type C C for Problen A16 - Coast S7 - Dark S F12 - Iron-N	Location M M	silf	ay, sand ty clay lo silty cla silty cla 	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	ption (Describe to Park Institute of Section 12	Horizon Horizon 1 2 3	Color 10YR 10YR 10YR	m the absence or Matrix (Moist) 3/2 3/2 4/2 icators a	% 100 95 70 re not pre \$4 - Sanc \$5 - Sanc \$6 - Strip F1 - Loan	10YR 10YR 10YR	Red Color (Moist) 5/4 5/4): Matrix	ox Features	Type C C for Problem A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M M	silf	ay, sand ty clay lo silty cla silty cla 	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	ption (Describe to Park Institute of Park Instit	Horizon 1 2 3 ndicators (check he objeedon stic en Sulfide et Layers	Color 10YR 10YR 10YR	m the absence of Matrix (Moist) 3/2 3/2 4/2 icators a	% 100 95 70	10YR 10YR 10YR	Red Color (Moist) 5/4 5/4): Matrix Matrix	ox Features	Type C C for Problem A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M M	silf	ay, sand ty clay lo silty cla silty cla 	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	ption (Describe to Bottom Depth 12 18 20	Horizon 1 2 3 ndicators (check he objedon istic an Sulfide di Layers fluck ed Below Dark Surface	Color Color 10YR 10YR 10YR ere if ind	m the absence or Matrix (Moist) 3/2 3/2 4/2 icators a	% 100 95 70	pe: C=Concentri 10YR 10YR ty Gleyed dy Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su	Red Color (Moist) 5/4 5/4): Matrix ineral Matrix c	ox Features	Type C C for Problem A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M M	silf	ay, sand ty clay lo silty cla silty cla 	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	ption (Describe to Potential Potenti	Horizon 1 2 3	Color Color 10YR 10YR 10YR ere if ind	m the absence or Matrix (Moist) 3/2 3/2 4/2 icators a	% 100 95 70 re not pre S4 - Sanc S5 - Sanc S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redc F7 - Deple	10YR 10YR 10YR	Red Color (Moist) 5/4 5/4): Matrix : ineral Matrix (rface Surface	ox Features	Type C C for Problem A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M M	silf	ay, sand ty clay lo silty cla silty cla 	d, loam) oam y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	ption (Describe to Bottom Depth 12 18 20	the depth needed to document the in Horizon 1 2 3 ndicators (check he objecton stic an Sulfide d Layers fluck ed Below Dark Surface bluck Mireral	Color Color 10YR 10YR 10YR ere if ind	m the absence or Matrix (Moist) 3/2 3/2 4/2 icators a	% 100 95 70	10YR 10YR 10YR	Red Color (Moist) 5/4 5/4): Matrix : ineral Matrix (rface Surface	ox Features	Type C C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M M	silf	ay, sand ty clay lc silty cla silty cla 	d, loam) pam y y y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	ption (Describe to Bottom Depth 12 18 20	Horizon 1 2 3	Color Color 10YR 10YR 10YR ere if ind	m the absence of Matrix (Moist) 3/2 3/2 4/2 icators a	% 100 95 70	10YR 10YR 10YR	Red Color (Moist) 5/4 5/4): Matrix : ineral Matrix (rface Surface	ox Features % 5 30 Indicators Indicators of hydrophy	Type C C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M M	silf silf	ay, sand y clay lc silty cla silty cla 	d, loam) pam y y y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	ption (Describe to Bottom Depth 12 18 20	Horizon 1 2 3 ndicators (check he objector stic en Sulfide d Layers fluck ded Below Dark Surface Dark Surface Dark Surface fluck Mineral ucky Peat or Peat	Color Color 10YR 10YR 10YR ere if ind	m the absence or Matrix (Moist) 3/2 3/2 4/2 icators a	% 100 95 70	10YR 10YR 10YR	Red Color (Moist) 5/4 5/4): Matrix : ineral Matrix (rface Surface	ox Features	Type C C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M M	silf	ay, sand y clay lc silty cla silty cla 	d, loam) pam y y y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	Describe to	Horizon 1 2 3 ndicators (check he objector stic en Sulfide d Layers fluck ded Below Dark Surface Dark Surface Dark Surface fluck Mineral ucky Peat or Peat	Color Color 10YR 10YR 10YR ere if ind	m the absence of Matrix (Moist) 3/2 3/2 4/2 icators a	% 100 95 70	10YR 10YR 10YR	Red Color (Moist) 5/4 5/4): Matrix : ineral Matrix (rface Surface	ox Features % 5 30 Indicators Indicators of hydrophy	Type C C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M M	silf silf	ay, sand y clay lc silty cla silty cla 	d, loam) pam y y y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	Describe to	Horizon 1 2 3 ndicators (check he objector stic en Sulfide d Layers fluck ded Below Dark Surface Dark Surface Dark Surface fluck Mineral ucky Peat or Peat	Color Color 10YR 10YR 10YR ere if ind	m the absence of Matrix (Moist) 3/2 3/2 4/2 icators a	% 100 95 70	10YR 10YR 10YR	Red Color (Moist) 5/4 5/4): Matrix : ineral Matrix (rface Surface	ox Features % 5 30 Indicators Indicators of hydrophy	Type C C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M M	silf silf	ay, sand y clay lc silty cla silty cla 	d, loam) pam y y y
SOILS Map Unit Nam Profile Descri Top Depth 0 12 18 NRCS Hydric	Describe to	Horizon 1 2 3 ndicators (check he objector stic en Sulfide d Layers fluck ded Below Dark Surface Dark Surface Dark Surface fluck Mineral ucky Peat or Peat	Color Color 10YR 10YR 10YR ere if ind	m the absence of Matrix (Moist) 3/2 3/2 4/2 icators a	% 100 95 70	10YR 10YR 10YR	Red Color (Moist) 5/4 5/4): Matrix : ineral Matrix (rface Surface	ox Features % 5 30 Indicators Indicators of hydrophy	Type C C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M M	silf silf	ay, sand y clay lc silty cla silty cla 	d, loam) pam y y y



Project/Site: Wetland ID: N/A Sample Point: SP03 Marion County Solar Project **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) % Cover Dominant Ind.Status Dominance Test Worksheet Species Name Number of Dominant Species that are OBL, FACW, or FAC: ____0 (A) 2 3. 4. Total Number of Dominant Species Across All Strata: 1 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B) Prevalence Index Worksheet 8 9. Total % Cover of: __ Multiply by: 10. OBL spp. x 1 = Total Cover = FACW spp. 0 x 2 = FAC spp. 0 x 3 =Sapling/Shrub Stratum (Plot size: 15 ft radius) x 4 = FACU spp. UPL spp. 95 x 5= 475 2. 3. Total 95 (A) 475 4. 5. Prevalence Index = B/A = 5.000 6. 7. **Hydrophytic Vegetation Indicators:** 8. 9. Rapid Test for Hydrophytic Vegetation ☐ Yes ✓ No 10. ☐ Yes ✓ No Dominance Test is > 50% Total Cover = 0 ☐ Yes ☑ No Prevalence Index is ≤ 3.0 * □ No ☐ Yes Morphological Adaptations (Explain) * Herb Stratum (Plot size: 5 ft radius) ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) * Glycine max UPL 95 * Indicators of hydric soil and wetland hydrology must be 2. present, unless disturbed or problematic. 3. **Definitions of Vegetation Strata:** 4. --5. Tree - Woody plants 3 in. (7.6cm) or more in diameter at 6 breast height (DBH), regardless of height. 7. 8. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 9 10. 11. Herb - All herbaceous (non-woody) plants, regardless of size, 12 and woody plants less than 3.28 ft. tall. 13 14. Woody Vines - All woody vines greater than 3.28 ft. in height. 15. Total Cover = 95 Woody Vine Stratum (Plot size: 30 ft radius) 1. --2. 3. Hydrophytic Vegetation Present ☐ Yes ☑ No 4. 5. Total Cover = 0 Remarks: Vegetation disturbed from mowing and agriculture, 5% open ground **Additional Remarks:**



Remarks:

WETLAND DETERMINATION DATA FORM Midwest Region

						М	idwest Region				
Drain at/Cita	Marian Car	unti Calan Dunia at					Ctantas Dusiant #	0000440044		Deter	00/44/00
Project/Site:		unty Solar Project	1.0				Stantec Project #:	2028113241		Date:	09/11/20
Applicant:		unty Solar Project, L	LC							County:	Marion
Investigator #1					igator #2:			DECAA		State:	Ohio
Soil Unit:		lty clay loam, occasi	onally fic				NWI/WWI Classification	n: PFO1A		Wetland ID:	Wetland 2
Landform:	Floodplain				al Relief:		=			Sample Point:	
Slope (%):	0	Latitude:			ongitude:			Datum:		Community ID:	
Are climatic/hy	drologic cond	ditions on the site ty	pical for	this time	e of year?	(If no, expla	ain in remarks)	□ Yes □	No	Section:	S5
Are Vegetation	□ , Soil □ ,	or Hydrology sig	nificantly	disturb	ed?		Are normal circumsta	ances present?	?	Township:	T5S
Are Vegetation	□ , Soil □ ,	or Hydrology nat	turally pr	oblemat	ic?		Yes	No		Range:	R15 Dir: E
SUMMARY OF	FINDINGS	, ,,									
Hydrophytic Ve	getation Pre	sent?		Yes	□ No			Hydric Soils	Present?		∞ Yes □ No
Wetland Hydro				Yes						Within A Wetla	
Remarks:		•							<u>-</u>		
rtemarks.											
LIVEROLOGY											
HYDROLOGY											
Wetland Hydr	ology Indica	ators (Check here if	indicato	rs are n	ot present	t -):					
Primary	<u>:</u>								Secondary:	<u>-</u>	
	A1 - Surface	Water			B9 - Wate	r-Stained	Leaves			B6 - Surface So	oil Cracks
	A2 - High Wa	ater Table			B13 - Aqu				•	B10 - Drainage	
	A3 - Saturati				B14 - True					C2 - Dry-Seaso	
	B1 - Water M				C1 - Hydr					C8 - Crayfish B	
	B2 - Sedime			Ø			spheres on Living Roots				Visible on Aerial Imagery
	B3 - Drift De						educed Iron				Stressed Plants
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorph	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutr	ral Test
		on Visible on Aerial Ima	0 ,	0	D9 - Gaug						
	B8 - Sparsel	y Vegetated Concave S	urface		Other (Exp	plain in Re	emarks)				
Field Observa	tions:										
Surface Water	Present?	□ Yes □ No	Depth:	2	(in.)			Watland Hu	dralamı Dı	*************	Yes • No
Water Table Pr	esent?	□ Yes □ No	Depth:	0	(in.)			Wetland Hy	urology Pi	resent? "	res a No
Saturation Pres	sent?	□ Yes □ No	Depth:	0	(in.)						
			<u>'</u>		. ,						
Describe Record	led Data (stre	eam gauge, monitoring	g well, ae	rial photo	s, previous	s inspecti	ons), if available:		N/A		
Remarks:											
SOILS											
Map Unit Name	٥.	Saranac silty clay lo	nam occ	asionall	v flooded						
							tion, D=Depletion, RM=Reduced Matrix, CS	-0	inno I nontino DI -D	ton Lining Maddata	
		the depth needed to document the ind	icator or confirm			e: C=Concentrat			ins; Location: PL=P	ore Lining, M=Matrix)	Texture
Тор	Bottom			Matrix				lox Features			
Depth	Depth	Horizon		(Moist)	%		Color (Moist)	%	Туре	Location	(e.g. clay, sand, loam)
0	3	1	10YR	3/2	100						loam
3	10	2	10YR	3/2	94	5YR	4/6	4	С	PL	loam
		2				10YR	3/6	2	С	PL	loam
10	20		10YR	3/2	92	5YR	4/6	8	C	PL	loam
	+				+			0			•
NRCS Hydric	Soil Field Ir	ndicators (check he	re if indi	cators a	re not pre	sent -):	Indicators	for Probler	matic Soils 1	
	A1- Histosol	,			S4 - Sand	v Gleved	, Matrix			t Prairie Redox	
	A2 - Histic E	pipedon			S5 - Sand	, ,			S7 - Dark S		
	A3 - Black H				S6 - Stripp					//anganese Mass	es
	A4 - Hydroge				F1 - Loam					Shallow Dark S	
	A5 - Stratifie				F2 - Loam					ain in Remarks)	
	A10 - 2 cm M				F3 - Deple				(_ ,,p)		
		ed Below Dark Surface		•	F6 - Redo						
	A12 - Thick [F7 - Deple						
	S1 - Sandy N			_	F8 - Redo						
		ucky Peat or Peat				_ 561000	-	1 Indicators of hydrophyt	tic vegetation and v	vetland hydrology must be	e present, unless disturbed or problematic.
Restrictive Layer		-		D	NI/A			Unada: O ::	D (C		V N
(If Observed)	Type:	N/A		Depth:	N/A			Hydric Soil	Present?		Yes No
<u> </u>											



Wetland ID: Wetland 2 Sample Point: SP04 Project/Site: Marion County Solar Project **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) Species Name % Cover Dominant Ind.Status **Dominance Test Worksheet FACW** Acer saccharinum 60 2. Number of Dominant Species that are OBL, FACW, or FAC: 4 (A) 3. 4 Total Number of Dominant Species Across All Strata: 4 (B) 5. __ __ 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) Prevalence Index Worksheet 8 9. Total % Cover of: Multiply by: 10. OBL spp. x 1 = x 2 = Total Cover = FACW spp. 0 FAC spp. x 3 = Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. x 4 = Acer saccharinum 5 **FACW** UPL spp. 0 x 5 = 2 3. 0 0 Total (A) 4. 5 Prevalence Index = B/A = 6. 7. **Hydrophytic Vegetation Indicators:** 8 9. Yes No Rapid Test for Hydrophytic Vegetation 10. □ No Dominance Test is > 50% Yes Total Cover = Prevalence Index is ≤ 3.0 * Yes □ No □ No Morphological Adaptations (Explain) * Yes Herb Stratum (Plot size: 5 ft radius) □ No Problem Hydrophytic Vegetation (Explain) * Yes Persicaria punctata 35 OBL * Indicators of hydric soil and wetland hydrology must be **FACW** 2. Pilea pumila 25 Υ present, unless disturbed or problematic. 3. Lycopus americanus 10 N OBL **Definitions of Vegetation Strata:** 4. 5 Ν OBL Salix nigra 5 10 **FACW** Phalaris arundinacea N Lysimachia nummularia Tree - Woody plants 3 in. (7.6cm) or more in diameter at 6 15 Ν **FACW** breast height (DBH), regardless of height. 8 Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 9 ft. tall. 10. 11. Herb - All herbaceous (non-woody) plants, regardless of size, 12. and woody plants less than 3.28 ft. tall. 13 14. Woody Vines - All woody vines greater than 3.28 ft. in height. 15. --Total Cover = 100 Woody Vine Stratum (Plot size: 30 ft radius) 2 3. Hydrophytic Vegetation Present

Yes

No 4 5. Total Cover = 0 Remarks: Vegetation disturbed from mowing

Additional Remarks:		



Applicant: Investigator #1: Soil Unit:	Marion Cou Angela Sjo	unty Solar Project unty Solar Project, L Ilema clay loam, occasionally		Invest	igator #2:		Stantec Project #: ater IWI/WWI Classification:	2028113241 PFO1A		Date: County: State: Wetland ID:	09/09/2 Marion Ohio Wetlar		
Landform:	Terrace				al Relief:					Sample Point:			
Slope (%):	0	Latitude:			ongitude:			Datum:		Community ID:		i	
		ditions on the site ty				(If no, expl			No	Section:	S5		
		or Hydrology ☐ sig					Are normal circumstar	•	?	Township:	T5S	5.	_
		or Hydrology □ nat	urally pr	oblemat	IC?		☑ Yes	N□		Range:	R15	Dir:	Е
SUMMARY OF				- V	_ N-			Llordei - O - il-	D			_ V	E N.
Hydrophytic Veg Wetland Hydrol				☐ Yes				Hydric Soils		Within A Wetl		□ Yes	☑ No
		<u>.r</u> significant rainfall o	vernight	□ Yes	<u> </u>			is this sain	piling Point	within A wet	anu :	■ Yes	□ NO
HYDROLOGY													
		ators (Check here i	f indicat	ors are r	not preser	nt☑):							
	A1 - Surface A2 - High Wa A3 - Saturatii B1 - Water M B2 - Sedime B3 - Drift Dep B4 - Algal Ma B5 - Iron Dep B7 - Inundatii B8 - Sparsely	ater Table on Marks nt Deposits posits at or Crust			C4 - Pres	latic Fauna e Aquatic ogen Sulfi ized Rhizo ence of Ro ent Iron Re Muck Suri ge or Well	a Plants de Odor spheres on Living Roots educed Iron sduction in Tilled Soils face Data			B6 - Surface So B10 - Drainage C2 - Dry-Seasc C8 - Crayfish B C9 - Saturation D1 - Stunted or D2 - Geomorph D5 - FAC-Neutr	Patterns on Water currows Visible of Stressed nic Position	Table n Aerial I d Plants	magery
Field Observat Surface Water I Water Table Pro Saturation Pres	Present? esent? ent?	Yes No Yes No	Depth: Depth: Depth:	0	(in.) (in.) (in.)			Wetland Hy	drology Pr	resent?	l Yes	☑ No	
Describe Record	ed Data (str	eam gauge, monitorii	ng well, a	aerial pho	otos, previ	ous inspe	ections), if available:		N/A				
Remarks:													
SOILS													
Map Unit Name		Saranac silty clay lo											
		the depth needed to document the inc	dicator or confin			pe: C=Concentra	ation, D=Depletion, RM=Reduced Matrix, CS=0		rains; Location: PL=P	ore Lining, M=Matrix)	1	T 4	
Top	Bottom	11	0-1	Matrix				x Features	T	Lasation	(0.0.0	Textur	e d, loam)
Depth 0	Depth	Horizon 1		(Moist) 4/1	% 100		Color (Moist)	% 	Type 	Location	· ·	-	
	20	<u> </u>	10YR	4/1	100						SII	ty clay l	oam
		-					-						
Restrictive Layer	A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplete A12 - Thick I S1 - Sandy M	istic en Sulfide d Layers Muck ed Below Dark Surface Dark Surface Muck Mineral ucky Peat or Peat	ere if ind		S4 - Sand S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple F8 - Redo	ly Gleyed ly Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	Matrix iineral Matrix c rface Surface sions		S7 - Dark Si F12 - Iron-M TF12 - Very Other (Expla	Prairie Redox urface langanese Mass Shallow Dark S ain in Remarks)	urface		or problematic
(If Observed)	.,,,,,				•			,					
Remarks:													



Project/Site: Wetland ID: Wetland 2 Sample Point: SP05 Marion County Solar Project **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) % Cover Dominant Ind.Status Dominance Test Worksheet Species Name 2 Number of Dominant Species that are OBL, FACW, or FAC: 0 (A) 3. 4. Total Number of Dominant Species Across All Strata: 2 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B) Prevalence Index Worksheet 8 9. Total % Cover of: __ Multiply by: 10. OBL spp. x 1 = Total Cover = FACW spp. 10 x 2 = x 3 = FAC spp. 5 15 x 4 = Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. 20 80 15 FACU Gleditsia triacanthos UPL spp. 80 x 5= 400 2. 3. Total 115 (A) 515 4 5. Prevalence Index = B/A = 4.478 6. 7. **Hydrophytic Vegetation Indicators:** 8. 9. ☐ Yes ✓ No Rapid Test for Hydrophytic Vegetation 10. ☐ Yes ✓ No Dominance Test is > 50% Total Cover = 15 ☐ Yes ☑ No Prevalence Index is ≤ 3.0 * □ No ☐ Yes Morphological Adaptations (Explain) * Herb Stratum (Plot size: 5 ft radius) ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) * Solidago canadensis UPL 80 * Indicators of hydric soil and wetland hydrology must be 2. Phalaris arundinacea 5 Ν **FACW** present, unless disturbed or problematic. FAC 3. Andropogon gerardii 5 Ν FACU **Definitions of Vegetation Strata:** 4. Sorghastrum nutans 5 Ν 5. 5 Ν **FACW** Fraxinus pennsylvanica Tree - Woody plants 3 in. (7.6cm) or more in diameter at 6 breast height (DBH), regardless of height. 7. 8. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 9 10. 11. Herb - All herbaceous (non-woody) plants, regardless of size, 12 and woody plants less than 3.28 ft. tall. 13 14. Woody Vines - All woody vines greater than 3.28 ft. in height. 15.

Additional Remarks:			

Hydrophytic Vegetation Present ☐ Yes ☑ No

--

Total Cover =

Total Cover =

Woody Vine Stratum (Plot size: 30 ft radius)

1.

2.

4. 5.

