Wetland and Waterbody Delineation Report

Leroy Center-Pawnee Tap 138 kV Transmission Line Reconductoring Project Lake and Geauga Counties, Ohio

Prepared for



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Jacobs

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Acronyms and Abbreviations

ATSI American Transmission Systems, Incorporated

CWA Clean Water Act

ESB Environmental Survey Boundary

FAC Facultative

FACU Facultative Upland
FACW Facultative Wetland

GNSS Global Navigation Satellite System
HHEI Headwater Habitat Evaluation Index

HUC Hydrologic Unit Code

Jacobs Engineering Group Inc.

kV Kilovolt

NHD National Hydrography Dataset

NRCS Natural Resource Conservation Service

NWI National Wetland Inventory

OBL Obligate Wetland

OEPA Ohio Environmental Protection Agency

OHWM Ordinary High-Water Mark

ORAM Ohio Rapid Assessment Method

PEM Palustrine emergent

Project Leroy Center-Pawnee Tap 138 kV Transmission Line Reconductoring Project

PSS Palustrine scrub-shrub

QHEI Qualitative Habitat Evaluation Index

ROW Right-of-way

TNW Traditionally navigable water

UPL Upland

USACE United States Army Corps of Engineers
USDA United States Department of Agriculture

USEPA United States Environmental Protection Agency

USFWS United States Fish and Wildlife Service

USGS United States Geological Survey

1 Introduction

This wetland and waterbody delineation report (Report) summarizes the results of the wetland and waterbody delineation surveys conducted in Lake and Geauga Counties, Ohio by Jacobs Engineering Group Inc. (Jacobs), for American Transmission Systems, Incorporated (ATSI), a wholly-owned subsidiary of FirstEnergy Corporation. ATSI is proposing to reconductor the larger Leroy Center-Mayfield 138 kV Transmission Line Project, which comprises several segments. This Report covers the Leroy Center-Pawnee Tap 138 kV Transmission Line Reconductoring Project (Project), which consists of reconductoring approximately 8.4 miles of transmission line within the existing right-of-way (ROW). The Project area crosses the City of Chardon and the townships of Leroy, Hambden, and Chardon (Figure 1). Jacobs conducted environmental surveys in August through November of 2021 and August of 2022. The environmental survey boundary (ESB) included approximately 8.4 miles of 200-foot wide ROW, access roads, and helicopter landing zones. This Report contains the following components:

- Figure 1 provides an overview map of the ESB overlain on ArcGIS Online USA topographic maps.
- Figure 2-1 to 2-19 shows U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) mapped soil units, the location of National Wetland Inventory (NWI) polygons, national hydrography dataset (NHD) streams, and Federal Emergency Management Agency (FEMA) 100-year floodplain and floodway information. Table 2-1 summarizes recent precipitation data. Table 3-1 lists the soil map units identified within the ESB and Table 3-2 lists the NWI wetland types identified within the ESB.
- Figure 3-1 to 3-19 provides the location of all features mapped during the delineation by Jacobs biologists. This includes all wetlands, data points, and waterbodies. Tables 4-1 (wetlands), 4-2 (streams), and 4-3 (ponds) follow the text, providing detailed information for all delineated features within the ESB. Tables 4-4 (wetlands), 4-5 (QHEI streams), and 4-6 (HHEI streams) are within the text, providing a summary of information for delineated wetlands and streams within the ESB.
- U.S. Army Corps of Engineers (USACE) wetland determination field data forms are in Appendix A.
- Ohio Rapid Assessment Method for Wetlands (ORAM) two-page forms are in Appendix B.
- Qualitative Habitat Evaluation Index (QHEI) Stream Forms are in Appendix C.
- Headwater Habitat Evaluation Index (HHEI) Stream Forms are in Appendix D.
- Jacobs Open Water/Pond Data Forms are in Appendix E.

2 Background Information

This section describes the ESB and methodology used during the wetland and waterbody delineation field surveys.

2.1 Project Area

The Project is located in Lake and Geauga Counties, Ohio (Figure 1). The Project begins at Leroy Center Substation in Leroy Township (41.52302, -81.32976), ends at Structure PW-1 in Chardon Township (41.59548, -81.22868), and is approximately 8.4 miles long. Review of the USGS 7.5-minute topographic maps indicates that the ESB is within the USGS 7.5-minute topographic quadrangles of Painesville and Chardon, Ohio. Topographic relief is generally flat, with a few steep areas associated with waterbodies. The Project area ranges from 987 to 1,275 feet above sea level (Figure 1).

Land use and natural communities observed within the ESB include maintained ROW, residential areas, agricultural fields, and industrial parcels.

2.2 Annual Precipitation

Precipiation history for Chardon, Ohio was reviewed prior to completing environmental surveys to determine if climatic conditions were normal at the time of the surveys. Rainfall recorded in Chardon was generally normal prior to and during the surveys conducted in summer and fall of 2021 (Table 2-1; USDA, 2021), suggesting that climatic conditions were approximately normal. This was taken into consideration during the delineation survey.

TABLE 2-1: Recent Precipitation Data

Leroy Center-Pawnee Tap 138kV Transmission Line Reconductoring Project

Precipitation Data	Jun	Jul	Aug	Sep	Oct	Nov	Total
2021 Monthly Sum ^{1,3}	5.0	6.6	4.1	2.3	7.1	3.5	28.6
Normal Precipitation ^{2,3}	3.2-5.4	2.9-4.6	3.3-5.5	3.2-5.2	3.1-4.4	3.1-5.1	18.7-30.2
Monthly climatic condition	Average	Above average	Average	Below average	Above average	Average	Average

¹Monthly weather summary from weather station CHARDON, OH

2.3 Drainage Basins

The Project is within the Grand River drainage basin, corresponding to 8-digit Hydrologic Unit Code (HUC) 04110004. More specifically it is within the Paine Creek (12-digit HUC 04110004-06-04) and Big Creek (12-digit HUC 04110004-06-06) watersheds (USGS, 2020).

2.4 Traditional Navigable Waters

The U.S. Environmental Protection Agency (EPA) and USACE assert jurisdiction over "all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce including all waters which are subject to the ebb and flow of the tide" (USACE and EPA, 2008). These waters are considered traditionally navigable waters (TNW). No TNW directly cross the ESB.

²USDA WETS Station Climate Data 1971-2000 (USDA 2021)

³Displayed in inches

3 Wetland and Waterbody Delineation

3.1 Desktop Review

Prior to conducting the field investigations, Jacobs reviewed the following resources to identify the potential for wetlands within the ESB:

- Aerial photo-based maps (ArcGIS Online, World Imagery Map, 2018)
- Topographic maps (ArcGIS Online, USA Topo Maps, 2019)
- NRCS Web Soil Survey (USDA-NRCS, 2021)
- NWI shapefile (USFWS, 2020)
- National Hydrography Dataset (NHD) (USGS, 2020)

According to the NRCS soil survey of Geauga and Lake Counties (USDA-NRCS, 2021), the ESB consists of 22 soil map units (Figure 2-1 to 2-19). Of these, 21 soil map units are listed as not hydric or predominantly not hydric, making up 96% of the ESB. One soil map unit is considered predominantly hydric and makes up 4% of the ESB (Table 3-1, follows text).

Generally, hydric soils are those soils that indicate through their color and structure that they have experienced dominantly reducing (i.e. oxygen poor) conditions. Oxygen-poor conditions result from inundation and/or saturation by water. Partially hydric soils have both hydric and non-hydric soil components identified in the mapped soil unit.

NWI data were obtained from the USFWS for review of potential wetlands that may occur within the ESB. The NWI data (USFWS, 2020) identify the type of wetland or open water present at a location using the USFWS classification system (Cowardin et al., 1979). The NWI data indicated that there are 13 NWI features mapped within the ESB (Figure 2-1 to 2-19; USFWS, 2020). This included emergent, scrub-shrub/forested complexes, scrub-shrub, forested, and open water NWI wetland types (Table 3-2, follows text). The presence of an NWI feature is not a definitive indicator that a wetland or waterbody is present. The information on NWI maps is obtained largely from aerial interpretation, may be outdated, and is only sporadically field-checked.

As shown on the FEMA floodplain panels (Figure 2-1 to 2-19), a 100-year floodplain associated with Big Creek crosses the ESB (FEMA, 2019).

3.2 Field Survey Methodology

Over five weeks in August through November of 2021, Jacobs biologists surveyed the ESB by walking the area and evaluating for wetlands and other waters of the U.S. The boundaries of each wetland and waterbody within the ESB were delineated and recorded using handheld global navigation satellite system (GNSS) receivers. For waterbodies identified within the Project area, the ordinary high-water mark (OHWM) was used as the jurisdictional boundary.

Wetland data were recorded on USACE Northcentral and Northeast Regional Supplement wetland determination data forms, stream data were recorded on Qualitative Habitat Evaluation Index (QHEI) forms and Headwater Habitat Evaluation Index (HHEI) forms, and pond data were recorded on Jacobs pond/open water forms. All other land use, habitat, and other supplemental data were collected in a digital geodatabase.

3.2.1 Wetland Delineation

Wetland boundaries were field-delineated according to methodology described in the Technical Report Y-87-1 *Corps of Engineers Wetlands Delineation Manual* and subsequent guidance documents (Environmental Laboratory, 1987) and according to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0) (USACE, 2012). Wetland delineation data were recorded on the USACE Regional Supplement wetland determination data forms. Representative wetland and upland data points were recorded during the wetland delineation to determine the presence/absence of wetlands and/or to document upland conditions within the Project area. Upland data points were determined not to be within wetlands because they did not have positive indicators of one or more of the three wetland criteria: hydrophytic vegetation, wetland hydrology, and hydric soils.

3.2.1.1 Soils

Jacobs biologists examined soils using a shovel to extract soil cores, which were examined for hydric soil characteristics. A *Munsell Soil Color Chart* (Kollmorgen Corporation, 1988) was used to identify the hue, value, and chroma of the matrix and concentrations/depletions of the soils. Generally, mottled soils with a matrix chroma of two or less, or unmottled soils with a matrix chroma of one or less are considered to exhibit hydric soil characteristics (Environmental Laboratory, 1987). In sandy soils, mottled soils with a matrix chroma of three or less, or unmottled soils with a matrix chroma of two or less are hydric soils.

3.2.1.2 Hydrology

The 1987 Manual requires that an area be inundated or saturated to the surface for an absolute minimum of five percent of the growing season. Areas saturated between five percent and 12.5 percent of the growing season may or may not be wetlands, while areas saturated over 12.5 percent of the growing season fulfill the hydrology requirements for wetlands. The Regional Supplement states that the growing season dates are determined through onsite observations of the following indicators of biological activity in a given year; (1) above-ground growth and development of vascular plants, and/or (2) soil temperature (12-in. depth is 41 degrees Fahrenheit or higher) as an indicator of soil microbial activity. Therefore, the beginning of the growing season in a given year is indicated by whichever condition occurs earlier, and the end of the growing season by whichever persists later.

The soils and ground surface were examined by Jacobs biologists for evidence of wetland hydrology in lieu of detailed hydrological data. This is an acceptable approach according to the *1987 Manual* and the *Regional Supplement*. Evidence indicating wetland hydrology typically includes primary indicators such as surface water, saturation, water marks, drift deposits, water-stained leaves, sediment deposits, and oxidized rhizospheres on living roots; and secondary indicators such as drainage patterns, geomorphic position, microtopographic relief, and a positive Facultative (FAC)-neutral test (USACE, 2012).

3.2.1.3 Vegetation

Dominant vegetation was visually assessed for each stratum (tree, sapling/shrub, herb, and woody vine) and an indicator status (obligate wetland [OBL], facultative wetland [FACW], facultative [FAC], facultative upland [FACU], upland [UPL]) was assigned to each plant species based on the 2016 National Wetland Plant List. An area is determined to have hydrophytic vegetation when any of the following are true: all dominant species are OBL or FACW; more than 50 percent of the dominant species are OBL, FACW or FAC; or the average total cover of plants, when weighted based on indicator status, calculates to a prevalence index of less than or equal to three.

Wetland quality was evaluated using the Ohio Environmental Protection Agency (OEPA) Ohio Rapid Assessment Method (ORAM) for Wetlands Version 5.0 (Mack 2001). Categorization was conducted in accordance with the latest quantitative score calibration (OEPA, 2000). Wetlands are scored based on size, surrounding land use, hydrology, habitat alteration, special wetland communities, and plant communities. Each of these subject areas is further divided into subcategories under ORAM v5.0 resulting in a score that describes the wetland using a range from 0 (low quality and high disturbance) to 100 (high quality and low disturbance). Wetlands scored from 0 to 29.9 are grouped into "Category 1", 30 to 59.9 are "Category 2" and 60 to 100 are "Category 3". Transitional zones exist between Categories 1 and 2 from 30 to 34.9 and between Categories 2 and 3 from 60 to 64.9. However, according to the OEPA, if the wetland score falls into the transitional range, it must be given the higher Category unless scientific data can prove it should be in a lower category (Mack, 2001).

3.2.2 Stream Assessment

Jurisdictional streams were identified as those waters that possessed a continuously defined bed and bank, OHWM indicators, and lacked a dominance of upland vegetation in the channel. Per USACE guidance, the OHWM is defined as the "line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (USACE, 2005). Channels that parallel a roadway or railroad were identified as upland drainage features and were not considered to be jurisdictional unless they had an identifiable OHWM, were identified on the USGS topographic map, or represented a presumed relocation of a natural channel.

During the field survey, functional stream assessments were conducted using the methods described in *Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index* (OEPA, 2006) and *Field Methods for Evaluating Primary Headwater Streams in Ohio* (OEPA, 2018). The QHEI is used to characterize larger streams (drainage areas greater than one square mile or maximum pool depth greater than 40 centimeters), while the HHEI is appropriate for first-order and second-order headwater streams (drainage areas less than one square mile and maximum pool depth less than 40 centimeters).

4 Field Survey Results

Jacobs biologists surveyed the Project in August-November 2021 and August 2022 by walking the ESB and evaluating for wetlands and other waters of the U.S. A total of 56 wetlands, 18 streams, and six ponds were delineated within the ESB and are displayed on the Wetlands and Waterbodies Delineation Map (Figure 3-1 to 3-19). Detailed information for wetland and waterbody features within the ESB is provided in Tables 4-1 (wetlands), 4-2 (streams), and 4-3 (ponds).

4.1 Wetlands

A total of 56 wetlands and wetland complexes, ranging in size from less than 0.01 to 8.68 acres, were delineated within the ESB. The reported wetland acreage only corresponds to areas identified within the ESB, as many wetlands extended beyond the survey boundary. Three of the wetlands were identified as palustrine emergent/scrub-shrub wetland complexes (PEM/PSS) and the remaining 53 wetlands were identified as PEM wetlands. Detailed information for each delineated wetland within the ESB is provided in Table 4-1 (follows text).

Completed USACE wetland and upland determination forms are provided in Appendix A; representative photographs were taken of each wetland during the field survey and are appended to each USACE wetland form.

4.1.1 Wetland ORAM Results

Of the 56 wetlands, 38 were classified as Category 1 wetlands and 18 were classified as Category 2 wetlands. No Category 3 wetlands were identified within the ESB. Table 4-4 provides summary information regarding wetlands identified within the ESB, and completed ORAM forms are included in Appendix B.

Thirty-eight Category 1 wetlands were identified within the ESB, including one PEM/PSS wetland complex and 37 PEM wetlands. These wetlands were classified as Category 1 wetlands based on ORAM scores ranging from 9 to 29.5. Generally, the Category 1 wetlands scored low due to factors such as small size, intensity of surrounding land use, habitat alteration, poor habitat development, lack of horizontal interspersion, presence of invasive species, and lack of microtopography.

Eighteen Category 2 wetlands were identified within the ESB, including two PEM/PSS wetland complexes and 16 PEM wetlands. These wetlands were classified as Category 2 wetlands based on ORAM scores ranging from 30.5 to 43. The Category 2 wetlands exhibited less habitat alteration, greater horizontal interspersion, less invasive species cover, and greater presence of microtopography.

No Category 3 wetlands were identified within the ESC.

TABLE 4-4: Wetland Summary Table

Leroy Center-Pawnee Tap 138 kV Transmission Line Reconductoring Project

Watland Type	C	RAM Categor	Number of	Acreage	
Wetland Type	Category 1	Category 2	Category 3	Wetlands	within ESB
PEM/PSS	1	2	0	3	19.54
PEM	37	16	0	53	26.33
Totals	38	18	0	56	45.87

4.2 Streams

Eighteen streams, totaling 4,940 linear feet, were identified within the ESB. Of the 18 streams, six were identified as perennial streams, ten were intermittent streams, and two were ephemeral streams. Four streams were assessed using the QHEI methodology (drainage area greater than one square mile) and 14 streams were assessed using the HHEI methodology (drainage area less than one square mile). Detailed information for each delineated stream within the ESB is provided in Table 4-2 (follows text).

4.2.1 QHEI Results

Four streams, totaling 1,361 linear feet within the ESB, were evaluated using QHEI methodology. One was classified as an Excellent Warmwater stream, one was classified as a Good Warmwater stream, and two were classified as Fair Warmwater streams. The completed QHEI forms and representative photographs are in Appendix C and Table 4-5 provides a summary of streams identified within the ESB that were assessed using the QHEI.

TABLE 4-5: QHEI Stream Summary Table

Leroy Center-Paynee Tap 138 kV Transmission Line Reconductoring Project

Пом		Number of	Length				
Flow Regime	Very Poor	Poor	Fair	Good	Excellent	Number of Streams	(feet)
ŭ	Warmwater	Warmwater	Warmwater	Warmwater	Warmwater		within ESB
Perennial	0	0	2	1	1	4	1,361
Total	0	0	2	1	1	4	1,361

4.2.2 HHEI Results

Fourteen headwater streams, totaling 3,578 linear feet within the ESB, were evaluated using the HHEI methodology. Four streams were categorized as Class III streams, three were categorized as Class II streams, one was categorized as Class I, one was categorized as Modified Class I, and two were categorized as Rheocrene. Of the 14 streams, two were ephemeral, 10 were intermittent, and two were perennial streams. Completed HHEI forms and representative photographs are provided in Appendix D and Table 4-6 provides a summary of streams identified within the ESB that were assessed using the HHEI.

TABLE 4-6: HHEI Stream Summary Table

Leroy Center-Pawnee Tap 138 kV Transmission Line Reconductoring Project

Flow			Number of	Length				
Flow Regime ¹	Rheocrene	Modified Class I	Class I	Modified Class II	Class II	Class III	Streams	(feet) within ESB ²
Ephemeral	0	0	0	0	1	1	2	1,122
Intermittent	2	1	1	1	2	3	10	1,850
Perennial	0	0	0	2	0	0	2	606
Total	2	1	1	3	3	4	14	3,578

¹Flow regime estimated based on analysis of drainage area, gradient, and observations at the time of survey

4.3 Ponds/Open Water

Six ponds, totaling 3.81 acres, were identified within the ESB (Figure 3-1 to 3-19). Detailed information for each delineated pond within the ESB is provided in Table 4-3. Representative photographs and more detailed information on pond conditions can be found in the Jacobs Pond/Open Water Data Forms in Appendix E.

²Numbers have been rounded for presentation purposes. Thus, the total may not reflect the exact sum of the addends.

5 Conclusion

This report presents the background research and field survey results conducted for the Leroy Center-Pawnee Tap 138 kV Transmission Line Reconductoring Project located in Lake and Geauga Counties, Ohio.

During the August-November 2021 and August 2022 field surveys, 56 wetlands, 18 streams, and six ponds were identified within the ESB. The 56 wetlands totaled 45.87 acres and included 3 PEM/PSS wetland complexes and 53 PEM wetlands. Of the 56 wetlands, 38 Category 1 wetlands and 18 Category 2 wetlands were identified within the ESB. No Category 3 wetlands were identified within the ESB. The 18 streams identified totaled 4,940 linear feet and included six perennial streams, ten intermittent streams, and two ephemeral streams. Four streams were assessed using the QHEI methodology (drainage area greater than one square mile) and 14 streams were assessed using the HHEI methodology (drainage area less than one square mile). The six ponds identified totaled 3.81 acres within the ESB.

The jurisdiction of all assessed features will be determined by the USACE and state-established water quality standards based on hydrologic connectivity. Further coordination with the USACE and state regulating agency is recommended prior to the submittal of any permit or construction activities.

The results of the environmental resource survey described in this Report conducted by Jacobs are limited to the what was identified within the ESB, and depicted in Figure 3-1 to 3-19. The information contained in this Report is for a study area that may be much larger than the actual Project limits-of-disturbance for construction; therefore, lengths and acreages listed in this Report may likely not constitute the actual impacts of the Project at the time of construction. If permits are determined to be necessary, actual impacted lengths and/or acreages will be submitted in subsequent permit applications.

The wetland and waterbodies field survey results presented within this Report apply to the site conditions at the time of our assessment. Changes within the environmental survey boundary that may occur with time due to natural processes or human impacts at the project site or on adjacent properties, could invalidate the findings of this Report, especially if Jacobs is unaware and has not had the opportunity to revisit the Project environmental survey boundary. Additionally, changes in applicable standards and regulations may also occur due to legislation or the expansion of knowledge over time. Therefore, the findings of this Report may be invalidated, wholly or in part, by changes that are beyond the control of Jacobs.

6 References

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TABLE 3-1: Soil Map Units Leroy Center-Pawnee Tap 138 kV Transmission Line Reconductoring Project

Soil type	Soil type description	Hydric status	Acres (ac) within ESB
DaA	Darien silt loam, 0 to 1 percent slopes	Predominantly not hydric	18.19
DaB	Darien silt loam, 1 to 4 percent slopes	Not hydric	15.77
EhB	Ellsworth silt loam, 2 to 6 percent slopes	Predominantly not hydric	2.41
EhC	Ellsworth silt loam, 6 to 12 percent slopes	Not hydric	10.30
EhD	Ellsworth silt loam, 12 to 18 percent slopes	Not hydric	4.15
EhD2	Ellsworth silt loam, 12-18 percent slope eroded	Not hydric	7.80
EhF	Ellsworth silt loam, 25 to 70 percent slopes	Not hydric	8.81
EIC	Ellsworth silt loam, 6 to 12 percent slopes	Not hydric	2.77
FcB	Fitchville silt loam, 2 to 6 percent slopes	Predominantly not hydric	0.56
GfC	Glenford silt loam, 6 to 12 percent slopes	Predominantly not hydric	0.13
Но	Holly silt loam, frequently flooded	Predominantly hydric	8.64
LrB	Lordstown channery silt loam, 2-6 percent slope	Not hydric	6.70
MgA	Mahoning silt loam, 0 to 2 percent slopes	Predominantly not hydric	4.32
MgB	Mahoning silt loam, 2 to 6 percent slopes	Predominantly not hydric	79.99
MhB	Mahoning silt loam, shale substratum2-6 perc slope	Predominantly not hydric	0.25
MsB	Mahoning silt loam shale substratum 2-6 perc slope	Predominantly not hydric	0.46
MtA	Mitiwanga silt loam, 0 to 3 percent slopes	Not hydric	1.35
Or	Orrville silt loam, frequently flooded	Predominantly not hydric	4.71
PsA	Platea silt loam, 0 to 2 percent slopes	Predominantly not hydric	21.45
PsB	Platea silt loam, 2 to 6 percent slopes	Predominantly not hydric	40.47
Tg	Tioga Ioam	Not hydric	1.90
W	Water	Not hydric	2.50

TABLE 3-2: Mapped National Wetland Inventory Features

Leroy Center-Pawnee Tap 138 kV Transmission Line Reconductoring Project

Wetland Type	Description	Count of Mapped Features	Acres (ac) within ESB
PEM1C	Palustrine emergent, persistent, seasonally flooded	2	1.13
PFO1/SS1C	Palustrine forested, broad-leaved deciduous and palustrine scrub-shrub, broad-leaved deciduous, seasonally flooded	2	0.20
PFO1C	Palustrine forested, broad-leaved deciduous, seasonally flooded	1	0.05
PSS1C	Palustrine scrub-shrub, broad-leaved deciduous, seasonally flooded	3	1.37
PUBG	Palustrine unconsolidated bottom, intermittently exposed	1	0.54
PUBGx	Palustrine unconsolidated bottom, intermittently exposed, excavated	4	2.93

TABLE 4-1: Delineated Wetland Table Leroy Center-Pawnee Tap 138 kV Transmission Line Reconductoring Project

Vetland LP-001	Wetland ID	Location		Wetland	Area (ac) within ESB ²	ORAM Score, Category
Vetland LP-002 41.67624 -81.14282 PEM 3.05 42. Category 2 Vetland LP-003 41.66862 -81.14264 PEM 2.18 23.5, Category 1 Vetland LP-004 41.66512 -81.14268 PEM 0.03 23. Category 1 Vetland LP-005 41.65591 -81.14268 PEM 1.00 32.5, Category 1 Vetland LP-006 41.65791 -81.14268 PEM 1.03 25. Category 1 Vetland LP-007 41.64774 -81.14765 PEM 0.56 27, Category 1 Vetland LP-009 41.6432 -81.15106 PEM 0.48 24, Category 1 Vetland LP-010 41.64332 -81.15178 PEM 0.26 20.5, Category 1 Vetland LP-011 41.64303 -81.15587 PEM 0.77 35.5, Category 1 Vetland LP-013 41.64236 -81.15658 PEM 0.15 26, Category 1 Vetland LP-014 41.6307 -81.156779 PEM 0.20 23, Category 1 Vetland LP-015 41.63387						
Wetland LP-003 41.66862 -81.14264 PEM 2.18 23.5, Category 1 Wetland LP-004 41.66512 -81.14248 PEM 0.03 23, Category 1 Wetland LP-005 41.65551 -81.14268 PEM 1.00 32.5, Category 2 Wetland LP-007 41.64794 -81.14290 PEM 0.13 28.5, Category 1 Wetland LP-008 41.64794 -81.14870 PEM 0.11 15.5, Category 1 Wetland LP-009 41.64632 -81.15006 PEM 0.48 24, Category 1 Wetland LP-010 41.64303 -81.15187 PEM 0.26 20.5, Category 1 Wetland LP-011 41.64383 -81.15587 PEM 0.77 35.5, Category 2 Wetland LP-013 41.64307 -81.15507 PEM 0.98 35, Category 2 Wetland LP-013 41.63363 -81.15507 PEM 0.09 35, Category 1 Wetland LP-014 41.6397 -81.15779 PEM 0.02 23, Category 1 Wetland LP-015 41.63817 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
Vetland LP-004 41.66512 -81.14248 PEM 0.03 23, Category 1 Vetland LP-005 41.65591 -81.14268 PEM 1.00 32.5, Category 2 Vetland LP-006 41.65591 -81.14290 PEM 1.13 28.5, Category 1 Vetland LP-007 41.64794 -81.14765 PEM 0.56 27, Category 1 Vetland LP-009 41.64632 -81.15006 PEM 0.48 24, Category 1 Vetland LP-010 41.64383 -81.15178 PEM 0.26 20.5, Category 1 Vetland LP-011 41.64307 -81.15507 PEM 0.98 35, Category 2 Vetland LP-013 41.64307 -81.15507 PEM 0.98 35, Category 2 Vetland LP-013 41.64097 -81.15779 PEM 0.15 26, Category 1 Vetland LP-014 41.63954 -81.16166 PEM 0.04 9, Category 1 Vetland LP-015 41.63547 -81.1644 PEM 3.84 25.5, Category 1 Vetland LP-016 41.63173	Wetland LP-002	41.67624			3.05	42, Category 2
Wetland LP-005 41.65591 -81.14268 PEM 1.00 32.5, Category 2 Wetland LP-006 41.65351 -81.14290 PEM 1.13 28.5, Category 1 Wetland LP-007 41.64747 -81.14765 PEM 0.56 27, Category 1 Wetland LP-008 41.64717 -81.14870 PEM 0.11 15.5, Category 1 Wetland LP-009 41.64632 -81.15006 PEM 0.48 24, Category 1 Wetland LP-010 41.64510 -81.151878 PEM 0.77 35.5, Category 2 Wetland LP-011 41.64307 -81.15507 PEM 0.98 35, Category 2 Wetland LP-013 41.64307 -81.15658 PEM 0.15 26, Category 1 Wetland LP-013 41.64097 -81.15779 PEM 0.20 23, Category 1 Wetland LP-014 41.63953 -81.16156 PEM 0.04 9, Category 1 Wetland LP-015 41.63547 -81.1644 PEM 0.04 9, Category 1 Wetland LP-016 41.63547	Wetland LP-003					
Vetland LP-006 41.65351 -81.14290 PEM 1.13 28.5, Category 1 Vetland LP-007 41.64794 -81.14765 PEM 0.56 27, Category 1 Vetland LP-008 41.64717 -81.14870 PEM 0.11 15.5, Category 1 Vetland LP-009 41.64510 -81.15006 PEM 0.48 24, Category 1 Vetland LP-011 41.64530 -81.15578 PEM 0.26 20.5, Category 1 Vetland LP-012 41.64307 -81.15577 PEM 0.77 35.5, Category 2 Vetland LP-013 41.64307 -81.15568 PEM 0.15 26, Category 1 Vetland LP-014 41.64097 -81.15779 PEM 0.20 23, Category 1 Vetland LP-015 41.63853 -81.16156 PEM 0.04 9, Category 1 Vetland LP-016 41.633547 -81.16644 PEM 3.84 25.5, Category 1 Vetland LP-017 41.633173 -81.17011 PEM 0.34 19.5, Category 1 Vetland LP-018 41.63238<	Wetland LP-004	41.66512				• •
Vetland LP-007 41.64794 -81.14765 PEM 0.56 27, Category 1 Vetland LP-008 41.64717 -81.14870 PEM 0.11 15.5, Category 1 Vetland LP-010 41.64632 -81.15006 PEM 0.48 24, Category 1 Vetland LP-011 41.64383 -81.15387 PEM 0.77 35.5, Category 2 Vetland LP-012 41.64307 -81.15507 PEM 0.98 35, Category 2 Vetland LP-013 41.64236 -81.15658 PEM 0.15 26, Category 1 Vetland LP-014 41.64097 -81.15797 PEM 0.20 23, Category 1 Vetland LP-015 41.63353 -81.16156 PEM 0.04 9, Category 1 Vetland LP-016 41.63547 -81.1644 PEM 3.84 25.5, Category 1 Vetland LP-018 41.63317 -81.17011 PEM 3.43 19.5, Category 1 Vetland LP-0218 41.63035 -81.17404 PEM 0.51 26, Category 1 Vetland LP-0219 41.63077	Wetland LP-005	41.65591	-81.14268	PEM	1.00	0 3
Vetland LP-008 41.64717 -81.14870 PEM 0.11 15.5, Category 1 Vetland LP-009 41.64632 -81.15006 PEM 0.48 24, Category 1 Vetland LP-010 41.64510 -81.15178 PEM 0.26 20.5, Category 1 Vetland LP-011 41.64383 -81.15507 PEM 0.77 35.5, Category 2 Vetland LP-013 41.64236 -81.15658 PEM 0.15 26, Category 1 Vetland LP-014 41.64097 -81.15779 PEM 0.20 23, Category 1 Vetland LP-015 41.63853 -81.16156 PEM 0.04 9, Category 1 Vetland LP-016 41.63547 -81.16166 PEM 3.84 25.5, Category 1 Vetland LP-017 41.63317 -81.17011 PEM 3.43 19.5, Category 1 Vetland LP-018 41.63238 -81.17120 PEM 0.35 13, Category 1 Vetland LP-0219 41.63057 -81.17404 PEM 0.51 26, Category 1 Vetland LP-0218 41.62974 <td>Wetland LP-006</td> <td>41.65351</td> <td>-81.14290</td> <td>PEM</td> <td>1.13</td> <td>28.5, Category 1</td>	Wetland LP-006	41.65351	-81.14290	PEM	1.13	28.5, Category 1
Vetland LP-009 41.64632 -81.15006 PEM 0.48 24, Category 1 Vetland LP-010 41.64510 -81.15178 PEM 0.26 20.5, Category 1 Vetland LP-011 41.64383 -81.15387 PEM 0.77 35.5, Category 2 Vetland LP-012 41.64307 -81.15507 PEM 0.98 35, Category 2 Vetland LP-013 41.64236 -81.15658 PEM 0.15 26, Category 1 Vetland LP-014 41.64097 -81.15779 PEM 0.20 23, Category 1 Vetland LP-015 41.633853 -81.16156 PEM 0.04 9, Category 1 Vetland LP-016 41.63547 -81.17011 PEM 3.43 19.5, Category 1 Vetland LP-017 41.63317 -81.17132 PEM 0.18 12, Category 1 Vetland LP-018 41.63238 -81.17120 PEM 0.35 13, Category 1 Vetland LP-019 41.63173 -81.17404 PEM 0.51 26, Category 1 Vetland LP-0218 41.62974	Wetland LP-007	41.64794	-81.14765	PEM	0.56	27, Category 1
Vetland LP-010 41.64510 -81.15178 PEM 0.26 20.5, Category 1 Vetland LP-011 41.64383 -81.15387 PEM 0.77 35.5, Category 2 Vetland LP-012 41.64307 -81.15507 PEM 0.98 35, Category 2 Vetland LP-013 41.64236 -81.15658 PEM 0.15 26, Category 1 Vetland LP-014 41.64097 -81.15779 PEM 0.20 23, Category 1 Vetland LP-015 41.63883 -81.16156 PEM 0.04 9, Category 1 Vetland LP-016 41.633547 -81.17611 PEM 3.43 19.5, Category 1 Vetland LP-017 41.63317 -81.17101 PEM 3.43 19.5, Category 1 Vetland LP-018 41.63238 -81.171203 PEM 0.18 12, Category 1 Vetland LP-019 41.63173 -81.17404 PEM 0.51 26, Category 1 Vetland LP-020 41.63022 -81.17487 PEM 0.04 32.5, Category 1 Vetland LP-0218 41.62874 </td <td>Wetland LP-008</td> <td>41.64717</td> <td>-81.14870</td> <td>PEM</td> <td>0.11</td> <td>15.5, Category 1</td>	Wetland LP-008	41.64717	-81.14870	PEM	0.11	15.5, Category 1
Vetland LP-011 41.64383 -81.15387 PEM 0.77 35.5, Category 2 Vetland LP-012 41.64307 -81.15507 PEM 0.98 35, Category 2 Vetland LP-013 41.64236 -81.15658 PEM 0.15 26, Category 1 Vetland LP-014 41.64097 -81.15779 PEM 0.20 23, Category 1 Vetland LP-015 41.63853 -81.16156 PEM 0.04 9, Category 1 Vetland LP-016 41.63547 -81.16644 PEM 3.84 25.5, Category 1 Vetland LP-018 41.63238 -81.17011 PEM 3.43 19.5, Category 1 Vetland LP-019 41.63173 -81.17203 PEM 0.35 13, Category 1 Vetland LP-020 41.63057 -81.17404 PEM 0.51 26, Category 1 Vetland LP-021E 41.62974 -81.17487 PEM 0.04 32.5, Category 1 Vetland LP-0218 41.62885 -81.17735 PEM 0.02 20.5, Category 1 Vetland LP-0224 41.62772 </td <td>Wetland LP-009</td> <td>41.64632</td> <td>-81.15006</td> <td>PEM</td> <td>0.48</td> <td>24, Category 1</td>	Wetland LP-009	41.64632	-81.15006	PEM	0.48	24, Category 1
Vetland LP-012 41.64307 -81.15507 PEM 0.98 35, Category 2 Vetland LP-013 41.64236 -81.15658 PEM 0.15 26, Category 1 Vetland LP-014 41.64097 -81.15779 PEM 0.20 23, Category 1 Vetland LP-015 41.63853 -81.16156 PEM 0.04 9, Category 1 Vetland LP-016 41.63547 -81.16644 PEM 3.84 25.5, Category 1 Vetland LP-017 41.63317 -81.17011 PEM 3.43 19.5, Category 1 Vetland LP-018 41.63238 -81.17732 PEM 0.18 12, Category 1 Vetland LP-019 41.63173 -81.17203 PEM 0.35 13, Category 1 Vetland LP-0219 41.63057 -81.17404 PEM 0.51 26, Category 1 Vetland LP-0215 41.62974 -81.17487 PEM 0.04 32.5, Category 1 Vetland LP-0218 41.62885 -81.17735 PEM 0.02 20.5, Category 1 Vetland LP-0224 41.62772 <td>Wetland LP-010</td> <td>41.64510</td> <td>-81.15178</td> <td>PEM</td> <td>0.26</td> <td>20.5, Category 1</td>	Wetland LP-010	41.64510	-81.15178	PEM	0.26	20.5, Category 1
Wetland LP-013 41.64236 -81.15658 PEM 0.15 26, Category 1 Wetland LP-014 41.64097 -81.15779 PEM 0.20 23, Category 1 Wetland LP-015 41.63853 -81.16156 PEM 0.04 9, Category 1 Wetland LP-016 41.63547 -81.16644 PEM 3.84 25.5, Category 1 Wetland LP-017 41.63317 -81.17011 PEM 3.43 19.5, Category 1 Wetland LP-018 41.63238 -81.17132 PEM 0.18 12, Category 1 Wetland LP-019 41.63173 -81.17203 PEM 0.35 13, Category 1 Wetland LP-020 41.63057 -81.17404 PEM 0.51 26, Category 1 Wetland LP-0215 41.63022 -81.17487 PEM 0.04 32.5, Category 2 Wetland LP-0218 41.63022 -81.17887 PEM 0.02 20.5, Category 1 Wetland LP-022 41.62885 -81.17735 PEM 0.02 20.5, Category 1 Wetland LP-023 41.62772 <td>Wetland LP-011</td> <td>41.64383</td> <td>-81.15387</td> <td>PEM</td> <td>0.77</td> <td>35.5, Category 2</td>	Wetland LP-011	41.64383	-81.15387	PEM	0.77	35.5, Category 2
Wetland LP-014 41.64097 -81.15779 PEM 0.20 23, Category 1 Wetland LP-015 41.63853 -81.16156 PEM 0.04 9, Category 1 Wetland LP-016 41.63547 -81.16644 PEM 3.84 25.5, Category 1 Wetland LP-017 41.63317 -81.17011 PEM 3.43 19.5, Category 1 Wetland LP-018 41.63238 -81.17132 PEM 0.18 12, Category 1 Wetland LP-019 41.63073 -81.17203 PEM 0.35 13, Category 1 Wetland LP-020 41.63057 -81.17404 PEM 0.51 26, Category 1 Wetland LP-021E 41.63022 -81.17487 PEM 0.04 32.5, Category 2 Wetland LP-021S 41.63022 -81.17802 PSS 0.35 32.5, Category 2 Wetland LP-022 41.62885 -81.17735 PEM 0.02 20.5, Category 1 Wetland LP-023 41.62772 -81.18811 PEM 0.63 29.5, Category 1 Wetland LP-024E 41.6268<	Wetland LP-012	41.64307	-81.15507	PEM	0.98	35, Category 2
Wetland LP-015 41.63853 -81.16156 PEM 0.04 9, Category 1 Wetland LP-016 41.63547 -81.16644 PEM 3.84 25.5, Category 1 Wetland LP-017 41.63317 -81.17011 PEM 3.43 19.5, Category 1 Wetland LP-018 41.63238 -81.17132 PEM 0.18 12, Category 1 Wetland LP-019 41.63173 -81.17203 PEM 0.35 13, Category 1 Wetland LP-020 41.63057 -81.17404 PEM 0.51 26, Category 1 Wetland LP-021E 41.63022 -81.17487 PEM 0.04 32.5, Category 1 Wetland LP-021S 41.63022 -81.17502 PSS 0.35 32.5, Category 2 Wetland LP-021 41.62885 -81.17735 PEM 0.02 20.5, Category 1 Wetland LP-022 41.62885 -81.17883 PEM 0.63 29.5, Category 1 Wetland LP-024 41.62574 -81.18111 PEM 2.63 29.5, Category 1 Wetland LP-025 41.6268	Wetland LP-013	41.64236	-81.15658	PEM	0.15	26, Category 1
Wetland LP-016 41.63547 -81.16644 PEM 3.84 25.5, Category 1 Wetland LP-017 41.63317 -81.17011 PEM 3.43 19.5, Category 1 Wetland LP-018 41.63238 -81.17132 PEM 0.18 12, Category 1 Wetland LP-019 41.63173 -81.17203 PEM 0.35 13, Category 1 Wetland LP-020 41.63057 -81.17404 PEM 0.51 26, Category 1 Wetland LP-021E 41.62974 -81.17487 PEM 0.04 32.5, Category 1 Wetland LP-021E 41.63022 -81.17502 PSS 0.35 32.5, Category 1 Wetland LP-021S 41.62885 -81.17735 PEM 0.02 20.5, Category 2 Wetland LP-022 41.62885 -81.17735 PEM 0.63 29.5, Category 1 Wetland LP-024E 41.62874 -81.18811 PEM 2.63 29.5, Category 1 Wetland LP-024E 41.62688 -81.18012 PSS 0.44 29.5, Category 1 Wetland LP-025 4	Wetland LP-014	41.64097	-81.15779	PEM	0.20	23, Category 1
Wetland LP-017 41.63317 -81.17011 PEM 3.43 19.5, Category 1 Wetland LP-018 41.63238 -81.17132 PEM 0.18 12, Category 1 Wetland LP-019 41.63173 -81.17203 PEM 0.35 13, Category 1 Wetland LP-020 41.63057 -81.17404 PEM 0.51 26, Category 1 Wetland LP-021E 41.62974 -81.17487 PEM 0.04 32.5, Category 2 Wetland LP-021S 41.63022 -81.17502 PSS 0.35 32.5, Category 2 Wetland LP-022 41.62885 -81.17735 PEM 0.02 20.5, Category 1 Wetland LP-023 41.62772 -81.17883 PEM 0.63 29.5, Category 1 Wetland LP-024E 41.62574 -81.18111 PEM 2.63 29.5, Category 1 Wetland LP-025 41.62688 -81.18012 PSS 0.44 29.5, Category 1 Wetland LP-026 41.62244 -81.18361 PEM 0.26 14.5, Category 1 Wetland LP-027 41.	Wetland LP-015	41.63853	-81.16156	PEM	0.04	9, Category 1
Wetland LP-018 41.63238 -81.17132 PEM 0.18 12, Category 1 Wetland LP-019 41.63173 -81.17203 PEM 0.35 13, Category 1 Wetland LP-020 41.63057 -81.17404 PEM 0.51 26, Category 1 Wetland LP-021E 41.62974 -81.17487 PEM 0.04 32.5, Category 2 Wetland LP-021S 41.63022 -81.17502 PSS 0.35 32.5, Category 2 Wetland LP-022 41.62885 -81.17735 PEM 0.02 20.5, Category 1 Wetland LP-023 41.62772 -81.1883 PEM 0.63 29.5, Category 1 Wetland LP-024E 41.62574 -81.18111 PEM 2.63 29.5, Category 1 Wetland LP-024S 41.62688 -81.18012 PSS 0.44 29.5, Category 1 Wetland LP-025 41.62448 -81.18361 PEM 0.26 14.5, Category 1 Wetland LP-026 41.62142 -81.18740 PEM 0.02 34, Category 2 Wetland LP-028 41.62	Wetland LP-016	41.63547	-81.16644	PEM	3.84	25.5, Category 1
Wetland LP-019 41.63173 -81.17203 PEM 0.35 13, Category 1 Wetland LP-020 41.63057 -81.17404 PEM 0.51 26, Category 1 Wetland LP-021E 41.62974 -81.17487 PEM 0.04 Wetland LP-021S 41.63022 -81.17502 PSS 0.35 Wetland LP-022 41.62885 -81.17735 PEM 0.02 20.5, Category 1 Wetland LP-023 41.62772 -81.17883 PEM 0.63 29.5, Category 1 Wetland LP-024E 41.62574 -81.18111 PEM 2.63 29.5, Category 1 Wetland LP-024S 41.62688 -81.18012 PSS 0.44 29.5, Category 1 Wetland LP-025 41.62448 -81.18361 PEM 0.26 14.5, Category 1 Wetland LP-026 41.62227 -81.18740 PEM 0.02 34, Category 2 Wetland LP-027 41.62142 -81.18890 PEM 0.51 34, Category 2 Wetland LP-038 41.61798 -81.19048 PEM 0.96 31, Category 2 Wetland LP-0305 41.61948 -8	Wetland LP-017	41.63317	-81.17011	PEM	3.43	19.5, Category 1
Wetland LP-020 41.63057 -81.17404 PEM 0.51 26, Category 1 Wetland LP-021E 41.62974 -81.17487 PEM 0.04 32.5, Category 2 Wetland LP-021S 41.63022 -81.17502 PSS 0.35 20.5, Category 2 Wetland LP-022 41.62885 -81.17735 PEM 0.02 20.5, Category 1 Wetland LP-023 41.62772 -81.1883 PEM 0.63 29.5, Category 1 Wetland LP-024E 41.62574 -81.18111 PEM 2.63 29.5, Category 1 Wetland LP-024S 41.62688 -81.18012 PSS 0.44 29.5, Category 1 Wetland LP-025 41.62448 -81.18361 PEM 0.26 14.5, Category 1 Wetland LP-026 41.62227 -81.18740 PEM 0.02 34, Category 2 Wetland LP-027 41.62142 -81.18800 PEM 0.51 34, Category 2 Wetland LP-028 41.62066 -81.19048 PEM 0.96 31, Category 2 Wetland LP-030E 41.61798 -81.19194 PSS 0.19 Wetland LP-031	Wetland LP-018	41.63238	-81.17132	PEM	0.18	12, Category 1
Wetland LP-021E 41.62974 -81.17487 PEM 0.04 32.5, Category 2 Wetland LP-021S 41.63022 -81.17502 PSS 0.35 32.5, Category 2 Wetland LP-022 41.62885 -81.17735 PEM 0.02 20.5, Category 1 Wetland LP-023 41.62772 -81.17883 PEM 0.63 29.5, Category 1 Wetland LP-024E 41.62574 -81.18111 PEM 2.63 29.5, Category 1 Wetland LP-024S 41.62688 -81.18012 PSS 0.44 29.5, Category 1 Wetland LP-024S 41.62688 -81.18012 PSS 0.44 29.5, Category 1 Wetland LP-025 41.62448 -81.18361 PEM 0.26 14.5, Category 1 Wetland LP-026 41.62227 -81.18740 PEM 0.02 34, Category 2 Wetland LP-027 41.62142 -81.18800 PEM 0.51 34, Category 2 Wetland LP-028 41.62006 -81.19048 PEM 0.96 31, Category 2 Wetland LP-030E 41.61798 -81.19149 PSS 0.19 Wetland LP-031	Wetland LP-019	41.63173	-81.17203	PEM	0.35	13, Category 1
Wetland LP-021S 41.63022 -81.17502 PSS 0.35 32.5, Category 2 Wetland LP-022 41.62885 -81.17735 PEM 0.02 20.5, Category 1 Wetland LP-023 41.62772 -81.17883 PEM 0.63 29.5, Category 1 Wetland LP-024E 41.62574 -81.18111 PEM 2.63 29.5, Category 1 Wetland LP-024S 41.62688 -81.18012 PSS 0.44 29.5, Category 1 Wetland LP-024S 41.62448 -81.18361 PEM 0.26 14.5, Category 1 Wetland LP-025 41.62244 -81.18740 PEM 0.02 34, Category 2 Wetland LP-026 41.62227 -81.18800 PEM 0.51 34, Category 2 Wetland LP-027 41.62042 -81.18930 PEM 0.51 34, Category 2 Wetland LP-038 41.62066 -81.19048 PEM 0.96 31, Category 2 Wetland LP-030S 41.61798 -81.19425 PEM 7.38 31, Category 2 Wetland LP-031 41.61468 -81.20058 PEM 0.06 13.5, Category 1	Wetland LP-020	41.63057	-81.17404	PEM	0.51	26, Category 1
Wetland LP-021S 41.63022 -81.17502 PSS 0.35 0.35 Wetland LP-022 41.62885 -81.17735 PEM 0.02 20.5, Category 1 Wetland LP-023 41.62772 -81.17883 PEM 0.63 29.5, Category 1 Wetland LP-024E 41.62574 -81.18111 PEM 2.63 29.5, Category 1 Wetland LP-024S 41.62688 -81.18012 PSS 0.44 29.5, Category 1 Wetland LP-025 41.62448 -81.18361 PEM 0.26 14.5, Category 1 Wetland LP-026 41.62227 -81.18740 PEM 0.02 34, Category 2 Wetland LP-027 41.62142 -81.18800 PEM 0.51 34, Category 2 Wetland LP-028 41.62067 -81.18930 PEM 0.22 31, Category 2 Wetland LP-039 41.61798 -81.19048 PEM 0.96 31, Category 2 Wetland LP-030S 41.61948 -81.19194 PSS 0.19 Wetland LP-031 41.61468 -81.20058 PEM 0.06 13.5, Category 1 Wetland LP-032 41.61	Wetland LP-021E	41.62974	-81.17487	PEM	0.04	22 E Catagony 2
Wetland LP-023 41.62772 -81.17883 PEM 0.63 29.5, Category 1 Wetland LP-024E 41.62574 -81.18111 PEM 2.63 29.5, Category 1 Wetland LP-024S 41.62688 -81.18012 PSS 0.44 29.5, Category 1 Wetland LP-025 41.62448 -81.18361 PEM 0.26 14.5, Category 1 Wetland LP-026 41.62227 -81.18740 PEM 0.02 34, Category 2 Wetland LP-027 41.62142 -81.18800 PEM 0.51 34, Category 2 Wetland LP-028 41.62067 -81.18930 PEM 0.52 31, Category 2 Wetland LP-039 41.62006 -81.19048 PEM 0.96 31, Category 2 Wetland LP-030E 41.61798 -81.19194 PSS 0.19 31, Category 2 Wetland LP-031 41.61468 -81.20058 PEM 0.06 13.5, Category 1 Wetland LP-032 41.61321 -81.20188 PEM 0.42 27.5, Category 2 Wetland LP-034 41.6128	Wetland LP-021S	41.63022	-81.17502	PSS	0.35	32.5, Category 2
Wetland LP-024E 41.62574 -81.18111 PEM 2.63 29.5, Category 1 Wetland LP-024S 41.62688 -81.18012 PSS 0.44 29.5, Category 1 Wetland LP-025 41.62448 -81.18361 PEM 0.26 14.5, Category 1 Wetland LP-026 41.62227 -81.18740 PEM 0.02 34, Category 2 Wetland LP-027 41.62142 -81.18800 PEM 0.51 34, Category 2 Wetland LP-028 41.62067 -81.18930 PEM 0.22 31, Category 2 Wetland LP-039 41.62006 -81.19048 PEM 0.96 31, Category 2 Wetland LP-030E 41.61798 -81.19425 PEM 7.38 31, Category 2 Wetland LP-030S 41.61948 -81.19194 PSS 0.19 Wetland LP-031 41.61468 -81.20058 PEM 0.06 13.5, Category 1 Wetland LP-032 41.61321 -81.20188 PEM 0.42 27.5, Category 1 Wetland LP-033 41.61286 -81.20306 PEM 0.59 30.5, Category 1 Wetland LP-034	Wetland LP-022	41.62885	-81.17735	PEM	0.02	20.5, Category 1
Vetland LP-024S 41.62688 -81.18012 PSS 0.44 29.5, Category 1 Vetland LP-025 41.62448 -81.18361 PEM 0.26 14.5, Category 1 Vetland LP-026 41.62227 -81.18740 PEM 0.02 34, Category 2 Vetland LP-027 41.62142 -81.18800 PEM 0.51 34, Category 2 Vetland LP-028 41.62067 -81.18930 PEM 0.96 31, Category 2 Vetland LP-039 41.62006 -81.19048 PEM 0.96 31, Category 2 Vetland LP-030E 41.61798 -81.19425 PEM 7.38 31, Category 2 Vetland LP-030S 41.61948 -81.19194 PSS 0.19 31, Category 2 Vetland LP-031 41.61468 -81.20058 PEM 0.06 13.5, Category 1 Vetland LP-032 41.61321 -81.20188 PEM 0.42 27.5, Category 2 Vetland LP-033 41.61286 -81.20306 PEM 0.59 30.5, Category 2 Vetland LP-034 41.61209 -81.20352 PEM 0.30 18, Category 1 <td>Wetland LP-023</td> <td>41.62772</td> <td>-81.17883</td> <td>PEM</td> <td>0.63</td> <td>29.5, Category 1</td>	Wetland LP-023	41.62772	-81.17883	PEM	0.63	29.5, Category 1
Vetland LP-024S 41.62688 -81.18012 PSS 0.44 0.26 14.5, Category 1 Vetland LP-025 41.62448 -81.18361 PEM 0.26 14.5, Category 1 Vetland LP-026 41.62227 -81.18740 PEM 0.02 34, Category 2 Vetland LP-027 41.62142 -81.18800 PEM 0.51 34, Category 2 Vetland LP-028 41.62067 -81.18930 PEM 0.22 31, Category 2 Vetland LP-039 41.62006 -81.19048 PEM 0.96 31, Category 2 Vetland LP-030E 41.61798 -81.19425 PEM 7.38 31, Category 2 Vetland LP-030S 41.61948 -81.19194 PSS 0.19 31, Category 2 Vetland LP-031 41.61468 -81.20058 PEM 0.06 13.5, Category 1 Vetland LP-032 41.61321 -81.20188 PEM 0.42 27.5, Category 2 Vetland LP-033 41.61286 -81.20306 PEM 0.59 30.5, Category 2 Vetland LP-034 41.61209 -81.20352 PEM 0.30 18, Category 1 <td>Wetland LP-024E</td> <td>41.62574</td> <td>-81.18111</td> <td>PEM</td> <td>2.63</td> <td>20 F. Catamany 1</td>	Wetland LP-024E	41.62574	-81.18111	PEM	2.63	20 F. Catamany 1
Wetland LP-026 41.62227 -81.18740 PEM 0.02 34, Category 2 Wetland LP-027 41.62142 -81.18800 PEM 0.51 34, Category 2 Wetland LP-028 41.62067 -81.18930 PEM 0.22 31, Category 2 Wetland LP-029 41.62006 -81.19048 PEM 0.96 31, Category 2 Wetland LP-030E 41.61798 -81.19425 PEM 7.38 31, Category 2 Wetland LP-030S 41.61948 -81.19194 PSS 0.19 31, Category 2 Wetland LP-031 41.61468 -81.20058 PEM 0.06 13.5, Category 1 Wetland LP-032 41.61321 -81.20188 PEM 0.42 27.5, Category 1 Wetland LP-033 41.61286 -81.20306 PEM 0.59 30.5, Category 2 Wetland LP-034 41.61209 -81.20352 PEM 0.30 18, Category 1	Wetland LP-024S	41.62688	-81.18012	PSS	0.44	29.5, Category 1
Vetland LP-027 41.62142 -81.18800 PEM 0.51 34, Category 2 Vetland LP-028 41.62067 -81.18930 PEM 0.22 31, Category 2 Vetland LP-029 41.62006 -81.19048 PEM 0.96 31, Category 2 Vetland LP-030E 41.61798 -81.19425 PEM 7.38 31, Category 2 Vetland LP-030S 41.61948 -81.19194 PSS 0.19 Vetland LP-031 41.61468 -81.20058 PEM 0.06 13.5, Category 1 Vetland LP-032 41.61321 -81.20188 PEM 0.42 27.5, Category 1 Vetland LP-033 41.61286 -81.20306 PEM 0.59 30.5, Category 2 Vetland LP-034 41.61209 -81.20352 PEM 0.30 18, Category 1	Wetland LP-025	41.62448	-81.18361	PEM	0.26	14.5, Category 1
Wetland LP-028 41.62067 -81.18930 PEM 0.22 31, Category 2 Wetland LP-029 41.62006 -81.19048 PEM 0.96 31, Category 2 Wetland LP-030E 41.61798 -81.19425 PEM 7.38 Wetland LP-030S 41.61948 -81.19194 PSS 0.19 Wetland LP-031 41.61468 -81.20058 PEM 0.06 13.5, Category 1 Wetland LP-032 41.61321 -81.20188 PEM 0.42 27.5, Category 1 Wetland LP-033 41.61286 -81.20306 PEM 0.59 30.5, Category 2 Wetland LP-034 41.61209 -81.20352 PEM 0.30 18, Category 1	Wetland LP-026	41.62227	-81.18740	PEM	0.02	34, Category 2
Vetland LP-029 41.62006 -81.19048 PEM 0.96 31, Category 2 Vetland LP-030E 41.61798 -81.19425 PEM 7.38 31, Category 2 Vetland LP-030S 41.61948 -81.19194 PSS 0.19 Vetland LP-031 41.61468 -81.20058 PEM 0.06 13.5, Category 1 Vetland LP-032 41.61321 -81.20188 PEM 0.42 27.5, Category 1 Vetland LP-033 41.61286 -81.20306 PEM 0.59 30.5, Category 2 Vetland LP-034 41.61209 -81.20352 PEM 0.30 18, Category 1	Wetland LP-027	41.62142	-81.18800	PEM	0.51	34, Category 2
Vetland LP-030E 41.61798 -81.19425 PEM 7.38 31, Category 2 Vetland LP-030S 41.61948 -81.19194 PSS 0.19 0.06 13.5, Category 1 Vetland LP-031 41.61321 -81.20188 PEM 0.42 27.5, Category 1 Vetland LP-032 41.61286 -81.20306 PEM 0.59 30.5, Category 2 Vetland LP-034 41.61209 -81.20352 PEM 0.30 18, Category 1	Wetland LP-028	41.62067	-81.18930	PEM	0.22	31, Category 2
Vetland LP-030S 41.61948 -81.19194 PSS 0.19 31, Category 2 Vetland LP-031 41.61468 -81.20058 PEM 0.06 13.5, Category 1 Vetland LP-032 41.61321 -81.20188 PEM 0.42 27.5, Category 1 Vetland LP-033 41.61286 -81.20306 PEM 0.59 30.5, Category 2 Vetland LP-034 41.61209 -81.20352 PEM 0.30 18, Category 1	Wetland LP-029	41.62006	-81.19048	PEM	0.96	31, Category 2
Vetland LP-030S 41.61948 -81.19194 PSS 0.19 Vetland LP-031 41.61468 -81.20058 PEM 0.06 13.5, Category 1 Vetland LP-032 41.61321 -81.20188 PEM 0.42 27.5, Category 1 Vetland LP-033 41.61286 -81.20306 PEM 0.59 30.5, Category 2 Vetland LP-034 41.61209 -81.20352 PEM 0.30 18, Category 1	Wetland LP-030E	41.61798	-81.19425	PEM	7.38	21 Catagam: 2
Vetland LP-032 41.61321 -81.20188 PEM 0.42 27.5, Category 1 Vetland LP-033 41.61286 -81.20306 PEM 0.59 30.5, Category 2 Vetland LP-034 41.61209 -81.20352 PEM 0.30 18, Category 1	Wetland LP-030S	41.61948	-81.19194	PSS	0.19	31, Category 2
Vetland LP-033 41.61286 -81.20306 PEM 0.59 30.5, Category 2 Vetland LP-034 41.61209 -81.20352 PEM 0.30 18, Category 1	Wetland LP-031	41.61468	-81.20058	PEM	0.06	13.5, Category 1
Vetland LP-034 41.61209 -81.20352 PEM 0.30 18, Category 1	Wetland LP-032	41.61321	-81.20188	PEM	0.42	27.5, Category 1
g ,	Wetland LP-033	41.61286	-81.20306	PEM	0.59	30.5, Category 2
Vetland LP-035 41.61118 -81.20517 PEM 0.43 38, Category 2	Wetland LP-034	41.61209	-81.20352	PEM	0.30	18, Category 1
	Wetland LP-035	41.61118	-81.20517	PEM	0.43	38, Category 2