Remarks:

100



Project/Site:		unty Solar Project					Stantec Project #:	2028113241		Date:	09/11/	20	
Applicant:	Marion Co	unty Solar Project, L	.LC							County:	Mario	า	
Investigator #1:	Angela Sjo	llema		Investi	gator #2:	Julie Sla	ater			State:	Ohio		
Soil Unit:	Saranac si	Ity clay loam, occas	ionally fl	ooded		N	IWI/WWI Classification:	N/A		Wetland ID:	Wetla	nd 3	
Landform:	Depression				al Relief:	Concav	е			Sample Point:	SP06		
Slope (%):	0	Latitude:	40.6314	L	ongitude:	-83.16537		Datum:		Community ID:			
		ditions on the site ty	pical for	this time				☑ Yes □	No	Section:	S5		
		or Hydrology ☐ sig				(,	Are normal circumsta			Township:	T5S		
		or Hydrology □ nat					✓ Yes	N□		Range:	R15	Dir:	Е
SUMMARY OF		or riyarology in ha	urany pr	obicinat	10:		<u> </u>	110		rtange.	1110	DII.	
Hydrophytic Ve		+0		□ V	_ N-			Lludaia Caila	Dunnanto			□ V	□ Na
				☑ Yes				Hydric Soils		A/:41-: A \A/-41	IO	Yes ✓	
Wetland Hydrol	logy Present	[/			□ No			is This Samp	oling Point	Within A Wetl	and?	✓ Yes	■ NO
Remarks:													
HYDROLOGY													
Wetland Hydr	ology Indic	ators (Check here i	f indicat	ors are r	ot preser	nt□):							
Primary		ators (Oncon nere i	i iiiaioat	oro are r	iot prosor	/.			Secondary:				
	A1 - Surface	Water			B9 - Wate	r-Stained	Leaves			B6 - Surface So	oil Crack	s	
	A2 - High Wa	ater Table			B13 - Aqu	atic Fauna	a			B10 - Drainage	Patterns	5	
	A3 - Saturati				B14 - True					C2 - Dry-Seaso		Table	
	B1 - Water N				C1 - Hydro					C8 - Crayfish B			
	B2 - Sedime						spheres on Living Roots			C9 - Saturation			Imagery
	B3 - Drift De						educed Iron			D1 - Stunted or			
	B4 - Algal Ma						eduction in Tilled Soils			D2 - Geomorph		on	
	B5 - Iron Dep				C7 - Thin				Ā	D5 - FAC-Neuti	rai i est		
		on Visible on Aerial Ima v Vegetated Concave S			D9 - Gaug Other (Ex								
	bo - Sparser	y vegetated Concave S	unace	Ц	Other (EX	piaiii iii re	marks)						
Field Observed													
Field Observat													
Surface Water		☐ Yes ☑ No	Depth:	0	(in.)			Wetland Hy	drology Pr	esent?	Yes	П №	
Water Table Pr	esent?	☐ Yes ☑ No	Depth:	0	(in.)			Trottana my	u.o.ogy			_ 110	
Saturation Pres	ent?	☐ Yes ☑ No	Depth:	0	(in.)								
Describe Record	led Data (str	eam gauge, monitori	na well a	erial nho	ntos previo	nus insne	ections) if available:		N/A				
Remarks:	lou Buta (oti	oun gaago, monton	ng won, c	zonai pric	roo, provi	ouo mope	odonoj, ii avanabio.						
Remarks.													
0011.0													
SOILS													
Map Unit Name		Saranac silty clay lo											
Profile Descrip	otion (Describe to	the depth needed to document the in-	dicator or confin	m the absence of	f indicators.) (Typ	pe: C=Concentra	ation, D=Depletion, RM=Reduced Matrix, CS=	Covered/Coated Sand Gra	ains; Location: PL=P	ore Lining, M=Matrix)	,		
Тор	Bottom			Matrix			Redo	ox Features			1	Textur	е
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist)	%	Type	Location	(e.g. c	day, sar	nd, loam)
Ö	3	1	10YR	2/1	93	7.5YR	4/6	7	C	PL		silty cla	av
3	8	2	10YR	2/1	90	7.5YR	4/6	8	C	PL		silty cla	
		2				7.5YR	4/6	2	C	M			
	-										1	silty cla	•
8	20	3	10YR	2/1	90	7.5YR	4/6	10	С	PL	ļ	silty cla	ay
NRCS Hydric	Soil Field I	ndicators (check he	ere if ind	icators a	re not pre	esent 🗆)•	Indicators	for Problen	natic Soils 1	•		
	A1- Histosol	idicators (oncornic	,, C II III G		S4 - Sand					Prairie Redox			
	A2 - Histic E	ninedon			S5 - Sand				S7 - Dark Si				
	A3 - Black H				S6 - Stripp					langanese Mass	es		
	A4 - Hydroge				F1 - Loam					Shallow Dark S			
	A5 - Stratifie			_	F2 - Loam	•				in in Remarks)			
	A10 - 2 cm N				F3 - Deple				, ,	-,			
	A11 - Deplet	ed Below Dark Surface		V	F6 - Redo	x Dark Su	ırface						
	A12 - Thick [F7 - Deple								
	S1 - Sandy N				F8 - Redo	x Depress	sions						
	S3 - 5 cm Mi	ucky Peat or Peat						1 Indicators of hydrophy	tic vegetation and w	vetland hydrology must b	e present, ur	nless disturbed	d or problematic
Restrictive Layer	Type:	N/A		Depth:	N/A			Hydric Soil	Present?	V	Yes	□ No	
(If Observed)	туре.	19/1		Бериі.	1975			. Iyana dan	0001111		103		
Remarks:													
Ī													



Project/Site: Marion County Solar Project Wetland 1D: Wetland 3 Sample Point: SP06

EGETATION ree Stratum (P	(Species identified in all uppercase lot size: 30 ft radius)	are non-native spe	cies.)		
ee Stratum (1	Species Name	% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC: 1 (A)
3.					
4.					Total Number of Dominant Species Across All Strata: 1 (B)
5.					· ·
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp. $0 \times 1 = 0$
	Total	Cover = 0			FACW spp. $0 x 2 = 0$
					FAC spp. $0 \times 3 = 0$
pling/Shrub St	ratum (Plot size: 15 ft radius)				FACU spp. $0 x 4 = 0$
1.				-	UPL spp. $0 x 5 = 0$
2.					
3.					Total 0 (A) 0 (B)
4.					
5.					Prevalence Index = B/A = NA
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☑ Yes ☐ No Rapid Test for Hydrophytic Vegetation
10.				-	☑ Yes ☐ No Dominance Test is > 50%
	Total	Cover = 0			☐ Yes ☐ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
rb Stratum (Pl	ot size: 5 ft radius)				☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	Phalaris arundinacea	20	N	FACW	*
2.	Lysimachia nummularia	90	Υ	FACW	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3.	Agrostis stolonifera	10	N	FACW	present, unless disturbed of problematic.
4.				-	Definitions of Vegetation Strata:
5.				-	
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.				-	breast height (DBH), regardless of height.
8.				-	
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.
10.					II. GAII.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size,
13.					and woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total	Cover = 120			
oody Vine Stra	tum (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present ☑ Yes ☐ No
4.					
5.					
	Total	Cover = 0			
emarks:					



Remarks:

WETLAND DETERMINATION DATA FORM Midwest Region

										Г_	
Project/Site:		unty Solar Project					Stantec Project #:	2028113241		Date:	09/11/20
Applicant:		unty Solar Project, I	LLC							County:	Marion
Investigator #1:	: Angela Sjo	llema		Invest	igator #2:					State:	Ohio
Soil Unit:	Saranac silty	clay loam, occasional	ly flooded			1	IWI/WWI Classification	n: N/A		Wetland ID:	Wetland 3
Landform:	Terrace			Loc	cal Relief:	Linear				Sample Point:	SP07
Slope (%):	0		40.6315	L	ongitude:	-83.16549	6	Datum:		Community ID:	Upland
Are climatic/hyd	drologic con	ditions on the site ty	pical for	this time	e of year?	(If no, expla	in in remarks)	□ Yes □	No	Section:	S5
Are Vegetation			nificantly				Are normal circumsta	ances present?)	Township:	T5S
Are Vegetation			turally pr				□ Yes	Nto		Range:	R15 Dir: E
SUMMARY OF		or riyarology Tid	ituruny pr	obioma			, , ,			rtango.	TTTO BII. E
		t0		Vac	. No			Hydric Soils	Dunnanto		Vac - Na
Hydrophytic Ve					s □ No					\^/: :	□ Yes □ No
Wetland Hydrol	0,			Yes	s □ No			is this samp	ning Point	Within A Wetl	and? • Yes • No
Remarks:	There was	significant rainfall o	vernight.								
HYDROLOGY											
	ology Indio	ators (Check here i	findicate	re are n	ot procont	· _ \•					
•	••	ators (Check here i	IIIuicaic	15 ale 11	ot presem	ι _□).			C		
Primary:		10/-4			DO 14/-4-	(4-:			Secondary:		-il Consiler
	A1 - Surface A2 - High Wa				B9 - Wate					20 041.400 04	
	A2 - Figit Wa				B13 - Aqu B14 - True					B10 - Drainage C2 - Dry-Seaso	
	B1 - Water N										
	B1 - Water N B2 - Sedime				C1 - Hydro		spheres on Living Roots			C8 - Crayfish B	urrows Visible on Aerial Imagery
	B2 - Sedime B3 - Drift De	•					spheres on Living Roots				Stressed Plants
	B4 - Algal M						duction in Tilled Soils		_	D2 - Geomorph	
	B5 - Iron Der				C7 - Thin					D5 - FAC-Neuti	
		on Visible on Aerial Im	agery		D9 - Gaug				_	D3 - FAC-Neuti	ai rest
		y Vegetated Concave S	0 ,		Other (Ex						
2	Do - Sparser	y vegetated Concave t	Juliace	_	Other (LA	piaiii iii ixe	marks)				
Field Observat	tions:										
		- V N-	Daniel.	0	(in)						
Surface Water		□ Yes □ No	Depth:	0	(in.)			Wetland Hy	drology Pr	resent? •	Yes No
Water Table Pr		□ Yes ☑ No	Depth:	0	(in.)						
Saturation Pres	sent?	□ Yes □ No	Depth:	0	(in.)						
Describe Record	led Data (stre	eam gauge, monitorin	g well ae	rial photo	s previous	s inspecti	ons) if available:		N/A		
Remarks:	(gg-,	y ,		-, F		,				
itemarks.											
SOILS											
Map Unit Name		Saranac silty clay I	oom oo	acional	v floodod						
							on, D=Depletion, RM=Reduced Matrix, CS=				
		the depth needed to document the in	dicator or confirm			e: C=Concentrat			ns; Location: PL=P	ore Lining, M=Matrix)	T
Тор	Bottom			Matrix	1			lox Features			Texture
Depth	Depth	Horizon		(Moist)	%		Color (Moist)	%	Type	Location	(e.g. clay, sand, loam
0	7	1	10YR	3/2	100						silty clay
7	18	2	10YR	4/3	68	5YR	4/6	5	С	M	sandy clay
		2				10YR	3/1	15	D	M	
						10111		10		IVI	sandy clay
		2				7.5YR	5/8	12	C	M	sandy clay sandy clay
	+			1							
		2				7.5YR	5/8	12	С	M	sandy clay
		2 2				7.5YR 5YR	5/8 4/6 3/1 5/8	12 5	C	M PL	sandy clay sandy clay
 18 	 20 	2 2 3 	 10YR 	 4/3 	 20 	7.5YR 5YR 10YR 7.5YR	5/8 4/6 3/1 5/8	12 5 10 70	C C D C	M PL M M	sandy clay sandy clay sandy clay
 18 NRCS Hydric	 20 Soil Field Ir	2 2 3 	 10YR 	 4/3 	 20 re not pres	7.5YR 5YR 10YR 7.5YR sent @	5/8 4/6 3/1 5/8 	12 5 10 70 	C C D for Probler	M PL M M matic Soils 1	sandy clay sandy clay sandy clay sandy clay
 18 NRCS Hydric	20 Soil Field Ir	2 2 3 	 10YR 	 4/3 cators a	 20 re not pres	7.5YR 5YR 10YR 7.5YR sent y Gleyed	5/8 4/6 3/1 5/8 	12 5 10 70 	C D C for Probler A16 - Coast	M PL M M matic Soils Prairie Redox	sandy clay sandy clay sandy clay sandy clay
 18 NRCS Hydric	20 Soil Field Ir A1- Histosol A2 - Histic E	2 2 3 ndicators (check he	 10YR 	 4/3 cators a	 20 re not pres \$4 - Sand \$5 - Sand	7.5YR 5YR 10YR 7.5YR sent y Gleyed y Redox	5/8 4/6 3/1 5/8 	12 5 10 70 	C D C for Probler A16 - Coast S7 - Dark S	M PL M M M matic Soils 1 Prairie Redox urface	sandy clay sandy clay sandy clay sandy clay
 18 NRCS Hydric	20 2- Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H	2 2 3 ndicators (check he	 10YR 	 4/3 cators a	 20 re not pres \$4 - Sand \$5 - Sand \$6 - Stripp	7.5YR 5YR 10YR 7.5YR sent y Gleyed y Redox oed Matrix	5/8 4/6 3/1 5/8): Matrix	12 5 10 70 Indicators	C C D C for Probler A16 - Coast S7 - Dark S F12 - Iron-N	M PL M M matic Soils 1 Prairie Redox urface Manganese Mass	sandy clay sandy clay sandy clay sandy clay
 18 NRCS Hydric	20 20 30il Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge	2 2 3 ndicators (check he	 10YR 	 4/3 cators a		7.5YR 5YR 10YR 7.5YR sent y Gleyed y Redox oed Matrix y Muck M	5/8 4/6 3/1 5/8): Matrix	12 5 10 70 	C C D C for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very	M PL M M matic Soils 1 Prairie Redox urface Manganese Mass Shallow Dark S	sandy clay sandy clay sandy clay sandy clay
 18 NRCS Hydric	20 20 20 30 Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie	2 3	 10YR 	 4/3 cators a		7.5YR 5YR 10YR 7.5YR sent y Gleyed y Redox y Redox y Muck M y Gleyed	5/8 4/6 3/1 5/8): Matrix	12 5 10 70 Indicators	C C D C for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very	M PL M M matic Soils 1 Prairie Redox urface Manganese Mass	sandy clay sandy clay sandy clay sandy clay
 18 NRCS Hydric	Soil Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M	2 2 3	10YR ere if indi	 4/3 cators a		7.5YR 5YR 10YR 7.5YR sent a y Gleyed y Redox y Gleyed Matrix y Muck M y Gleyed Matrix	5/8 4/6 3/1 5/8): Matrix neral Matrix	12 5 10 70 	C C D C for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very	M PL M M matic Soils 1 Prairie Redox urface Manganese Mass Shallow Dark S	sandy clay sandy clay sandy clay sandy clay
18 NRCS Hydric	20 20 30i Field Ir A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroga A5 - Stratifie A10 - 2 cm N A11 - Deplet	2 2 3 ndicators (check he pipedon sistic en Sulfide d Layers luck ed Below Dark Surface	10YR ere if indi	4/3 cators a		7.5YR 5YR 10YR 7.5YR	5/8 4/6 3/1 5/8): Matrix Ineral Matrix Inface	12 5 10 70 	C C D C for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very	M PL M M matic Soils 1 Prairie Redox urface Manganese Mass Shallow Dark S	sandy clay sandy clay sandy clay sandy clay
18 NRCS Hydric	20 20 30 41- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A11 - Deplet A12 - Thick I	2 2 3 ndicators (check here) pipedon istic en Sulfide d Layers Muck ed Below Dark Surface Dark Surface	10YR ere if indi	4/3 ccators a		7.5YR 5YR 10YR 7.5YR	5/8 4/6 3/1 5/8): Matrix ineral Matrix : face Surface	12 5 10 70 	C C D C for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very	M PL M M matic Soils 1 Prairie Redox urface Manganese Mass Shallow Dark S	sandy clay sandy clay sandy clay sandy clay
18 NRCS Hydric		2 2 3	10YR ere if indi	4/3 cators a		7.5YR 5YR 10YR 7.5YR	5/8 4/6 3/1 5/8): Matrix ineral Matrix : face Surface	12 5 10 70 Indicators	C C D C for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	M PL M M matic Soils Prairie Redox urface Manganese Mass Shallow Dark S ain in Remarks)	sandy clay sandy clay sandy clay sandy clay es urface
 18 NRCS Hydric		2 2 3 ndicators (check here) pipedon istic en Sulfide d Layers Muck ed Below Dark Surface Dark Surface	10YR ere if indi	4/3 ccators a		7.5YR 5YR 10YR 7.5YR	5/8 4/6 3/1 5/8): Matrix ineral Matrix : face Surface	12 5 10 70 Indicators	C C D C for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	M PL M M matic Soils Prairie Redox urface Manganese Mass Shallow Dark S ain in Remarks)	sandy clay sandy clay sandy clay sandy clay es urface
18 NRCS Hydric		2 3 ndicators (check here) pipedon istic pistic d Layers Muck ded Below Dark Surface Muck Mineral ucky Peat or Peat	10YR ere if indi	4/3 ccators a		7.5YR 5YR 10YR 7.5YR	5/8 4/6 3/1 5/8): Matrix ineral Matrix : face Surface	12 5 10 70 Indicators	C C D C for Probler A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Explain	M PL M M matic Soils Prairie Redox urface Manganese Mass Shallow Dark S ain in Remarks)	sandy clay sandy clay sandy clay sandy clay



Project/Site: Marion County Solar Project Wetland 3 Sample Point: SP07

VEGETATION	(Species identified in all uppercase are non-n	ative spec	cies.)		
	ot size: 30 ft radius)		/-		
,	Species Name	% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:0 (A)
3.					
4.					Total Number of Dominant Species Across All Strata:(B)
5.					
6.					Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
7.					
8.					Prevalence Index Worksheet
9. 10.					<u>Total % Cover of:</u> OBL spp. 0
10.	Total Cover =	0			···
	Total Cover –	U			FACW spp. 10
Sanling/Shruh Str	atum (Plot size: 15 ft radius)				FACU spp. 85 x 4 = 340
1.					UPL spp. 0 x 5 = 0
2.					
3.					Total 100 (A) 375 (B)
4.					
5.					Prevalence Index = B/A = 3.750
6.					
7.					
8.					Hydrophytic Vegetation Indicators:
9.					 Yes No Rapid Test for Hydrophytic Vegetation
10.					Yes No Dominance Test is > 50%
	Total Cover =	0			Yes No Prevalence Index is ≤ 3.0 *
					 Yes No Morphological Adaptations (Explain) *
•	ot size: 5 ft radius)	70		FAOLL	□ Yes □ No Problem Hydrophytic Vegetation (Explain) *
1.	Sorghastrum nutans	70	Y	FACU	* Indicators of hydric soil and wetland hydrology must be
2. 3.	Fraxinus pennsylvanica	10	N	FACU	present, unless disturbed or problematic.
3. 4.	Solidago canadensis Andropogon gerardii	15 5	N N	FACU FAC	Definitions of Vegetation Strata:
5.				FAC	Definitions of Vegetation Strata.
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.					breast height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.					ft. tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size,
13.					and woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover =	100			
•	rum (Plot size: 30 ft radius)				
1.					
2.					
3.					Hydrophytic Vegetation Present Yes No
4.					
5.	Tabal Carrain				
Damanka	Total Cover =	0			
Remarks:					

Additional	Remarks:
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Project/Site:												
		unty Solar Project					Stantec Project #:	2028113241		Date:	09/11/20	
Applicant:	Marion Cou	unty Solar Project, L	LC							County:	Marion	
Investigator #1:				Investi	gator #2:					State:	Ohio	
Soil Unit:	Saranac silty	clay loam, occasionally fl	ooded			N	WI/WWI Classification:	: PEM1C		Wetland ID:	Wetland 4	
Landform:	Depression	1		Loc	al Relief:	Concave)			Sample Point:	SP08	
Slope (%):	0	Latitude:			ongitude:			Datum:		Community ID:	PEM	
Are climatic/hyd	drologic cond	ditions on the site ty	pical for	this time	of year?	(If no, expla	in in remarks)		No	Section:	S5	
Are Vegetation	□, Soil □,	or Hydrology □ sig	nificantly	disturbe	ed?		Are normal circumsta	nces present?	?	Township:	T5S	
Are Vegetation	\square , Soil \square ,	or Hydrology □ nat	turally pr	oblemati	ic?		Yes	N□		Range:	R15 Dir:	E
SUMMARY OF	FINDINGS											
Hydrophytic Ve	getation Pre	sent?			□ No			Hydric Soils	Present?			□ No
Wetland Hydro				☑ Yes				Is This Samp	oling Point	Within A Wetl	and? 🛮 Yes	■ No
Remarks:	Sample pt	for PEM community	of wetla	ind comp	olex							
HYDROLOGY												
Wetland Hydr	ology Indic	ators (Check here i	if indicate	ors are n	ot preser	nt□):						
Primary		atoro (oriocit ricio)	ii iiiaioat	010 010 11	ot procor	,.			Secondary:			
	A1 - Surface	Water			B9 - Wate	r-Stained	_eaves			B6 - Surface So	oil Cracks	
	A2 - High Wa				B13 - Aqu					B10 - Drainage		
	A3 - Saturation				B14 - True					C2 - Dry-Seaso	n Water Table	
	B1 - Water M B2 - Sedimer				C1 - Hydr		spheres on Living Roots			C8 - Crayfish B		Imageny
	B3 - Drift De						duced Iron			D1 - Stunted or		
-							duction in Tilled Soils			D2 - Geomorph		
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutr	al Test	
		on Visible on Aerial Ima			D9 - Gaug							
□	B8 - Sparsely	y Vegetated Concave S	surrace	Ц	Other (Ex	piain in Re	marks)					
Field Observe	4!											
Field Observa				•	<i>(</i> : \							
Surface Water		☐ Yes ☑ No	Depth:	0	(in.)			Wetland Hy	drology Pr	esent?	Yes □ No	
Water Table Pr		☐ Yes ☑ No	Depth:		(in.)			•	•			
Saturation Pres	sent?	☐ Yes ☑ No	Depth:	0	(in.)							
Describe Record	ded Data (str	eam gauge, monitori	ng well, a	aerial pho	tos, previ	ous inspe	ctions), if available:		N/A			
Remarks:												
SOILS												
Map Unit Name		Saranac silty clay lo										
Map Unit Name						pe: C=Concentra	ion, D=Depletion, RM=Reduced Matrix, CS=	=Covered/Coated Sand Gra	ains; Location: PL=F	ore Lining, M=Matrix)		
Map Unit Name						pe: C=Concentra		=Covered/Coated Sand Gra	ains; Location: PL=P	ore Lining, M=Matrix)	Textu	
Map Unit Name Profile Descri	otion (Describe to		dicator or confirm	n the absence o		pe: C=Concentra			ains; Location: PL=F	ore Lining, M=Matrix) Location	Textu (e.g. clay, sa	
Map Unit Name Profile Descri	Potion (Describe to Bottom	the depth needed to document the in-	dicator or confirm	m the absence of Matrix	f indicators.) (Ty	pe: C=Concentra	Redo	ox Features			1	nd, loam)
Map Unit Name Profile Descrip Top Depth	Depth	the depth needed to document the in	dicator or confirm	Matrix (Moist)	f indicators.) (Type		Color (Moist)	ox Features %	Туре	Location	(e.g. clay, sa	nd, loam) loam
Map Unit Name Profile Descrip Top Depth 0	Bottom Depth	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist)	f indicators.) (Type 100 % 100		Color (Moist)	ox Features % 	Type 	Location 	(e.g. clay, sa silty clay silty clay	nd, loam) loam loam
Map Unit Name Profile Descrip Top Depth 0 3	Bottom (Describe to Bottom Depth 3	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 2/2 3/2	% 100 94	 5YR	Color (Moist) 4/6	%	Type C	Location PL	(e.g. clay, sa silty clay silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7	Bottom Depth 3 7 15	the depth needed to document the in Horizon 1 2 3	Color 10YR 10YR 10YR	Matrix (Moist) 2/2 3/2 3/2	% 100 94 90	 5YR 5YR	Color (Moist) 4/6 4/6	% 6 10	Type C C	Location PL PL	(e.g. clay, sa silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15	Potion (Describe to Bottom Depth 3 7 15 20	the depth needed to document the in Horizon 1 2 3 4	Color 10YR 10YR 10YR 10YR	Matrix (Moist) 2/2 3/2 3/2 3/2	% 100 94 90 92	 5YR 5YR 7.5YR	Color (Moist) 4/6 4/6 5/6	% 6 10 8	Type C C C	Location PL PL M	(e.g. clay, sa silty clay silty clay silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15	Deption (Describe to Bottom Depth 3 7 15 20	the depth needed to document the in Horizon 1 2 3 4	Color 10YR 10YR 10YR 10YR	m the absence of Matrix (Moist) 2/2 3/2 3/2 3/2 3/2	% 100 94 90 92	 5YR 5YR 7.5YR 	Redd Color (Moist) 4/6 4/6 5/6	% 6 10 8	Type C C C	Location PL PL M	(e.g. clay, sa silty clay silty clay silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15	Ption (Describe to Bottom Depth 3 7 15 20	the depth needed to document the in Horizon 1 2 3 4	Color 10YR 10YR 10YR 10YR	Matrix (Moist) 2/2 3/2 3/2 3/2 3/2	% 100 94 90 92	5YR 5YR 5YR 7.5YR	Color (Moist) 4/6 4/6 5/6	% 6 10 8	Type C C C	Location PL PL M	(e.g. clay, sa silty clay silty clay silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15	ption (Describe to Bottom Depth 3 7 15 20	the depth needed to document the in Horizon 1 2 3 4	Color 10YR 10YR 10YR 10YR	m the absence of Matrix (Moist) 2/2 3/2 3/2 3/2	% 100 94 90 92	 5YR 5YR 7.5YR 	Redd Color (Moist) 4/6 4/6 5/6	% 6 10 8	Type C C C	Location PL PL M	(e.g. clay, sa silty clay silty clay silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15 NRCS Hydric	ption (Describe to Bottom Depth 3 7 15 20 Soil Field In	the depth needed to document the in Horizon 1 2 3 4	Color 10YR 10YR 10YR 10YR	m the absence of Matrix (Moist) 2/2 3/2 3/2 3/2 icators a	% 100 94 90 92 re not pre	 5YR 5YR 7.5YR 	Redd Color (Moist) 4/6 4/6 5/6):	% Features % 6 10 8 8 Indicators	Type C C C for Problem	Location PL PL M natic Soils 1	(e.g. clay, sa silty clay silty clay silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15 NRCS Hydric	ption (Describe to Bottom Depth 3 7 15 20	Horizon 1 2 3 4 ndicators (check he	Color 10YR 10YR 10YR 10YR	m the absence or Matrix (Moist) 2/2 3/2 3/2 3/2 icators a	% 100 94 90 92	 5YR 5YR 7.5YR esent □	Redo Color (Moist) 4/6 4/6 5/6):	Section Sect	Type C C C for Problem	Location PL PL M	(e.g. clay, sa silty clay silty clay silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15 NRCS Hydric	ption (Describe to Bottom Depth 3 7 15 20 Soil Field It A1- Histosol	Horizon 1 2 3 4 ndicators (check he	Color 10YR 10YR 10YR 10YR	m the absence or Matrix (Moist) 2/2 3/2 3/2 3/2 icators a	% 100 94 90 92 re not pre S4 - Sand S6 - Stripi	5YR 5YR 7.5YR	Redd Color (Moist) 4/6 4/6 5/6 /: //atrix	0x Features	Type C C for Problen A16 - Coast S7 - Dark St F12 - Iron-N	Location PL PL M stic Soils Prairie Redox urface anganese Mass	(e.g. clay, sa silty clay silty clay silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15 NRCS Hydric	ption (Describe to Bottom Depth 3 7 15 20 Soil Field In A1- Histosoi A2 - Histic El A3 - Black H A4 - Hydroge	Horizon 1 2 3 4 ndicators (check he	Color 10YR 10YR 10YR 10YR	m the absence or Matrix (Moist) 2/2 3/2 3/2 3/2 icators a	% 100 94 90 92 re not pre \$4 - Sand \$5 - Sand \$6 - Stripp[F1 - Loarn	5YR 5YR 7.5YR y Gleyed I y Redox y Redox y Muck Muck Muck Muck Muck Muck Muck Muck	Redo Color (Moist) 4/6 4/6 5/6	0x Features	Type C C C for Problem A16 - Coast S7 - Dark S0 F12 - Iron-M TF12 - Very	Location PL PL M natic Soils Prairie Redox urface anganese Mass Shallow Dark Si	(e.g. clay, sa silty clay silty clay silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15 NRCS Hydric	ption (Describe to Bottom Depth 3 7 15 20 Soil Field It A1- Histosol A2 - Histic E, A3 - Black H 4- Hydroge A5 - Stratified	Horizon 1 2 3 4 ndicators (check he objeedon stic en Sulfide d Layers	Color 10YR 10YR 10YR 10YR	m the absence or Matrix (Moist) 2/2 3/2 3/2 3/2	% 100 94 90 92 re not pre S4 - Sand S5 - Sand S6 - Strip F1 - Loarn F2 - Loarn	5YR 5YR 7.5YR seent □ y Gleyed I y Redox only Muck Matrix by Muck Muy Gleyed	Redd Color (Moist) 4/6 4/6 5/6): datrix	0x Features	Type C C C for Problem A16 - Coast S7 - Dark S0 F12 - Iron-M TF12 - Very	Location PL PL M stic Soils Prairie Redox urface anganese Mass	(e.g. clay, sa silty clay silty clay silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15 NRCS Hydric	ption (Describe to Bottom Depth 3 7 15 20 Soil Field In A1 - Histosol A2 - Histic El A3 - Black Hi A4 - Hydroge A5 - Stratified A10 - 2 cm M	Horizon 1 2 3 4 ndicators (check he	Color Color 10YR 10YR 10YR 10YR ere if indi	m the absence or Matrix (Moist) 2/2 3/2 3/2 3/2 icators a	% 100 94 90 92 re not pre S4 - Sand S5 - Sand S6 - Stripl F1 - Loarr F3 - Deple	5YR 5YR 7.5YR esent □ y Gleyed I y Redox oed Matrix y Muck My Gleyed teed Matrix	Redo Color (Moist) 4/6 4/6 5/6): Matrix neral Matrix	0x Features	Type C C C for Problem A16 - Coast S7 - Dark S0 F12 - Iron-M TF12 - Very	Location PL PL M natic Soils Prairie Redox urface anganese Mass Shallow Dark Si	(e.g. clay, sa silty clay silty clay silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15 NRCS Hydric	ption (Describe to Bottom Depth 3 7 7 15 20 Soil Field Ir A1- Histosol A2 - Histic E, A3 - Black H A4 - Hydroge A5 - Stratifiee A10 - 2 cm M A11 - Deplete	Horizon 1 2 3 4 ndicators (check here) cipiedon istic en Sulfide d1 Layers luck ed Below Dark Surface	Color Color 10YR 10YR 10YR 10YR ere if indi	m the absence or Matrix (Moist) 2/2 3/2 3/2 3/2 icators a	% 100 94 90 92 re not pre \$5 - Sand \$6 - Stript \$1 - Loam \$7 - Loam \$7 - Redoctors \$1 - Redoctors \$2 - Redoctors \$3 - Redoctors \$4 - Redoctors \$4 - Redoctors \$5 - Redoctors \$5 - Redoctors \$6 - Redoctors \$	5YR 5YR 7.5YR y Gleyed I y Redox oped Matrix yn Muck Mmy Muck Mmy Muck Mmy Seleyed	Redo Color (Moist) 4/6 4/6 5/6): Matrix neral Matrix face	0x Features	Type C C C for Problem A16 - Coast S7 - Dark S0 F12 - Iron-M TF12 - Very	Location PL PL M natic Soils Prairie Redox urface anganese Mass Shallow Dark Si	(e.g. clay, sa silty clay silty clay silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15 NRCS Hydric	ption (Describe to Bottom Depth 3 7 15 20 Soil Field Ir A1 - Histosol A2 - Histosol A3 - Stratifie A4 - Hydroge A5 - Stratifie A11 - Deplet A12 - Thick I	Horizon 1 2 3 4	Color Color 10YR 10YR 10YR 10YR ere if indi	m the absence or Matrix (Moist) 2/2 3/2 3/2 3/2 icators a	% 100 94 90 92 re not pre S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - RedG F7 - Deple F7 - Deple	5YR 5YR 7.5YR seent □ 1 y Gleyed I y Redox y Muck M y Gleyed d Atrix x Dark Su eted Dark	Redo Color (Moist) 4/6 4/6 5/6): // Autrix face Surface Surface	0x Features	Type C C C for Problem A16 - Coast S7 - Dark S0 F12 - Iron-M TF12 - Very	Location PL PL M natic Soils Prairie Redox urface anganese Mass Shallow Dark Si	(e.g. clay, sa silty clay silty clay silty clay silty clay	nd, loam) loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15 NRCS Hydric	ption (Describe to Bottom Depth 3 7 15 20 Soil Field It A1- Histosol A2 - Histic E, A3 - Black H 4 - Hydroge A5 - Stratifler A10 - 2 cm M A11 - Deplet A12 - Thick [S1 - Sandy M S1 - Sandy M	Horizon 1 2 3 4	Color Color 10YR 10YR 10YR 10YR ere if indi	m the absence or Matrix (Moist) 2/2 3/2 3/2 3/2 icators a	% 100 94 90 92 re not pre \$5 - Sand \$6 - Stript \$1 - Loam \$7 - Loam \$7 - Redoctors \$1 - Redoctors \$2 - Redoctors \$3 - Redoctors \$4 - Redoctors \$4 - Redoctors \$5 - Redoctors \$5 - Redoctors \$6 - Redoctors \$	5YR 5YR 7.5YR seent □ 1 y Gleyed I y Redox y Muck M y Gleyed d Atrix x Dark Su eted Dark	Redo Color (Moist) 4/6 4/6 5/6): // Autrix face Surface Surface	Section Sect	Type C C C for Problen A16 - Coast S7 - Dark St F12 - Iron-N Cher (Expla	Location PL PL M natic Soils Prairie Redox urface anganese Mass Shallow Dark Si	(e.g. clay, sa silty clay silty clay silty clay silty clay 	nd, Ioam) loam loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15 NRCS Hydric	ption (Describe to Bottom Depth 3 7 15 20 Soil Field It A1- Histosol A3 - Black H A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A10 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to B1 - Sandy M S3 -	Horizon 1 2 3 4 ndicators (check here) bipedon stic en Sulfide d Layers duck ed Below Dark Surface Dark Surface fluck Mineral ucky Peat or Peat	Color Color 10YR 10YR 10YR 10YR ere if indi	m the absence or Matrix (Moist) 2/2 3/2 3/2 3/2 icators a	% 100 94 90 92 re not pre S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redc F7 - Deple F8 - Redc	5YR 5YR 7.5YR seent □ 1 y Gleyed I y Redox y Muck M y Gleyed d Atrix x Dark Su eted Dark	Redo Color (Moist) 4/6 4/6 5/6): // Autrix face Surface Surface	ox Features % 6 10 8 Indicators Indicators of hydrophy	Type C C C for Problen A16 - Coast S7 - Dark St F12 - Iron-N TF12 - Very Other (Expla	Location PL PL M satic Soils ¹ Prairie Redox urface anganese Mass Shallow Dark Si ain in Remarks)	(e.g. clay, sa silty clay silty clay silty clay silty clay es es urface	nd, Ioam) loam loam loam loam
Map Unit Name Profile Descri Top Depth 0 3 7 15 NRCS Hydric	ption (Describe to Bottom Depth 3 7 15 20 Soil Field It A1- Histosol A2 - Histic E, A3 - Black H 4 - Hydroge A5 - Stratifler A10 - 2 cm M A11 - Deplet A12 - Thick [S1 - Sandy M S1 - Sandy M	Horizon 1 2 3 4 ndicators (check here) bipedon stic en Sulfide d Layers duck ed Below Dark Surface Dark Surface fluck Mineral ucky Peat or Peat	Color Color 10YR 10YR 10YR 10YR ere if indi	m the absence or Matrix (Moist) 2/2 3/2 3/2 3/2 icators a	% 100 94 90 92 re not pre S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redc F7 - Deple F8 - Redc	5YR 5YR 7.5YR seent □ 1 y Gleyed I y Redox y Muck M y Gleyed d Atrix x Dark Su eted Dark	Redo Color (Moist) 4/6 4/6 5/6): // Autrix face Surface Surface	Section Sect	Type C C C for Problen A16 - Coast S7 - Dark St F12 - Iron-N TF12 - Very Other (Expla	Location PL PL M satic Soils ¹ Prairie Redox urface anganese Mass Shallow Dark Si ain in Remarks)	(e.g. clay, sa silty clay silty clay silty clay silty clay 	nd, Ioam) loam loam loam loam
Map Unit Name Profile Descrip Top Depth 0 3 7 15 NRCS Hydric	ption (Describe to Bottom Depth 3 7 15 20 Soil Field It A1- Histosol A3 - Black H A4 - Hydroge A5 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A10 - Stratified A10 - 2 cm M A11 - Deplet A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to Bottom Depth A12 - Thick It S1 - Sandy M S3 - 5 cm M to B1 - Sandy M S3 -	Horizon 1 2 3 4 ndicators (check here) bipedon stic en Sulfide d Layers duck ed Below Dark Surface Dark Surface fluck Mineral ucky Peat or Peat	Color Color 10YR 10YR 10YR 10YR ere if indi	m the absence or Matrix (Moist) 2/2 3/2 3/2 3/2 icators a	% 100 94 90 92 re not pre S4 - Sand S6 - Stript F1 - Loam F2 - Loam F3 - Deple F6 - Redc F7 - Deple F8 - Redc	5YR 5YR 7.5YR seent □ 1 y Gleyed I y Redox y Muck M y Gleyed d Atrix x Dark Su eted Dark	Redo Color (Moist) 4/6 4/6 5/6): // Autrix face Surface Surface	ox Features % 6 10 8 Indicators Indicators of hydrophy	Type C C C for Problen A16 - Coast S7 - Dark St F12 - Iron-N TF12 - Very Other (Expla	Location PL PL M satic Soils ¹ Prairie Redox urface anganese Mass Shallow Dark Si ain in Remarks)	(e.g. clay, sa silty clay silty clay silty clay silty clay es es urface	nd, Ioam) loam loam loam loam
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Project/Site: Marion County Solar Project Wetland 4 Sample Point: SP08

VEGETATION	(Species identified in all uppercase are	non-native spe	cies.)		
Tree Stratum (Pl	ot size: 30 ft radius)				
	Species Name	% Cover	Dominant	Ind.Status	Dominance Test Worksheet
1.	Salix nigra	30	Υ	OBL	
2.					Number of Dominant Species that are OBL, FACW, or FAC:3(A)
3.					
4.				-	Total Number of Dominant Species Across All Strata:3(B)
5.				-	
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
7.					
8.					Prevalence Index Worksheet
9.					Total % Cover of: Multiply by:
10.					OBL spp 0 x 1 = 0
	Total Cov	ver = 30			FACW spp. 0 x 2 = 0
					FAC spp. $0 x 3 = 0$
Sapling/Shrub Str	atum (Plot size: 15 ft radius)				FACU spp. $0 x 4 = 0$
1.					UPL spp 0
2.					
3.					Total (A) (B)
4.				-	
5.				-	Prevalence Index = B/A = NA
6.				-	
7.				-	
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					☑ Yes ☐ No Dominance Test is > 50%
	Total Cov	/er = 0			Yes □ No Prevalence Index is ≤ 3.0 *
					☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (Plo	ot size: 5 ft radius)				☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	Echinochloa crus-galli	50	Υ	FACW	
2.	Phalaris arundinacea	40	Υ	FACW	* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3.	Acorus calamus	5	N	OBL	present, unless disturbed of problematic.
4.	Xanthium strumarium	5	N	FAC	Definitions of Vegetation Strata:
5.					
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.					breast height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.					ft. tall.
11.					
12.		-			Herb - All herbaceous (non-woody) plants, regardless of size,
13.					and woody plants less than 3.28 ft. tall.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cov	ver = 100			
Woody Vine Strat	um (Plot size: 30 ft radius)				
1.					
2.					
3.		-			Hydrophytic Vegetation Present ☑ Yes ☐ No
4.					, , , ,
5.					
	Total Cov				
Remarks:	Wetland is not dominated by trees		unity is a	PEM	
	,				

Additional Remarks:



Project/Site:	Marion Co	unty Solar Project					Stantec Project #:	2028113241		Date:	09/11/2	20
Applicant:	Marion Co	unty Solar Project, L	LC							County:	Marion	
Investigator #1	: Angela Sjo	llema		Investi	gator #2:	Julie Sla	ater			State:	Ohio	
Soil Unit:	Glynwood clar	/ loam, end moraine, 2-6	% slopes,	eroded		١	IWI/WWI Classification:	N/A		Wetland ID:	Wetlan	d 4
Landform:	Side slope				al Relief:	Linear				Sample Point:	SP09	
Slope (%):	3	Latitude:	40.6355	Lo	onaitude:	-83.16327		Datum:				
		ditions on the site ty			of vear?	(If no. expl	ain in remarks)	☑ Yes □	No	1		
		or Hydrology □ sig	•			(,	Are normal circumstar			1		
		or Hydrology ☐ sig					✓ Yes	N□				Dir: E
SUMMARY OF		or riyurology 🗀 na	turally pr	obicinat	10:		<u> </u>	110		rtange.	ICIO	DII. L
Hydrophytic Ve				□ V	_ N-			Lluduia Caila	Dunnanto			J Vaa 🖂 Na
, , ,	O .			☐ Yes				Hydric Soils		\A/:41-:		
Wetland Hydro				☐ Yes			.,	is This Sam	oling Point	within A weti	and?	J Yes ☑ No
Remarks:	There was	significant rainfall o	vernight	. Upland	point for	PEM co	mmunity					
HYDROLOGY												
Wetland Hyd	rology Indic	ators (Check here i	if indicate	ors are n	ot preser	nt [기):						
Primary		atoro (oriocit ricio)	ii iii aioat	oro aro ri	iot procoi	,,			Secondary:			
	A1 - Surface	Water			B9 - Wate	er-Stained	Leaves			B6 - Surface So	il Cracks	
	l A2 - High Wa	ater Table			B13 - Aqu	uatic Faun	a					
	A3 - Saturati				B14 - Tru					C2 - Dry-Seaso	n Water 1	Table
	B1 - Water N				C1 - Hydr							
	B2 - Sedime						spheres on Living Roots					
I =							educed Iron					
	9						duction in Tilled Soils					n
		oosแร on Visible on Aerial Ima			C7 - Thin D9 - Gau				Ц	D5 - FAC-Neutr	ai rest	
I -		Vegetated Concave S			Other (Ex							
	, bo oparooi,	y vogotatou conouve c	Juliuoo	_	Othor (Ex	piairi ii i k	markoj					
Field Observa	tions:											
				0	/: \							
Surface Water		☐ Yes ☑ No	Depth:		(in.)			Wetland Hy	drology Pi	resent?	Yes 5	☑ No
Water Table P		☐ Yes ☑ No	Depth:		(in.)			,		County: Marion State: Ohio Wetland ID: Wetland 4 Sample Point: SP09 Community ID: Upland Section: S5 Township: T5S Range: R15 Dir: E Person Programme Patterns C2 - Dry-Season Water Table C3 - Crayfish Burrows C4 - Cayfish Burrows C5 - Saturation Visible on Aerial Imagery C6 - Saturation Visible on Aerial Imagery C7 - Stunted or Stressed Plants C8 - Crayfish Burrows C9 - Saturation Visible on Aerial Imagery C9 - Saturation Visible on Aerial Image		
Saturation Pre	sent?	☐ Yes ☑ No	Depth:	0	(in.)						Inty: Marion Ide: Ohio Ide: Ohio Ide: Ohio Ide: Ohio Ide: Ohio Ide: Ohio Ide: SP09 Ide: SP09 Ide: SP09 Ide: Spon Ide	
Describe Recor	ded Data (str	eam gauge, monitori	ng well, a	aerial pho	tos, previ	ous inspe	ections), if available:		N/A			
		5 5 ,										
Remarks:						•						
Remarks:				-			,					
				·		·						
SOILS		Ohmun da landar			0.00/ -1	·						
SOILS Map Unit Nam		Glynwood clay loar				pes, eroc	ed					
SOILS Map Unit Nam Profile Descri	ption (Describe to			m the absence o		pes, eroc	ed ation, D=Depletion, RM=Reduced Matrix, CS=		ains; Location: PL=F	Pore Lining, M=Matrix)	I	-
SOILS Map Unit Nam	ption (Describe to Bottom		dicator or confirm	m the absence o	f indicators.) (Ty	pes, eroc	ed ition, D=Depletion, RM=Reduced Matrix, CS= Redc	x Features	ı	1		
SOILS Map Unit Nam Profile Descri	ption (Describe to		dicator or confirm	m the absence o		pes, eroc	ed ation, D=Depletion, RM=Reduced Matrix, CS=		ains; Location: PL=F	1	(e.g. cl	
SOILS Map Unit Nam Profile Descri	ption (Describe to Bottom	the depth needed to document the in	dicator or confirm	m the absence o	f indicators.) (Ty	pes, eroc	ed ition, D=Depletion, RM=Reduced Matrix, CS= Redc	x Features	ı	Location	(e.g. cl	ay, sand, loam)
SOILS Map Unit Nam Profile Descri Top Depth	ption (Describe to Bottom Depth	the depth needed to document the in	dicator or confineration Color 10YR	Matrix (Moist)	f indicators.) (Ty	Des, eroc	ed ation, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)	x Features %	Туре	Location	(e.g. cl	ay, sand, loam)
SOILS Map Unit Nam Profile Descri Top Depth 0	Bottom Depth 14	the depth needed to document the in Horizon 1 2	dicator or confirm	Matrix (Moist) 3/3	f indicators.) (Ty	Des, erocope: C=Concentr	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)	%	Type 	Location 	(e.g. cl	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14	Ption (Describe to Bottom Depth 14 20	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 3/3 4/3	% 100 100	pes C=Concentr	ed Notion, D=Depletion, RM=Reduced Matrix, CS= Redoc Color (Moist)	% Features	Type	Location 	(e.g. cl	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14	ption (Describe to Bottom Depth 14 20 	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 3/3 4/3	% 100 100	Des, eroc	ed tition, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)	% Features	Type	Location	(e.g. cl	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14	ption (Describe to Bottom Depth 14 20	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 3/3 4/3	% 100 100	Des, eroc	ed tition, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)	% Features	Type		(e.g. cl	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14	ption (Describe to Bottom Depth 14 20	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	m the absence of Matrix (Moist) 3/3 4/3	% 100 100	Des, erocentr	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redc Color (Moist)	% Features	Type		(e.g. cl	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14	ption (Describe to Bottom Depth 14 20	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 3/3 4/3	% 100 100	Des, eroc	ed tition, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)		Type		(e.g. cl	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14	ption (Describe to Bottom Depth 14 20	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	m the absence of Matrix (Moist) 3/3 4/3	% 100 100	Des, erocentr	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redc Color (Moist)		Type	Location	(e.g. cl	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14	ption (Describe to Bottom Depth 14 20	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	m the absence of Matrix (Moist) 3/3 4/3	% 100 100	Des, erocentr	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redc Color (Moist)	%	Type		(e.g. cl	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Bottom Depth 14 20 Soil Field II	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	m the absence or Matrix (Moist) 3/3 4/3 icators a	% 100 100 re not pre	Des, eroc	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)	% Indicators	Type for Problem	Location	(e.g. cl	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Bottom Depth 14 20 Soil Field II A1- Histosol	Horizon 1 2 ndicators (check he	Color 10YR 10YR	m the absence or Matrix (Moist) 3/3 4/3 icators a	% 100 100	Des, erocepe: C=Concentr	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)	Section	Type for Problem	Location	(e.g. cl	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Bottom Depth 14 20 Soil Field II A1- Histosol A2 - Histic E	Horizon 1 2 ndicators (check he	Color 10YR 10YR	m the absence or Matrix (Moist) 3/3 4/3 icators a	% 100 100	Des, erocepe: C=Concentr esent ② ty Gleyed ty Redox	ed Notion, D=Depletion, RM=Reduced Matrix, CS= Redoc Color (Moist)	x Features	Type for Problem A16 - Coast S7 - Dark S	Location		ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Bottom Depth 14 20 Soil Field II A1- Histosol A2 - Histic E, A3 - Black H	Horizon 1 2	Color 10YR 10YR	m the absence or Matrix (Moist) 3/3 4/3 icators a	% 100 100 re not pre S4 - Sanc S5 - Sanc	Des, erocepe: C=Concentr	ed tion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)	x Features %	Type for Problen A16 - Coast S7 - Dark S F12 - Iron-N	Location	es	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Bottom Depth 14 20 Soil Field II A1- Histosci A2 - Black H A4 - Hydroge	Horizon 1 2	Color 10YR 10YR	m the absence or Matrix (Moist) 3/3 4/3 icators a	%	Des, eroc pe: C=Concentr esent ☑ ty Gleyed ty Redox ped Matrib ny Muck N	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)): Matrix : ineral	%	Type for Problem A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location	es	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Bottom Depth 14 20	Horizon 1 2	Color 10YR 10YR	m the absence or Matrix (Moist) 3/3 4/3 icators a	% 100 100	Des, eroc per C=Concentr	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)): Matrix ineral Matrix	%	Type for Problem A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location	es	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Bottom Depth 14 20	Horizon 1 2	Color Color 10YR 10YR	m the absence of Matrix (Moist) 3/3 4/3 icators a	% 100 100 re not pre \$4 - Sanc \$5 - Sanc \$6 - Strip F1 - Loam F2 - Loam	Des, eroceps: C=Concentr	ed Ition, D=Depietion, RM=Reduced Matrix, CS= Redo Color (Moist)	%	Type for Problem A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location	es	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Potential Potenti	Horizon 1 2	Color Color 10YR 10YR	m the absence or Matrix (Moist) 3/3 4/3 icators a	% 100 100	Des, erocepe: C=Concentr	ed tion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)): Matrix Matrix K urface	%	Type for Problem A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location	es	ay, sand, loam) loam loam
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SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Bottom Depth 14 20	Horizon 1 2	Color Color 10YR 10YR	m the absence or Matrix (Moist) 3/3 4/3 icators a	% 100 100	Des, erocepe: C=Concentr	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)): Matrix : iineral Matrix c urface Surface sions	x Features % Indicators	Type	Location	es	ay, sand, loam) loam loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Bottom Depth 14 20	Horizon 1 2	Color Color 10YR 10YR	m the absence or Matrix (Moist) 3/3 4/3 icators a	%	Des, erocepe: C=Concentr	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)): Matrix : iineral Matrix c urface Surface sions	x Features %	Type for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location	es urface	ay, sand, loam) loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Bottom Depth 14 20	Horizon 1 2	Color Color 10YR 10YR	m the absence or Matrix (Moist) 3/3 4/3 icators a	% 100 100	Des, erocepe: C=Concentr	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)): Matrix : iineral Matrix c urface Surface sions	x Features % Indicators	Type for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location	es urface	ay, sand, loam) loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Bottom Depth 14 20	Horizon 1 2	Color Color 10YR 10YR	m the absence or Matrix (Moist) 3/3 4/3 icators a	%	Des, erocepe: C=Concentr	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)): Matrix : iineral Matrix c urface Surface sions	x Features %	Type for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location	es urface	ay, sand, loam) loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Bottom Depth 14 20	Horizon 1 2	Color Color 10YR 10YR	m the absence or Matrix (Moist) 3/3 4/3 icators a	%	Des, erocepe: C=Concentr	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)): Matrix : iineral Matrix c urface Surface sions	x Features %	Type for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location	es urface	ay, sand, loam) loam
SOILS Map Unit Nam Profile Descri Top Depth 0 14 NRCS Hydric	ption (Describe to Bottom Depth 14 20	Horizon 1 2	Color Color 10YR 10YR	m the absence or Matrix (Moist) 3/3 4/3 icators a	%	Des, erocepe: C=Concentr	ed stion, D=Depletion, RM=Reduced Matrix, CS= Redo Color (Moist)): Matrix : iineral Matrix c urface Surface sions	x Features %	Type for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location	es urface	ay, sand, loam) loam



Wetland ID: Wetland 4 Project/Site: Sample Point: SP09 Marion County Solar Project **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) Ind.Status Dominance Test Worksheet Species Name % Cover Dominant Prunus serotina **FACU** 15 2 Crataegus viridis 30 **FACW** Number of Dominant Species that are OBL, FACW, or FAC: 2 (A) 3. 4. Total Number of Dominant Species Across All Strata: 5 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B) Prevalence Index Worksheet 8 9. Total % Cover of: __ Multiply by: 10. OBL spp. x 1 = Total Cover = 45 FACW spp. 10 x 2 = 20 x 3 = FAC spp. 5 15 x 4 = Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. 85 70 **FACW** Crataegus viridis UPL spp. 0 x 5= 2. Lonicera morrowii 40 **FACU** 3. Total 100 (A) 375 4 5. Prevalence Index = B/A = 3.750 6. 7. **Hydrophytic Vegetation Indicators:** 8. 9. ☐ Yes ✓ No Rapid Test for Hydrophytic Vegetation 10. ☐ Yes ✓ No Dominance Test is > 50% Total Cover = ☑ No 110 ☐ Yes Prevalence Index is ≤ 3.0 * □ No ☐ Yes Morphological Adaptations (Explain) * Herb Stratum (Plot size: 5 ft radius) ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) * Lonicera morrowii FACU 40 * Indicators of hydric soil and wetland hydrology must be 2. present, unless disturbed or problematic. 3. **Definitions of Vegetation Strata:** 4. --5. Tree - Woody plants 3 in. (7.6cm) or more in diameter at 6 breast height (DBH), regardless of height. 7. 8. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 9 10. 11. Herb - All herbaceous (non-woody) plants, regardless of size, 12 and woody plants less than 3.28 ft. tall. 13 14. Woody Vines - All woody vines greater than 3.28 ft. in height. 15. Total Cover = 40 Woody Vine Stratum (Plot size: 30 ft radius) 1. --2. 3. Hydrophytic Vegetation Present ☐ Yes ☑ No 4. 5. Total Cover = 0 Remarks: Only approximately 40% open ground, due to dense rooted shrubs and trees

Additional Remarks:			



Project/Site: Applicant:		ınty Solar Project ınty Solar Project, I	LC				Stantec Project #:	2028113241		Date: County:	09/11/20 Marion	
Investigator #1				Invest	igator #2:	Julie Sla	ter			State:	Ohio	
Soil Unit:	Saranac silty	clay loam, occasionall	y flooded				WI/WWI Classification:	PEM1C		Wetland ID:	Wetland 4	
Landform:	Depression				cal Relief:)			Sample Point:		
Slope (%):	0	Latitude:			ongitude:			Datum:		Community ID:		
		ditions on the site ty				(If no, expla			No	Section:	S5	
		or Hydrology ☐ sig					Are normal circumsta	•	,	Township:	T5S	_
		or Hydrology 🛭 na	turally pr	oblemat	IIC'?		☑ Yes	N□		Range:	R15 Dir:	Е
SUMMARY OF Hydrophytic Ve		cont?		☑ Yes	s □ No			Hydric Soils	Drocont?			□ No
Wetland Hydro	•			☑ Yes						Within A Wetl		
Remarks:	Sample pt	for PSS community	of wetlan					is This Camp	Jillig i Ollic	vvidili A vved	and: — res	_ 110
		,										
HYDROLOGY												
Wetland Hydr	ology Indic	ators (Check here	if indicate	ors are r	not preser	nt□):						
Primary					.от р. ооо.	,.			Secondary:			
	A1 - Surface				B9 - Wate					B6 - Surface So		
	A2 - High Wa A3 - Saturation				B13 - Aqu B14 - Tru					B10 - Drainage C2 - Dry-Seaso		
					C1 - Hydr				ੂ	C8 - Crayfish B	urrows	
	B2 - Sedimer						spheres on Living Roots				Visible on Aerial Ir	magery
	B3 - Drift Dep B4 - Algal Ma				C4 - Pres		duced Iron duction in Tilled Soils			D1 - Stunted or D2 - Geomorph	Stressed Plants	
	B5 - Iron Dep				C7 - Thin					D5 - FAC-Neutr		
		on Visible on Aerial Ima			D9 - Gaug							
	B8 - Sparsely	/ Vegetated Concave S	Surface	Ц	Other (Ex	plain in Re	marks)					
Field Observa	tione:											
Surface Water		☐ Yes ☑ No	Depth:	0	(in.)							
Water Table Pr		☐ Yes ☑ No	Depth:	0	(in.)			Wetland Hy	drology Pr	resent? 🗵	Yes □ No	
Saturation Pres		☐ Yes ☑ No	Depth:	0	(in.)							
Describe Record	led Data (str	eam gauge, monitori	na well a	erial nho	` '	nus insne	ctions) if available:		N/A			
	ded Data (Sti	eam gauge, monitori	ng wen, a	ichai phi	otos, previ	ous mape	ctions), ii available.		14//-4			
Remarks:												
Remarks:												
Remarks: SOILS												
	e:	Saranac silty clay l	oam, occ	asionall	ly flooded							
SOILS Map Unit Name						oe: C=Concentra	ion, D=Depletion, RM=Reduced Matrix, CS=	=Covered/Coated Sand Gra	ains; Location: PL=P	Pore Lining, M=Matrix)		
SOILS Map Unit Name					of indicators.) (Ty	oe: C=Concentra	ion, D=Depletion, RM=Reduced Matrix, CS= RedC	Covered/Coated Sand Grace	ains; Location: PL=P	Pore Lining, M=Matrix)	Texture	
SOILS Map Unit Name Profile Descri	Bottom (Describe to Bottom Depth		dicator or confirm	Matrix (Moist)	of indicators.) (Ty	pe: C=Concentra			ains; Location: PL=F	Pore Lining, M=Matrix)	Texture (e.g. clay, sand	
SOILS Map Unit Name Profile Descrip Top Depth 0	Bottom Depth	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist)	of indicators.) (Ty		Color (Moist)	ox Features % 	Type 	Location 	(e.g. clay, sand	d, loam) oam
SOILS Map Unit Name Profile Descrip Top Depth 0 3	Bottom Depth 3 6	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 2/2 2/2	% 100 97	 5YR	Color (Moist) 4/6	%	Type C	Location PL	(e.g. clay, sand silty clay lo	d, loam) oam oam
SOILS Map Unit Name Profile Descrip Top Depth 0 3 6	Bottom Depth 3 6 14	the depth needed to document the in Horizon 1 2 3	Color (10YR 10YR 10YR	Matrix (Moist) 2/2 2/2 2/2	% 100 97 93	 5YR 7.5YR	Color (Moist) 4/6 4/6	% 3 2	Type C C	Location PL M	(e.g. clay, sand silty clay lo silty clay lo silty clay lo	d, loam) oam oam oam
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SOILS Map Unit Name Profile Descrip Top Depth 0 3 6 14	Bottom Depth 3 6 14 18	Horizon 1 2 3 3 4	Color 10YR 10YR 10YR 10YR 10YR 10YR	Matrix (Moist) 2/2 2/2 2/2 2/2 2/1	of indicators.) (Ty	 5YR 7.5YR 7.5YR	Color (Moist) 4/6 4/6 4/4	x Features	Type C C C	Location PL M M	(e.g. clay, sand silty clay lo silty clay lo silty clay lo silty clay lo	d, loam) pam pam pam pam pam pam pam
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SOILS Map Unit Name Profile Descrip Top Depth 0 3 6 14 18	Bottom Depth 3 6 14 18 20	Horizon 1 2 3 3 4 4 5 5	Color 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	Matrix (Moist) 2/2 2/2 2/2 2/1 3/1 2/1	% 100 97 93 60 40 94	 5YR 7.5YR 7.5YR 10YR 10YR	Redd Color (Moist) 4/6 4/6 4/6 4/4 5/3 5/8	% 3 2 5 5 1	Type C C C C C	Location PL M M M M	(e.g. clay, sand silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo	d, loam) pam pam pam pam pam pam pam
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SOILS Map Unit Name Profile Descrip Top Depth 0 3 6 14 18 NRCS Hydric	Detion (Describe to Bottom Depth 3 6 14 18 20 Soil Field Ir A1 - Histosol A2 - Histic Et A3 - Black Hi	Horizon 1 2 3 3 4 4 5 5 indicators (check heading to be proposed in the company of the company	Color 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	mthe absence or Matrix (Moist) 2/2 2/2 2/2 2/1 3/1 2/1 cators a	% 100 97 93 60 40 94 ser end pre- \$5-\$ Sance \$6-\$ Stripp.	5YR 7.5YR 7.5YR 10YR 10YR 10YR y Gleyed I y Redox sed Matrix	Redo Color (Moist) 4/6 4/6 4/6 4/4 5/3 5/8): Matrix	x Features	Type C C C C C for Problen A16 - Coast S7 - Dark St F12 - Iron-N	Location PL M M M M Prairie Redox urface	(e.g. clay, sand silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo	d, loam) pam pam pam pam pam pam pam
SOILS Map Unit Name Profile Descrip Top Depth 0 3 6 14 18 NRCS Hydric	Bottom Depth 3 6 14 18 20 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge	Horizon 1 2 3 3 4 4 5 5 ndicators (check heading to be proposed to sufficient sufficien	Color 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	mthe absence of Matrix (Moist) 2/2 2/2 2/2 2/1 3/1 2/1 cators a	% 100 97 93 60 40 94 are not pre \$4 - Sanc \$5 - Sanc \$5 - Strip F1 - Loan	5YR 7.5YR 7.5YR 7.5YR 10YR 10YR 10YR 29Sent □ y Gleyed I y Redox 29d Matrix, by Muck My	Redo Color (Moist) 4/6 4/6 4/6 4/4 5/3 5/8): //atrix	xx Features	Type C C C C C for Problen A16 - Coast S7 - Dark Si F12 - Iron-M	Location PL M M M M Prairic Soils Prairie Redox urface langanese Mass Shallow Dark S	(e.g. clay, sand silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo	d, loam) pam pam pam pam pam pam pam
SOILS Map Unit Name Profile Descrip Top Depth 0 3 6 14 18 NRCS Hydric	Bottom Depth 3 6 14 18 20 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge	Horizon 1 2 3 3 4 4 5 5 indicators (check he objeedon stic an Sulfide st Layers	Color 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	mthe absence or Matrix (Moist) 2/2 2/2 2/2 2/1 3/1 2/1 cators a	% 100 97 93 60 40 94 ser 84 - Sanc 85 - Sanc 86 - Strip F1 - Loar F2 - Loar F3 - Deph	5YR 7.5YR 7.5YR 10YR 10YR 10YR 2y Gleyed I y Redox J Muck Muck Muck Muck Muck Muck Muck Muck	Redo Color (Moist) 4/6 4/6 4/6 4/4 5/3 5/8): Matrix	xx Features	Type C C C C C for Problen A16 - Coast S7 - Dark Si F12 - Iron-M	Location PL M M M M Prairie Redox urface	(e.g. clay, sand silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo	d, loam) pam pam pam pam pam pam pam
SOILS Map Unit Name Profile Descri Top Depth 0 3 6 14 18 NRCS Hydric	Detion (Describe to Bottom Depth 3 6 14 18 20 20 Soil Field Ir A4 - Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifiee A10 - 2 cm M A11 - Deplete	Horizon 1 2 3 3 4 4 5 5 indicators (check he objedon stic en Sulfide di Layers fluck ed Below Dark Surface	Color 10YR	mthe absence or Matrix (Moist) 2/2 2/2 2/2 2/1 3/1 2/1 cators a	% 100 97 93 60 40 94 are not pre 55 - Sanc S6 - Strip F1 - Loan F2 - Loan F3 - Peplo F6 - Redo	5YR 7.5YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	Redo Color (Moist) 4/6 4/6 4/6 4/4 5/3 5/8): Matrix neral Matrix face	xx Features	Type C C C C C for Problen A16 - Coast S7 - Dark Si F12 - Iron-M	Location PL M M M M Prairic Soils Prairie Redox urface langanese Mass Shallow Dark S	(e.g. clay, sand silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo	d, loam) pam pam pam pam pam pam pam
SOILS Map Unit Name Profile Descrip Top Depth 0 3 6 14 18 NRCS Hydric	Bottom (Describe to Bottom Depth 3 6 14 18 20 Soil Field Ir A1 - Histosol A2 - Histos Histosol A3 - Stratified A4 - Hydroge A50 - Stratified A11 - Deplete A12 - Thick It Late Thick It La	Horizon 1 2 3 3 4 4 5 5 indicators (check horizoed in Sulfide di Layers fluck and Below Dark Surface Dark Surface Dark Surface Dark Surface	Color 10YR	mthe absence or Matrix (Moist) 2/2 2/2 2/2 2/1 3/1 2/1 cators a	% 100 97 93 60 40 94 ser end pre S4 - Sanc S6 - Sartip F1 - Loam F2 - Loam F3 - Deple F6 - Redc F7 - Deple	5YR 7.5YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	Redo Color (Moist) 4/6 4/6 4/6 4/4 5/3 5/8): Matrix neral Matrix face Surface	xx Features	Type C C C C C for Problen A16 - Coast S7 - Dark Si F12 - Iron-M	Location PL M M M M Prairic Soils Prairie Redox urface langanese Mass Shallow Dark S	(e.g. clay, sand silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo	d, loam) pam pam pam pam pam pam pam
SOILS Map Unit Name Profile Descri Top Depth 0 3 6 14 18 NRCS Hydric	Dotton (Describe to Bottom Depth 3 6 6 14 18 20 20 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifler A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M S1 - Sandy M	Horizon 1 2 3 3 4 4 5 5 indicators (check horizoed in Sulfide di Layers fluck and Below Dark Surface Dark Surface Dark Surface Dark Surface	Color 10YR	mthe absence or Matrix (Moist) 2/2 2/2 2/2 2/1 3/1 2/1 cators a	% 100 97 93 60 40 94 are not pre 55 - Sanc S6 - Strip F1 - Loan F2 - Loan F3 - Peplo F6 - Redo	5YR 7.5YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	Redo Color (Moist) 4/6 4/6 4/6 4/4 5/3 5/8): Matrix neral Matrix face Surface	x Features	Type C C C C C for Problen A16 - Coast S7 - Dark St F12 - Iron-N TF12 - Very Other (Expla	Location PL M M M M M Prairic Soils ¹ Prairie Redox urface danganese Mass Shallow Dark S ain in Remarks)	(e.g. clay, sand silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo silty clay lo	d, loam) pam
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SOILS Map Unit Name Profile Descri Top Depth 0 3 6 14 18 NRCS Hydric	Dotton (Describe to Bottom Depth 3 6 6 14 18 20 20 Soil Field Ir A1- Histosol A2 - Histic Ep A3 - Black Hi A4 - Hydroge A5 - Stratifler A10 - 2 cm M A11 - Deplett A12 - Thick E S1 - Sandy M S1 - Sandy M	Horizon 1 2 3 3 4 4 5 5 indicators (check hoppedon stice in Sulfide I Layers fluck and Below Dark Surface Dark Surface Dark Surface Luck Mineral acky Peat or Peat	Color 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	mthe absence or Matrix (Moist) 2/2 2/2 2/2 2/1 3/1 2/1 cators a	% 100 97 93 60 40 94 ser end pre S4 - Sance S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redc F7 - Deple F8 - Redc	5YR 7.5YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	Redo Color (Moist) 4/6 4/6 4/6 4/4 5/3 5/8): Matrix neral Matrix face Surface	x Features	Type C C C C C for Problen A16 - Coast S7 - Dark St F12 - Iron-N TF12 - Very Other (Expla	Location PL M M M M Prairie Redox urface langanese Mass Shallow Dark S ain in Remarks)	(e.g. clay, sand silty clay lo	d, loam) pam
SOILS Map Unit Name Profile Descri Top Depth 0 3 6 14 18 NRCS Hydric	Describe to Bottom Depth 3 6 14 18 20 Soil Field Ir A1- Histosol A2- Histos E4 A3- Black Hi A4- Hydroge A5- Stratifiev A11- Deplete A12- Thick E S1- Sandy M S3- 5 cm Mt	Horizon 1 2 3 3 4 4 5 5 indicators (check hoppedon stice in Sulfide I Layers fluck and Below Dark Surface Dark Surface Dark Surface Luck Mineral acky Peat or Peat	Color 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	mthe absence or Matrix (Moist) 2/2 2/2 2/2 2/1 3/1 2/1 cators a	% 100 97 93 60 40 94 ser end pre S4 - Sance S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redc F7 - Deple F8 - Redc	5YR 7.5YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	Redo Color (Moist) 4/6 4/6 4/6 4/4 5/3 5/8): Matrix neral Matrix face Surface	ox Features % 3 2 5 5 1 Indicators ' Indicators of hydrophy	Type C C C C C for Problen A16 - Coast S7 - Dark St F12 - Iron-N TF12 - Very Other (Expla	Location PL M M M M Prairie Redox urface langanese Mass Shallow Dark S ain in Remarks)	(e.g. clay, sand silty clay lo	d, loam) pam
SOILS Map Unit Name Profile Descri Top Depth 0 3 6 14 18 NRCS Hydric	Describe to Bottom Depth 3 6 14 18 20 Soil Field Ir A1- Histosol A2- Histos E4 A3- Black Hi A4- Hydroge A5- Stratifiev A11- Deplete A12- Thick E S1- Sandy M S3- 5 cm Mt	Horizon 1 2 3 3 4 4 5 5 indicators (check hoppedon stice in Sulfide I Layers fluck and Below Dark Surface Dark Surface Dark Surface Luck Mineral acky Peat or Peat	Color 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	mthe absence or Matrix (Moist) 2/2 2/2 2/2 2/1 3/1 2/1 cators a	% 100 97 93 60 40 94 ser end pre S4 - Sance S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redc F7 - Deple F8 - Redc	5YR 7.5YR 7.5YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR 10YR	Redo Color (Moist) 4/6 4/6 4/6 4/4 5/3 5/8): Matrix neral Matrix face Surface	ox Features % 3 2 5 5 1 Indicators ' Indicators of hydrophy	Type C C C C C for Problen A16 - Coast S7 - Dark St F12 - Iron-N TF12 - Very Other (Expla	Location PL M M M M Prairie Redox urface langanese Mass Shallow Dark S ain in Remarks)	(e.g. clay, sand silty clay lo	d, loam) pam