TABLE 4-1: Delineated Wetland Table Leroy Center-Pawnee Tap 138 kV Transmission Line Reconductoring Project

Wetland ID		ation	Wetland	Area (ac)	ORAM Score, Category
Wettand ID	Latitude	Longitude	Type ¹	within ESB ²	ORAIVI Score, Category
Wetland LP-036	41.60982	-81.20662	PEM	0.01	33.5, Category 2
Wetland LP-037	41.60890	-81.20856	PEM	0.04	26, Category 1
Wetland LP-038	41.60787	-81.20957	PEM	0.02	19, Category 1
Wetland LP-039	41.60694	-81.21176	PEM	0.03	32.5, Category 2
Wetland LP-040	41.60566	-81.21312	PEM	0.17	33.5, Category 2
Wetland LP-041	41.60519	-81.21421	PEM	0.21	18, Category 1
Wetland LP-042	41.60359	-81.21610	PEM	0.44	29, Category 1
Wetland LP-043	41.60350	-81.21670	PEM	0.02	25, Category 1
Wetland LP-044	41.60305	-81.21694	PEM	0.04	22, Category 1
Wetland LP-045	41.60250	-81.21744	PEM	0.02	22, Category 1
Wetland LP-046	41.60185	-81.21858	PEM	0.04	17.5, Category 1
Wetland LP-047	41.60203	-81.21909	PEM	0.02	25, Category 1
Wetland LP-048	41.60106	-81.22047	PEM	0.08	20, Category 1
Wetland LP-049	41.59980	-81.22166	PEM	0.00	20.5, Category 1
Wetland LP-050	41.59938	-81.22245	PEM	0.42	43, Category 2
Wetland LP-051	41.59858	-81.22340	PEM	0.03	21, Category 1
Wetland LP-052	41.59845	-81.22442	PEM	0.01	26, Category 1
Wetland LP-053	41.59792	-81.22512	PEM	0.56	33, Category 2
Wetland LP-054	41.59680	-81.22640	PEM	0.04	18, Category 1
Wetland LP-055	41.59645	-81.22694	PEM	0.01	20, Category 1
Wetland LP-056	41.59568	-81.22817	PEM	0.30	23, Category 1
		Total Wetlan	d Area (ac)	45.87	

¹Cowardin et al. 1979.

²Numbers have been rounded for presentation purposes. Thus, the total may not reflect the exact sum of the addends.

TABLE 4-2: Delineated Stream Table

Leroy Center-Pawnee Tap 138 kV Transmission Line Reconductoring Project

Stream ID	Location		Flow	Length (ft)		Average TOB	HHEI/QHEI	Category/ Designation
Stream ib	Latitude	Longitude	Regime ¹	within ESB ²	Width (ft)	Width (ft)	Score	Category/ Designation
Stream LP-001	41.66903	-81.14285	Perennial	348	6	8	70.5	Excellent Warmwater
Stream LP-002	41.65243	-81.14316	Perennial	287	6	10	47	Modified Category II
Stream LP-003	41.64366	-81.15401	Perennial	319	3	4	64	Modified Category II
Stream LP-004	41.64317	-81.15482	Perennial	326	12	15	53.5	Fair Warmwater
Stream LP-005	41.64177	-81.15700	Intermittent	270	2	3	38	Modified Category II
Stream LP-006	41.63062	-81.17433	Ephemeral	263	1.5	3	56	Category II
Stream LP-007	41.63014	-81.17490	Intermittent	321	2	3	58	Category II
Stream LP-008	41.62172	-81.18711	Intermittent	138	1	1.5	12	Modified Category I
Stream LP-009	41.62181	-81.18763	Perennial	323	12	18	53.5	Fair Warmwater
Stream LP-010	41.62098	-81.18945	Intermittent	157	2.5	3	45	Category II
Stream LP-011	41.62090	-81.18980	Intermittent	28	4	4	40	Category III
Stream LP-012	41.61324	-81.20196	Intermittent	283	1.5	2	40	Rheocrene
Stream LP-013	41.61275	-81.20234	Intermittent	29	2	2	17	Category I
Stream LP-014	41.61076	-81.20537	Intermittent	76	1	1	34	Rheocrene
Stream LP-015	41.61013	-81.20690	Perennial	364	30	40	57.5	Good Warmwater
Stream LP-016	41.60671	-81.21179	Ephemeral	859	3	4	60	Category III
Stream LP-017	41.59941	-81.22233	Intermittent	441	5	8	55	Category III
Stream LP-018	41.59816	-81.22490	Intermittent	106	2	4	55	Category III
		Total Strea	m Length (ft)	4,940				

¹Flow regime estimated based on analysis of drainage area, gradient, and observations at the time of survey

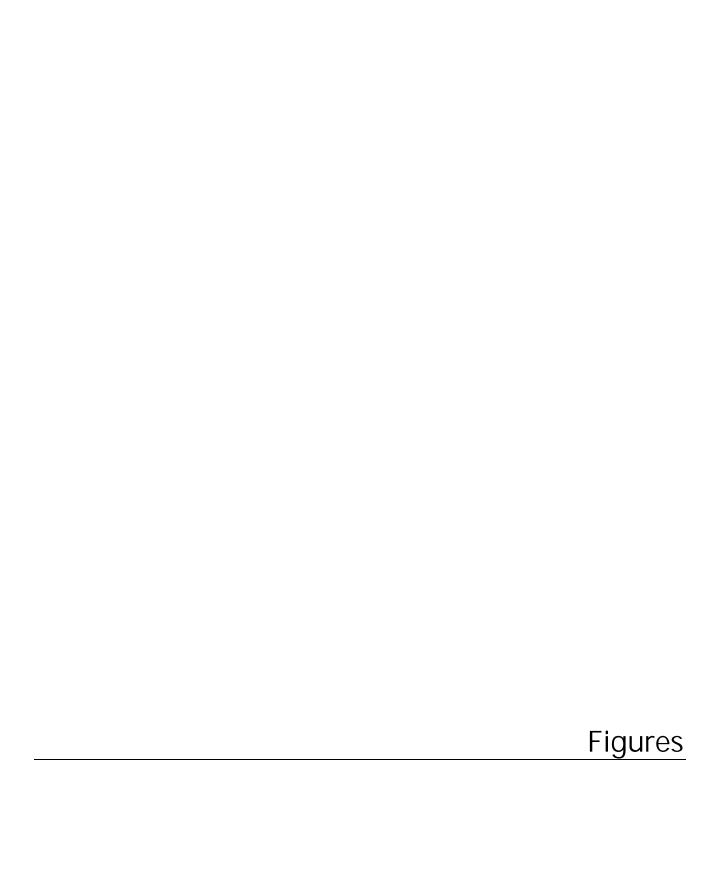
²Numbers have been rounded for presentation purposes. Thus, the total may not reflect the exact sum of the addends.

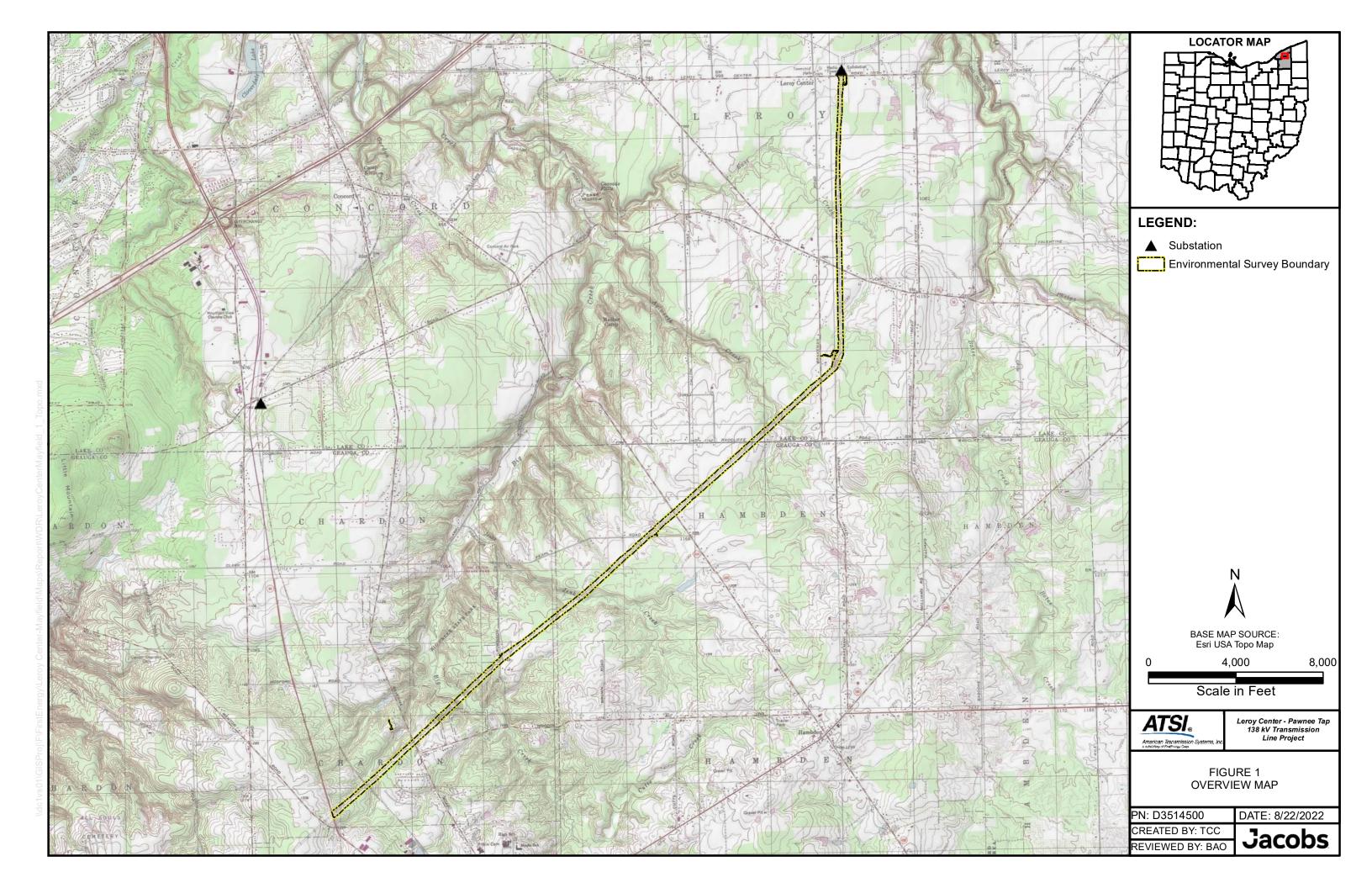
TABLE 4-3: Delineated Pond Table

Leroy Center-Pawnee Tap 138 kV Transmission Line Reconductoring Project

Pond ID	Loca	Area (ac) within ESB ¹	
FORGID	Latitude	Longitude	Area (ac) within L3b
Pond LP-01	41.67839	-81.14285	0.68
Pond LP-02	41.65119	-81.14365	2.06
Pond LP-03	41.64270	-81.15610	0.41
Pond LP-04	41.62858	-81.17701	0.47
Pond LP-05	41.62776	-81.17791	0.14
Pond LP-06	41.62570	-81.18206	0.05
	То	tal Pond Area (ac)	3.81

¹Numbers have been rounded for presentation purposes. Thus, the total may not reflect the exact sum of the addends.

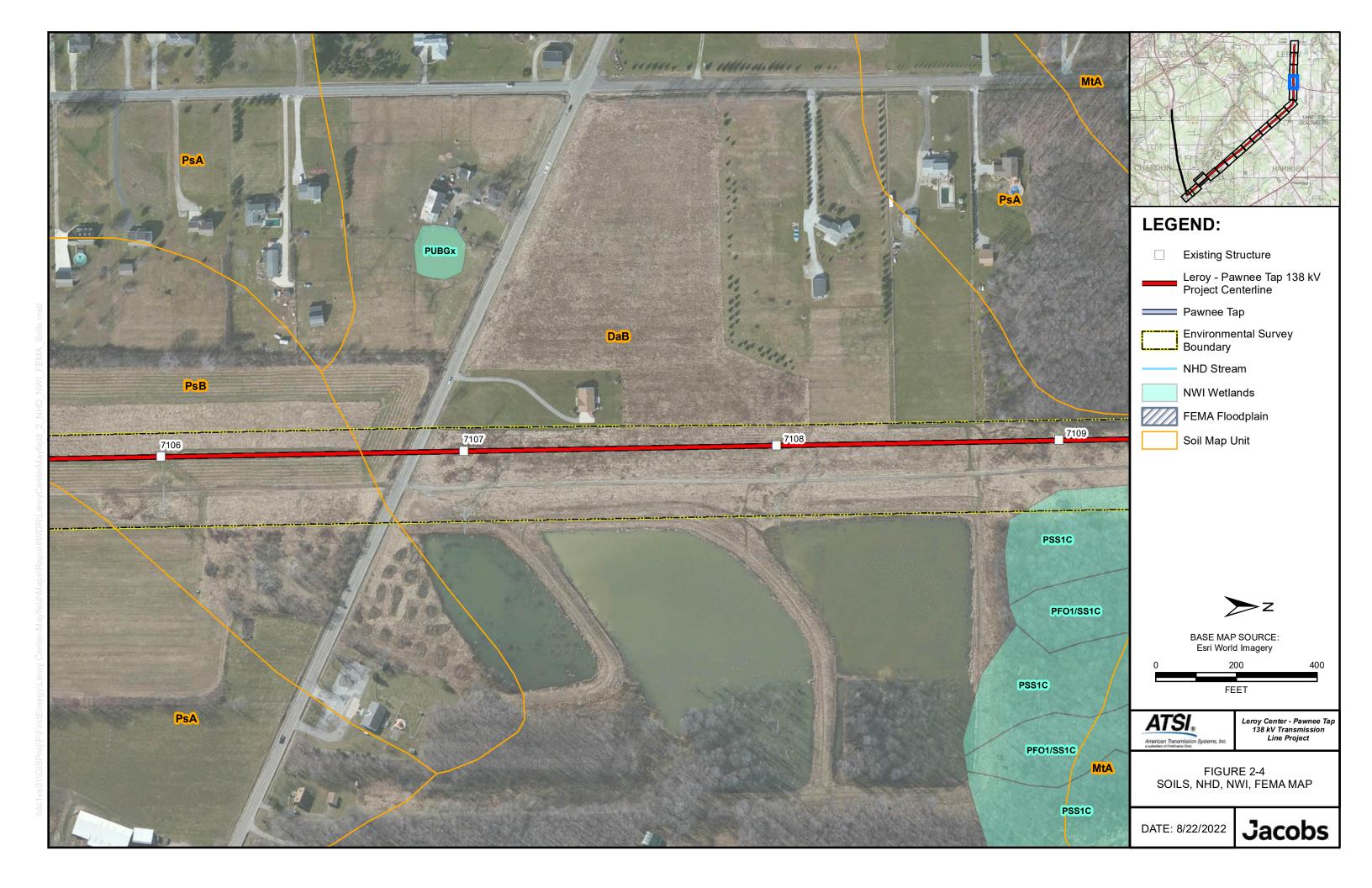


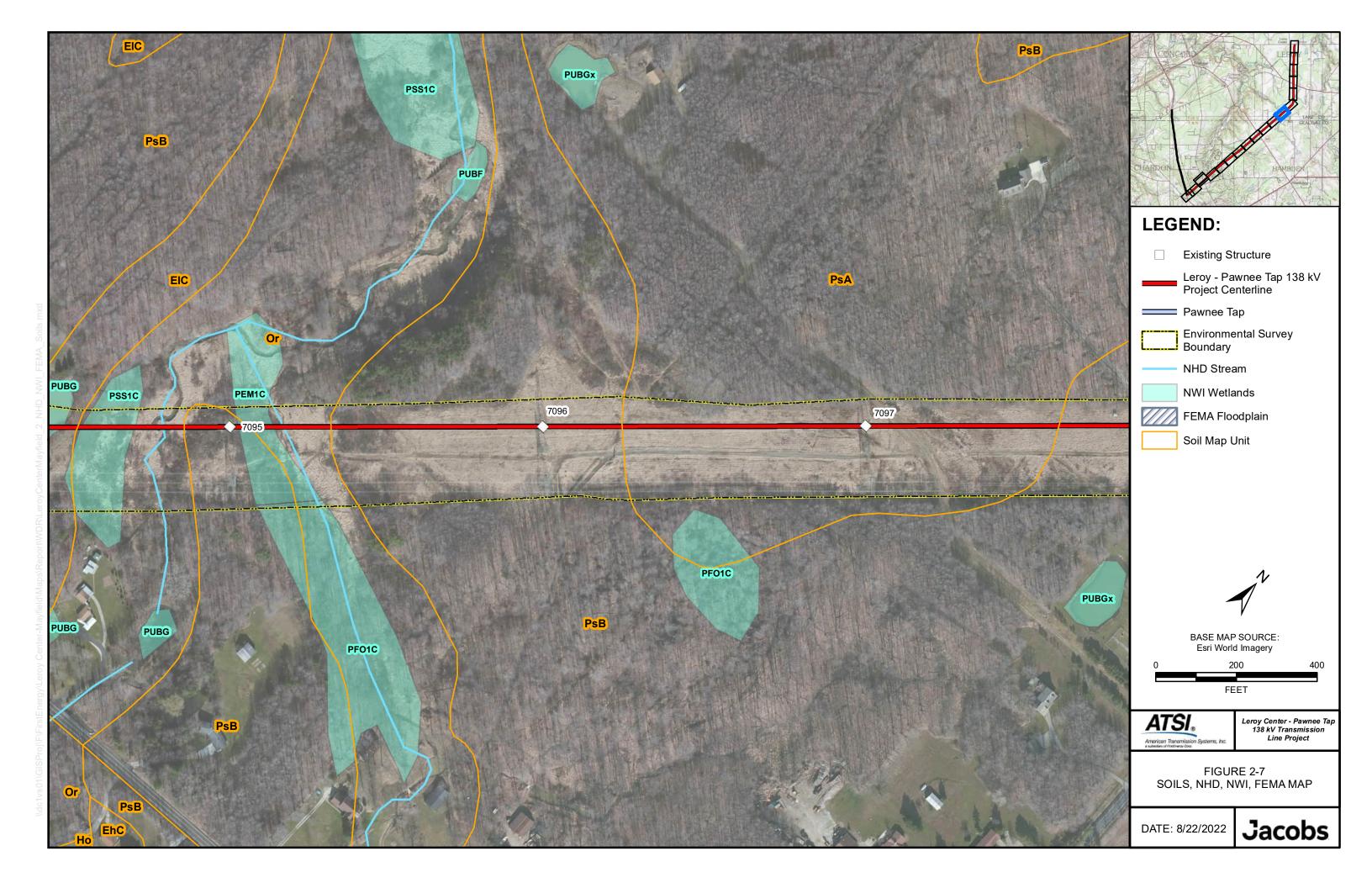


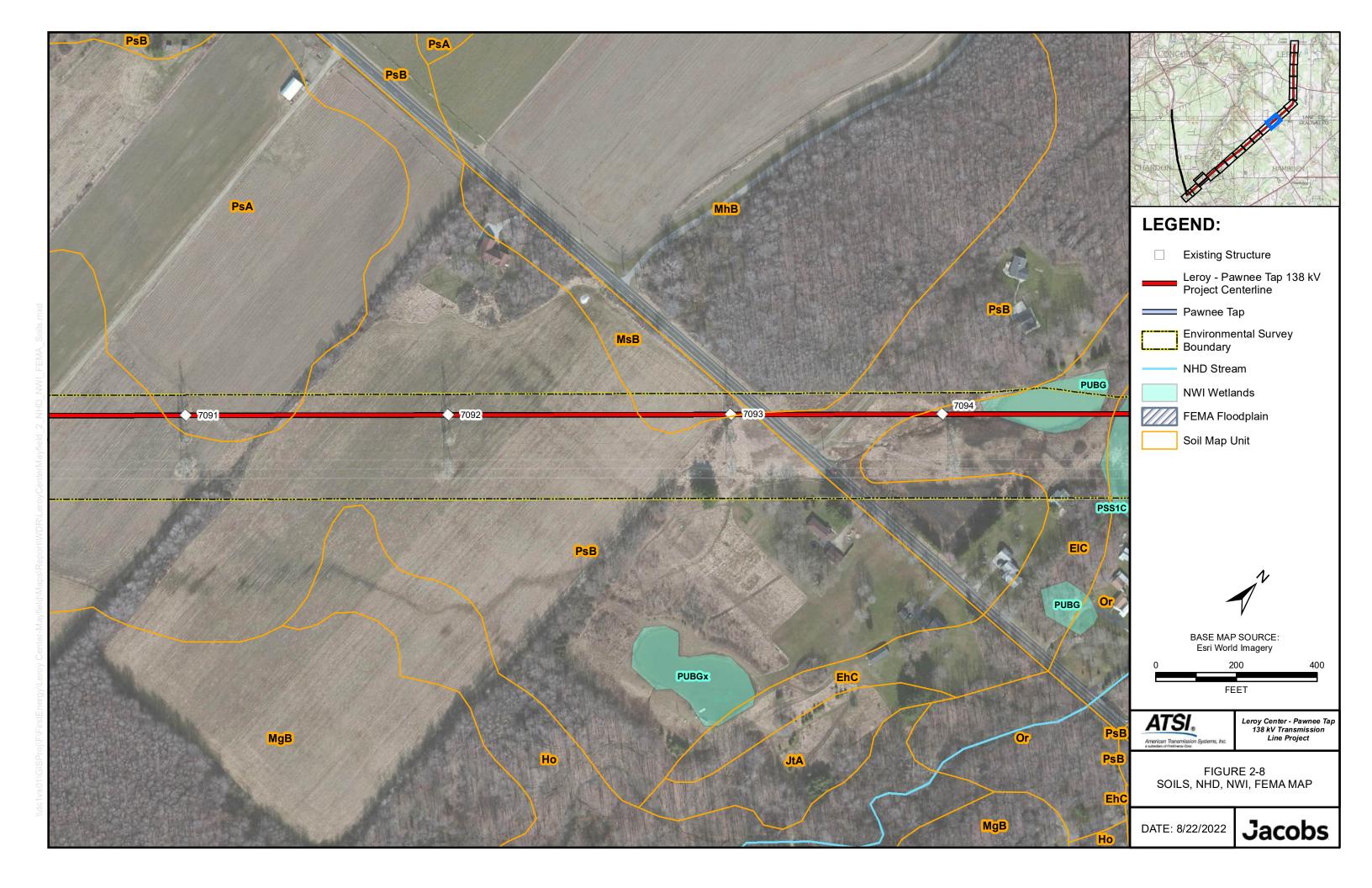


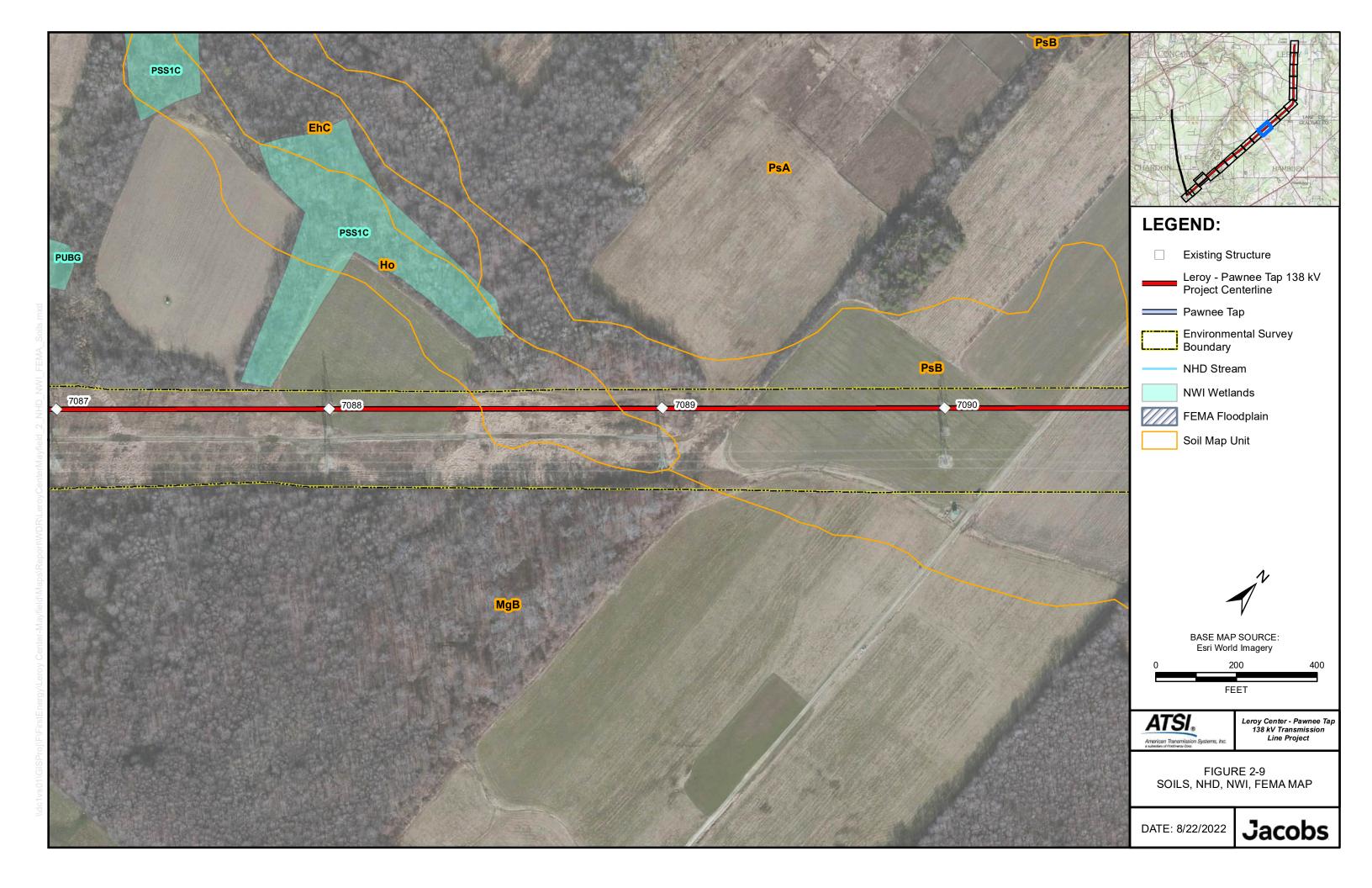






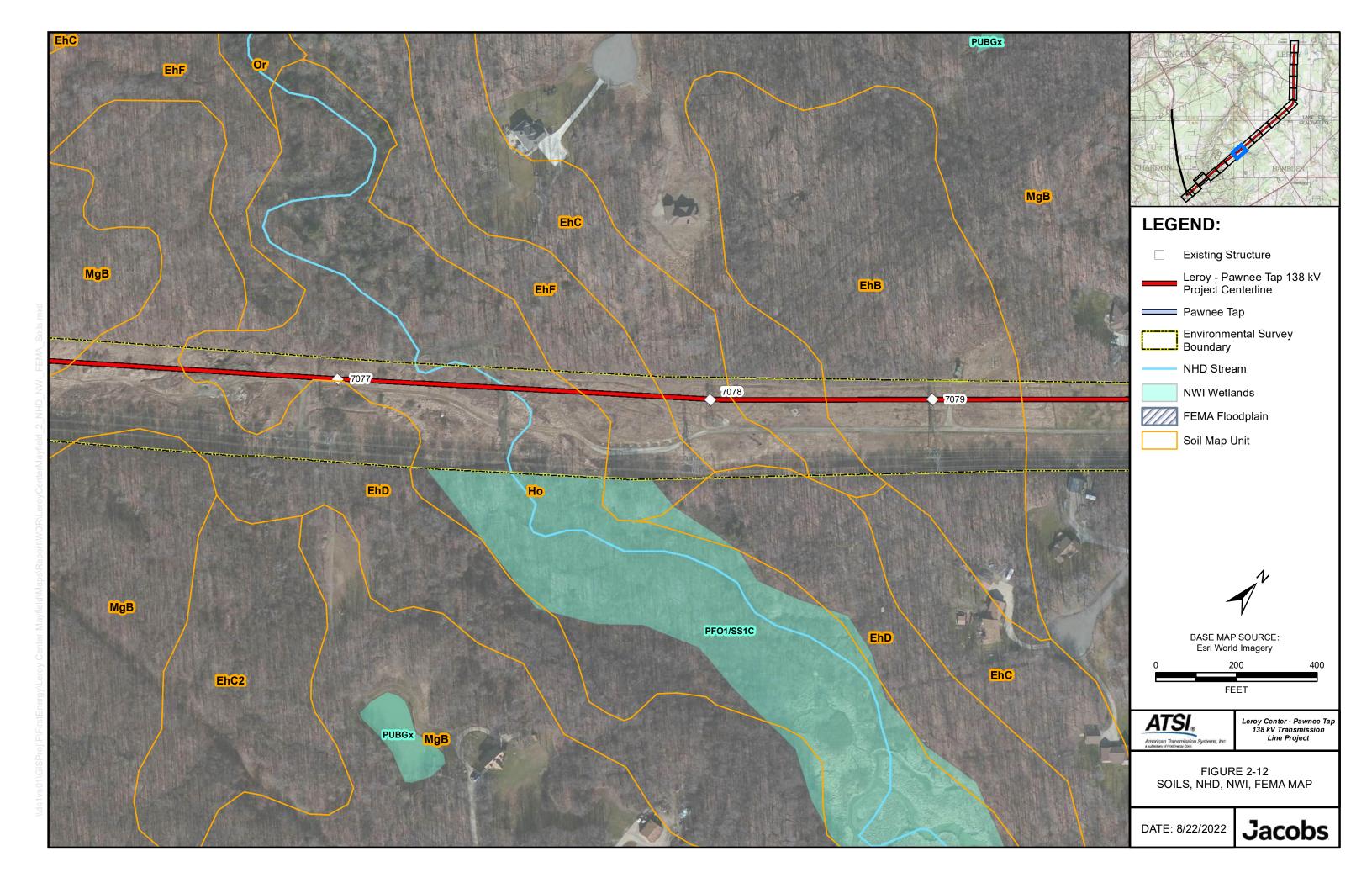




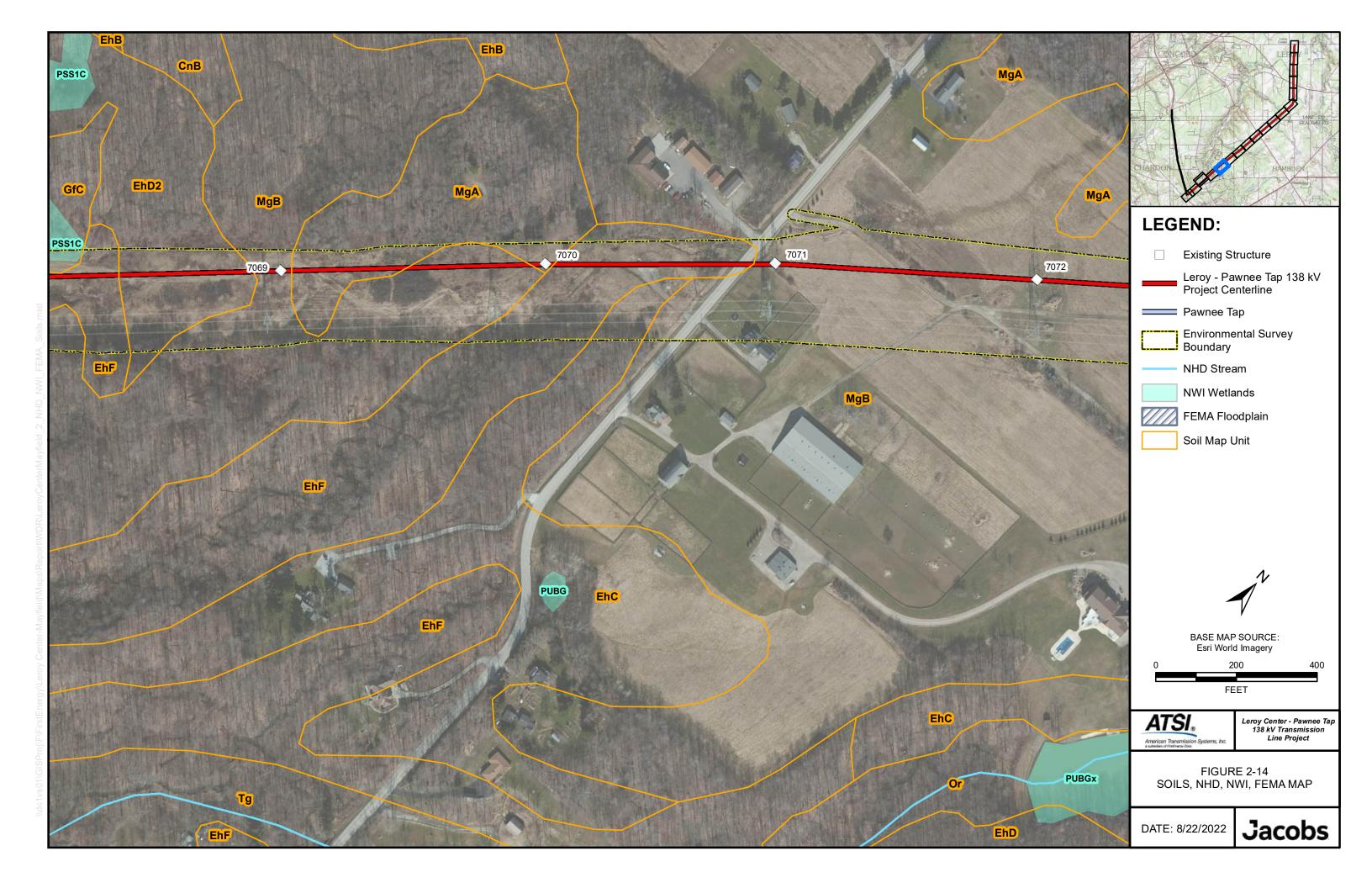


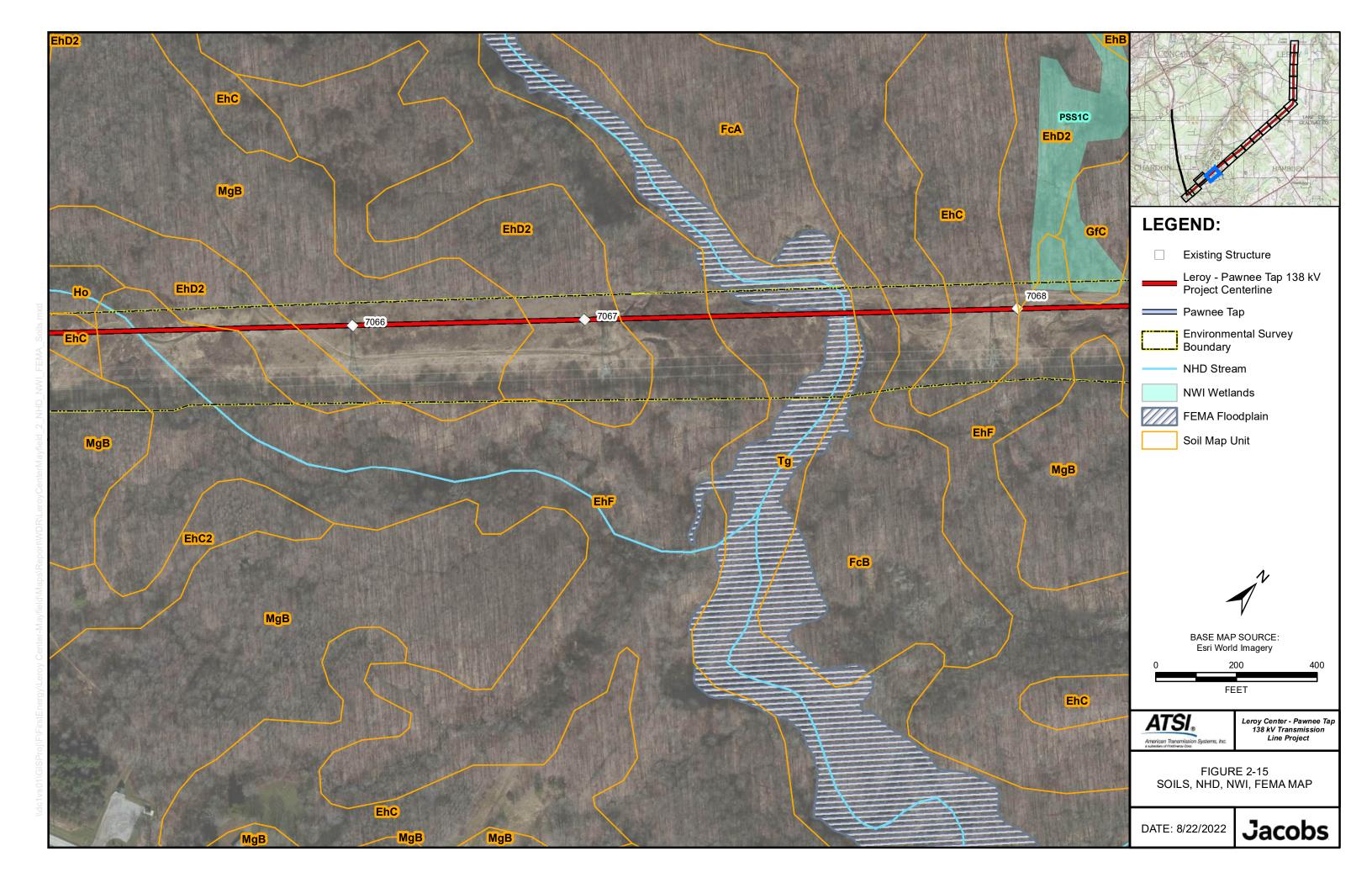


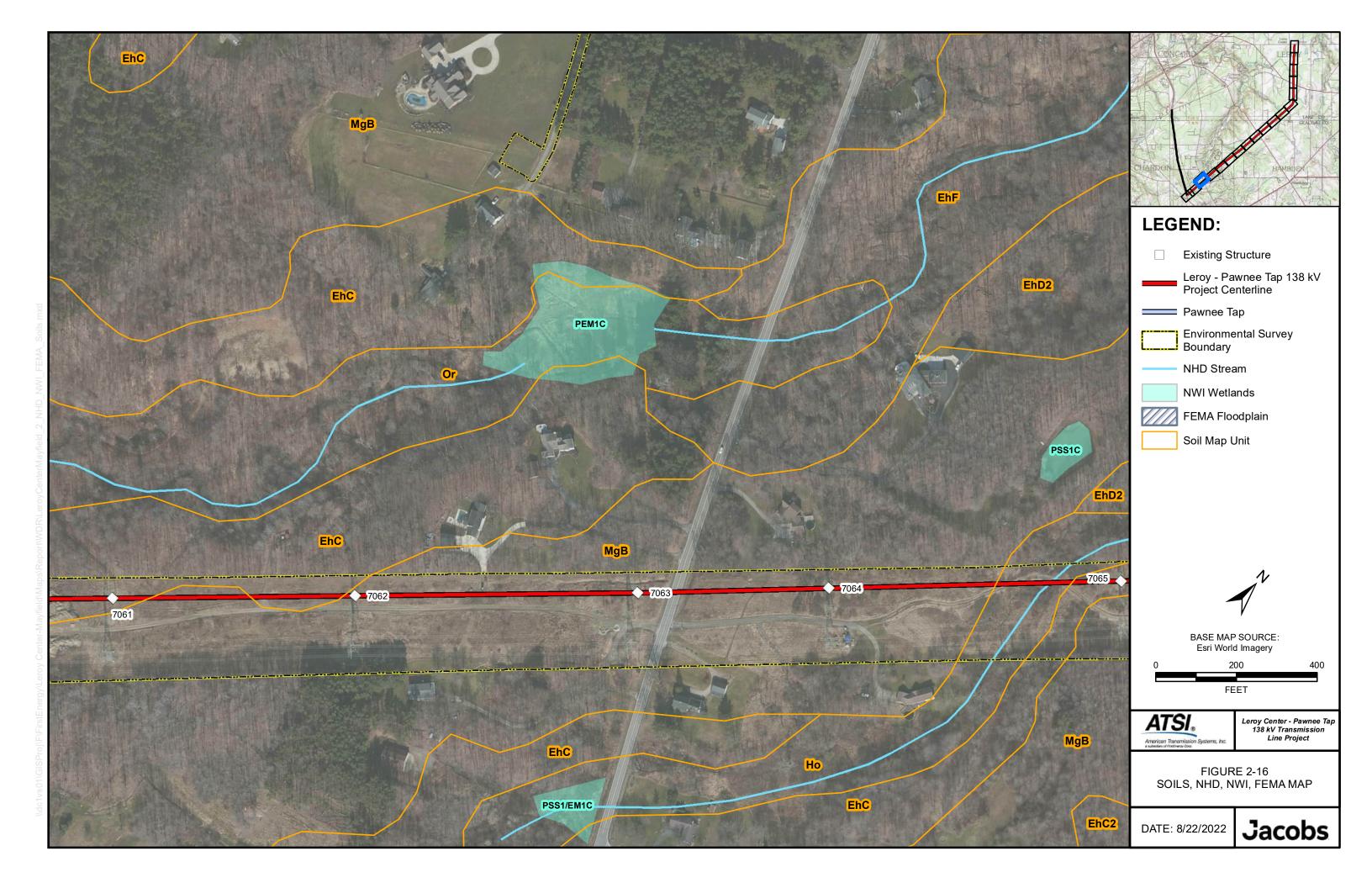




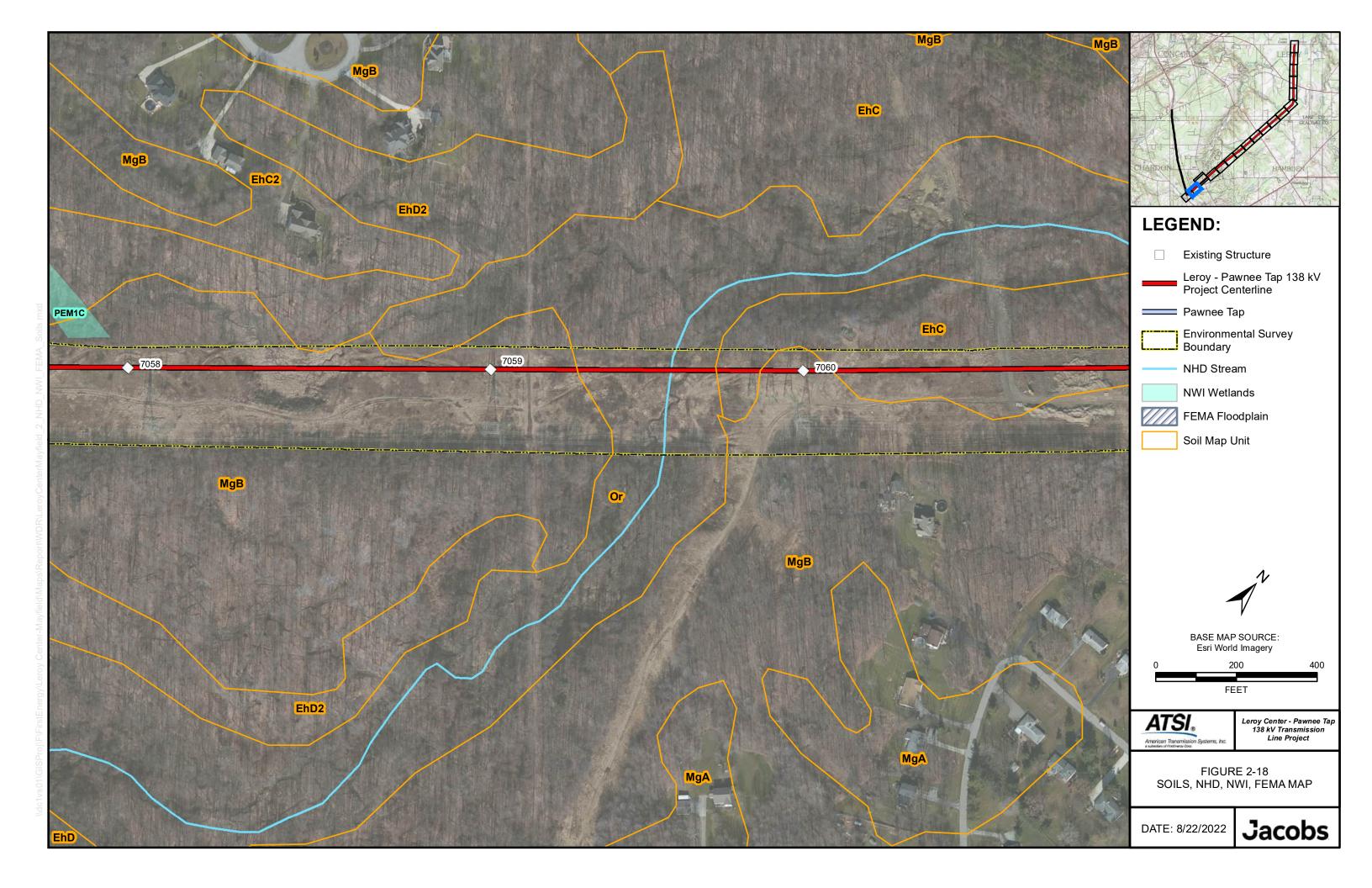






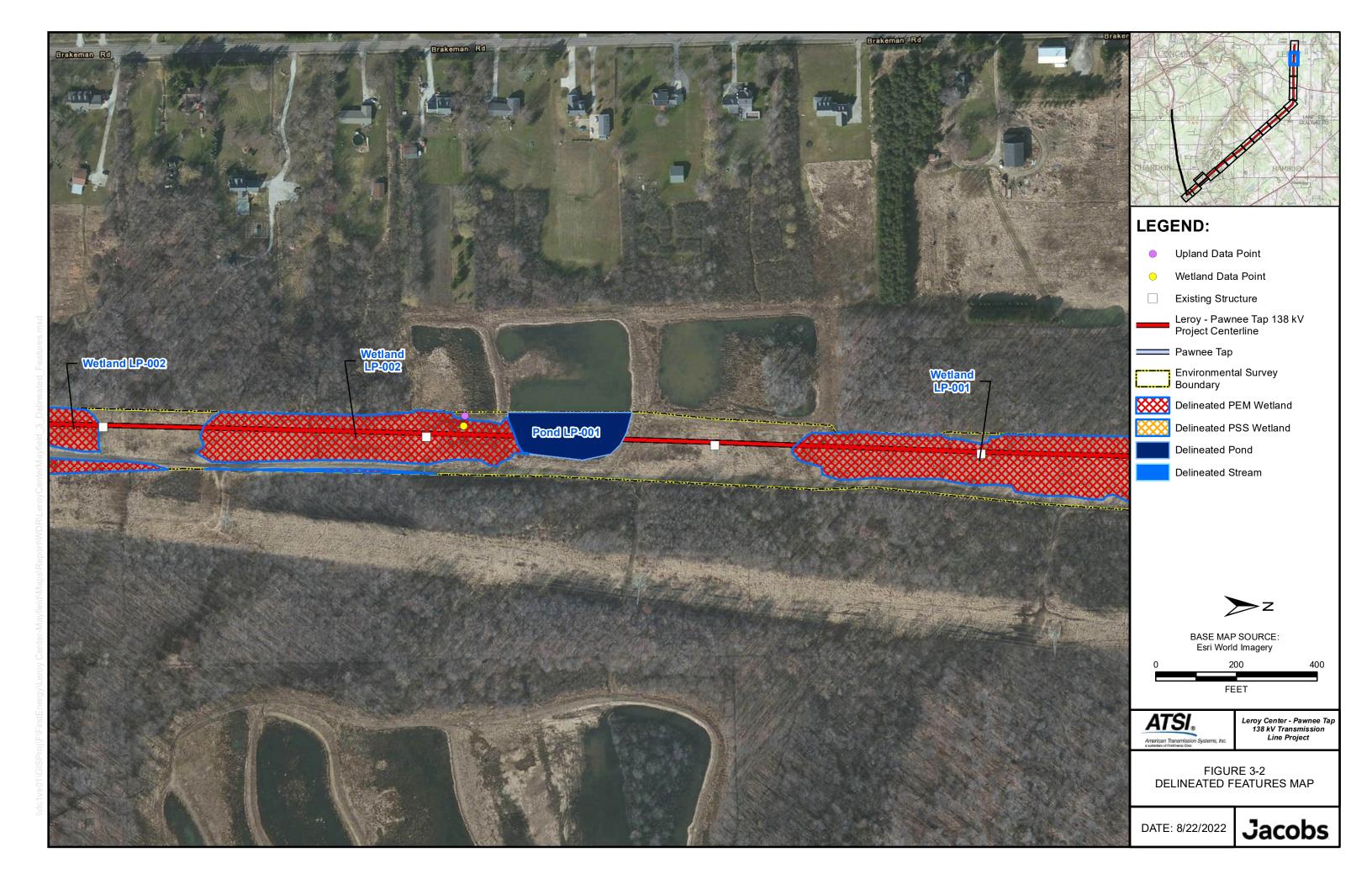








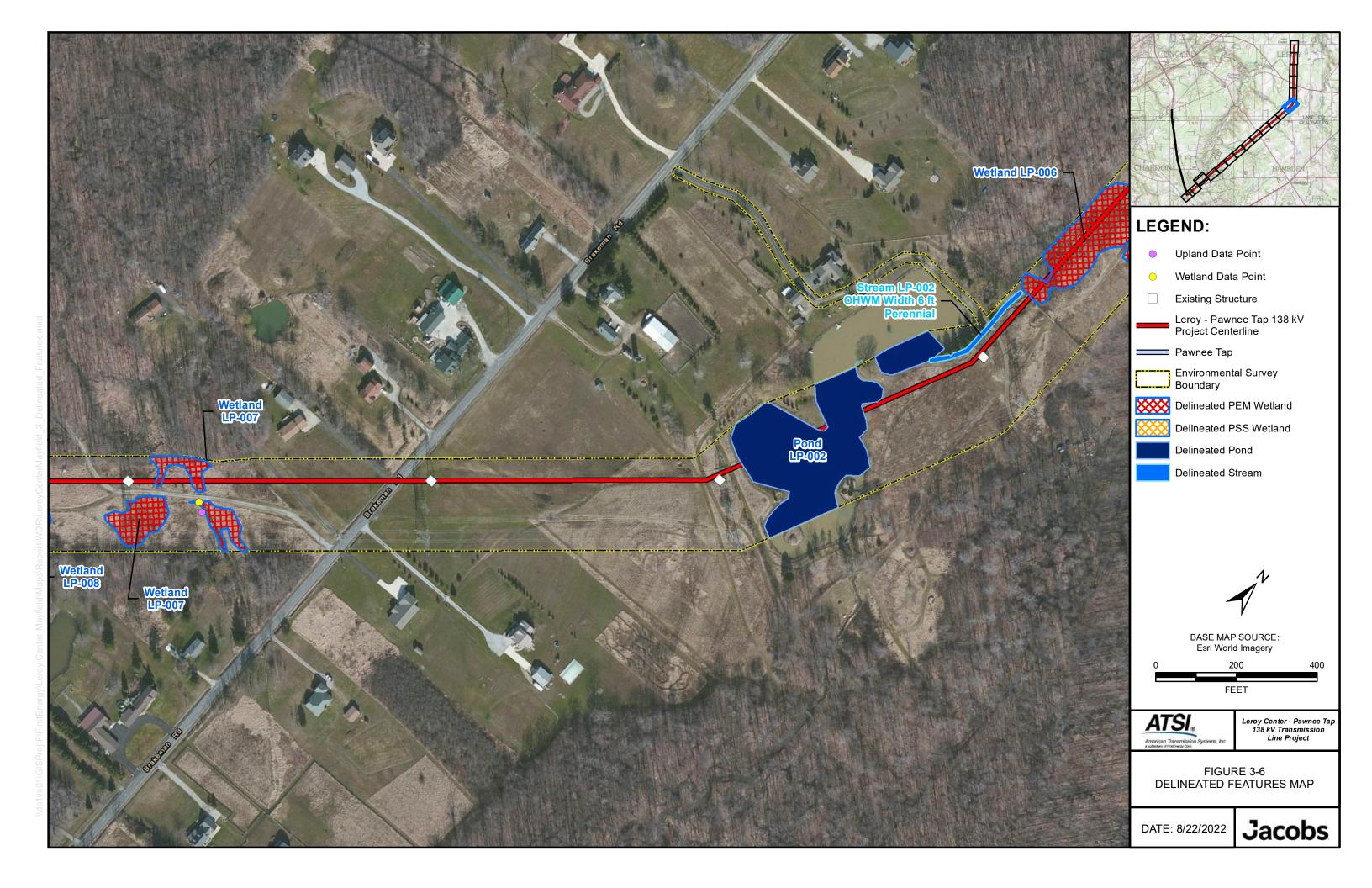






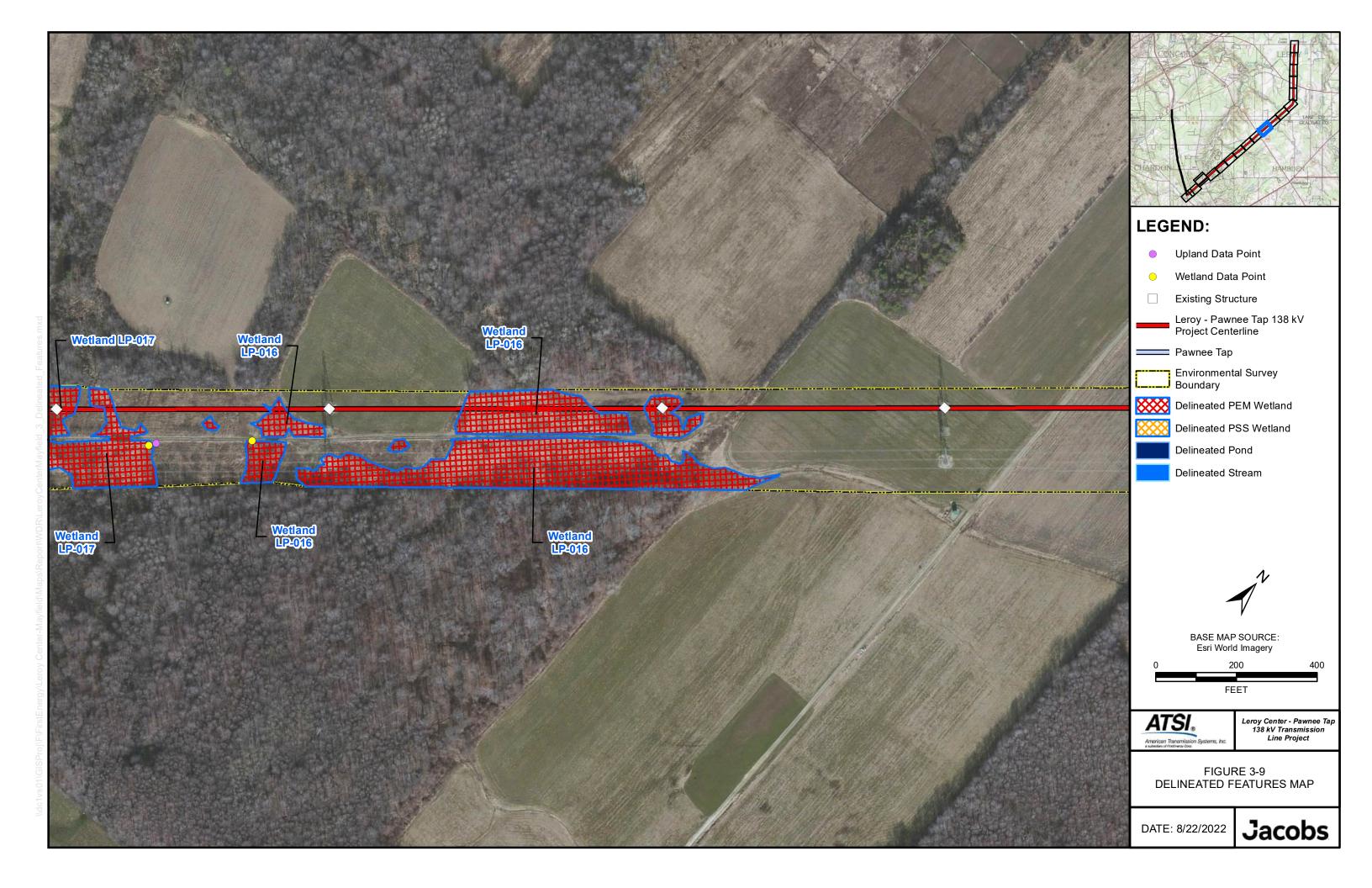


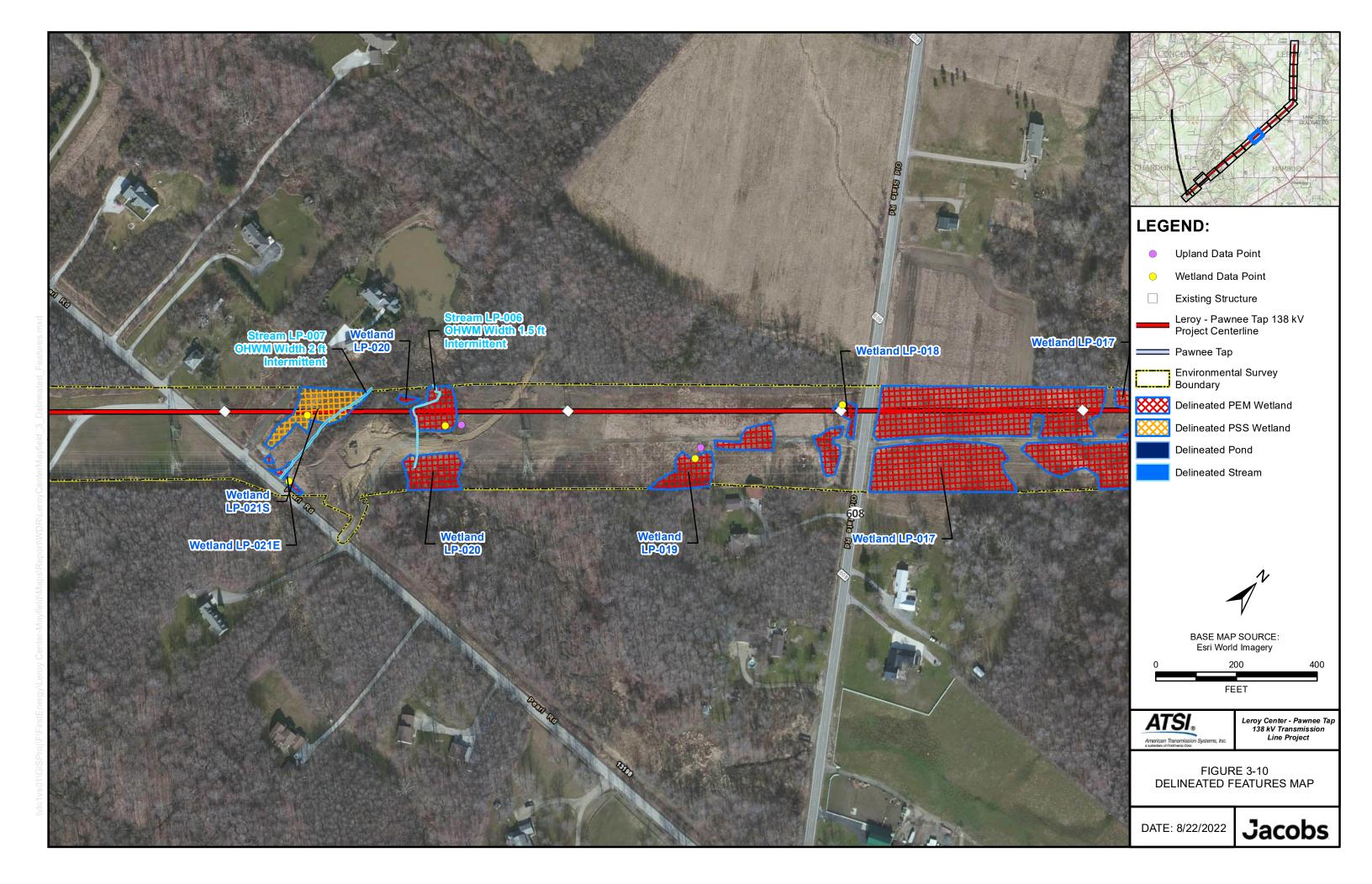




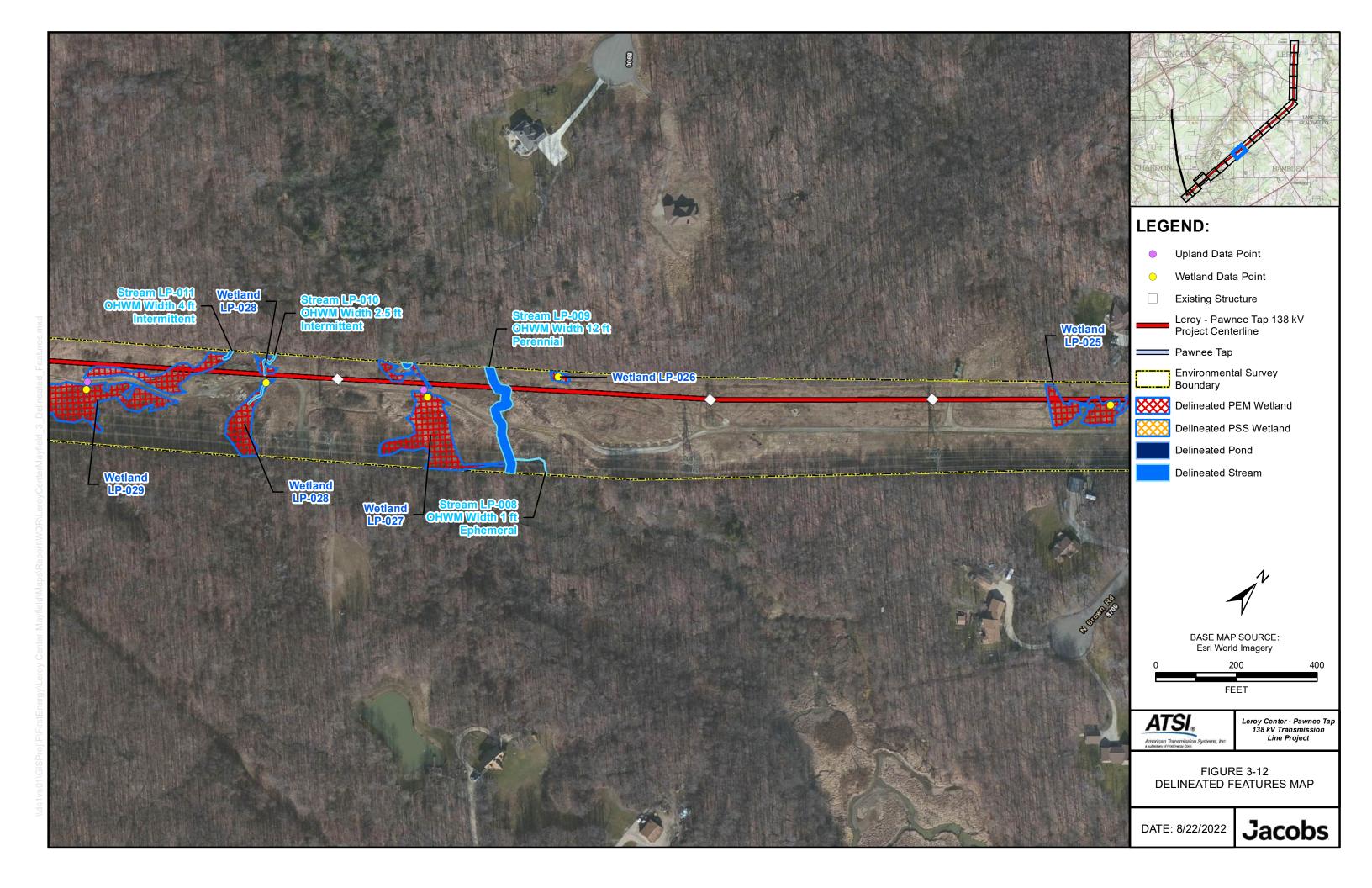


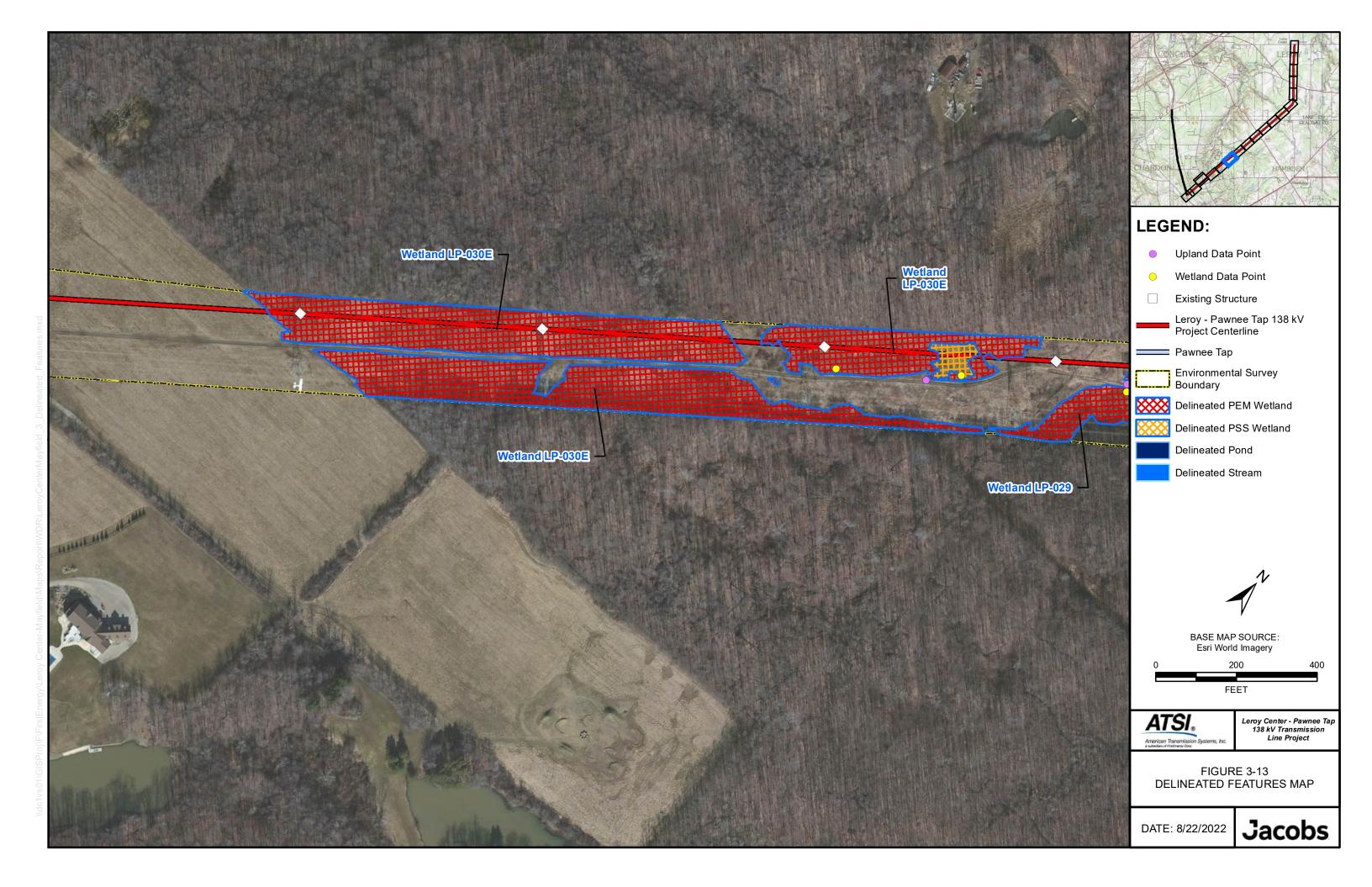


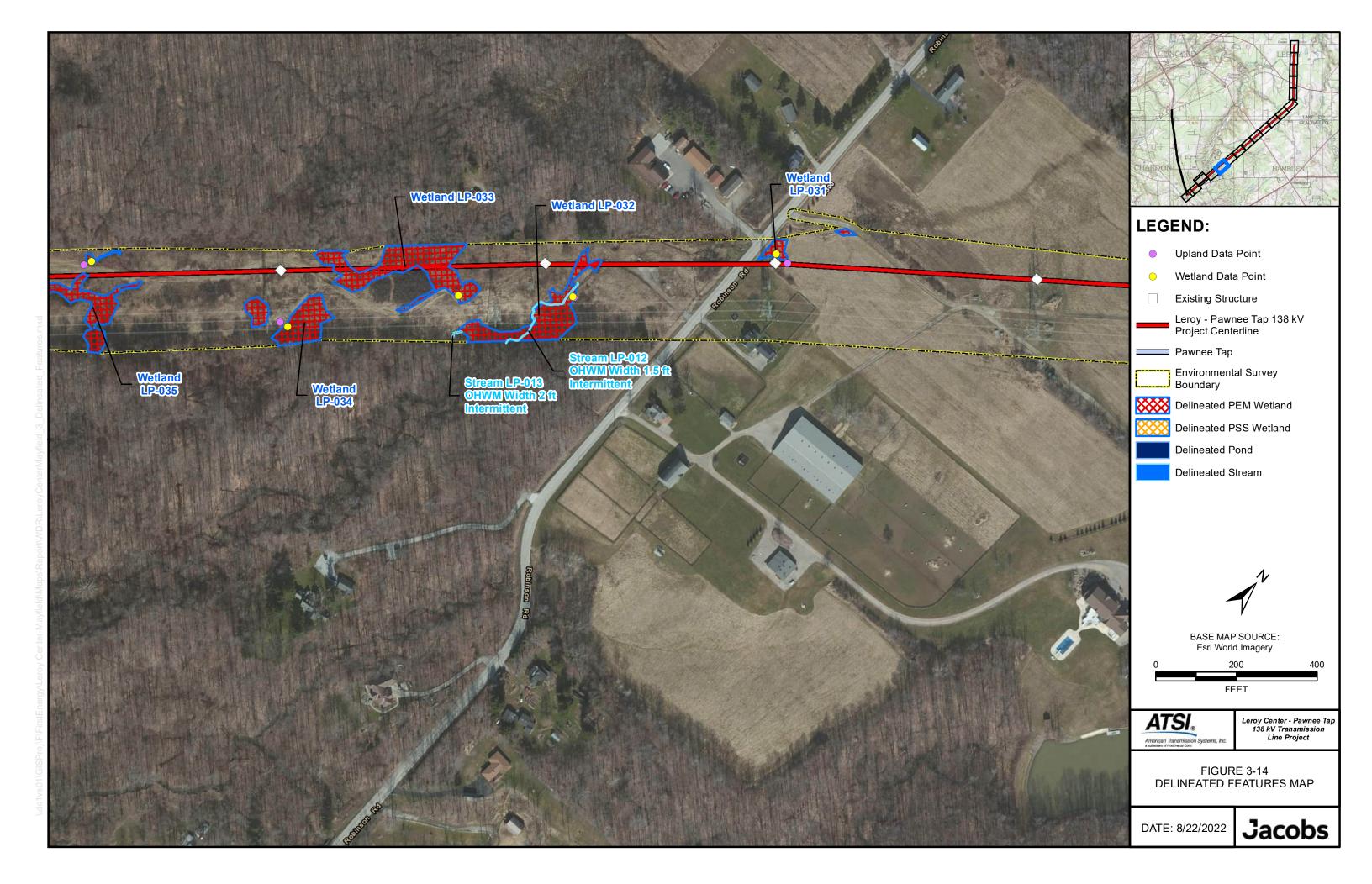


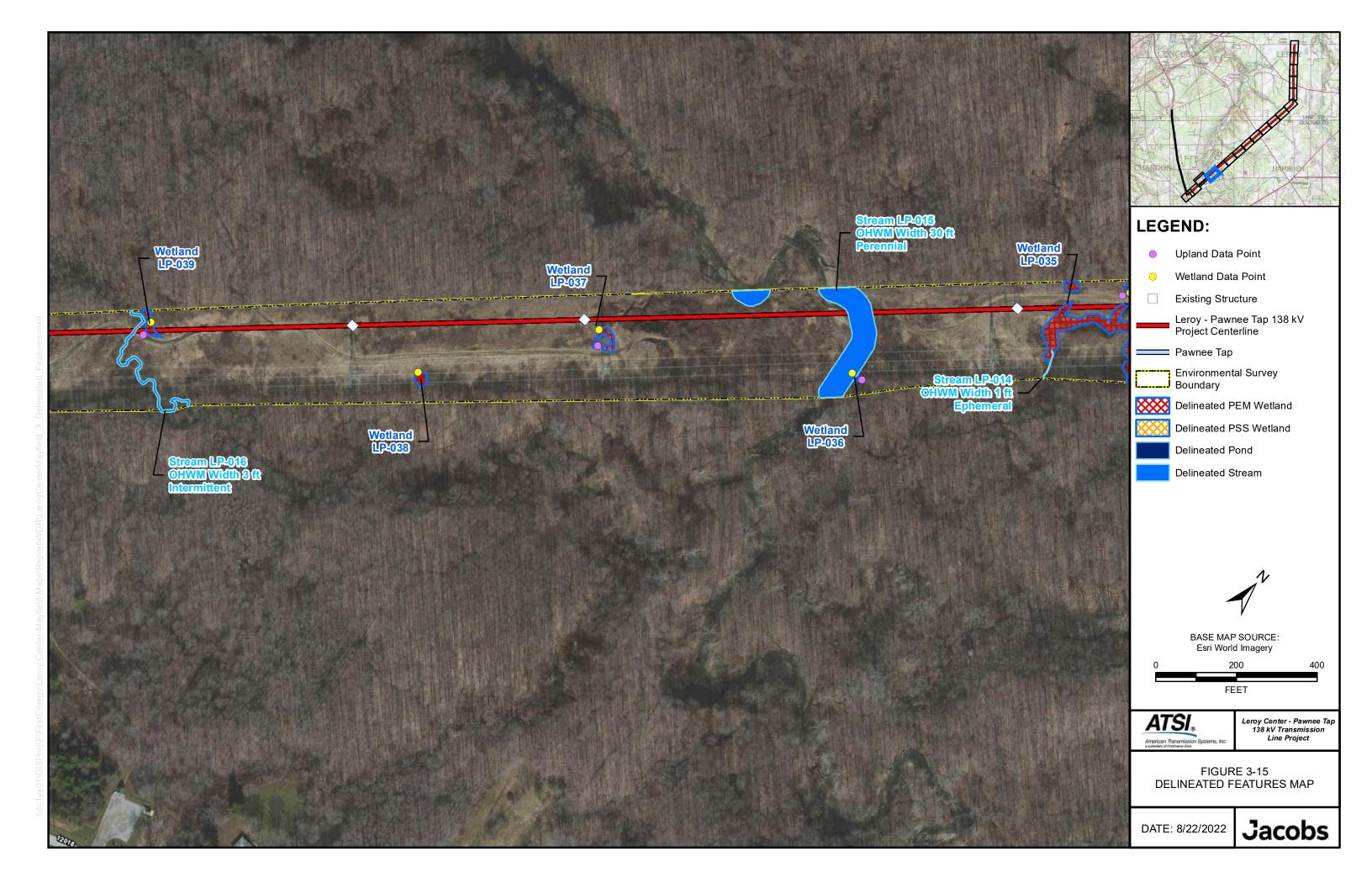




















WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mag	yfield 138 kV	Fransmiss	sion Line Projec City/0	County: Lake	County	:	Sampling Date: 11	/11/2021
Applicant/Owner: FirstEnergy				-			_ Sampling Point:	
Investigator(s): BAO			Secti				· -	
Landform (hillslope, terrace, etc.						Flat	Slope	(%): 0
Subregion (LRR or MLRA): LF Soil Map Unit Name: DaA: Da	rien silt loam,	0 to 1 per	cent slopes			NWI classifica	tion: N/A	
Are climatic / hydrologic conditi	ions on the site	e typical f	or this time of year?	Yes X N	lo (If n	o, explain in Re	marks.)	
Are Vegetation, Soil	, or Hydro	ology	significantly distu	rbed?	Are "Normal Cir	cumstances" pr	esent? Yes X	No
Are Vegetation, Soil						ain any answers		_
SUMMARY OF FINDING	GS – Attac	h site n	nap showing san	mpling poir	nt locations	, transects,	important fea	tures, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present?	Y	es X	No _ No		etland?	Yes X e ID: Wetland L	-	
Large PEM wetland located w	ithin ROW							
HYDROLOGY								
Wetland Hydrology Indicato	ors:				Sec	condary Indicate	ors (minimum of tw	o required)
Primary Indicators (minimum		red; chec	k all that apply)			Surface Soil C		
Surface Water (A1)	•		Water-Stained Leave	es (B9)		Drainage Patte		
High Water Table (A2)			Aquatic Fauna (B13)			Moss Trim Lin		
X Saturation (A3)			Marl Deposits (B15)		X		/ater Table (C2)	
Water Marks (B1)			Hydrogen Sulfide Oc			Crayfish Burro	ows (C8)	
Sediment Deposits (B2)		X	Oxidized Rhizospher	res on Living F	Roots (C3)	Saturation Vis	ible on Aerial Imag	ery (C9)
Drift Deposits (B3)			Presence of Reduce	d Iron (C4)		Stunted or Str	essed Plants (D1)	
Algal Mat or Crust (B4)			Recent Iron Reduction		ils (C6)	Geomorphic F	Position (D2)	
Iron Deposits (B5)			Thin Muck Surface (C7)		Shallow Aquita	ard (D3)	
Inundation Visible on Aer	rial Imagery (B	7)	Other (Explain in Re	marks)		Microtopograp	hic Relief (D4)	
Sparsely Vegetated Cond	cave Surface (B8)			X	FAC-Neutral T	est (D5)	
Field Observations:								
Surface Water Present?	Yes	No X	_ Depth (inches):					
Water Table Present?	Yes X	No	_ Depth (inches):	12				
Saturation Present? (includes capillary fringe)	Yes X	No	_ Depth (inches):	0	-		? Yes <u>X</u>	No
Describe Recorded Data (stre	am gauge, m	onitoring	well, aerial photos, pre	evious inspect	ions), if availab	le:		
Remarks:								
Í								

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
2				Total Number of Dominant
3				Species Across All Strata:1 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:1 (A/B)
6				
				Prevalence Index worksheet:
7				
45		= Total Cov	/er	A 1
Sapling/Shrub Stratum (Plot size: 15)				FACW species 70
1				FACU species 0 x 4 = 0
2				UPL species
3				Column Totals: 105 (A) 175 (B)
4				
5				Prevalence Index = B/A = 1.6666666666
6				Hydrophytic Vegetation Indicators:
7	·			X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov	/or	X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		10tal 000	, C1	X 3 - Prevalence Index is ≤3.0 ¹
1. Phalaris arundinacea	60	Yes	FACW	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2. Mimulus ringens	15	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Scirpus cyperinus			OBL	¹ Indicators of hydric soil and wetland hydrology must
4. Juncus effusus	40		OBL	be present, unless disturbed or problematic.
5. Verbena hastata		No	FACW	Definitions of Vegetation Strata:
0.:	5	No	OBL	_
•		-	· ——	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				Herb – All herbaceous (non-woody) plants, regardless of
10				size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	105	= Total Cov	/er	
Woody Vine Stratum (Plot size:)				
1				
2				Hydrophytic
3	·			Vegetation Present? Yes X No
4				
		= Total Cov	/or	
Remarks: (Include photo numbers here or on a separate	sheet)	Total Cov		
Tremaine. (moduce priote numbers here of on a separate	oncoi.)			

Sampling Point: Wetland LP-001

SOIL Sampling Point: Wetland LP-001

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator o	or confirm	n the absence	of indicators.)
Depth	Matrix			x Features	<u>S</u> _ 1	. 2		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 16	10YR 4/1	80	10YR 5/8	20	Depleti	PL,M	Silty clay loam	
-								
-								
							· ·	
-								
							·	
-								
-								
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ins.		: PL=Pore Lining, M=Matrix.
Hydric Soil I						_		for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belov		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)
-	oipedon (A2)		MLRA 149B)		DD D MI	D A 440B		Prairie Redox (A16) (LRR K, L, R)
Black Hi	stic (A3) n Sulfide (A4)		Thin Dark Surfa Loamy Mucky N					Mucky Peat or Peat (S3) (LRR K, L, R)
	I Layers (A5)		Loamy Gleyed I			L)		Surface (S7) (LRR K, L, M) slue Below Surface (S8) (LRR K, L)
	d Below Dark Surface	(Δ11)	Z Depleted Matrix		,			eark Surface (S9) (LRR K, L)
	ark Surface (A12)	(Д11)	Redox Dark Su					anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)		Depleted Dark S		7)			ont Floodplain Soils (F19) (MLRA 149B)
	sleyed Matrix (S4)		Redox Depress		.,			Spodic (TA6) (MLRA 144A, 145, 149B)
	ledox (S5)			.00 (. 0)				arent Material (F21)
-	Matrix (S6)							Shallow Dark Surface (TF12)
	rface (S7) (LRR R, M	LRA 149B)					(Explain in Remarks)
	, , , ,		,				<u> </u>	,
³ Indicators of	hydrophytic vegetati	on and we	tland hydrology mus	st be prese	ent, unless	disturbed	l or problemation	.
Restrictive I	ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes X No No
Remarks:							1 -	
remarks.								











WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City	//County: Lake County Sampling Date: 11/11/2021
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Upland LP-00
Investigator(s): BAO Sec	
Landform (hillslope, terrace, etc.): Flat Local r	