Project/Site: Marion County Solar Project Wetland ID: Wetland 4 Sample Point: SP10

EGETATION		ative spe	cies.)		
ree Stratum (Plot size: 30 ft radius)	~ ~			Deminance Test Werkshoot
4	Species Name		Dominant	Ind.Status	Dominance Test Worksheet
1.	Crataegus viridis	10	Y	FACW	
2.					Number of Dominant Species that are OBL, FACW, or FAC:(A)
3.					
4.					Total Number of Dominant Species Across All Strata:5(B)
5.				-	
6.					Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
7.				-	· · ·
8.					Prevalence Index Worksheet
9.				_	Total % Cover of: Multiply by:
10.					OBL spp. 0 x 1 = 0
10.	Total Cover =				FACW spp. 0 x 2 = 0
	Total Cover –	10			FAC spp. 0 x 3 = 0
!:/Cbb C	Martine (Dist airs of the diss)				· · ·
	Stratum (Plot size: 15 ft radius)	70	Y	FACW	FACU spp. 0 x 4 = 0
1.	Crataegus viridis				UPL spp0
2.					- (a)
3.					Total <u>0</u> (A) <u>0</u> (B)
4.					
5.					Prevalence Index = B/A = NA
6.					
7.				1	
8.			-		Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					☑ Yes ☐ No Dominance Test is > 50%
	Total Cover =				☐ Yes ☐ No Prevalence Index is ≤ 3.0 *
	Total Cover –	70			☐ Yes ☐ No Morphological Adaptations (Explain) *
Ctt /F	Distriction (F. #4 and district)				' 9 ' ' ' '
	Plot size: 5 ft radius) Bidens frondosa	20	Y	FACW	☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.		20		_	* Indicators of hydric soil and wetland hydrology must be
2.	Pilea pumila	20	Y	FACW	present, unless disturbed or problematic.
3.	Symphyotrichum lateriflorum	20	Υ	FACW	
4.	Persicaria punctata	10	N	OBL	Definitions of Vegetation Strata:
5.	Poa pratensis	10	N	FAC	
6	Lolium perenne	5	N	FACU	Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.	Boehmeria cylindrica	5	N	OBL	breast height (DBH), regardless of height.
8.				1	
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.					ft. tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size,
13.					and woody plants less than 3.28 ft. tall.
14.					
					Woody Vines - All woody vines greater than 3.28 ft. in height.
15.					WOODY VIIIes - All Woody Villes greater than 5.20 ft. If Height.
	Total Cover =	90			
	atum (Plot size: 30 ft radius)				
1.					
2.				-	
3.				-	Hydrophytic Vegetation Present ☑ Yes ☐ No
4.				-	
5.					
	Total Cover =	0			
lemarks:	10101 00701 -				
.cmanto.					
Additional R	emarks:				



Project/Site:	Marion Co	unty Solar Project					Stantec Project #:	2028113241		Date:	09/11/2	20	
Applicant:	Marion Co	unty Solar Project, L	LC							County:	Marion		
Investigator #1:	Angela Sjo	llema		Investi	igator #2:	Julie Sla	ater			State:	Ohio		
Soil Unit:	Saranac silty	clay loam, occasionall	y flooded			N	IWI/WWI Classification:	N/A		Wetland ID:	Wetlar	d 4	
Landform:	Side slope		•	Loc	al Relief:	Linear				Sample Point:	SP11		
Slope (%):	3	Latitude:	40.6346	L	ongitude:	-83.16399		Datum:		Community ID:		l	
		ditions on the site ty					ain in remarks)			Section:	S5		
		or Hydrology □ sig				(11 110, 034)	Are normal circumstar			Township:	T5S		
		or Hydrology ☐ sig					✓ Yes	N□		Range:	R15	Dir:	Е
SUMMARY OF		or riyurology 🗀 na	turany pr	oblemat	.10 !		□ 105	NO		Range.	IVIO	ЫI.	_
		10		- \					D 10			- V	
Hydrophytic Ve	0			☑ Yes				Hydric Soils				□ Yes	
Wetland Hydrol				☐ Yes				Is This Samp	oling Point	Within A Wetl	and'?	■ Yes	■ No
Remarks:	There was	significant rainfall o	vernight	. Upland	I point for	PSS cor	nmunity						
HYDROLOGY													
Wetland Hydro	ology Indic	ators (Check here i	if indicat	ors are r	not nreser	nt 🗔 🕦							
Primary:		ators (Oncor nore	ii iiidicat	ors are r	iot preser	<i>)</i> .			Secondary:				
	A1 - Surface	Water			B9 - Wate	r-Stained	Leaves			B6 - Surface So	oil Cracks		
	A2 - High Wa				B13 - Aqu					B10 - Drainage			
	A3 - Saturati	on			B14 - Tru	e Aquatic	Plants			C2 - Dry-Seaso	n Water	Table	
	B1 - Water N				C1 - Hydr					C8 - Crayfish B			
							spheres on Living Roots			C9 - Saturation			magery
	B3 - Drift De						educed Iron			D1 - Stunted or			
	B4 - Algal Ma						duction in Tilled Soils			D2 - Geomorph		n	
		อดรแร on Visible on Aerial Ima	ogon/		C7 - Thin D9 - Gau				Ш	D5 - FAC-Neutr	ai rest		
l H		Vegetated Concave S			Other (Ex								
	Во орагоог	y regulated contains t	Junuoo	_	Othor (Ex	piaiii iii i k	marks)						
Field Observat	tionor												
			.	0	/: \								
Surface Water		☐ Yes ☑ No	Depth:	0	(in.)			Wetland Hyd	drology Pi	esent?	Yes [☑ No	
Water Table Pr		☐ Yes ☑ No	Depth:	0	(in.)			•					
Saturation Pres	sent?	☐ Yes ☑ No	Depth:	0	(in.)								
Describe Record	led Data (str	eam gauge, monitori	ng well, a	aerial pho	otos, previ	ous inspe	ctions), if available:		N/A				
Remarks:													
SOILS													
Map Unit Name		Saranac silty clay le	000 00	agaignall	ly floodod								
		the depth needed to document the in	dicator or confin			pe: C=Concentra	ntion, D=Depletion, RM=Reduced Matrix, CS=0		nins; Location: PL=F	ore Lining, M=Matrix)	I	Texture	
Тор	Bottom			Matrix				x Features			/		
Depth	Depth	Horizon	_	(Moist)	%		Color (Moist)	%	Туре	Location	(e.g. c	ay, san	d, loam)
0	14	1	10YR	3/3	100				-			loam	
14	18	2	10YR	5/3	98	7.5YR	4/6	2	С	M		loam	
		-							-				
	1				+								
							-						
NDCC Uvdeia			ara if ind	icators a					for Problen				
		ndicators (check he	ere ii ina		C4 Cana	y Gleyed	Matrix		A16 - Coast	Prairie Redox			
	A1- Histosol	`	ere ii iiiu				viau ix			_			
	A1- Histosol A2 - Histic E	oipedon `	ere ii ina		S5 - Sand	y Redox			S7 - Dark S				
	A1- Histosol A2 - Histic E A3 - Black H	oipedon istic	ere ii iiid		S5 - Sand S6 - Strip	y Redox ped Matrix			F12 - Iron-M	langanese Mass			
	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge	pipedon istic en Sulfide	ere ii iiid		S5 - Sand S6 - Strip F1 - Loan	y Redox ped Matrix ny Muck M	ineral		F12 - Iron-M TF12 - Very	langanese Mass Shallow Dark S			
	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie	pipedon istic en Sulfide d Layers	ere II IIIa		S5 - Sand S6 - Strip F1 - Loan F2 - Loan	ly Redox ped Matrix ny Muck M ny Gleyed	ineral Matrix		F12 - Iron-M TF12 - Very	langanese Mass			
	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N	pipedon istic en Sulfide d Layers Muck			S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Deple	ly Redox ped Matrix ny Muck M ny Gleyed eted Matri:	ineral Matrix		F12 - Iron-M TF12 - Very	langanese Mass Shallow Dark S			
	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet	pipedon istic n Sulfide d Layers luck ed Below Dark Surface			S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo	ly Redox bed Matrix by Muck M by Gleyed eted Matrix ox Dark Su	ineral Matrix < rface		F12 - Iron-M TF12 - Very	langanese Mass Shallow Dark S			
	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydrogo A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I	oipedon istic on Sulfide d Layers fluck ed Below Dark Surface Dark Surface			S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo F7 - Deple	y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	ineral Matrix (rface Surface		F12 - Iron-M TF12 - Very	langanese Mass Shallow Dark S			
	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M	oipedon istic on Sulfide d Layers fluck ed Below Dark Surface Dark Surface			S5 - Sand S6 - Strip F1 - Loam F2 - Loam F3 - Deple F6 - Redo	y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	ineral Matrix (rface Surface sions		F12 - Iron-M TF12 - Very Other (Expla	langanese Mass Shallow Dark S	urface	ess disturbed	or problematic
	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm M	pipedon stic on Sulfide d Layers fuck ed Below Dark Surface Jark Surface fuck Mineral ucky Peat or Peat			S5 - Sand S6 - Strip F1 - Loan F2 - Loan F3 - Deple F6 - Redo F7 - Deple F8 - Redo	y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	ineral Matrix (rface Surface sions	¹ Indicators of hydrophy	F12 - Iron-M TF12 - Very Other (Expla	langanese Mass Shallow Dark S ain in Remarks)	urface		or problematic
, 00 00 00 00	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm M A11 - Deplet A12 - Thick I S1 - Sandy M	pipedon stic on Sulfide d Layers fuck ed Below Dark Surface Jark Surface fuck Mineral ucky Peat or Peat			S5 - Sand S6 - Strip F1 - Loan F2 - Loan F3 - Deple F6 - Redo F7 - Deple F8 - Redo	y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	ineral Matrix (rface Surface sions		F12 - Iron-M TF12 - Very Other (Expla	langanese Mass Shallow Dark S ain in Remarks)	urface		or problematic
Restrictive Layer	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm M	pipedon stic on Sulfide d Layers fuck ed Below Dark Surface Jark Surface fuck Mineral ucky Peat or Peat			S5 - Sand S6 - Strip F1 - Loan F2 - Loan F3 - Deple F6 - Redo F7 - Deple F8 - Redo	y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	ineral Matrix (rface Surface sions	¹ Indicators of hydrophy	F12 - Iron-M TF12 - Very Other (Expla	langanese Mass Shallow Dark S ain in Remarks)	urface		or problematic.
Restrictive Layer (If Observed)	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm M	pipedon stic on Sulfide d Layers fuck ed Below Dark Surface Jark Surface fuck Mineral ucky Peat or Peat			S5 - Sand S6 - Strip F1 - Loan F2 - Loan F3 - Deple F6 - Redo F7 - Deple F8 - Redo	y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	ineral Matrix (rface Surface sions	¹ Indicators of hydrophy	F12 - Iron-M TF12 - Very Other (Expla	langanese Mass Shallow Dark S ain in Remarks)	urface		or problematic.
Restrictive Layer (If Observed)	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm M	pipedon stic on Sulfide d Layers fuck ed Below Dark Surface Jark Surface fuck Mineral ucky Peat or Peat			S5 - Sand S6 - Strip F1 - Loan F2 - Loan F3 - Deple F6 - Redo F7 - Deple F8 - Redo	y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	ineral Matrix (rface Surface sions	¹ Indicators of hydrophy	F12 - Iron-M TF12 - Very Other (Expla	langanese Mass Shallow Dark S ain in Remarks)	urface		or problematic.
Restrictive Layer (If Observed)	A1- Histosol A2 - Histic E A3 - Black H A4 - Hydroge A5 - Stratifie A10 - 2 cm N A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm M	pipedon stic on Sulfide d Layers fuck ed Below Dark Surface Jark Surface fuck Mineral ucky Peat or Peat			S5 - Sand S6 - Strip F1 - Loan F2 - Loan F3 - Deple F6 - Redo F7 - Deple F8 - Redo	y Redox ped Matrix ny Muck M ny Gleyed eted Matrix ox Dark Su eted Dark	ineral Matrix (rface Surface sions	¹ Indicators of hydrophy	F12 - Iron-M TF12 - Very Other (Expla	langanese Mass Shallow Dark S ain in Remarks)	urface		or problematic



Wetland ID: Wetland 4 Project/Site: Sample Point: SP11 Marion County Solar Project **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) **Dominance Test Worksheet** Species Name % Cover Dominant Ind.Status Crataegus viridis **FACW** 50 2 Number of Dominant Species that are OBL, FACW, or FAC: 5 (A) 3. 4. Total Number of Dominant Species Across All Strata: 5 (B) 5. 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B) 7. Prevalence Index Worksheet 8 9. Total % Cover of: __ Multiply by: 10. OBL spp. x 1 = Total Cover = 50 FACW spp. 0 x 2 = FAC spp. 0 x 3 =x 4 = Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. FACW 15 Crataegus viridis UPL spp. 0 x 5= 2. 3. 4 5. Prevalence Index = B/A = 6. 7. **Hydrophytic Vegetation Indicators:** 8. --9. ☐ Yes ✓ No Rapid Test for Hydrophytic Vegetation 10. ✓ Yes ☐ No Dominance Test is > 50% Total Cover = ☐ No 15 ☐ Yes Prevalence Index is ≤ 3.0 * □ No ☐ Yes Morphological Adaptations (Explain) * Herb Stratum (Plot size: 5 ft radius) ☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) * Pilea pumila 15 **FACW** * Indicators of hydric soil and wetland hydrology must be 2. Bidens frondosa 15 Υ **FACW** present, unless disturbed or problematic. FAC 3. Persicaria longiseta 5 Ν 5 FACU **Definitions of Vegetation Strata:** 4. Parthenocissus quinquefolia Ν 5. 10 FAC Poa pratensis Tree - Woody plants 3 in. (7.6cm) or more in diameter at 6 Lolium perenne 5 Ν **FACU** breast height (DBH), regardless of height. 7. Persicaria punctata 5 Ν OBL 8. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 9 10. 11. Herb - All herbaceous (non-woody) plants, regardless of size, 12 and woody plants less than 3.28 ft. tall. 13 14. Woody Vines - All woody vines greater than 3.28 ft. in height. 15. Total Cover = 60 Woody Vine Stratum (Plot size: 30 ft radius) Vitis riparia 40 **FACW** 1. 2. 3. Hydrophytic Vegetation Present ☑ Yes ☐ No 4. 5. Total Cover = 40

Additional Remarks:			

Only approximately 40% open ground

Remarks:



Project/Site:	Marion County Solar	Project			Stantec	Project #:	. 203	28113241		Date:	09/11/2	n	
Applicant:	Marion County Solar	•			Otantoo	r rojoot #.	. 202	20110241		County:	Marion	O .	
Investigator #1:	Angela Sjollema		Investigator #2:	Julie Slate	r					State:	Ohio		
Soil Unit:	Saranac silty clay loam,	occasionally flooded		NW	/I/WWI Cla	assification	n: PEN	/1C		Wetland ID:	N/A		
Landform:	Depression		Local Relief:	Concave						Sample Point:	SP12		
Slope (%):	0	Latitude: 40.6337	Longitude:					Datum:		Community ID:	Upland		
Are climatic/hyd	Irologic conditions on	the site typical for the	nis time of year?	(If no, explain in	n remarks)		· ·	Yes 🛚	No	Section:	S5		
Are Vegetation	, Soil , or Hydrol	ogy ⁿ significantly	disturbed?	,	Are norma	ıl circumst	tances	present?		Township:	T5S		
Are Vegetation	, Soil , or Hydrol	ogyn naturally pro	blematic?		Ø	Yes	Nσ			Range:	R15	Dir:	Е
SUMMARY OF I	FINDINGS												
Hydrophytic Veg	getation Present?	1	₃ Yes □ No				Hydi	ric Soils f	Present?			Yes	□ No
Wetland Hydrol	ogy Present?	1	□ Yes ৷ No				Is Th	his Samp	ling Point	Within A Wetla	and? •	Yes	• No
Remarks:	There was significan	t rainfall overnight. I	NWI investigatio	n point									

HYDROLOGY

etland Hydrology Indicators	(Check here if indicators are not present •):
-----------------------------	---	----

Primary:

A1 - Surface Water A2 - High Water Table A3 - Saturation B1 - Water Marks B2 - Sediment Deposits

B3 - Drift Deposits B4 - Algal Mat or Crust B5 - Iron Deposits B7 - Inundation Visible on Aerial Imagery

B8 - Sparsely Vegetated Concave Surface

Secondary:

B9 - Water-Stained Leaves B6 - Surface Soil Cracks B13 - Aquatic Fauna B10 - Drainage Patterns B14 - True Aquatic Plants C2 - Dry-Season Water Table C1 - Hydrogen Sulfide Odor C8 - Crayfish Burrows C3 - Oxidized Rhizospheres on Living Roots C9 - Saturation Visible on Aerial Imagery

D1 - Stunted or Stressed Plants C4 - Presence of Reduced Iron C6 - Recent Iron Reduction in Tilled Soils D2 - Geomorphic Position D5 - FAC-Neutral Test C7 - Thin Muck Surface

D9 - Gauge or Well Data Other (Explain in Remarks)

Field Observations:

Surface Water Present? □ Yes □ No Depth: (in.) Water Table Present? □ Yes ☑ No Depth: 0 (in.) Saturation Present? □ Yes □ No 0 Depth: (in.)

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

SOILS											
Map Unit Name	e:	Saranac silty clay l	oam, occ	casionally	/ flooded						
Profile Descri	ption (Describe to th	ne depth needed to document the in	dicator or confirm	the absence of	indicators.) (Typ	e: C=Concentrati	on, D=Depletion, RM=Reduced Matrix, CS:	Covered/Coated Sand Gra	ns; Location: PL=Po	ore Lining, M=Matrix)	
Тор	Bottom			Matrix Redox Features					Texture		
Depth	Depth	Horizon	Color	(Moist)	%		Color (Moist) % Type			Location	(e.g. clay, sand, loam)
0	5	1	10YR	3/2	98	10YR	5/6	2	С	M	silty clay loam
5	20	2	10YR	3/2	100		-				silty clay loam
				-	-		1		-		
				-	-	-	-				
					-	-	-				
							-				
						-	-				
				-	-		-				

NRCS Hydric Soil Field Indicators (check here if indicators are not present (a)):

A1- Histosol S4 - Sandy Gleyed Matrix A2 - Histic Epipedon S5 - Sandy Redox A3 - Black Histic S6 - Stripped Matrix A4 - Hydrogen Sulfide F1 - Loamy Muck Mineral A5 - Stratified Layers F2 - Loamy Gleyed Matrix A10 - 2 cm Muck F3 - Depleted Matrix A11 - Depleted Below Dark Surface

F6 - Redox Dark Surface A12 - Thick Dark Surface F7 - Depleted Dark Surface S1 - Sandy Muck Mineral F8 - Redox Depressions S3 - 5 cm Mucky Peat or Peat

Indicators for Problematic Soils 1

A16 - Coast Prairie Redox S7 - Dark Surface

F12 - Iron-Manganese Masses TF12 - Very Shallow Dark Surface Other (Explain in Remarks)

Wetland Hydrology Present? • Yes • No

1 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic □ Yes □ No

(If Observed) Remarks:

Restrictive Layer

Type: N/A

Depth: N/A

Hydric Soil Present?



5.

15% open herb layer

Remarks:

WETLAND DETERMINATION DATA FORM Midwest Region

Wetland ID: N/A Sample Point: SP12 Project/Site: Marion County Solar Project **VEGETATION** (Species identified in all uppercase are non-native species.) Tree Stratum (Plot size: 30 ft radius) Species Name % Cover Dominant Ind.Status **Dominance Test Worksheet** FACW Crataegus viridis 30 2. Fraxinus pennsylvanica 20 **FACW** Number of Dominant Species that are OBL, FACW, or FAC: 6 (A) 3. 4 Total Number of Dominant Species Across All Strata: 7 (B) 5. __ 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 86% (A/B) Prevalence Index Worksheet 8 9. Total % Cover of: Multiply by: 10 OBL spp. x 1 = x 2 = Total Cover = FACW spp. 0 FAC spp. x 3 = Sapling/Shrub Stratum (Plot size: 15 ft radius) FACU spp. x 4 = Acer negundo 15 FAC UPL spp. 0 x 5 = 2 Crataegus viridis 5 Ν **FACW** 3. Lonicera maackii 10 UPL 0 (A) 0 Total Gleditsia triacanthos Ν **FACU** 4. 5 5 Fraxinus pennsylvanica 5 Ν **FACW** Prevalence Index = B/A = 6 7. **Hydrophytic Vegetation Indicators:** 8 --9. Yes 🛮 No Rapid Test for Hydrophytic Vegetation 10. □ No Dominance Test is > 50% Yes Total Cover = 40 Prevalence Index is ≤ 3.0 * Yes □ No Morphological Adaptations (Explain) * Yes □ No Herb Stratum (Plot size: 5 ft radius) □ No Problem Hydrophytic Vegetation (Explain) * Yes Poa pratensis 30 FAC * Indicators of hydric soil and wetland hydrology must be 2. Carex frankii 40 Υ OBL present, unless disturbed or problematic. 3. Acer negundo 10 Ν FAC 4. Persicaria longiseta 5 Ν FAC **Definitions of Vegetation Strata:** 5 Tree - Woody plants 3 in. (7.6cm) or more in diameter at 6 breast height (DBH), regardless of height. 7. 8 Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 9 ft. tall. 10. 11. Herb - All herbaceous (non-woody) plants, regardless of size, 12. and woody plants less than 3.28 ft. tall. 13 14. Woody Vines - All woody vines greater than 3.28 ft. in height. 15. --Total Cover = 85 Woody Vine Stratum (Plot size: 30 ft radius) FAC Toxicodendron radicans 2 3. Hydrophytic Vegetation Present

Yes

No 4

Additional Remarks:		

Total Cover =

5



Project/Site:	Marion Cou	unty Solar Project					Stantec Project #:	2028113241		Date:	09/11/20)	
Applicant:	Marion Cou	ınty Solar Project, L	LC				•			County:	Marion		
Investigator #1				Investi	gator #2:					State:	Ohio		
Soil Unit:		clay loam, occasionall	y flooded			-	IWI/WWI Classification:	PEM1A		Wetland ID:			
Landform:	Terrace				al Relief:					Sample Point:			
Slope (%):	0	Latitude:			ongitude:			Datum:		Community ID:			
		ditions on the site ty				(If no, expla	ain in remarks) Are normal circumsta		No	Section:	S5		
		or Hydrology □ sig or Hydrology □ na					Are normal circumsta	nces present≀ N⊡	•	Township:	T5S R15	D: [E
SUMMARY OF		or Hydrology 🗆 Ha	lurally pr	oblemat	IC?		⊴ les	1110		Range:	KID	Dir:	
Hydrophytic Ve		cent?		□ Yes	☑ No			Hydric Soils	Drocont?			Yes 🖸	7 No
Wetland Hydro				☐ Yes						Within A Wetl		Yes E	
Remarks:		significant rainfall c	verniaht					is inis cam	Jillig i Ollic	Widili A Wed	ana: =	163	- NO
T tomanto.	111010 1140	o.g			roongano								
HYDROLOGY													
	ology Indic	ators (Check here	if indicate	ore are r	not procer	ot □ \•							
Primary		ators (Check here	II IIIUICau	DIS ale I	ioi presei	ıı≌).			Secondary:				
	A1 - Surface	Water			B9 - Wate	er-Stained	Leaves			B6 - Surface So	oil Cracks		
	A2 - High Wa				B13 - Aqu					B10 - Drainage			
	A3 - Saturation B1 - Water M				B14 - True C1 - Hydr					C2 - Dry-Seaso C8 - Crayfish B		abie	
	B2 - Sedimer						spheres on Living Roots			C9 - Saturation		Aerial Ima	agery
	B3 - Drift De						educed Iron			D1 - Stunted or	Stressed F		• .
	9				C6 - Rece C7 - Thin		eduction in Tilled Soils			D2 - Geomorph D5 - FAC-Neutr			
	B5 - Iron Dep B7 - Inundation	องเเร on Visible on Aerial Im:	agery		D9 - Gaug					D5 - FAC-Neuti	rai rest		
		/ Vegetated Concave S			Other (Ex								
Field Observa	tions:												
Surface Water	Present?	☐ Yes ☑ No	Depth:	0	(in.)			Wetland Hy	drology Pi	resent?	Yes ☑	No	
Water Table Pr		☐ Yes ☑ No	Depth:	0	(in.)			Wettand my	urology i i	esent:	1103 🗀	140	
Saturation Pres	sent?	☐ Yes ☑ No	Depth:	0	(in.)								
Describe Record	ded Data (str	eam gauge, monitori	ng well, a	aerial pho	otos, previ	ous inspe	ections), if available:		N/A				
Remarks:													
Remarks:													
Remarks: SOILS													
SOILS Map Unit Name		Saranac silty clay l											
SOILS Map Unit Name Profile Descri							ation, D=Depletion, RM=Reduced Matrix, CS=	-Covered/Coated Sand Gra	ains; Location: PL=F	ore Lining, M=Matrix)			
SOILS Map Unit Name Profile Descri	Bottom	the depth needed to document the in	dicator or confirm	m the absence of Matrix	of indicators.) (Ty		Redo	ox Features	1	1	-↓	exture	
SOILS Map Unit Name Profile Descri Top Depth	Depth	the depth needed to document the in	dicator or confirm	Matrix (Moist)	of indicators.) (Type	pe: C=Concentra	Color (Moist)	x Features %	Туре	Location	(e.g. cla	y, sand,	
SOILS Map Unit Name Profile Descri Top Depth 0	Bottom Depth 18	the depth needed to document the in Horizon 1	Color 10YR	Matrix (Moist)	% 100	pe: C=Concentra	Color (Moist)	% Features	Type 	Location 	(e.g. cla	y, sand, clay loa	am
SOILS Map Unit Name Profile Descri Top Depth 0 18	Bottom (Describe to Bottom Depth 18	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 3/2 3/2	% 100 98	e: C=Concentra	Color (Moist) 5/3	% 2	Type C	Location M	(e.g. cla	y, sand, clay loa clay loa	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18	Bottom Depth 18 20	the depth needed to document the in Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 3/2 3/2	% 100 98	e: C=Concentra	Color (Moist) 5/3	% 2	Type C	Location M	(e.g. cla	y, sand, clay loa clay loa 	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18	Bottom Depth 18 20	Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 3/2 3/2 	% 100 98	 10YR	Color (Moist) 5/3	2	Type C	Location M	(e.g. cla	y, sand, clay loa clay loa 	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18	Bottom Depth 18 20	Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 3/2 3/2	9% 100 98	10YR	Color (Moist) 5/3	2	Type C	Location M	(e.g. cla	y, sand, clay loa clay loa 	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18	Bottom (Describe to Bottom Depth 18 20	Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 3/2 3/2	9% 100 98	10YR	Color (Moist) 5/3	x Features	Type C	Location M	(e.g. cla	y, sand, clay loa clay loa 	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18	Bottom (Describe to Bottom Depth 18 20	Horizon 1 2	Color 10YR 10YR	Matrix (Moist) 3/2 3/2 	% 100 98	10YR	Color (Moist) 5/3	% 2	Type C	Location M	(e.g. cla	y, sand, clay loa clay loa 	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18	Bottom (Describe to Bottom Depth 18 20	Horizon 1 2	Color 10YR 10YR	m the absence or Matrix (Moist) 3/2 3/2	% 100 98	10YR	Color (Moist) 5/3	% 2	Type C	Location M	(e.g. cla	y, sand, clay loa clay loa 	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18 NRCS Hydric	Bottom Depth 18 20 Soil Field In	Horizon 1 2	Color 10YR 10YR	m the absence of Matrix (Moist) 3/2 3/2 icators a	% 100 98 ure not pre		Color (Moist) 5/3	% 2	Type C for Problem	Location M	(e.g. cla	y, sand, clay loa clay loa 	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18 NRCS Hydric	Bottom (Describe to Bottom Depth 18 20	Horizon 1 2	Color 10YR 10YR	m the absence of Matrix (Moist) 3/2 3/2 icators a	% 100 98	10YR	Color (Moist) 5/3	Section	Type C for Problem	Location M Prairie Redox	(e.g. cla	y, sand, clay loa clay loa 	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18 NRCS Hydric	Detion (Describe to Bottom Depth 18 20 Soil Field Ir A1- Histosol A2 - Histic E, A3 - Black Hi	Horizon 1 2	Color 10YR 10YR	m the absence or Matrix (Moist) 3/2 3/2 icators a	% 100 98	10YR	Redo		Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N	Location M	(e.g. cla silty silty	y, sand, clay loa clay loa 	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18 NRCS Hydric	Detion (Describe to Bottom Depth 18 20 Soil Field In A1- Histosoi A2 - Histic El A3 - Black H A4 - Hydroge	Horizon 1 2	Color 10YR 10YR	m the absence or Matrix (Moist) 3/2 3/2 icators a	% 100 98		Redo Color (Moist) 5/3): Matrix : ineral		Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla silty silty	y, sand, clay loa clay loa 	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18 NRCS Hydric	Describe to Bottom Depth 18 20 Soil Field Ir A1- Histosol A2 - Histic E, A3 - Black H A4 - Hydroge A5 - Stratifier	Horizon 1 2	Color 10YR 10YR	m the absence of Matrix (Moist) 3/2 3/2 icators a	% 100 98	ee: C=Concentrii	Redo Color (Moist)		Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla silty silty	y, sand, clay loa clay loa 	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18 NRCS Hydric	Describe to Describe to Bottom Depth 18 20	Horizon 1 2 ndicators (check hoppedon stic en Sulfide et Layers fuck	Color 10YR 10YR	m the absence of Matrix (Moist) 3/2 3/2 icators a	% 100 98	ee: C=Concentration 10YR	Redo Color (Moist) 5/3): Matrix Matrix		Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla silty silty	y, sand, clay loa clay loa 	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18 NRCS Hydric	Describe to Describe to Bottom Depth 18 20	Horizon 1 2 ndicators (check he objedon stic en Sulfide di Layers luck ed Below Dark Surface	Color 10YR 10YR	m the absence of Matrix (Moist) 3/2 3/2 icators a	% 100 98	10YR	Redo Color (Moist) 5/3): Matrix curface		Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-M TF12 - Very	Location M	(e.g. cla silty silty	y, sand, clay loa clay loa 	am
SOILS Map Unit Name Profile Descrip Top Depth 0 18 NRCS Hydric	Dotton (Describe to Bottom Depth 18 20	Horizon 1 2	Color 10YR 10YR	m the absence or Matrix (Moist) 3/2 3/2 icators a	% 100 98		Redo Color (Moist) 5/3): Matrix ineral Matrix or frace Surface Surface		Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M	(e.g. cla silty silty	y, sand, clay loa clay loa 	am am
SOILS Map Unit Name Profile Descrip Top Depth 0 18 NRCS Hydric	Dotton (Describe to Bottom Depth 18 20	Horizon 1 2	Color 10YR 10YR	m the absence or Matrix (Moist) 3/2 3/2 icators a	% 100 98		Redo Color (Moist) 5/3): Matrix ineral Matrix or frace Surface Surface		Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M	(e.g. cla silty silty	y, sand, clay loa clay loa 	am am
SOILS Map Unit Name Profile Descri Top Depth 0 18 NRCS Hydric	Dotton (Describe to Bottom Depth 18 20	Horizon 1 2 ndicators (check hoppedon stice an Sulfide I Layers fluck and Below Dark Surface Dark Surface Dark Surface Luck Mineral acky Peat or Peat	Color 10YR 10YR	m the absence or Matrix (Moist) 3/2 3/2 icators a	% 100 98		Redo Color (Moist) 5/3): Matrix ineral Matrix or frace Surface Surface		Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M	(e.g. cla silty silty	y, sand, clay loa clay loa 	am am
SOILS Map Unit Name Profile Descri Top Depth 0 18 NRCS Hydric	Describe to Bottom Depth 18 20 Soil Field Ir A1- Histosol A2- Histic El A3 - Black H A4 - Hydroge A5 - Stratifier A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm Mt	Horizon 1 2 ndicators (check hoppedon stice an Sulfide I Layers fluck and Below Dark Surface Dark Surface Dark Surface Luck Mineral acky Peat or Peat	Color 10YR 10YR	m the absence of Matrix (Moist) 3/2 3/2 icators a	% 100 98		Redo Color (Moist) 5/3): Matrix ineral Matrix or frace Surface Surface	ox Features % 2 Indicators Indicators of hydrophy	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M	(e.g. cla silty silty	y, sand, clay loa clay loa 	am am
SOILS Map Unit Name Profile Descri Top Depth 0 18 NRCS Hydric	Describe to Bottom Depth 18 20 Soil Field Ir A1- Histosol A2- Histic El A3 - Black H A4 - Hydroge A5 - Stratifier A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm Mt	Horizon 1 2 ndicators (check hoppedon stice an Sulfide I Layers fluck and Below Dark Surface Dark Surface Dark Surface Luck Mineral acky Peat or Peat	Color 10YR 10YR	m the absence of Matrix (Moist) 3/2 3/2 icators a	% 100 98		Redo Color (Moist) 5/3): Matrix ineral Matrix or frace Surface Surface	ox Features % 2 Indicators Indicators of hydrophy	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M	(e.g. cla silty silty	y, sand, clay loa clay loa 	am am
SOILS Map Unit Name Profile Descri Top Depth 0 18 NRCS Hydric	Describe to Bottom Depth 18 20 Soil Field Ir A1- Histosol A2- Histic El A3 - Black H A4 - Hydroge A5 - Stratifier A11 - Deplet A12 - Thick I S1 - Sandy N S3 - 5 cm Mt	Horizon 1 2 ndicators (check hoppedon stice an Sulfide I Layers fluck and Below Dark Surface Dark Surface Dark Surface Luck Mineral acky Peat or Peat	Color 10YR 10YR	m the absence of Matrix (Moist) 3/2 3/2 icators a	% 100 98		Redo Color (Moist) 5/3): Matrix ineral Matrix or frace Surface Surface	ox Features % 2 Indicators Indicators of hydrophy	Type C for Problen A16 - Coast S7 - Dark S F12 - Iron-N TF12 - Very Other (Expla	Location M	(e.g. cla silty silty	y, sand, clay loa clay loa 	am am



Project/Site: Marion County Solar Project Wetland ID: N/A Sample Point: SP13

VEGETATION	(Species identified in all uppercase are non-	native spe	cies.)		
Tree Stratum (P	lot size: 30 ft radius)				
	<u>Species Name</u>	_	Dominant	Ind.Status	Dominance Test Worksheet
1.					
2.					Number of Dominant Species that are OBL, FACW, or FAC:1 (A)
3.					
4.					Total Number of Dominant Species Across All Strata: 2 (B)
5.					D
6.					Percent of Dominant Species That Are OBL, FACW, or FAC:(A/B)
7.					December of the december of
8. 9.					Prevalence Index Worksheet
_					Total % Cover of: Multiply by:
10.	Total Cover	= 0			OBL spp. 0 x 1 = 0
	Total Cover	= 0			FACW spp. 0 x 2 = 0 FAC spp. 35 x 3 = 105
Cli/Chh C4					
5apiing/Shrub St	ratum (Plot size: 15 ft radius)				FACU spp. $\frac{65}{0}$ $x = \frac{260}{0}$ UPL spp. $\frac{65}{0}$ $x = \frac{260}{0}$
2.					ОFL spp X
3.					Total 100 (A) 365 (B)
4.					10tal 100 (A)(D)
5.					Prevalence Index = B/A = 3.650
6.					1 Tovalchice mack - B/A - 3.000
7.					
8.					Hydrophytic Vegetation Indicators:
9.					☐ Yes ☑ No Rapid Test for Hydrophytic Vegetation
10.					☐ Yes ☑ No Dominance Test is > 50%
10.	Total Cover				☐ Yes ☐ No Prevalence Index is ≤ 3.0 *
	rotal covol	Ŭ			☐ Yes ☐ No Morphological Adaptations (Explain) *
Herb Stratum (PI	ot size: 5 ft radius)				☐ Yes ☐ No Problem Hydrophytic Vegetation (Explain) *
1.	Sorghastrum nutans	50	Υ	FACU	
2.	Andropogon gerardii	35	Υ	FAC	* Indicators of hydric soil and wetland hydrology must be
3.	Lolium perenne	5	N	FACU	present, unless disturbed or problematic.
4.	Solidago canadensis	10	N	FACU	Definitions of Vegetation Strata:
5.					-
6					Tree - Woody plants 3 in. (7.6cm) or more in diameter at
7.					breast height (DBH), regardless of height.
8.					
9.					Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28
10.					ft. tall.
11.					
12.					Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.
13.					and woody plants less than 5.20 ft. tdll.
14.					
15.					Woody Vines - All woody vines greater than 3.28 ft. in height.
	Total Cover	= 100			
	tum (Plot size: 30 ft radius)				
1.		-			
2.		-			
3.		-			Hydrophytic Vegetation Present ☐ Yes ☑ No
4.					
5.	 T 1 1 0				
Domarks	Total Cover	= 0			
Remarks:					

Additional Remarks:		

MARION COUNTY SOLAR PROJECT WETLAND AND WATERBODY DELINEATION REPORT

B.2 ORAM FORMS



B.2

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization						
Version 5.0	Background Information Scoring Boundary Worksheet						
	Narrative Rating	Ohio EPA, Division of Surface Water					
	Field Form Quantitative Rating ORAM Summary Worksheet	Final: February 1, 2001					
	Wetland Categorization Worksheet						

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name: Angela Sjollema

Date:

9/8/2020

Affiliation:

Stantec Consulting Services Inc.

Address:

1500 Lake Shore Drive, Suite 100, Columbus, Ohio 43204

Phone Number:

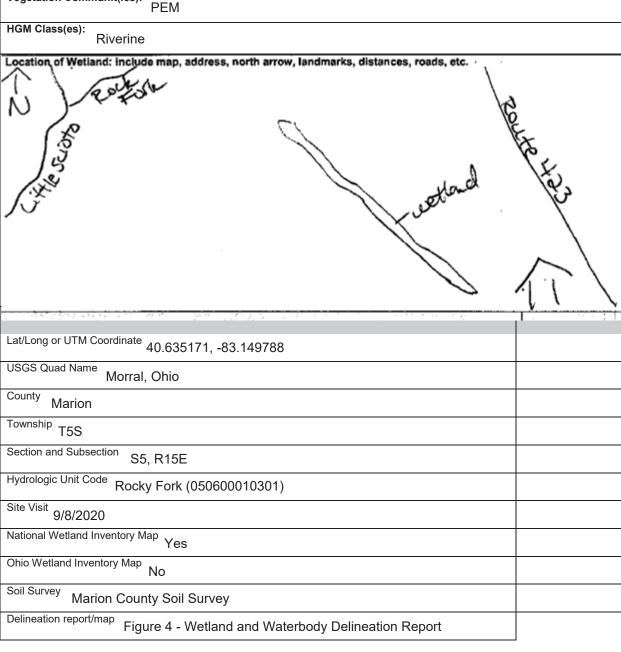
614-643-4400

e-mail address:

angela.sjollema@stantec.com

Name of Wetland: Wetland 1

Vegetation Communit(ies):



Name of Wetland: Wetland 1						
Wetland Size (acres, hectares): 0.76 acres						
Sketch: Include north arrow, relationship with other surface waters, vegetation	zones, etc.					
Sketch: Include north arrow, relationship with other surface waters, vegetation	1 +1610					
A Soul For Soul	504					
Comments, Narrative Discussion, Justification of Category Changes:						
Final score: 25	Category:	_				
i iliai scole . Z5	Calegory:	1				

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Angela Sjollema Wetland 1 9/8/2020 Steps in properly establishing scoring boundaries done? not applicable Step 1 Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc. Step 2 Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and humaninduced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland. Step 3 Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary. Step 4 Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes. Step 5 In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately. Step 6 Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers,

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

or for dual classifications

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

Wetland 1 Angela Sjollema 9/8/2020

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	NO Solution 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	NO Solution 8 Solution
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead spags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	NO So to Question 8b

Wetland 1	Angela Sjollema		9/8/2020
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status.	NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this	YES Cate Question 9h	NO X
9b	elevation, or along a tributary to Lake Erie that is accessible to fish? Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Go to Question 9b YES Wetland should be evaluated for possible Category 3 status Go to Question 10	Go to Question 10 NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9 e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Solution NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		C C
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W	/etland	1 Rater(s): Angela Sjollema D	ate: 9/8/2020
2	2	Metric 1. Wetland Area (size).	
max 6 pts.	subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) J 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	
2	4	Metric 2. Upland buffers and surrounding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only one and assign score. Do not double check. WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrub land, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow f HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)	field. (3)
9	13	Metric 3. Hydrology.	
max 30 pts.	subtotal	Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) Part of wetland/uplar Part of wetland/uplar Part of riparian or up	e and other human use (1) nd (e.g. forest), complex (1) pland corridor (1)
		3e. Modifications to natural hydrologic regime. Score one or double check and average. None or none apparent (12) Check all disturbances observed	d (2) d in upper 30cm (12in) (1)
		Recovered (7) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recovering (4) R	rmwater)
11	24	Metric 4. Habitat Alteration and Development.	
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double check and average. None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)	
		4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	
		4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1) None or none apparent (9) Recovering (3) Recent or no recovery (1) Check all disturbances observed whereaccous/aquatic sedimentation	
	24 ubtotal this pa	selective cutting woody debris removal toxic pollutants dredging farming nutrient enrichment	
		ary 2001 jjm	

7

Site: W	Vetland	1	Rater(s): Angela	Sielleme	Date: 9/8/2020
Site. V	Vellariu	ı	Nater (5). Arigera	Sjollema	Date. 9/0/2020
	24				
su	ibtotal first pa	_			
0	24	Metric 5. Special W	etlands.		
max 10 pts.	subtotal	Check all that apply and score as indi	cated.		
		Bog (10)			
		Fen (10)			
		Old growth forest (10)			
		Mature forested wetland (5	,		
		Lake Erie coastal/tributary	_		
		Lake Erie coastal/tributary		logy (5)	
		Lake Plain Sand Prairies (C Relict Wet Prairies (10)	Jak Operlings) (10)		
		Known occurrence state/fee	deral threatened or enda	angered species (10)	
		Significant migratory songb		• , , ,	
		Category 1 Wetland. See			
		Metric 6. Plant com		- · ·	nography
1	25	Wethic o. Flant com	illiullilles, illi	erspersion, microto	pograpity.
max 20 pts.	auhtatal	0 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -		0	
max 20 pts.	subtotal	6a. Wetland Vegetation Communities Score all present using 0 to 3 scale.		Community Cover Scale Absent or comprises < 0.1ha (0.24)	71 coros) contiguous area
		Aquatic bed	0	Present and either comprises sma	
		1 Emergent	'	vegetation and is of moderate q	
		Shrub		significant part but is of low qual	-
		Forest	2	Present and either comprises sign	nificant part of wetland's
		Mudflats		vegetation and is of moderate q	uality or comprises a small
		Open water		part and is of high quality	
		Other	_ 3	Present and comprises significant	
		6b. horizontal (plan view) Interspersion	on	vegetation and is of high quality	
		Select only one.	Norrativa D	accription of Vagatation Quality	
		High (5) Moderately high(4)	low	escription of Vegetation Quality Low spp diversity and/or predomin	nance of nonnative or
		Moderate (3)	101	disturbance tolerant native spec	
		Moderately low (2)	mod	Native spp are dominant compone	
		✓ Low (1)		although nonnative and/or distu	rbance tolerant native spp
		None (0)		can also be present, and specie	s diversity moderate to
		6c. Coverage of invasive plants. Ref		moderately high, but generally v	
		to Table 1 ORAM long form for list. A		threatened or endangered spp	
		or deduct points for coverage	high	A predominance of native species	
		Extensive >75% cover (-5) Moderate 25-75% cover (-3)	2)	and/or disturbance tolerant native absent, and high spp diversity a	
		✓ Sparse 5-25% cover (-1)	·)	the presence of rare, threatened	
		Nearly absent <5% cover (0)	p	,, or orraningerou opp
		Absent (1)	,	l Open Water Class Quality	
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 ac	res)
		Vegetated hummucks/tussi	-	Moderate 1 to <4ha (2.47 to 9.88	acres)
		0 Coarse woody debris >15cl		High 4ha (9.88 acres) or more	
		0 Standing dead >25cm (10ir	•	manhu Causa Caala	
		Amphibian breeding pools		raphy Cover Scale	
			0	Absent Present very small amounts or if r	nore common
			1	of marginal quality	nore commun
			2	Present in moderate amounts, but	not of highest
			_	quality or in small amounts of hi	•
			3	Present in moderate or greater an	
				and of highest quality	
25					

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

Wetland 1 Angela Sjollema 9/8/2020

		circle answer or insert	Result
Narrative Rating	Question 1 Critical Habitat	score NO	If yes, Category 3.
riandavoridanig		NO	
	Question 2. Threatened or Endangered Species	NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	NO	If yes, Category 3.
	Question 4. Significant bird habitat	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	NO	If yes, Category 1.
	Question 6. Bogs	NO	If yes, Category 3.
	Question 7. Fens	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	NO	If yes, Category 3
	Question 11. Relict Wet Prairies	NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
J	Metric 2. Buffers and surrounding land use	2	
	Metric 3. Hydrology	9	
	Metric 4. Habitat	11	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	1	
	TOTAL SCORE	25	Category based on score breakpoints Category 1

Complete Wetland Categorization Worksheet.