Soil Map Unit Name: DaA: Darien silt loam, 0 to 1 percent slopes	05 Long: -81.14187983283333 Datum: WGS 198
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly dist	surbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problem	
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locations, transects, important features, etc
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland? Yes No
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID: Upland LP-001
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Lear	ves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B1:	
Saturation (A3) Marl Deposits (B15	
Water Marks (B1) Hydrogen Sulfide C	
	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduc	
Algal Mat or Crust (B4) Recent Iron Reduct	
Iron Deposits (B5) Thin Muck Surface Inundation Visible on Aerial Imagery (B7) Other (Explain in R	
Sparsely Vegetated Concave Surface (B8)	iniciolopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	(AO-Neutlai Test (DO)
Surface Water Present? Yes No _X _ Depth (inches):	
Water Table Present? Yes No _X Depth (inches):	
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes NoX
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	orevious inspections), if available:
Remarks:	
No hydrologic indicators observed	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co	ver	OBL species0 x 1 =0
Sapling/Shrub Stratum (Plot size: 15)				FACW species60 x 2 =120
1				FAC species0 x 3 =0
2				FACU species45 x 4 =180
3				UPL species x 5 = 0
				Column Totals:105
4				Prevalence Index = B/A = 2.857142857
6.				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size:5		_ rotar oo	VCI	X 3 - Prevalence Index is ≤3.0 ¹
1. Phalaris arundinacea	60	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Dipsacus fullonum	25	Yes	FACU	Problematic Hydrophytic Vegetation¹ (Explain)
3. Solidago altissima			FACU	¹ Indicators of hydric soil and wetland hydrology must
4. Senecio hieraciifolius		No	FACU	be present, unless disturbed or problematic.
·· ·		-		Definitions of Vegetation Strata:
5				_
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				Sapling/shrub – Woody plants less than 3 in. DBH
8				and greater than or equal to 3.28 ft (1 m) tall.
9				Herb – All herbaceous (non-woody) plants, regardless of
10				size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	105	= Total Co	ver	
Woody Vine Stratum (Plot size:)				
1				Hardward and a
2				Hydrophytic Vegetation
3				Present? Yes X No
4				
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Sampling Point: Upland LP-001

SOIL Sampling Point: Upland LP-001

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	ndicator o	r confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>s</u> _ 1	. 2		
(inches) 0 - 10	Color (moist) 10YR 3/2	100	Color (moist)	%	Type ¹	Loc ²	Texture Sandy loam	Remarks
10 - 17	10YR 3/2	95	7.5YR 4/4	5	Concer	M	Sandy loam	
-								
-			_					
-								
-								
Hydric Soil I	ncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ins.		PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belov	v Surface	(S8) (LRR	R.		uck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)	•	MLRA 149B)		() (,		Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa					ucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4) I Layers (A5)	•	Loamy Mucky M Loamy Gleyed I			L)		urface (S7) (LRR K, L, M) ue Below Surface (S8) (LRR K, L)
	l Below Dark Surface	e (A11)	Depleted Matrix		,		-	ark Surface (S9) (LRR K, L)
Thick Da	rk Surface (A12)	. , .	Redox Dark Sur	rface (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	-	Depleted Dark S		7)			ont Floodplain Soils (F19) (MLRA 149B)
-	leyed Matrix (S4) edox (S5)	•	Redox Depress	ions (Fo)				Spodic (TA6) (MLRA 144A, 145, 149B) rent Material (F21)
-	Matrix (S6)							nallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	ILRA 149B)				Other (I	Explain in Remarks)
³ Indicators of	hydrophytic vegetati	ion and wo	tland hydrology mus	t ha proce	ont unloce	disturbed	or problematic	
	ayer (if observed):	on and we	liand flydrology mus	t be prese	ent, uniess	uistuibeu		:
Type:	.,							
	ches):						Hydric Soil I	Present? Yes No X
Remarks:								





S



Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Ma	yfield 1	38 kV	Trans	mission Line Projec City/	County: Lake	County		Sampling Date:	11/11/2021
Applicant/Owner: FirstEnergy									int: Wetland LP-002
Investigator(s): BAO				Sect	ion, Township	o, Range: N/A			
Landform (hillslope, terrace, et	c.): De						Concave	Slo	ope (%): 0
Subregion (LRR or MLRA): LF	, <u></u> ≀R R			Lat: 41.6776790666666	66	Long: -81.142	93446666667	 Datu	m· WGS 1984
Soil Map Unit Name: DaA: Da	rien silt	loam,	, 0 to 1	percent slopes			NWI classific	ation: N/A	
Are climatic / hydrologic condit	ions on	the si	ite typi	cal for this time of year?	Yes X I	No (If n	o, explain in R	emarks.)	
Are Vegetation, Soil	, o	r Hyd	rology	significantly distu	ırbed?	Are "Normal Cir	cumstances" p	resent? Yes	X No
Are Vegetation, Soil	, 0	r Hyd	rology	naturally problem	natic?	(If needed, expl	ain any answei	rs in Remarks.)	
SUMMARY OF FINDIN	GS –	Atta	ch si	te map showing sai	mpling poi	int locations	, transects	, important f	eatures, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternativ		`	Yes _ Yes _	X No X No X No		npled Area /etland? onal Wetland Sit			
HYDROLOGY									
Wetland Hydrology Indicate	ore:					Se	condary Indica	tors (minimum o	f two required)
Primary Indicators (minimum		ie rea	uired:	check all that annly)			Surface Soil		r two required)
X Surface Water (A1)	OI OIIC	3 requ	uncu,	Water-Stained Leav	es (B9)		Drainage Pat		
X High Water Table (A2)				Aquatic Fauna (B13			Moss Trim Li		
X Saturation (A3)				Marl Deposits (B15)				Water Table (C2)
Water Marks (B1)				Hydrogen Sulfide O			Crayfish Burr		,
Sediment Deposits (B2)				X Oxidized Rhizosphe	res on Living	Roots (C3)	Saturation Vi	sible on Aerial In	nagery (C9)
Drift Deposits (B3)				Presence of Reduce	ed Iron (C4)		Stunted or St	ressed Plants (D)1)
Algal Mat or Crust (B4)				Recent Iron Reducti	on in Tilled So	oils (C6) <u>X</u>	Geomorphic	Position (D2)	
Iron Deposits (B5)				Thin Muck Surface ((C7)		Shallow Aqui	tard (D3)	
Inundation Visible on Ae	rial Imag	gery (B7)	Other (Explain in Re	emarks)		_ Microtopogra	phic Relief (D4)	
Sparsely Vegetated Con	cave Sı	ırface	(B8)			X	FAC-Neutral	Test (D5)	
Field Observations:									
Surface Water Present?				Depth (inches):	1				
Water Table Present?				Depth (inches):	8				
Saturation Present? (includes capillary fringe)				Depth (inches):	0		0,	t? Yes X	
Describe Recorded Data (stre	eam gai	uge, n	nonito	ring well, aerial photos, pr	evious inspec	ctions), if availab	le:		
Remarks:									

VEGETATION – Use scientific names of plants.

Cover Cover FACW OBL OBL	Dominance Test worksheet: Number of Dominant Species 1 (A) Total Number of Dominant Species Across All Strata: 1 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B Prevalence Index worksheet: 1 (A/B Prevalence Index worksheet: 1 (A/B Prevalence Index worksheet: 1 (A/B OBL species Index worksheet: 25 1 FACW species Index
Cover Cover FACW FACW OBL	Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B Prevalence Index worksheet: Total % Cover of: OBL species 80 x 2 = 160 FACW species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 105 (A) 185 (B) Prevalence Index = B/A = 1.7619047615 Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportin data in Remarks or on a separate sheet)
Cover Cover FACW FACW OBL	That Are OBL, FACW, or FAC: 1 (A/B Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 25 x 1 = 25 FACW species 80 x 2 = 160 FAC species 0 x 3 = 0 FACU species 0 x 4 = 0 UPL species 0 x 5 = 0 Column Totals: 105 (A) 185 (B) Prevalence Index = B/A = 1.7619047619 Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is $\leq 3.0^1$ 4 - Morphological Adaptations (Provide supportindata in Remarks or on a separate sheet)
Cover Cover FACW OBL	
Cover FACW OBL	OBL species 25 $\times 1 = 25$ FACW species 80 $\times 2 = 160$ FAC species 0 $\times 3 = 0$ FACU species 0 $\times 4 = 0$ UPL species 0 $\times 5 = 0$ Column Totals: 105 (A) 185 (B) Prevalence Index $= B/A = 1.7619047615$ Hydrophytic Vegetation Indicators: $\frac{X}{2}$ 1 - Rapid Test for Hydrophytic Vegetation $\frac{X}{2}$ 2 - Dominance Test is >50% $\frac{X}{2}$ 3 - Prevalence Index is $\le 3.0^1$ $\frac{X}{2}$ 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
Cover FACW OBL	FACW species 80 \times 2 = 160 FAC species 0 \times 3 = 0 FACU species 0 \times 4 = 0 UPL species 0 \times 5 = 0 Column Totals: 105 (A) 185 (B) Prevalence Index = B/A = 1.761904761 Hydrophytic Vegetation Indicators: $\frac{X}{2}$ 1 - Rapid Test for Hydrophytic Vegetation $\frac{X}{2}$ 2 - Dominance Test is >50% $\frac{X}{2}$ 3 - Prevalence Index is \leq 3.0 1 $\frac{X}{2}$ 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
Cover FACW FACW OBL	FAC species 0 $x 3 = 0$ FACU species 0 $x 4 = 0$ UPL species 0 $x 5 = 0$ Column Totals: 105 (A) 185 (B) Prevalence Index 0 0 0 0 0 0 0 0 0 0
Cover FACW FACW OBL	FACU species 0 $x = 4$ 0 UPL species 0 $x = 5$ Column Totals: 105 (A) 185 (B) Prevalence Index 0 0 0 0 0 0 0 0 0 0
Cover FACW FACW OBL	PACU species $\frac{0}{0}$ $\times 5 = \frac{0}{0}$ Column Totals: $\frac{105}{105}$ (A) $\frac{185}{185}$ (B) Prevalence Index = B/A = $\frac{1.761904761!}{1.761904761!}$ Hydrophytic Vegetation Indicators: $\frac{X}{1}$ 1 - Rapid Test for Hydrophytic Vegetation $\frac{X}{2}$ 2 - Dominance Test is >50% $\frac{X}{3}$ 3 - Prevalence Index is $\leq 3.0^{1}$ $\frac{X}{3}$ 4 - Morphological Adaptations (Provide supporting data in Remarks or on a separate sheet)
Cover FACW FACW OBL	Column Totals:
Cover FACW FACW OBL	Prevalence Index = B/A = 1.7619047619 Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportindata in Remarks or on a separate sheet)
Cover FACW FACW OBL	Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportin data in Remarks or on a separate sheet)
Cover FACW FACW OBL	 X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportin data in Remarks or on a separate sheet)
Cover FACW FACW OBL	 X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportin data in Remarks or on a separate sheet)
Cover FACW FACW OBL	 X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportin data in Remarks or on a separate sheet)
FACW FACW OBL	4 - Morphological Adaptations ¹ (Provide supportin data in Remarks or on a separate sheet)
FACW	data in Remarks or on a separate sheet)
OBL	Problematic Hydrophytic Vegetation¹ (Explain)
OBL	Indicators of hydric soil and wetland hydrology must
	be present, unless disturbed or problematic.
OBL	Definitions of Vegetation Strata:
OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.
	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	Herb – All herbaceous (non-woody) plants, regardless of
	size, and woody plants less than 3.28 ft tall.
	Woody vines – All woody vines greater than 3.28 ft in
	height.
Cover	
	Hydrophytic Vegetation
	Present? Yes X No
Cover	
	Cover

SOIL Sampling Point: Wetland LP-002

Depth Matrix Redox Features Color (moist) % Type ¹ Loc ² Texture Remarks
0 - 16
<u> </u>
<u> </u>
-
-
<u>-</u>
_ -
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M)
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11) X Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L)
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5) Red Parent Material (F21)
Stripped Matrix (S6) Very Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if observed):
Type:
Depth (inches): Hydric Soil Present? Yes X No
Remarks:





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Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec	City/County: Lake County Sampling Date: 11/11/2021
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Upland LP-002
Investigator(s): BAO	Section, Township, Range: N/A
-	cal relief (concave, convex, none): Flat Slope (%): 0
	66667 Long: -81.1429289 Datum: WGS 1984
Soil Map Unit Name: DaA: Darien silt loam, 0 to 1 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye	ar? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	
Are Vegetation, Soil, or Hydrology naturally pro	
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes NoX	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes No
Wetland Hydrology Present? Yes NoX Remarks: (Explain alternative procedures here or in a separate report	If yes, optional Wetland Site ID: Upland LP-002
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained	
High Water Table (A2) Aquatic Fauna Aquatic Fauna	
Saturation (A3) Marl Deposits (
Water Marks (B1) Hydrogen Sulfic	
	spheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Re	educed Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Re	duction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surf	
Inundation Visible on Aerial Imagery (B7) Other (Explain	
Sparsely Vegetated Concave Surface (B8) Field Observations:	FAC-Neutral Test (D5)
Surface Water Present? Yes No _X _ Depth (inches)	
Water Table Present? Yes No X Depth (inches)	
Saturation Present? Yes No X Depth (inches)	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:
Remarks:	
1	