Angela Sjollema Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO X	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO X	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO X	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO X	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category				
Choose one	Category 1	Category 2	Category 3	
Category 1				

End of Ohio Rapid Assessment Method for Wetlands.

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization		
Version 5.0	Background Information Scoring Boundary Worksheet		
	Narrative Rating	Ohio EPA, Division of Surface Water	
	Field Form Quantitative Rating ORAM Summary Worksheet	Final: February 1, 2001	
	Wetland Categorization Worksheet		

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name: Angela Sjollema Date: 9/11/2020 Affiliation: Stantec Consulting Services Inc. Address: 1500 Lake Shore Drive, Suite 100, Columbus, Ohio 43204 Phone Number: 614-643-4400 e-mail address: angela.sjollema@stantec.com Name of Wetland: Wetland 2 Vegetation Communit(ies): HGM Class(es): Riverine Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. Lat/Long or UTM Coordinate 40.629728, -83.165697 USGS Quad Name Morral, Ohio County Marion Township T5S Section and Subsection S5, R15E Hydrologic Unit Code City of Marion - Little Scioto River (050600010303) Site Visit 9/11/2020 National Wetland Inventory Map Yes Ohio Wetland Inventory Map No Soil Survey Marion County Soil Survey Delineation report/map Figure 4 - Wetland and Waterbody Delineation Report

tland 2	Angela Sjollema	9/11/2020
Name of Wetland: Wetland 2		
Wetland Size (acres, hectares):	0.24 acres	
Sketch: Include north arrow, rel	lationship with other surface waters, vegetation zones, etc.)
	lationship with other surface waters, vegetation zones, etc.	Sciolo Piver
	(Stronge	To the 20-18 shows to the state of the state
Comments, Narrative Discussion	on, Justification of Category Changes:	

Final score: 45

Category: 2

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland 2 Angela Sjollema 9/11/2020

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	X	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		X
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

Wetland 2 Angela Sjollema 9/11/2020

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	Wetland should be evaluated for possible Category 3 status Go to Question 2	NO So to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	Wetland is a Category 3 wetland. Go to Question 3	NO So to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO So to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NO So to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO So to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	NO So to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	NO So to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead spags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	NO So to Question 8b

Wetland 2	Angela Sjollema		9/11/2020
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status.	NO Go to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9a YES Go to Question 9b	NO X Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO Solution NO Go to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		C C
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W	/etland 2	2 Rater(s):Angela Sjollema Date: 9	9/11/2020
1	1	Metric 1. Wetland Area (size).	
max 6 pts.	subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) 0.3 to <3 acres (0.12 to <1.2ha) (2pts) ✓ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	
7	8	Metric 2. Upland buffers and surrounding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only one and assign score. Do not double check. WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) WEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) ✓ LOW. Old field (>10 years), shrub land, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) ✓ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)	
24	32	Metric 3. Hydrology.	
max 30 pts.	subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3c. Maximum water depth. Select only one and assign score. >0.7 (27.6in) (3)	forest), complex (1) rridor (1) ore one or dbl check ated/saturated (4)
		 <0.4m (<15.7in) (1) Seasonally saturated in upposition of the content of the content	
13	45	Metric 4. Habitat Alteration and Development.	
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double check and average. V None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)	
		4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	
	45	4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1) Reconstruction Recovering (3) Recent or no recovery (1) Recovering (3) Recent or no recovery (1) Recovering (3) Recovering (4) Recovering (4) Recovering (4) Recovering (5) Recovering (6) Recovering (7) Recovering (7) Recovering (8) Recovering (9) Recovering (9) Recovering (1) R	noval
sı	45 ubtotal this pa	woody debris removal farming nutrient enrichment	
last revised	l 1 Februa	ary 2001 jjm	

7

Site: Wetland 2		2 Ra	ter(s): Angela	Sjollema	Date: 9/11/2020	
	45 btotal first pa	,		-,		
0	45	Metric 5. Special Wet	lands.			
max 10 pts.	subtotal	Check all that apply and score as indicated Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland Lake Erie coastal/tributary wetland Lake Plain Sand Prairies (Oak Relict Wet Prairies (10) Known occurrence state/federa Significant migratory songbird/v Category 1 Wetland. See Ques	and-unrestricted hyd and-restricted hydrol Openings) (10) Il threatened or enda vater fowl habitat or	ngered species (10) usage (10)		
0	45	Metric 6. Plant comm	unities, inte	erspersion, microto	pography.	
max 20 pts.	subtotal	6a. Wetland Vegetation Communities.	Vegetation (Community Cover Scale		
		Score all present using 0 to 3 scale. Aquatic bed Emergent Shrub	<u> </u>	Absent or comprises <0.1ha (0.24 Present and either comprises sma vegetation and is of moderate quesignificant part but is of low qual	all part of wetland's uality, or comprises a	
		0 Forest Mudflats Open water	2	Present and either comprises sign vegetation and is of moderate quart and is of high quality	ificant part of wetland's	
		Other6b. horizontal (plan view) Interspersion. Select only one.	3	Present and comprises significant vegetation and is of high quality		
		High (5)	Narrative De	escription of Vegetation Quality		
		Moderately high(4) ✓ Moderate (3)	low	Low spp diversity and/or predomir disturbance tolerant native spec	ies	
		Moderately low (2) Low (1) None (0)	mod	Native spp are dominant compone although nonnative and/or distur- can also be present, and specie	rbance tolerant native spp	
		6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add		moderately high, but generally w threatened or endangered spp	-	
		or deduct points for coverage Extensive >75% cover (-5) Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)	high	A predominance of native species and/or disturbance tolerant nativ absent, and high spp diversity a the presence of rare, threatened	e spp absent or virtually nd often, but not always,	
		Nearly absent <5% cover (0)		0 111		
		Absent (1)		Open Water Class Quality		
		6d. Microtopography. Score all present using 0 to 3 scale.	0	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 ac	rec)	
		Vegetated hummucks/tussucks		Moderate 1 to <4ha (2.47 to 9.88		
		1 Coarse woody debris >15cm (6		High 4ha (9.88 acres) or more		
		1 Standing dead >25cm (10in) dk	ph	<u> </u>		
Amphibian breeding pools			raphy Cover Scale			
			1	Absent Present very small amounts or if n	nore common	
			2	of marginal quality Present in moderate amounts, but quality or in small amounts of high		
			3	Present in moderate or greater an and of highest quality		
45						

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

Wetland 2 Angela Sjollema 9/11/2020

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	NO	If yes, Category 3.
	Question 4. Significant bird habitat	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	NO	If yes, Category 1.
	Question 6. Bogs	NO	If yes, Category 3.
	Question 7. Fens	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	NO	If yes, Category 3
	Question 11. Relict Wet Prairies	NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and surrounding land use	7	
	Metric 3. Hydrology	24	
	Metric 4. Habitat	13	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	0	
	TOTAL SCORE	45	Category based on score breakpoints Category 2

Complete Wetland Categorization Worksheet.

Angela Sjollema **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO X	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO X	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO X	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO X	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category				
Choose one	Category 1	Category 2	Category 3	
Category 2				

End of Ohio Rapid Assessment Method for Wetlands.

	Ohio Rapid Assessment Method 10 Page Form for Wetland Cat		
Version 5.0	Background Information Scoring Boundary Worksheet		
	Narrative Rating	Ohio EPA, Division of Surface Water	
	Field Form Quantitative Rating ORAM Summary Worksheet	Final: February 1, 2001	
	Wetland Categorization Worksheet		

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name: Julie Slater

Date: 9/11/2020

Affiliation:

Stantec Consulting Services Inc.

Address:

1500 Lake Shore Drive, Suite 100, Columbus, Ohio 43204

Phone Number:

614-286-7866

e-mail address:

julie.slater@stantec.com

Name of Wetland: Wetland 3

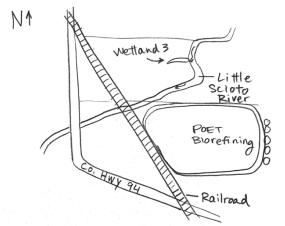
Vegetation Communit(ies):

PEM

HGM Class(es):

Depression

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



Lat/Long or UTM Coordinate 40.631353, -83.165457	
USGS Quad Name Morral, Ohio	
County Marion	
Township T5S	
Section and Subsection S5, R15E	
Hydrologic Unit Code City of Marion - Little Scioto River (050600010303)	
Site Visit 9/11/2020	
National Wetland Inventory Map Yes	
Ohio Wetland Inventory Map	
Soil Survey Marion County Soil Survey	
Delineation report/map Figure 4 - Wetland and Waterbody Delineation Report	

Name of Wetland: Wetland 3
Wetland Size (acres, hectares): 0.008 acres
Prairie grasses Wettand 3 Frairie grasses Reld Comments, Narrative Discussion, Justification of Category Changes:
Final score: 33 Category: 2

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland 3 Julie Slater 9/11/2020

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	X	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		X
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

Wetland 3 Julie Slater 9/11/2020

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO So to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	NO So to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO So to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NO So to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea, Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO So to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	NO So to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	NO So to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	Wetland is a Category 3 wetland. Go to Question 8b	NO So to Question 8b

Wetland 3	Julie Slater		9/11/2020
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status.	Go to Question 9a
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands . Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO So to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		C C
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: V	Vetland	Rater(s): Julie Slater Date: 9/11/2020
0	0	Metric 1. Wetland Area (size).
max 6 pts.	subtotal	Select one size class and assign score.
11	11	Metric 2. Upland buffers and surrounding land use.
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only one and assign score. Do not double check. ✓ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. ✓ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) LOW. Old field (>10 years), shrub land, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3) ✓ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)
12	23	Metric 3. Hydrology.
max 30 pts.	subtotal	3a. Sources of Water. Score all that apply. High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) Maximum water depth. Select only one and assign score. >0.7 (27.6in) (3) Other groundwater (3) Part of wetland/upland (e.g. forest), complex (1) Part of riparian or upland corridor (1) 3d. Duration inundation/saturation. Score one or dbl check Semi- to permanently inundated/saturated (4) Regularly inundated/saturated (3) Seasonally inundated (2) Seasonally saturated in upper 30cm (12in) (1) 3e. Modifications to natural hydrologic regime. Score one or double check and average.
	•	None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1) Check all disturbances observed ditch vitle dike road bed/RR track dredging other other
12	35	Metric 4. Habitat Alteration and Development.
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double check and average. None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)
		4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)
		4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1) None or none apparent (9) Recovering (3) Recent or no recovery (1)
s	35 subtotal this pa	selective cutting woody debris removal toxic pollutants dredging farming nutrient enrichment
last revised		

Site: V	/etland	2	Rater(s): Julie Sla	ator	Date: 9/11/2020
Site. V	velland	, j	vater (3). Julie Sia	atei	Date: 3/11/2020
	35				
SU	ıbtotal first pa	_			
0	35	Metric 5. Special We	etlands.		
max 10 pts.	subtotal	Check all that apply and score as indic	ated.		
		Bog (10)			
		Fen (10)			
		Old growth forest (10)			
		Mature forested wetland (5)			
		Lake Erie coastal/tributary w	_	=	
		Lake Erie coastal/tributary w	-	logy (5)	
		Lake Plain Sand Prairies (O Relict Wet Prairies (10)	ak Openings) (10)		
		Known occurrence state/fed	eral threatened or enda	angered species (10)	
		Significant migratory songbi		• , ,	
		Category 1 Wetland. See Q			
		Metric 6. Plant com		= : :	nography
-2	33	Metric o. Flant conn	mummes, mu	erspersion, inicioto	pograpity.
max 20 pts.	subtotal		Vanatation (Community Cover Cools	
пах 20 різ.	Subtotal	6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale.	vegetation o	Community Cover Scale Absent or comprises < 0.1ha (0.24)	71 acros) contiguous area
		Aquatic bed	1	Present and either comprises sma	
		0 Emergent		vegetation and is of moderate qu	
		Shrub		significant part but is of low qual	
		Forest	2	Present and either comprises sign	ificant part of wetland's
		Mudflats		vegetation and is of moderate qu	uality or comprises a small
		Open water		part and is of high quality	
		Other	. 3	Present and comprises significant	part, or more, of wetland's
		6b. horizontal (plan view) Interspersio	n	vegetation and is of high quality	
		Select only one.	Norrative D	accription of Vagatation Quality	
		High (5) Moderately high(4)	low	escription of Vegetation Quality Low spp diversity and/or predomin	nance of nonnative or
		Moderate (3)	1011	disturbance tolerant native spec	
		Moderately low (2)	mod	Native spp are dominant compone	
		✓ Low (1)		although nonnative and/or distu	bance tolerant native spp
		None (0)		can also be present, and specie	s diversity moderate to
		6c. Coverage of invasive plants. Refe		moderately high, but generally w	•
		to Table 1 ORAM long form for list. Ac		threatened or endangered spp	
		or deduct points for coverage Extensive >75% cover (-5)	high	A predominance of native species and/or disturbance tolerant nativ	
		✓ Moderate 25-75% cover (-3)		absent, and high spp diversity a	
		Sparse 5-25% cover (-1)		the presence of rare, threatened	
		Nearly absent <5% cover (0)	,	, 5 11
		Absent (1)		Open Water Class Quality	
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 ac	
		0 Vegetated hummucks/tussu	-	Moderate 1 to <4ha (2.47 to 9.88	acres)
		O Coarse woody debris >15cm		High 4ha (9.88 acres) or more	
		O Standing dead >25cm (10in) O Amphibian breeding pools		raphy Cover Scale	
		0 Amphibian breeding pools	0	Absent	
			1	Present very small amounts or if n	nore common
			•	of marginal quality	
			2	Present in moderate amounts, but	_
				quality or in small amounts of hi	
			3	Present in moderate or greater an	nounts
22				and of highest quality	
33					

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

Wetland 3 Julie Slater 9/11/2020

		circle answer or insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	NO	If yes, Category 3.
	Question 4. Significant bird habitat	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	NO	If yes, Category 1.
	Question 6. Bogs	NO	If yes, Category 3.
	Question 7. Fens	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	NO	If yes, Category 3
	Question 11. Relict Wet Prairies	NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
_	Metric 2. Buffers and surrounding land use	11	
	Metric 3. Hydrology	12	
	Metric 4. Habitat	12	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-2	
	TOTAL SCORE	33	Category based on score breakpoints Category 2

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO X	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (<i>excluding</i> gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO X	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	YES Wetland is categorized as a Category 1 wetland	NO X	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category				
Choose one	Category 1	Category 2	Category 3	
Category 2				

End of Ohio Rapid Assessment Method for Wetlands.

	Ohio Rapid Assessment Method for Wetlands 10 Page Form for Wetland Categorization		
Version 5.0	Background Information Scoring Boundary Worksheet		
	Narrative Rating	Ohio EPA, Division of Surface Water	
	Field Form Quantitative Rating ORAM Summary Worksheet	Final: February 1, 2001	
	Wetland Categorization Worksheet		

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name: Angela Sjollema

Date: 9/11/2020

Affiliation:

Stantec Consulting Services Inc.

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Phone Number:

614-286-7866

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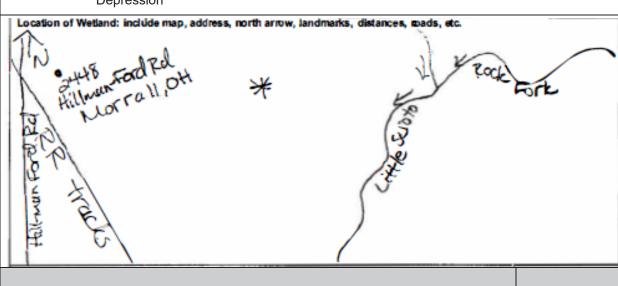
angela.sjollema@stantec.com

Name of Wetland: Wetland 4

Vegetation Communit(ies):

HGM Class(es):

Depression



Lat/Long or UTM Coordinate 40.634849, -83.163334	
USGS Quad Name Morral, Ohio	
County Marion	
Township T5S	
Section and Subsection S5, R15E	
Hydrologic Unit Code City of Marion - Little Scioto River (050600010303)	
Site Visit 9/11/2020	
National Wetland Inventory Map Yes	
Ohio Wetland Inventory Map No	
Soil Survey Marion County Soil Survey	
Delineation report/map Figure 4 - Wetland and Waterbody Delineation Report	

Angela Sjollema Wetland 4 9/11/2020 Name of Wetland: Wetland 4 Wetland Size (acres, hectares): 2.62 acres old Field Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. Comments, Narrative Discussion, Justification of Category Changes:

Final score: 44 Category: 2

Scoring Boundary Worksheet

INSTRUCTIONS. The initial step in completing the ORAM is to identify the "scoring boundaries" of the wetland being rated. In many instances this determination will be relatively easy and the scoring boundaries will coincide with the "jurisdictional boundaries." For example, the scoring boundary of an isolated cattail marsh located in the middle of a farm field will likely be the same as that wetland's jurisdictional boundaries. In other instances, however, the scoring boundary will not be as easily determined. Wetlands that are small or isolated from other surface waters often form large contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. Areas with a high degree of hydrologic interaction should be scored as a single wetland. In determining a wetland's scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

Wetland 4 Angela Sjollema 9/11/2020

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	X	
Step 2	Identify the locations where there is physical evidence that hydrology changes rapidly. Such evidence includes both natural and human-induced changes including, constrictions caused by berms or dikes, points where the water velocity changes rapidly at rapids or falls, points where significant inflows occur at the confluence of rivers, or other factors that may restrict hydrologic interaction between the wetlands or parts of a single wetland.	X	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	X	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	X	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		X
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	X	

End of Scoring Boundary Determination. Begin Narrative Rating on next page.

Narrative Rating

INSTRUCTIONS. Answer each of the following questions. Questions 1, 2, 3 and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), http://www.dnr.state.oh.us/dnap. The remaining questions are designed to be answered primarily by the results of the site visit. Refer to the User's Manual for descriptions of these wetland types. Note: "Critical habitat" is legally defined in the Endangered Species Act and is the geographic area containing physical or biological features essential to the conservation of a listed species or as an area that may require special management considerations or protection. The Rater should contact the Region 3 Headquarters or the Columbus Ecological Services Office for updates as to whether critical habitat has been designated for other federally listed threatened or endangered species. "Documented" means the wetland is listed in the appropriate State of Ohio database.

Wetland 4 Angela Sjollema 9/11/2020

#	Question	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	NO Go to Question 3
3	Documented High Quality Wetland. Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	NO Solution 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	NO Solution 8 Solution
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead spags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	NO So to Question 8b

Wetland 4	Angela Sjollema		9/11/2020
8b	Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	Wetland should be evaluated for possible Category 3 status.	NO So to Question 9a
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9a YES Go to Question 9b	NO X Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	NO Go to Question 10
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	Wetland is a Category 3 wetland Go to Question 10	NO Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	NO Go to Question 10
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	NO So to Question 11
11	Relict Wet Prairies. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.).	Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	NO Complete Quantitative Rating

Table 1. Characteristic plant species.

invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum	-	Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddelli
	Salix serissima	Xyris difformis		<u> </u>
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

End of Narrative Rating. Begin Quantitative Rating on next page.

Site: W	/etland	4 Rater(s): Angela Sjollema	Date: 9/11/2020
2	2	Metric 1. Wetland Area (size).	
max 6 pts.	subtotal	Select one size class and assign score. >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20.2ha) (5 pts) 10 to <25 acres (4 to <10.1ha) (4 pts) 3 to <10 acres (1.2 to <4ha) (3 pts) ✓ 0.3 to <3 acres (0.12 to <1.2ha) (2pts) 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt) <0.1 acres (0.04ha) (0 pts)	
12	14	Metric 2. Upland buffers and surrounding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width. Select only one and assign score. Do not double check. ✓ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7) MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4) NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1) VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0) 2b. Intensity of surrounding land use. Select one or double check and average. VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7) ✓ LOW. Old field (>10 years), shrub land, young second growth forest. (5) MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)	ow field. (3)
15	29	Metric 3. Hydrology.	
max 30 pts.	subtotal	✓Precipitation (1)✓Part of wetland/up✓Seasonal/Intermittent surface water (3)Part of riparian or3c.Maximum water depth. Select only one and assign score.Semi- to permane>0.7 (27.6in) (3)Regularly inundat0.4 to 0.7m (15.7 to 27.6in) (2)Seasonally inundat	in (1) lake and other human use (1) pland (e.g. forest), complex (1) r upland corridor (1) uration. Score one or dbl check ently inundated/saturated (4) ted/saturated (3)
		None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1) None or none apparent (12) Check all disturbances observed ditch tile filling/grading road bed/RR trac dredging other	
14	43	Metric 4. Habitat Alteration and Development.	
max 20 pts.	subtotal	4a. Substrate disturbance. Score one or double check and average. None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)	
		4b. Habitat development. Select only one and assign score. Excellent (7) Very good (6) Good (5) ✓ Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	
		4c. Habitat alteration. Score one or double check and average. None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1) Check all disturbances observed mowing shrub/sapling ren herbaceous/aqua	
si	43	selective cutting dredging woody debris removal toxic pollutants nutrient enrichme	ent
last revised	l 1 Februa	ry 2001 jjm	

Site: V	Vetland	4 R	ater(s): Angela	Sjollema	Date: 9/11/2020
	43 43 43 subtotal]	tlands. ted.		
		Lake Erie coastal/tributary we Lake Plain Sand Prairies (Oal Relict Wet Prairies (10) Known occurrence state/feder Significant migratory songbird Category 1 Wetland. See Qu Metric 6. Plant comn	tland-restricted hydrolo (Openings) (10) ral threatened or endal /water fowl habitat or u estion 1 Qualitative Ra	ngered species (10) usage (10) uting (-10)	pography.
1	44		,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	p = 9: -: p :: y :
max 20 pts.	subtotal	6a. Wetland Vegetation Communities.	Vegetation 0	Community Cover Scale	
		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	
		Aquatic bed	1	Present and either comprises small	
		1 Emergent 1 Shrub		vegetation and is of moderate questions significant part but is of low qual	
		Forest	2	Present and either comprises sign	•
		Mudflats	۷	vegetation and is of moderate qu	
		Open water		part and is of high quality	dailty of comprises a small
		Other	3	Present and comprises significant	nart or more of wetland's
		6b. horizontal (plan view) Interspersion.		vegetation and is of high quality	part, or more, or wettaria's
		Select only one.	-	vegetation and is of high quality	
		High (5)	Narrative De	scription of Vegetation Quality	
		Moderately high(4)	low	Low spp diversity and/or predomir	nance of nonnative or
		Moderate (3)	1011	disturbance tolerant native spec	
		✓ Moderately low (2)	mod	Native spp are dominant compone	
		Low (1)		although nonnative and/or distu	_
		None (0)		can also be present, and specie	
		6c. Coverage of invasive plants. Refer		moderately high, but generally w	-
		to Table 1 ORAM long form for list. Add		threatened or endangered spp	•
		or deduct points for coverage	high	A predominance of native species	, with nonnative spp
		✓ Extensive >75% cover (-5)	· ·	and/or disturbance tolerant nativ	
		Moderate 25-75% cover (-3)		absent, and high spp diversity a	
		Sparse 5-25% cover (-1)		the presence of rare, threatened	-
		Nearly absent <5% cover (0)		•	
		Absent (1)	Mudflat and	Open Water Class Quality	
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 to 2.47 ac	res)
		0 Vegetated hummucks/tussuck	as 2	Moderate 1 to <4ha (2.47 to 9.88	acres)
		1 Coarse woody debris >15cm		High 4ha (9.88 acres) or more	· · ·
		1 Standing dead >25cm (10in)		, ,	
		0 Amphibian breeding pools		aphy Cover Scale	
			0	Absent	
			1	Present very small amounts or if n of marginal quality	nore common
			2	Present in moderate amounts, but	not of highest
				quality or in small amounts of high	
			3	Present in moderate or greater an	nounts
	1			and of highest quality	

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

Wetland 4 Angela Sjollema 9/11/2020

		circle answer or insert	Result
Narrative Rating	Question 1 Critical Habitat	score NO	If yes, Category 3.
	Question 2. Threatened or Endangered	NO	If yes, Category 3.
	Species Question 3. High Quality Natural Wetland	NO	If yes, Category 3.
	Question 4. Significant bird habitat	NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	NO	If yes, Category 1.
	Question 6. Bogs	NO	If yes, Category 3.
	Question 7. Fens	NO	If yes, Category 3.
	Question 8a. Old Growth Forest	NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	NO	If yes, Category 3
	Question 11. Relict Wet Prairies	NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
J	Metric 2. Buffers and surrounding land use	12	
	Metric 3. Hydrology	15	
	Metric 4. Habitat	14	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	1	
	TOTAL SCORE	44	Category based on score breakpoints Category 2

Complete Wetland Categorization Worksheet.

Angela Sjollema **Wetland Categorization Worksheet**

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO X	Is quantitative rating score <i>less</i> than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been overcategorized by the ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 1, 8b, 9b, 9e, 11	YES Wetland should be evaluated for possible Category 3 status	NO X	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to Narrative Rating No. 5	Wetland is categorized as a Category 1 wetland	NO X	Is quantitative rating score <i>greater</i> than the Category 2 scoring threshold <i>(including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO X	Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1-54(C).
Does the wetland otherwise exhibit moderate OR superior hydrologic OR habitat, OR recreational functions AND the wetland was not categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category					
Choose one	Category 1	Category 2	Category 3		
Category 2					

End of Ohio Rapid Assessment Method for Wetlands.

MARION COUNTY SOLAR PROJECT WETLAND AND WATERBODY DELINEATION REPORT

B.3 QHEI FORMS





Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 76

Stream & Location: Stream 1 (Little Scioto River)	RM:	Date:(<u>11/20</u>
Savion Solar Project (Marion County, OH) Scorers Full Name & Affiliation:	A. Sjollen	na, Stantec	
	<u>826 /8</u> 3.	<u>162017</u>	Office verified location
1] SUBSTRATE Check ONLYTwo substrate TYPE BOXES; estimate % or note every type present BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE BLDR /SLABS [10]	SILT	average) QUALI HEAVY [-2 MODERAT NORMAL FREE [1] EXTENSIV MODERAT NORMAL NONE [1]	[0] Substrate
2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common quality; 2-Moderate amounts, but not of highest quality or in small amounts quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functiona UNDERCUT BANKS [1] OVERHANGING VEGETATION [1] SHALLOWS (IN SLOW WATER) [1] ROOTWADS [1] BOULDERS [1] 1 LOGS OR WOODY DE Comments	s of highest r, large l pools. ERS [1]	Check ONE (Or EXTENSIVE > MODERATE 2 SPARSE 5-<2 NEARLY ABS	2 & average) -75% [11] 25-75% [7] 25% [3]
3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY HIGH [4] EXCELLENT [7] NONE [6] IHIGH [3] MODERATE [3] GOOD [5] RECOVERED [4] MODERATE [2] LOW [2] FAIR [3] RECOVERING [3] LOW [1] NONE [1] POOR [1] RECENT OR NO RECOVERY [1] Comments			Channel 19
4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Control of the control of the category for EACH BANK (Control of the category for EACH BANK (Contr	ITY R C C C C C C C C C C C C C C C C C C	ONSERVATION RBAN OR INDI IINING / CONST predominant land Om riparian.	USTRIAL [0] RUCTION [0]
5] POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH Check ONE (ONLY!) Check ONE (Or 2 & average) POOL WIDTH > RIFFLE WIDTH [2] 0.7-<1m [4] 0.4-<0.7m [2] POOL WIDTH < RIFFLE WIDTH [1] 0.2-<0.4m [1] 0.2-<0.4m [1] 1 Comments CURRENT VELOCITY Check ALL that apply TORRENTIAL [-1] VERY FAST [1] INTERSTIT MODERATE [1] Indicate for reach - pools and recommends	TIAL [-1] TENT [-2]	Recreation Primary C Secondary (circle one and com	Contact Contact
☑ BEST AREAS > 10cm [2] ☐ BEST AREAS 5-10cm [1] ☐ BEST AREAS 5-10cm [1] ☐ BEST AREAS < 5cm ☐ metric=0] Comments ☐ MAXIMUM > 50cm [2] ☐ STABLE (e.g., Cobble, Boulder) [2] ☐ MAXIMUM < 50cm [1] ☑ MOD. STABLE (e.g., Large Gravel) [1] ☐ UNSTABLE (e.g., Fine Gravel, Sand) [0]	FLE / RUN	I EMBEDDE DNE [2] DW [1] DDERATE [0] TENSIVE [-1]	IFFLE [metric=0] DNESS Riffle /
6] GRADIENT (4 ft/mi)	%GLIDE		Gradient 6



Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score:	59
-------------	----

Stream & Location: Stream 2	RM:	Date:	0 <u>9</u> / <u>0</u> 9/ <u>20</u>
Savion Solar Project (Marion County) Scorers Full Name & Affiliation.	M. Kearı	ns, Stantec	
River Code: STORET #: Lat./ Long.: 40 . 616	<u>86</u> / 8 _3.	. <u>143</u>	Office verified location
1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present BEST TYPES POOL RIFFLE OTHER TYPES POOL RIFFLE HARDPAN [4] LIMESTONE [1] DETRITUS [3] TILLS [1] DETRITUS [3] SAND [6] SAND [6] SAND [6] BEDROCK [5] MUCK [2] MUCK [2] MUCK [2] MUCK [2] METLANDS [0] ARTIFICIAL [0] SANDSTONE [0] MUMBER OF BEST TYPES: 4 or more [2] sludge from point-sources) NUMBER OF BEST TYPES: 3 or less [0] Comments	SILT	QUAL HEAVY [- MODERA NORMAL FREE [1] EXTENSI MODERA NONE [1]	2] TE [-1] Substrate
2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more comm quality; 2-Moderate amounts, but not of highest quality or in small amounts quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional UNDERCUT BANKS [1]	s of highest er, large al pools. [ERS [1] [/TES [1] [Check ONE (O EXTENSIVE MODERATE SPARSE 5-< NEARLY AB	r 2 & average) >75% [11] 25-75% [7]
3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average) SINUOSITY DEVELOPMENT CHANNELIZATION STABILITY HIGH [4] EXCELLENT [7] NONE [6] HIGH [3] MODERATE [3] GOOD [5] RECOVERED [4] MODERATE [2] LOW [2] FAIR [3] RECOVERING [3] LOW [1] NONE [1] POOR [1] RECENT OR NO RECOVERY [1] Comments	1		Channel 11
4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Control of the control of the category for EACH BANK (Control of the category for EACH BANK (Contr		CONSERVATIO URBAN OR INE MINING / CONS e predominant le 00m riparian.	DUSTRIAL [0] STRUCTION [0]
5] POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH CHANNEL WIDTH CURRENT VELOCITY Check ONE (ONLY!) Check ONE (Or 2 & average) Check ALL that apply > 1m [6] POOL WIDTH > RIFFLE WIDTH [2] VERY FAST [1] INTERSTITE 0.4-<0.7m [2] POOL WIDTH < RIFFLE WIDTH [1] VERY FAST [1] INTERSTITE 0.2-<0.4m [1] MODERATE [1] EDDIES [Indicate for reach - pools and recomments	ITIAL [-1] ITENT [-2] 1]	Recreation Primary Secondar (circle one and co	Contact y Contact
□ BEST AREAS > 10cm [2] □ MAXIMUM > 50cm [2] □ STABLE (e.g., Cobble, Boulder) [2] □ BEST AREAS 5-10cm [1] □ MAXIMUM < 50cm [1] □ MOD. STABLE (e.g., Large Gravel) [1] □ BEST AREAS < 5cm □ UNSTABLE (e.g., Fine Gravel, Sand) [0] Comments	FLE / RUI	Tion NO I	RIFFLE [metric=0] EDNESS Riffle /
6] GRADIENT (16.2 ft/mi)) %GLIDE)%RIFFLE	=	Gradient Maximum

Comment RE: Reach consistency/ Is reach typical of steam?, Recreation/ Observed - Inferred, Other/ Sampling observations, Concerns, Access directions, etc



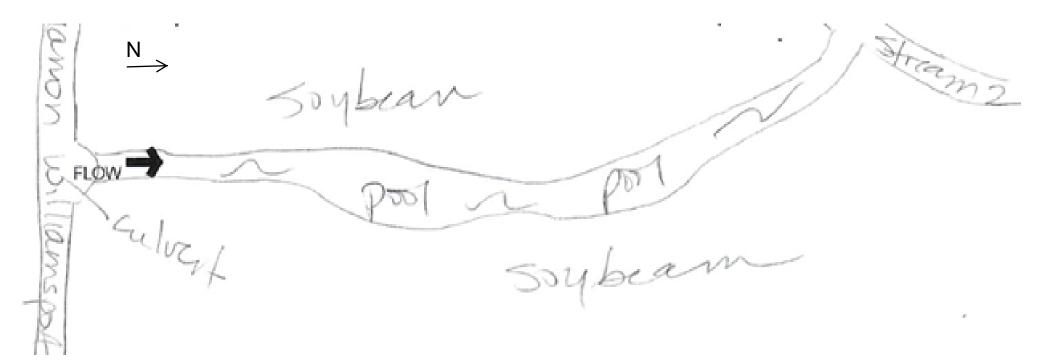
Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 51

Stream & Location: Stream 3		RM: Date:09/ 09/ 20
Marion County Solar Project	Scorers Full Name & Affile	liation: M. Kearns, Stantec
River Code:		. 61561 /8 3. 14246 Office verified location
BEST TYPES	every type present	HEAVY [-2]
quality; 3 -Highest quality in moderate o		amounts of highest fast water, large Check ONE (<i>Or 2 & average</i>) EXTENSIVE >75% [11]
3] CHANNEL MORPHOLOGY CONTROL SINUOSITY DEVELOPME HIGH [4]	[7] NONE [6] HIGH [3	3] RATE [2]
River right looking downstream RIF ROSION	RIAN ZONE Check ONE in each category for EACH EPARIAN WIDTH E > 50m [4]	QUALITY CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] WINING / CONSTRUCTION [0] Indicate predominant land use(s)
Check ONE (<i>ONLY!</i>) Check ☐ > 1m [6] ☐ POOL W ☐ 0.7-<1m [4] ☐ POOL W	HANNEL WIDTH CONE (Or 2 & average) IDTH > RIFFLE WIDTH [2] IDTH = RIFFLE WIDTH [1] IDTH < RIFFLE WIDTH [0] Check ALL that a town of the properties of t	apply SLOW [1] NTERSTITIAL [-1] NTERMITTENT [-2] EDDIES [1] Primary Contact Secondary Contact (circle one and comment on back)
of riffle-obligate species: RIFFLE DEPTH RUI BEST AREAS > 10cm [2] MAXIN BEST AREAS 5-10cm [1] MAXIN BEST AREAS < 5cm [metric=0] Comments	es; Best areas must be large enough to su Check ONE (Or 2 & average). N DEPTH RIFFLE / RUN SUBSTRATE MUM > 50cm [2] STABLE (e.g., Cobble, Boulder) [2 MUM < 50cm [1] MOD. STABLE (e.g., Large Gravel) UNSTABLE (e.g., Fine Gravel, Sand	upport a population NO RIFFLE [metric=0] E RIFFLE / RUN EMBEDDEDNESS D NONE [2] NONE [2] LOW [1]
DRAINAGE AREA	VERY LOW - LOW [2-4] %POOL: (MODERATE [6-10] HIGH - VERY HIGH [10-6] %RUN:	70 %GLIDE: 0 Gradient 10 %RIFFLE: 20

A] SAMPLED REACH Check ALL that apply	Comment RE: Reach consistency/	Is reach typical of steam?, Recreation	n/ Observed - Inferred, Other	r/ Sampling observations, Concerns, Acc	ess directions, etc.
METHOD STAGE BOAT 1st-sample pass-2nd HIGH L. LINE UP OTHER NORMAL DISTANCE DRY	pH: 7.2, Temp: 22.6°C, Condu Outside normal banks due to la	<u> </u>			
□ 0.5 Km □ 0.2 Km □ 0.15 Km □ 0.15 Km □ 0.12 Km □ 0.12 Km □ 0.70 cm □ 40.70 cm □ 40.70 cm □ 70 cm/ CTB □ SECCHI DEPTH □ SECCHI DEPTH □ 20-<40 cm □ 40-70 cm □ 40-70 cm □ 40-70 cm □ 20-<40 cm □ 40-70 cm □ 40-70 cm □ 40-70 cm □ 70 cm/ CTB □ 55%-<85% □ 30%-<55% □ 10%-<30% □ 2nd □ CI RECR	INVASIVE MACROPHYTES EXCESS TURBIDITY DISCOLORATION FOAM / SCUM OIL SHEEN TRASH / LITTER NUISANCE ODOR SLUDGE DEPOSITS CSOs/SSOs/OUTFALLS	DJ MAINTENANCE PUBLIC / PRIVATE / BOTH / NA ACTIVE / HISTORIC / BOTH / NA YOUNG-SUCCESSION-OLD SPRAY / SNAG / REMOVED MODIFIED / DIPPED OUT / NA LEVEED / ONE SIDED RELOCATED / CUTOFFS MOVING-BEDLOAD-STABLE ARMOURED / SLUMPS ISLANDS / SCOURED IMPOUNDED / DESICCATED FLOOD CONTROL / DRAINAGE	Circle some & COMMENT	EJ ISSUES WWTP / CSO / NPDES / INDUSTRY HARDENED / URBAN / DIRT&GRIME CONTAMINATED / LANDFILL BMPs-CONSTRUCTION-SEDIMENT LOGGING / IRRIGATION / COOLING BANK / EROSION / SURFACE FALSE BANK / MANURE / LAGOON WASH H ₂ 0 / TILE / H ₂ 0 TABLE ACID / MINE / QUARRY / FLOW NATURAL / WETLAND / STAGNANT PARK / GOLF / LAWN / HOME ATMOSPHERE / DATA PAUCITY	FJ MEASUREMENTS \overline{\text{x} width 5'} \overline{\text{x} depth 1'} \overline{\text{max. depth}} \overline{\text{x} bankfull width 6'} \overline{\text{bankfull } \overline{\text{x} depth } \angle .5'} \overline{\text{W/D} ratio} \overline{\text{bankfull max. depth}} \overline{\text{floodprone } x^2 width} \overline{\text{entrench. ratio}} \overline{\text{Legacy Tree:}}

Stream Drawing:



Appendix C PHOTOGRAPHS







Photo Location 1. View of Wetland 1, SP01. Photograph taken facing north.



Photo Location 1. View of Wetland 1, SP01. Photograph taken facing east.





Photo Location 1. View of Wetland 1, SP01. Photograph taken facing south.



Photo Location 1. View of Wetland 1, SP01. Photograph taken facing west.





Photo Location 2. Upstream view of Stream 1 (Little Scioto River), north segment. Photograph taken facing north.



Photo Location 2. Downstream view of Stream 1 (Little Scioto River), north segment. Photograph taken facing south.





Photo Location 3. View of swale. Photograph taken facing northwest.



Photo Location 4. View of non-NWI point (SP03). Photograph taken facing northwest.





Photo Location 5. Upstream view of Stream 2 (Rock Swale), eastern segment. Photograph taken facing southeast.



Photo Location 5. Downstream view of Stream 2 (Rock Swale), eastern segment. Photograph taken facing northwest.





Photo Location 5. View of Stream 2 (Rock Swale), eastern segment, substrates.



Photo Location 6. Upstream view of Stream 3. Photograph taken facing east.





Photo Location 6. Downstream view of Stream 3. Photograph taken facing west.



Photo Location 6. View of Stream 3 substrates.





Photo Location 7. View of UDF. Photograph taken facing west.



Photo Location 8. View of stream location on NHD. Photograph taken facing east.





Photo Location 9. Upstream view of Stream 1 (Little Scioto River), south segment. Photograph taken facing northeast.



Photo Location 9. Downstream view of Stream 1 (Little Scioto River), south segment. Photograph taken facing southwest.





Photo Location 9. View of Stream 1 (Little Scioto River), south segment, substrates.



Photo Location 10. View of Wetland 2, SP04. Photograph taken facing north.





Photo Location 10. View of Wetland 2, SP04. Photograph taken facing east.



Photo Location 10. View of Wetland 2, SP04. Photograph taken facing south.





Photo Location 10. View of Wetland 2, SP04. Photograph taken facing west.



Photo Location 11. View of Wetland 3, SP06. Photograph taken facing north.





Photo Location 11. View of Wetland 3, SP06. Photograph taken facing east.



Photo Location 11. View of Wetland 3, SP06. Photograph taken facing south.





Photo Location 11. View of Wetland 3, SP06. Photograph taken facing west.



Photo Location 12. View of Wetland 4 (PEM portion), SP8. Photograph taken facing north.





Photo Location 12. View of Wetland 4 (PEM portion), SP8. Photograph taken facing east.



Photo Location 12. View of Wetland 4 (PEM portion), SP8. Photograph taken facing south.





Photo Location 12. View of Wetland 4 (PEM portion), SP8. Photograph taken facing west.



Photo Location 13. View of Wetland 4 (PSS portion), SP10. Photograph taken facing north.





Photo Location 13. View of Wetland 4 (PSS portion), SP10. Photograph taken facing east.



Photo Location 13. View of Wetland 4 (PSS portion), SP10. Photograph taken facing south.





Photo Location 14. View of non-NWI point (SP12). Photograph taken facing west.



Photo Location 15. View of non-NWI point (SP13). Photograph taken facing northeast.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

3/5/2021 10:22:10 AM

in

Case No(s). 21-0036-EL-BGN

Summary: Application - 22 of 30 (Exhibit S – Wetland and Waterbody Delineation Report) electronically filed by Christine M.T. Pirik on behalf of Marion County Solar Project, LLC