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6				Presidence to describe est
7				Prevalence Index worksheet: Total % Cover of: Multiply by:
		= Total Cov		OBL species0 x 1 =0
Sapling/Shrub Stratum (Plot size: 15)		Total 00	VCI	FACW species0 x 2 =0
				FAC species 10 x 3 = 30
1				FACU species 90 x 4 = 360
2				UPL species0 x 5 =0
3				Column Totals:100 (A)390 (B)
4				Prevalence Index = B/A = 3.9
5				
6				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
_		= Total Cov	ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5 1. Solidago canadensis	70	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
			FACU	Problematic Hydrophytic Vegetation¹ (Explain)
-				
3. Juncus tenuis			FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Cirsium vulgare			FACU	
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7	<u> </u>			
8	<u> </u>			Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	100	= Total Cov	ver	
Woody Vine Stratum (Plot size: 30				
1				
2				Hydrophytic Vegetation
3				Present? Yes No X
4				
		= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	<u>-'</u>		

Sampling Point: Upland LP-002

SOIL Sampling Point: Upland LP-002

Profile Desc	ription: (Describe t	o the depth	n needed to docur	nent the i	ndicator c	r confirm	n the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	<u></u> %	Redo Color (moist)	x Feature: %	<u>S</u> Type ¹	Loc ²	Texture	Remarks
								Remarks
0 - 18	10YR 5/1	90	10YR 5/8	10	Concer	PL,M	Silty clay loam	
-								
-								
-								
								<u> </u>
-								
-								
¹ Type: C=Co	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ins.	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							for Problematic Hydric Soils ³ :
Histosol		_	Polyvalue Belov		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)
	oipedon (A2)		MLRA 149B)			D 4 4 40 D		Prairie Redox (A16) (LRR K, L, R)
Black His	stic (A3) n Sulfide (A4)	_	Thin Dark Surfa Loamy Mucky N					Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L, M)
	I Layers (A5)	_	Loamy Gleyed			L)		alue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11) _	X Depleted Matrix		,		-	eark Surface (S9) (LRR K, L)
	rk Surface (A12)	_	Redox Dark Su	. ,				anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	_	Depleted Dark		7)			ont Floodplain Soils (F19) (MLRA 149B)
-	eleyed Matrix (S4)	-	Redox Depress	ions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5) Matrix (S6)							arent Material (F21) Shallow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149B)					-	(Explain in Remarks)
	, , , ,	,						,
	hydrophytic vegetati	on and wetl	and hydrology mus	st be prese	ent, unless	disturbed	or problemation	D.
Restrictive L	ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes X No No
Remarks:								







S

Project/Site: Leroy Center-May	field 138	3 kV Tran	smissic	on Line Projec City	County: Lake	County	;	Sampling Date:	11/10/2021
Applicant/Owner: FirstEnergy						S	tate: OH	_ Sampling Poi	nt: Wetland LP-003
Investigator(s): BAO				Sec	tion, Township	o, Range: N/A			
Landform (hillslope, terrace, etc							Flat	Slo	pe (%): ⁰
Subregion (LRR or MLRA): LR									
Soil Map Unit Name: DaB: Dar	ien silt lo	oam, 1 to	4 perce				NWI classifica		
Are climatic / hydrologic condition	ons on th	ne site typ	oical for	this time of year?	Yes X	No (If n	o, explain in Re	marks.)	
Are Vegetation, Soil	, or	Hydrolog	у	significantly dist	urbed?	Are "Normal Cir	cumstances" pro	esent? Yes	X No
Are Vegetation, Soil							ain any answers		
SUMMARY OF FINDING	3S – A	ttach s	ite ma	ap showing sa	mpling poi	int locations	, transects,	important fo	eatures, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative		Yes _ Yes _	X	No No No separate report.)		etland?	Yes X re ID: Wetland L	_	
HYDROLOGY									
Wetland Hydrology Indicato	rs:					Se	condary Indicate	ors (minimum of	two required)
Primary Indicators (minimum o	of one is	required;	check	all that apply)			Surface Soil C		
Surface Water (A1)				Water-Stained Leav			Drainage Patte		
X High Water Table (A2)				Aquatic Fauna (B13			Moss Trim Lin		
X Saturation (A3)				Marl Deposits (B15)				ater Table (C2)	1
Water Marks (B1)				Hydrogen Sulfide O		Doots (C2)	Crayfish Burro	` ,	2000m/ (CO)
Sediment Deposits (B2)				Oxidized Rhizosphe Presence of Reduce	_	Roots (C3)		ible on Aerial Im essed Plants (D	
Drift Deposits (B3) Algal Mat or Crust (B4)				Recent Iron Reduct	, ,		Geomorphic P		1)
Iron Deposits (B5)				Thin Muck Surface			Shallow Aquita		
Inundation Visible on Aeri	ial Image	ary (R7)		Other (Explain in Re		· · · · · · · · · · · · · · · · · · ·	_ Microtopograp	, ,	
Sparsely Vegetated Cond	-	•		Julei (Explain in N	omarko)		FAC-Neutral T		
Field Observations:	ave Sun	ace (DO)					_ I AC-Neutiai i	est (D3)	
Surface Water Present?	Yes	No	Х	Depth (inches):					
Water Table Present?				Depth (inches):	5				
Saturation Present?				Depth (inches):	2	Wetland Hyd	rology Present	? Yes <u>X</u>	No
(includes capillary fringe) Describe Recorded Data (stre	am gaug	ge, monito	oring we	ell, aerial photos, p	revious inspec	l ctions), if availab	ıle:		
,		•	J	, , , , , ,	·	,,			
Remarks:									

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:
1			Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
2		. <u></u>	Total Number of Dominant
3		·	Species Across All Strata:1 (B)
4		. <u></u>	Percent of Dominant Species
5			That Are OBL, FACW, or FAC:1 (A/B)
6			Brooken by Louisidad and
7			Prevalence Index worksheet:
·		= Total Cover	Total % Cover of: Multiply by: OBL species 0 x 1 =0
Conding (Charth Charture (Diet sine) 15	-	_ = Total Cover	FACW species 90 x 2 = 180
Sapling/Shrub Stratum (Plot size: 15)			FAC species 10 x 3 = 30
1			FACU species 10 x 4 = 40
2	· - <u></u>	· 	UPL species 0 x 5 = 0
3			Column Totals: 110 (A) 250 (B)
4			0.070707070
5			Prevalence Index = B/A = 2.2727272727
6		·	Hydrophytic Vegetation Indicators:
7			X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cover	X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		_	X 3 - Prevalence Index is ≤3.0 ¹
1. Phalaris arundinacea	90	Yes FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Solidago altissima	10	No FACU	Problematic Hydrophytic Vegetation¹ (Explain)
3. Apocynum cannabinum		No FAC	¹ Indicators of hydric soil and wetland hydrology must
4		· -	be present, unless disturbed or problematic.
5			Definitions of Vegetation Strata:
			_
6			Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7			Sapling/shrub – Woody plants less than 3 in. DBH
8			and greater than or equal to 3.28 ft (1 m) tall.
9			Herb – All herbaceous (non-woody) plants, regardless of
10		·	size, and woody plants less than 3.28 ft tall.
11			Woody vines – All woody vines greater than 3.28 ft in
12		· 	height.
	110	_ = Total Cover	
Woody Vine Stratum (Plot size:)			
1			
2			Hydrophytic
3			Vegetation Present? Yes X No
4		·	
T-		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet)	_ = Total Covel	
Tremaine. (moduce priote numbers here of on a separate	oncoi.)		

Sampling Point: Wetland LP-003

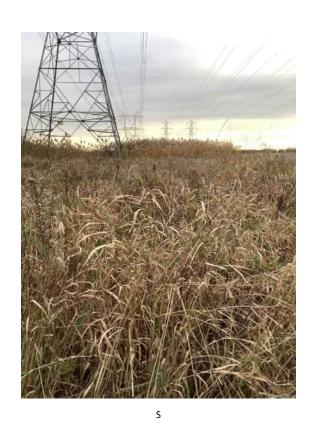
SOIL Sampling Point: Wetland LP-003

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the i	ndicator o	or confirn	n the absence	of indicators.)			
Depth	Matrix			x Feature	<u>s</u> ,	2					
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks			
0 - 4	7.5R 4/2	95	10R 4/6	5	Concer	PL,M	Silty clay loam				
4 - 17	7.5R 4/2	80	10YR 4/6	20		PL,M	Silty clay loam				
-											
-											
-											
-											
-											
1Type: C=C	oncentration, D=Depl	etion PM=		S=Macked	Sand Gra	ine	² l ocation	: PL=Pore Lining, M=Matrix.			
Hydric Soil I		elion, Rivi-	-Neduced Matrix, Mix	3-IVIASNEC	J Sand Gra	11115.		for Problematic Hydric Soils ³ :			
Histosol			Polyvalue Belov		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)			
Histic Ep	oipedon (A2)		MLRA 149B Thin Dark Surfa	•	RR R MI	RΔ 149R		Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R)			
	n Sulfide (A4)		Loamy Mucky N					Surface (S7) (LRR K, L, M)			
	l Layers (A5)		Loamy Gleyed			,		alue Below Surface (S8) (LRR K, L)			
Depleted	d Below Dark Surface	(A11)	X Depleted Matrix	(F3)			Thin D	ark Surface (S9) (LRR K, L)			
	ark Surface (A12)		Redox Dark Su					anganese Masses (F12) (LRR K, L, R)			
	lucky Mineral (S1)		Depleted Dark		7)			ont Floodplain Soils (F19) (MLRA 149B)			
	edox (S5)		X Redox Depress	ions (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)Red Parent Material (F21)				
-	Matrix (S6)						Very Shallow Dark Surface (TF12)				
	rface (S7) (LRR R, M	LRA 149E	3)				Other (Explain in Remarks)				
³ Indicators of	f hydrophytic vegetati	on and we	tland hydrology mus	st be prese	ent, unless	disturbed	l or problemation	D.			
	_ayer (if observed):		, 0,		· ·						
Type:								V			
Depth (inc	ches):						Hydric Soil	Present? Yes X No No			
Remarks:											





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W



Soil

Project/Site: Leroy Center-May	field 138	3 kV Trans	smissio	on Line Projec City	/County: Lake	County	;	Sampling Date: 1	1/10/2021	
Applicant/Owner: FirstEnergy					-		State: OH	_ Sampling Point	: Upland LP-003	
Investigator(s): BAO				Sec	tion, Township					
Landform (hillslope, terrace, etc							: Flat	Slope	e (%): ⁰	
Subregion (LRR or MLRA): LR										
Soil Map Unit Name: DaB: Dai	ien silt lo	oam, 1 to 4	4 perc					tion: N/A		
Are climatic / hydrologic conditi	ons on th	ne site typ	ical fo	r this time of year?	Yes X	No (If i	no, explain in Re	marks.)		
Are Vegetation, Soil	, or	Hydrology	/	significantly dist	urbed?	Are "Normal Ci	ircumstances" pr	esent? Yes>	⟨ No	
Are Vegetation, Soil							olain any answers			
SUMMARY OF FINDING	3S – A1	ttach si	te m	ap showing sa	mpling po	int locations	s, transects,	important fea	atures, etc.	
Hydrophytic Vegetation Prese Hydric Soil Present?	nt?			No	Is the Sam	etland?	Yes	_		
Wetland Hydrology Present?				No X	If yes, option	onal Wetland Si	ite ID: Upland LP	2-003		
HYDROLOGY										
Wetland Hydrology Indicato	rs:					Se	econdary Indicate	ors (minimum of t	wo required)	
Primary Indicators (minimum	of one is	required;	check	all that apply)			_ Surface Soil C			
Surface Water (A1)			'	Water-Stained Leav	es (B9)		Drainage Patt			
High Water Table (A2)				Aquatic Fauna (B13	3)	Moss Trim Lines (B16)				
Saturation (A3)			!	Marl Deposits (B15)	_	Dry-Season Water Table (C2)			
Water Marks (B1)			!	Hydrogen Sulfide C	dor (C1)		_ Crayfish Burro	ows (C8)		
Sediment Deposits (B2)				Oxidized Rhizosphe	-	Roots (C3)		ible on Aerial Ima		
Drift Deposits (B3)				Presence of Reduc		<u> </u>		essed Plants (D1))	
Algal Mat or Crust (B4)				Recent Iron Reduct			_ Geomorphic F			
Iron Deposits (B5)	ial Image	m. (D7)		Thin Muck Surface	. ,		_ Shallow Aquita			
Inundation Visible on AerSparsely Vegetated Cond	_	• , ,	—	Other (Explain in R	emarks)		MicrotopograpFAC-Neutral T			
Field Observations:	ave Sun	ace (bo)				<u> </u>	_ FAC-Neutral I	est (D5)		
Surface Water Present?	Ves	No	X	Depth (inches):						
Water Table Present?				Depth (inches):						
Saturation Present?				Depth (inches):	17	Wetland Hyd	drology Present	? Yes	No X	
(includes capillary fringe)										
Describe Recorded Data (stre	am gaug	je, monito	ring w	ell, aerial photos, p	revious inspec	tions), if availal	ble:			
Remarks:										

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1	<u> </u>			Number of Dominant Species That Are OBL, FACW, or FAC:1(A)
2		-		Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.5 (A/B)
6				
				Prevalence Index worksheet:
7				Total % Cover of: Multiply by: OBL species 0 v.1 = 0
15	-	= Total Cov	er/	ODL species X 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species 65
1				FACU species 35 x 4 = 140
2		-		UPL species 0 x 5 = 0
3				Column Totals: 100 (A) 270 (B)
4				
5				Prevalence Index = B/A = 2.7
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size:5	-	10101 001		X 3 - Prevalence Index is ≤3.0 ¹
1. Phalaris arundinacea	60	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Solidago altissima		Yes	FACU	Problematic Hydrophytic Vegetation¹ (Explain)
3. Solidago gigantea			FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Schedonorus arundinaceus			FACU	be present, unless disturbed or problematic.
<u> </u>	_	No	FACU	Definitions of Vegetation Strata:
O	5	No	FACU	_
	-		17.00	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7			· ——	Sapling/shrub – Woody plants less than 3 in. DBH
8				and greater than or equal to 3.28 ft (1 m) tall.
9				Herb – All herbaceous (non-woody) plants, regardless of
10		-		size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	100	= Total Cov	/er	
Woody Vine Stratum (Plot size:)				
1				
2		-		Hydrophytic Vegetation
3		-		Present? Yes X No
4.				
		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Sampling Point: Upland LP-003

SOIL Sampling Point: Upland LP-003

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	ndicator o	or confirn	n the absence o	f indicators.)		
Depth (inches)	Matrix	0/		x Features	<u>3</u> Tuno ¹	Loc ²	Toyturo	Domorko		
(inches) 0 - 12	Color (moist)	100	Color (moist)	%	Type ¹	LOC	Texture Silty clay loam	Remarks		
							· -			
12 - 17	7.5YR 3/1	98	10YR 4/4	2	Concer	M	Silty clay loam			
-							. <u></u> -			
-										
-							·			
						•	·			
-										
-						-	. <u></u> .			
-										
-							· -			
							· -			
							·			
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ins.		PL=Pore Lining, M=Matrix.		
Hydric Soil I			Daharaha Dalam	0	(00) (LBB			or Problematic Hydric Soils ³ :		
Histosol	(A1) pipedon (A2)		Polyvalue Belov MLRA 149B)		(58) (LRR	к,		uck (A10) (LRR K, L, MLRA 149B) rairie Redox (A16) (LRR K, L, R)		
Black His			Thin Dark Surfa		.RR R, ML	.RA 149B		ucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4)		Loamy Mucky M			L)		rface (S7) (LRR K, L, M)		
	Layers (A5)	(0.4.4)	Loamy Gleyed I)		-	ue Below Surface (S8) (LRR K, L)		
	l Below Dark Surface ork Surface (A12)	e (A11)	Depleted Matrix Redox Dark Sur					rk Surface (S9) (LRR K, L) nganese Masses (F12) (LRR K, L, R)		
	lucky Mineral (S1)	:	Depleted Dark S	. ,	7)			nt Floodplain Soils (F19) (MLRA 149B)		
Sandy G	leyed Matrix (S4)	•	Redox Depress				Mesic S	podic (TA6) (MLRA 144A, 145, 149B)		
-	edox (S5)							rent Material (F21)		
	Matrix (S6) face (S7) (LRR R, M	I DA 1/0B	A				Very Shallow Dark Surface (TF12) Other (Explain in Remarks)			
Dark our	race (O7) (LIXIX IX, III	LIVA 143D	,				Other (E	Explain in Remarks)		
	hydrophytic vegetati	on and we	tland hydrology mus	t be prese	ent, unless	disturbed	or problematic.			
	ayer (if observed):									
Type:										
	ches):						Hydric Soil P	Present? Yes NoX		
Remarks:										







Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/C	County: Lake County Sampling Date: 11/10/2021				
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-004				
Investigator(s): BAO Secti					
• ., -					
Landform (hillslope, terrace, etc.): Depression Local rel					
	06 Long: -81.14250633333333 Datum: WGS 1984				
Soil Map Unit Name: DaB: Darien silt loam, 1 to 4 percent slopes	NWI classification: N/A				
Are climatic / hydrologic conditions on the site typical for this time of year? $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	res X No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly distur	rbed? Are "Normal Circumstances" present? Yes X No				
Are Vegetation, Soil, or Hydrology naturally problem	atic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.				
Lhydrophytic Vegetation Procest? Yes X No.	Is the Sampled Area				
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No No	within a Wetland? Yes X				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland LP-004				
Remarks: (Explain alternative procedures here or in a separate report.)	ii yes, optional wetiand site ib.				
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stained Leave					
X High Water Table (A2) Aquatic Fauna (B13)	- · · · · · · · · · · · · · · · · · · ·				
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Od					
Sediment Deposits (B2) Oxidized Rhizospher	res on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduce					
Algal Mat or Crust (B4) Recent Iron Reduction					
Iron Deposits (B5) Thin Muck Surface (
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rel					
Sparsely Vegetated Concave Surface (B8) Field Observations:	X FAC-Neutral Test (D5)				
Surface Water Present? Yes No X Depth (inches):					
Water Table Present? Yes X No Depth (inches):	0				
Saturation Present? Yes X No Depth (inches):	0 Wetland Hydrology Present? Yes X No				
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections), if available:				
Remarks:					

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Indi Species? St		Dominance Test worksheet:
1			<u>tatao</u>	Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:1 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	-	= Total Cover		OBL species 60 x 1 = 60 EACW species 40 x 2 = 80
Sapling/Shrub Stratum (Plot size: 15)				racw species x z =
1				X 3
2				FACU species 0 x 4 = 0 UPL species x 5 = 0
3				Column Totals: 100 (A) 140 (B)
4				
5				Prevalence Index = B/A = 1.4
6				Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cover		X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5		-		X 3 - Prevalence Index is ≤3.0¹
1. Scirpus cyperinus	50	Yes (OBL	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2. Carex annectens	20	Yes F	ACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Agrostis stolonifera	20	Yes F	ACW	¹ Indicators of hydric soil and wetland hydrology must
4. Juncus effusus		No (OBL	be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
				at breast height (DBH), regardless of height.
7				Sapling/shrub – Woody plants less than 3 in. DBH
8				and greater than or equal to 3.28 ft (1 m) tall.
9				Herb – All herbaceous (non-woody) plants, regardless of
10				size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	100	= Total Cover		
Woody Vine Stratum (Plot size:)				
1				
2				Hydrophytic Vegetation
3				Present? Yes X No
4.				
		= Total Cover		
Remarks: (Include photo numbers here or on a separate	sheet.)	-		

Sampling Point: Wetland LP-004

SOIL Sampling Point: Wetland LP-004

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)	
Depth Matrix Redox Features	
(inches) Color (moist) % Color (moist) % Type¹ Loc² Texture Remarks 0 - 10 10R 4/2 95 10R 5/6 5 Concer M,PL Sandy clay loam	
10 - 17 10R 4/1 80 10YR 5/6 20 Concer M,PL Sandy clay loam	
<u> </u>	
-	
-	
<u> </u>	
<u> </u>	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix	
Hydric Soil Indicators: Indicators for Problematic Hydric So	
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLR/ Histic Epipedon (A2) Coast Prairie Redox (A16) (LRR K	
Histic Epipedon (A2)	
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M)	
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRI	
Depleted Below Dark Surface (A11) _X Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L)	
Thick Dark Surface (A12)	
Sandy Midcky Milleral (S1) Sandy Gleyed Matrix (S4) Mesic Spodic (TA6) (MLRA 144A,	
Sandy Redox (S5) Red Parent Material (F21)	, , , , , , , ,
Stripped Matrix (S6) Very Shallow Dark Surface (TF12)	
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)	
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Restrictive Layer (if observed):	
Type:	
Depth (inches): Hydric Soil Present? Yes X	No
Remarks:	











Soil

Applicant/Owner: FirstEnergy State: OH Sampling Point: Upland LP-Investigator(s): BAO Section, Township, Range: N/A
investigator(s) Section, Township, Range: 1771
Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Flat Slope (%): 0
Subregion (LRR or MLRA): LRR R Lat: 41.665119149999995 Long: -81.14255955 Datum: WGS 1
Soil Map Unit Name: DaB: Darien silt loam, 1 to 4 percent slopes NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? YesX_ No
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, et
Hydrophytic Vegetation Present? Yes No _X Is the Sampled Area within a Wetland? Yes No Wetland Hydrology Present? Yes No _X If yes, optional Wetland Site ID: Upland LP-004 Remarks: (Explain alternative procedures here or in a separate report.)
Wetland Hydrology Present? Yes No X If yes, optional Wetland Site ID: Upland LP-004
Remarks: (Explain alternative procedures here or in a separate report.) Upland area located near small PEM wetland within existing ROW
HYDROLOGY Western Understand Andread Programmer of the apprical and the standard Andread Programmer of the apprical and
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Surface Water (A2) Primary Indicators (minimum of one is required; check all that apply) Surface Water (A2)
Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16)
Aduatic Fabria (B13) Moss Triff Lines (B16) Noss Triff Lines (B16) Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5)
Field Observations:
Surface Water Present? Yes No _X Depth (inches):
Water Table Present? Yes No _X Depth (inches):
Saturation Present? Yes No _X Depth (inches): Wetland Hydrology Present? Yes No _X (includes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:				
1				Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)				
2				Total Number of Dominant				
3				Species Across All Strata:1 (B)				
4				Percent of Dominant Species				
5				That Are OBL, FACW, or FAC:0 (A/B)				
6				Prevalence Index worksheet:				
7				Total % Cover of: Multiply by:				
		= Total Co		OBL species5 x 1 =5				
Sapling/Shrub Stratum (Plot size: 15)		10tai 00	VCI	FACW species x 1 = 0				
				FAC species0 x 3 =0				
1				FACU species 90 x 4 = 360				
2				UPL species0 x 5 =0				
3				Column Totals:95 (A)365 (B)				
4			- ——	Prevalence Index = R/Δ = 3.842105263°				
5				Prevalence Index = B/A = 3.842105263'				
6				Hydrophytic Vegetation Indicators:				
7				1 - Rapid Test for Hydrophytic Vegetation				
		= Total Co	ver	2 - Dominance Test is >50%				
Herb Stratum (Plot size:5)				3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting				
1. Solidago canadensis			FACU	data in Remarks or on a separate sheet)				
2. Erigeron annuus	10	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)				
3Festuca altaica	10	No	FACU	¹ Indicators of hydric soil and wetland hydrology must				
4 Juncus effusus	5	No	OBL	be present, unless disturbed or problematic.				
5				Definitions of Vegetation Strata:				
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter				
7				at breast height (DBH), regardless of height.				
8				Sapling/shrub – Woody plants less than 3 in. DBH				
9				and greater than or equal to 3.28 ft (1 m) tall.				
10				Herb – All herbaceous (non-woody) plants, regardless of				
11				size, and woody plants less than 3.28 ft tall.				
12.				Woody vines – All woody vines greater than 3.28 ft in				
12	95	= Total Co	····	height.				
Woody Vine Stratum (Plot size:30)		_ = 10tal C0	vei					
1				Hydrophytic				
2				Vegetation				
3				Present? Yes No X				
4								
		= Total Co	ver					
Remarks: (Include photo numbers here or on a separate	sheet.)							

Sampling Point: Upland LP-004

SOIL Sampling Point: Upland LP-004

Profile Desc	ription: (Describe to	o the dep	th needed to docun	nent the i	ndicator o	or confirm	n the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Redox Color (moist)	k Feature: %	<u>s</u> _Type ¹ _	Loc ²	Texture	Remarks
0 - 16	10YR 4/2	95	10YR 4/4	5	Concer	M	Silty clay loam	
-								
-								
				-				
-								
-								
1- 0.0							2, ,,	
Hydric Soil I		etion, RM	=Reduced Matrix, MS	=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belov	v Surface	(S8) (LRR	R,		fuck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B)		, , ,	•		Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa					flucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4) Layers (A5)		Loamy Mucky M Loamy Gleyed I			, L)		urface (S7) (LRR K, L, M) lue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	X Depleted Matrix		.,		-	ark Surface (S9) (LRR K, L)
	rk Surface (A12)		Redox Dark Sur	, ,				anganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)		Depleted Dark S		7)			ont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4) edox (S5)		Redox Depress	ons (F8)				Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21)
-	Matrix (S6)							hallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	LRA 1491	3)				Other (Explain in Remarks)
³ Indicators of	hydronhytic vegetati	on and we	etland hydrology mus	t he nrese	ant unless	disturbed	or problematic	
	ayer (if observed):	on and w	staria frydrology mao	t be prese	ont, amego	diotarbea	Problematic	·-
Type:								
Depth (inc	hes):						Hydric Soil	Present? Yes X No No
Remarks:								







S

Project/Site: Leroy Center-Ma	yfield 13	38 kV	Trans	mission Line	Projec City	/County: Lake	e County		Sampling Dat	e:_11/10/2021
Applicant/Owner: FirstEnergy							8	State: OH	Sampling P	Point: Wetland LP-005
Investigator(s): BAO					Sec	ction, Townshi	p, Range: N/A			
Landform (hillslope, terrace, et	c.): Sw							Concave	5	Slope (%): ⁰
Subregion (LRR or MLRA): LF										
Soil Map Unit Name: PsA: Pla	tea silt	loam,	0 to 2	percent slop						
Are climatic / hydrologic condit	ions on	the si	ite typi	cal for this ti	me of year?	Yes X	No (If r	no, explain in R	emarks.)	
Are Vegetation, Soil	, o	r Hyd	rology	sigr	nificantly dist	urbed?	Are "Normal Cir	rcumstances" p	resent? Yes	X No
Are Vegetation, Soil	, 0	r Hyd	rology	nati	urally proble	matic?	(If needed, expl	lain any answe	rs in Remarks.)
SUMMARY OF FINDING	GS – I	Attac	ch si	e map sh	nowing sa	ımpling po	int locations	s, transects	, important	features, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present?	ent?			X No X No X No		within a W	npled Area Vetland? onal Wetland Si	'	 '	
HYDROLOGY										
Wetland Hydrology Indicate	ors:						Se	condary Indica	tors (minimum	of two required)
Primary Indicators (minimum		is rear	uired:	check all tha	it apply)			_ Surface Soil		or two rodanou
X Surface Water (A1)					Stained Lea	ves (B9)		_ Drainage Pa		
X High Water Table (A2)					c Fauna (B1		_	_ Moss Trim Li		
X Saturation (A3)				Marl D	eposits (B15	j)		_ Dry-Season	Water Table (C	2)
Water Marks (B1)				Hydrog	gen Sulfide C	Odor (C1)		_ Crayfish Buri	rows (C8)	
Sediment Deposits (B2)						eres on Living	Roots (C3) X	_ Saturation Vi		
Drift Deposits (B3)						ed Iron (C4)		 '	tressed Plants	(D1)
Algal Mat or Crust (B4)						tion in Tilled S			Position (D2)	
Iron Deposits (B5)	المحادا	/	חב)		luck Surface			_ Shallow Aqui		4)
Inundation Visible on Aer			,	Other ((Explain in R	emarks)		_ Microtopogra		+)
Sparsely Vegetated Cond Field Observations:	ave St	Пасе	(60)				<u>^</u>	_ FAC-Neutral	Test (D5)	
Surface Water Present?	Yes	Х	Nο	Depth	(inches):	1				
Water Table Present?				Depth		3				
Saturation Present?				Depth		0	Wetland Hyd	rology Presen	t? Yes X	No
(includes capillary fringe) Describe Recorded Data (stre	am na	une r	nonito	ing well ser	rial nhotos in	revious insper	tions) if availah	مام.		
Describe Necolded Data (stre	ani yat	age, ii	HOTHLOI	ilig Well, ael	nai priotos, p	revious irispec	clions), ii avalial	JIG.		
Remarks:										

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksheet:			
1			Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)			
2			Total Number of Dominant			
3			Species Across All Strata:1 (B)			
4			Percent of Dominant Species			
5			That Are OBL, FACW, or FAC:1 (A/B)			
6						
			Prevalence Index worksheet:			
7						
45		_ = Total Cover	OBE openies X 1			
Sapling/Shrub Stratum (Plot size: 15)			FACW species 80 x 2 = 160 FAC species 0 x 3 = 0			
1			FACU species 0 x 4 = 0			
2			UPL species 0 x 5 = 0			
3			Column Totals: 100 (A) 180 (B)			
4						
5			Prevalence Index = B/A = 1.8			
6			Hydrophytic Vegetation Indicators:			
7			X 1 - Rapid Test for Hydrophytic Vegetation			
		= Total Cover	X 2 - Dominance Test is >50%			
Herb Stratum (Plot size:5			X 3 - Prevalence Index is ≤3.01			
1. Phalaris arundinacea	80	Yes FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
2. Scirpus cyperinus	10	No OBL	Problematic Hydrophytic Vegetation¹ (Explain)			
3. Mimulus ringens		No OBL	¹ Indicators of hydric soil and wetland hydrology must			
4			be present, unless disturbed or problematic.			
5			Definitions of Vegetation Strata:			
6			Tree – Woody plants 3 in. (7.6 cm) or more in diameter			
			at breast height (DBH), regardless of height.			
7			Sapling/shrub – Woody plants less than 3 in. DBH			
8			and greater than or equal to 3.28 ft (1 m) tall.			
9			Herb – All herbaceous (non-woody) plants, regardless of			
10			size, and woody plants less than 3.28 ft tall.			
11			Woody vines – All woody vines greater than 3.28 ft in			
12			height.			
	100	_ = Total Cover				
Woody Vine Stratum (Plot size:)						
1						
2			Hydrophytic Vegetation			
3			Present? Yes X No			
4						
		= Total Cover				
Remarks: (Include photo numbers here or on a separate	sheet.)	-				

Sampling Point: Wetland LP-005

SOIL Sampling Point: Wetland LP-005

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			x Features	<u>s</u>	2			
<u>(inches)</u> C	olor (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks	
0 - 18	10YR 4/1	95	10YR 4/6	5	Concer	PL	Silty clay loam		
-									
						-			
-									
					-			<u> </u>	
-									
						-			
-									
-						-			
¹ Type: C=Concent	tration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ins.	² Location	: PL=Pore Lining, M=Matrix.	
Hydric Soil Indica								for Problematic Hydric Soils ³ :	
Histosol (A1)			Polyvalue Belov	w Surface	(S8) (LRR	R,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)	
Histic Epipedo			MLRA 149B	•				Prairie Redox (A16) (LRR K, L, R)	
Black Histic (A			Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)	
Hydrogen Sulf			Loamy Mucky N			L)		Surface (S7) (LRR K, L, M)	
Stratified Laye	rs (A5) w Dark Surface	(A11)	Loamy GleyedX Depleted Matrix)			lue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L)	
Depleted Belo		(A11)	Redox Dark Su					anganese Masses (F12) (LRR K, L, R)	
Sandy Mucky			Depleted Dark	, ,	7)			ont Floodplain Soils (F19) (MLRA 149B)	
Sandy Gleyed			Redox Depress		.,			Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy Redox				` ,				arent Material (F21)	
Stripped Matri	x (S6)						Very S	hallow Dark Surface (TF12)	
Dark Surface ((S7) (LRR R, M	LRA 149E	3)				Other	(Explain in Remarks)	
3									
		on and we	tland hydrology mus	st be prese	nt, unless	disturbed	or problemation	<u>) </u>	
Restrictive Layer	(if observed):								
Type:								- V	
Depth (inches):							Hydric Soil	Present? Yes X No No	
Remarks:									











Project/Site: Leroy Center-Mayfield 138 kV Tran	smission Line Projec City/C	county: Lake County		Sampling Date: 11/10/2021		
Applicant/Owner: FirstEnergy				Sampling Point: Upland LP-005		
	Section	on, Township, Range: N	N/A			
Landform (hillslope, terrace, etc.): Flat				Slope (%): 1		
Subregion (LRR or MLRA): LRR R						
Soil Map Unit Name: PsA: Platea silt loam, 0 to	2 percent slopes		NWI classific	ation: N/A		
Are climatic / hydrologic conditions on the site type	oical for this time of year? Y	es X No	(If no, explain in Re	emarks.)		
Are Vegetation, Soil, or Hydrolog	y significantly distur	bed? Are "Norma	al Circumstances" p	resent? Yes X No		
Are Vegetation, Soil, or Hydrolog	y naturally problema	atic? (If needed,	explain any answei	rs in Remarks.)		
SUMMARY OF FINDINGS – Attach s	ite map showing san	npling point locati	ons, transects	, important features, etc.		
Hydrophytic Vegetation Present? Yes _ Hydric Soil Present? Yes	NoX NoX	Is the Sampled Area within a Wetland?	Yes	_ No		
Wetland Hydrology Present? Yes _	No X	If yes, optional Wetlan	d Site ID: Upland L	P-005		
HADBOI OCA						
HYDROLOGY			Cocondon India	tora (minimum of two required)		
Wetland Hydrology Indicators:				tors (minimum of two required)		
Primary Indicators (minimum of one is required;		- (PO)	Surface Soil			
Surface Water (A1) High Water Table (A2)	Water-Stained Leave Aquatic Fauna (B13)		Drainage Patterns (B10) Moss Trim Lines (B16)			
Saturation (A3)	Marl Deposits (B15)		Moss frim Lines (B16) Dry-Season Water Table (C2)			
Water Marks (B1)	Hydrogen Sulfide Od	or (C1)	Crayfish Burrows (C8)			
Sediment Deposits (B2)	Oxidized Rhizosphere		 ,	sible on Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of Reduced	-		ressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reductio	n in Tilled Soils (C6)	Geomorphic			
Iron Deposits (B5)	Thin Muck Surface (0	27)	Shallow Aqui	tard (D3)		
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Rer	narks)	Microtopogra			
Sparsely Vegetated Concave Surface (B8)		T	FAC-Neutral	Test (D5)		
Field Observations:	v					
	X Depth (inches):					
	X Depth (inches):					
Saturation Present? Yes No (includes capillary fringe)	X Depth (inches):	Wetland	Hydrology Presen	t? Yes No <u>X</u>		
Describe Recorded Data (stream gauge, monitor	oring well, aerial photos, pre	vious inspections), if av	ailable:			
Remarks:						
remarks.						

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:				
1				Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)				
2				(, ,				
3				Total Number of Dominant Species Across All Strata: 1 (B)				
4				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B)				
5				(***)				
6				Prevalence Index worksheet:				
7				Total % Cover of: Multiply by:				
		= Total Cov	ver	OBL species x 1 = 5				
Sapling/Shrub Stratum (Plot size: 15)				FACW species 0 x 2 = 0				
1				FACUlargeign 90 x 3 = 0 360				
2	· - <u></u>	-		FACU species				
3				UPL species $0 \times 5 = 0$ Column Totals: $95 \times (A) \times 365 \times (B)$				
4				Column Totals:95 (A)365 (B)				
5				Prevalence Index = B/A = 3.842105263'				
6				Hydrophytic Vegetation Indicators:				
7				1 - Rapid Test for Hydrophytic Vegetation				
		= Total Cov	ver	2 - Dominance Test is >50%				
Herb Stratum (Plot size:5)		. Total oo	VCI	3 - Prevalence Index is ≤3.0 ¹				
1. Solidago canadensis	60	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)				
2. Dipsacus fullonum	· · · · · · · · · · · · · · · · · · ·	No	FACU	Problematic Hydrophytic Vegetation¹ (Explain)				
3. Polystichum acrostichoides			FACU	¹ Indicators of hydric soil and wetland hydrology must				
l	-		OBL	be present, unless disturbed or problematic.				
Juncus errususRubus allegheniensis			FACU	Definitions of Vegetation Strata:				
				_				
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.				
7								
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.				
9				Week All back assess (assessments) about a second as of				
10		-		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.				
11				Woody vines – All woody vines greater than 3.28 ft in				
12				height.				
	95	= Total Cov	ver					
Woody Vine Stratum (Plot size:)								
1								
2				Hydrophytic				
3				Vegetation Present? Yes No X				
4								
*·		- Total Car						
Remarks: (Include photo numbers here or on a separate	sheet)	= Total Cov	vei					
Tremains. (mediae photo humbers here of on a separate	Silect.)							

Sampling Point: Upland LP-005

SOIL Sampling Point: Upland LP-005

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator o	r confirm	n the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	<u></u> %	Redo Color (moist)	x Features %	Type ¹	Loc ²	Texture	Remarks
			•					Remarks
0 - 18	10YR 4/2	95	10YR 5/8	5	Concer	PL_	Silty clay loam	
-								
-								
								<u> </u>
-								
-								
	-							
	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ins.		: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							for Problematic Hydric Soils ³ :
Histosol		_	_ Polyvalue Belov		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)
	oipedon (A2)		MLRA 149B		DD D MI	DA 440B		Prairie Redox (A16) (LRR K, L, R)
Black His	n Sulfide (A4)	-	Thin Dark Surfa Loamy Mucky N					Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L, M)
	Layers (A5)	_	Loamy Gleyed			_,		alue Below Surface (S8) (LRR K, L)
	l Below Dark Surface	(A11)	Depleted Matrix		,		-	ark Surface (S9) (LRR K, L)
	ark Surface (A12)	_	_ Redox Dark Su	. ,				anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	_	_ Depleted Dark		7)			ont Floodplain Soils (F19) (MLRA 149B)
-	leyed Matrix (S4) edox (S5)	_	_ Redox Depress	ions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21)
-	Matrix (S6)							Shallow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149B)						(Explain in Remarks)
	hydrophytic vegetati	on and wetl	and hydrology mus	t be prese	nt, unless	disturbed	or problemation	D
	ayer (if observed):							
Type:								- v
	ches):						Hydric Soil	Present? Yes NoX
Remarks:								







Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/C	County: Lake County Sampling Date: 11/10/2021				
Applicant/Owner: FirstEnergy	011				
Investigator(s): BAO Section S					
Landform (hillslope, terrace, etc.): Channel (active) Local re	let (concave, convex, none): Oblicave Slope (%): 1				
	4 Long: -81.14267126656493 Datum: WGS 1984				
Soil Map Unit Name: PsA: Platea silt loam, 0 to 2 percent slopes	NWI classification: R5UBH				
Are climatic / hydrologic conditions on the site typical for this time of year?	res X No (If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly distu	rbed? Are "Normal Circumstances" present? Yes X No				
Are Vegetation, Soil, or Hydrology naturally problem					
Somman of Findings – Attach site map showing sail	npling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area within a Wetland? YesX No				
Hydric Soil Present? Yes X No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland LP-006				
Remarks: (Explain alternative procedures here or in a separate report.)					
PEM wetland that contains several off-ROW streams that flow into wetland	and one stream that flows out.				
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)				
Surface Water (A1) Water-Stained Leave	es (B9) Drainage Patterns (B10)				
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)				
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)				
Water Marks (B1) Hydrogen Sulfide Oc	dor (C1) Crayfish Burrows (C8)				
Sediment Deposits (B2) Oxidized Rhizospher	res on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)				
Drift Deposits (B3) Presence of Reduce					
Algal Mat or Crust (B4) Recent Iron Reduction					
Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re	marks) Microtopographic Relief (D4)				
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)				
Field Observations:					
Surface Water Present? Yes No _X _ Depth (inches):					
Water Table Present? Yes X No Depth (inches):					
Saturation Present? Yes X No Depth (inches):	16 Wetland Hydrology Present? Yes X No No				
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	ovious inspections) if available:				
Describe Recorded Data (stream gauge, monitoring well, aerial priotos, pre	inspections), if available.				
Remarks:					

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:			
1				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)			
2				Total Number of Dominant			
3				Species Across All Strata:1 (B)			
4				Percent of Dominant Species			
5				That Are OBL, FACW, or FAC:1 (A/B)			
6				Prevalence Index worksheet:			
7				Total % Cover of: Multiply by:			
		= Total Co		OBL species 20 x 1 = 20			
Sapling/Shrub Stratum (Plot size: 15)				FACW species85			
				FAC species 0 x 3 = 0			
1				FACU species0 x 4 =0			
2			<u> </u>	UPL species0 x 5 =0			
3				Column Totals:105 (A)190 (B)			
4				Prevalence Index = B/A = 1.809523809!			
5				Hydrophytic Vegetation Indicators:			
6				X 1 - Rapid Test for Hydrophytic Vegetation			
7				X 2 - Dominance Test is >50%			
-	-	= Total Co	ver	X 3 - Prevalence Index is ≤3.0 ¹			
Herb Stratum (Plot size: 5) 1. Phalaris arundinacea	80	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
2. Typha angustifolia			OBL	Problematic Hydrophytic Vegetation ¹ (Explain)			
			FACW				
Developaile as although	40		OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
			OBL	Definitions of Vegetation Strata:			
5. Epilobium coloratum				_			
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
7				Sapling/shrub – Woody plants less than 3 in. DBH			
8				and greater than or equal to 3.28 ft (1 m) tall.			
9				Herb – All herbaceous (non-woody) plants, regardless of			
10				size, and woody plants less than 3.28 ft tall.			
11				Woody vines – All woody vines greater than 3.28 ft in			
12				height.			
	105	= Total Co	ver				
Woody Vine Stratum (Plot size:)							
1				Hardward Ladd			
2				Hydrophytic Vegetation			
3				Present? Yes X No			
4							
		= Total Co	ver				
Remarks: (Include photo numbers here or on a separate	sheet.)						

Sampling Point: Wetland LP-006

SOIL Sampling Point: Wetland LP-006

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth Matrix		x Features	. 2						
(inches) Color (moist) %	Color (moist)	% Type ¹	Loc ²	Texture	Remarks				
0 - 18 10YR 4/1 85	2.5YR 4/8	15 Concer	PL	Silty clay loam					
-									
	_			·					
-									
	_	·							
				<u> </u>					
-									
		·							
				<u> </u>					
-									
-									
									
		·							
¹ Type: C=Concentration, D=Depletion, F	RM=Reduced Matrix, M	S=Masked Sand G	rains.	² Location	: PL=Pore Lining, M=Matrix.				
Hydric Soil Indicators:					for Problematic Hydric Soils ³ :				
Histosol (A1)	Polyvalue Belo	w Surface (S8) (LR	R R,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)				
Histic Epipedon (A2)	MLRA 149B)		Coast	Prairie Redox (A16) (LRR K, L, R)				
Black Histic (A3)	Thin Dark Surfa	ace (S9) (LRR R, N	ILRA 149B	3) 5 cm N	Mucky Peat or Peat (S3) (LRR K, L, R)				
Hydrogen Sulfide (A4)		Mineral (F1) (LRR I	(, L)		Surface (S7) (LRR K, L, M)				
Stratified Layers (A5)	Loamy Gleyed				llue Below Surface (S8) (LRR K, L)				
Depleted Below Dark Surface (A11)	X Depleted Matrix				ark Surface (S9) (LRR K, L)				
Thick Dark Surface (A12)	Redox Dark Su				anganese Masses (F12) (LRR K, L, R)				
Sandy Mucky Mineral (S1)	Depleted Dark				ont Floodplain Soils (F19) (MLRA 149B)				
Sandy Gleyed Matrix (S4)	Redox Depress	sions (F8)			Spodic (TA6) (MLRA 144A, 145, 149B)				
Sandy Redox (S5)					Red Parent Material (F21)				
Stripped Matrix (S6)	40D)				Shallow Dark Surface (TF12)				
Dark Surface (S7) (LRR R, MLRA 1	49B)			Other	(Explain in Remarks)				
³ Indicators of hydrophytic vegetation and	wotland hydrology mus	et ha procent unlo	e dieturbo	d or problematic					
Restrictive Layer (if observed):	welland flydrology mus	st be present, unles	s distuibet	T OF PRODICTION					
, , ,									
Type:	_				- · · · · · · · · · · · · · · · · · · ·				
Depth (inches):				Hydric Soil	Present? Yes X No No				
Remarks:									





Soil







Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Pro	ojec City/County: Lake C	County	Sampling Date: 11/10/2021
Applicant/Owner: FirstEnergy			_ Sampling Point: Upland LP-006
Investigator(s): BAO			
Landform (hillslope, terrace, etc.): Flat			Slope (%): ⁰
Subregion (LRR or MLRA): LRR R Lat: 41.654070 Soil Map Unit Name: PsA: Platea silt loam, 0 to 2 percent slopes		NWI classifica	tion: N/A
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes X No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology signification	antly disturbed? Ar	re "Normal Circumstances" pr	esent? Yes X No
Are Vegetation, Soil, or Hydrology naturall	y problematic? (If	needed, explain any answers	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling poin	t locations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes No> Hydric Soil Present? Yes No _>			_ No
Wetland Hydrology Present? Yes No	<u>` </u>	al Wetland Site ID: Upland LF	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicate	ors (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap	ply)	Surface Soil C	Cracks (B6)
	ned Leaves (B9)	Drainage Patt	erns (B10)
High Water Table (A2) Aquatic Fa		Moss Trim Lin	
Saturation (A3) Marl Depos			Vater Table (C2)
	Sulfide Odor (C1)	Crayfish Burro	` '
	Rhizospheres on Living Ro		ible on Aerial Imagery (C9)
	of Reduced Iron (C4)		essed Plants (D1)
<u> </u>	n Reduction in Tilled Soils	. ,	
Iron Deposits (B5) Thin Muck Inundation Visible on Aerial Imagery (B7) Other (Exp	plain in Remarks)	Shallow Aquit Microtopograp	
Sparsely Vegetated Concave Surface (B8)	nain in Remarks)	FAC-Neutral	
Field Observations:		1 AO-Neutral	1031 (100)
Surface Water Present? Yes No _X _ Depth (inc	ches):		
Water Table Present? Yes No X Depth (inc	·		
Saturation Present? Yes No _X Depth (includes capillary fringe)		Wetland Hydrology Present	? Yes No _X_
Describe Recorded Data (stream gauge, monitoring well, aerial p	photos, previous inspection	ons), if available:	
Remarks:			
Tremane.			

EGETATION – Use scientific names of plants	•			Sampling Point: Upland	LP-00
Tree Stratum (Plot size:)		Dominant Species?	Status	Dominance Test worksheet: Number of Dominant Species	
				That Are OBL, FACW, or FAC:0	(A)
				Total Number of Dominant Species Across All Strata: 3	(B)
				Percent of Dominant Species	
				That Are OBL, FACW, or FAC: 0	(A/B
				Prevalence Index worksheet:	
				Total % Cover of: Multiply by:	
		= Total Cov	er	OBL species 0 x 1 = 0	_
apling/Shrub Stratum (Plot size: 15)				FACW species $0 \times 2 = 0$ FAC species $0 \times 3 = 0$	_
Rosa multiflora	5	Yes	FACU	FAC species $\begin{array}{cccccccccccccccccccccccccccccccccccc$	_
Rubus argutus	10	Yes	FACU	UPL species 15 x 5 = 75	_
				Column Totals: 115 (A) 475	_ _ (B
				Prevalence Index = B/A = 4.130434782	ŧ
				Hydrophytic Vegetation Indicators:	
				1 - Rapid Test for Hydrophytic Vegetation	
		= Total Cov		2 - Dominance Test is >50%	
erb Stratum (Plot size:5)		= Total Cov	еі	3 - Prevalence Index is ≤3.0 ¹	
Solidago canadensis	70	Yes	FACU	4 - Morphological Adaptations ¹ (Provide support data in Remarks or on a separate sheet)	ortir
Dipsacus fullonum	15	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explai	n)
Festuca trachyphylla	15	No	UPL	¹Indicators of hydric soil and wetland hydrology n	nust
				be present, unless disturbed or problematic.	
· <u>·</u>				Definitions of Vegetation Strata:	
				Tree – Woody plants 3 in. (7.6 cm) or more in dia at breast height (DBH), regardless of height.	mete
				Sapling/shrub – Woody plants less than 3 in. Diand greater than or equal to 3.28 ft (1 m) tall.	ВН
					c
0				Herb – All herbaceous (non-woody) plants, regardles size, and woody plants less than 3.28 ft tall.	s oī
1				Woody vines – All woody vines greater than 3.28 ft i	า
2				height.	
20	100	= Total Cov	er		
/oody Vine Stratum (Plot size:30)					
				Hydrophytic	
				Vegetation Present? Yes No X	
				165 <u></u>	
		= Total Cov			
		- Total Cov	CI		

SOIL Sampling Point: Upland LP-006

Profile Desc	ription: (Describe t	o the depth				or confirm	the absence	of indicators.)
Depth (in the ca)	Matrix			x Features	T 1	L = = ²	Tauduma	Damarka
(inches)	Color (moist)	<u></u> % _	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 17	10R 4/3	100					Sandy clay loam	
-								
-								
-								
-								
-								
1- 0.0							2, ,,	BL B. J. L. L. M. M. L.
Hydric Soil I	ncentration, D=Depl	etion, RIVI=F	Reduced Matrix, M	S=Masked	Sand Gra	ins.		r: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belo	w Surface	(S8) (I DD	D		Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)	_	MLRA 149B		(30) (LIXIX	ΙΧ,		Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa	,	RR R, ML	RA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	_	Loamy Mucky I					Surface (S7) (LRR K, L, M)
	Layers (A5)	_	Loamy Gleyed)		-	alue Below Surface (S8) (LRR K, L)
-	Below Dark Surface	e (A11) _	Depleted Matri					Park Surface (S9) (LRR K, L)
	irk Surface (A12)	-	Redox Dark Su	, ,	7)			langanese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1) leyed Matrix (S4)	_	Depleted Dark Redox Depress		()			ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)	_	Nedox Depress	510113 (1 0)				arent Material (F21)
-	Matrix (S6)							Shallow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149B))					(Explain in Remarks)
	hydrophytic vegetati	on and wetl	and hydrology mu	st be prese	nt, unless	disturbed	or problemation	3.
	ayer (if observed):							
Type:								Y
	ches):						Hydric Soil	Present? Yes No _X
Remarks:								







Project/Site: Leroy Center-May	yfield 13	38 kV	Trans	mission	Line Projec City	//County: Lake	e County		Sampling Date	: 11/09/2021
Applicant/Owner: FirstEnergy							S	State: OH	Sampling Po	oint: Wetland LP-007
Investigator(s): BAO Section, Township, Range: N/A										
Landform (hillslope, terrace, etc	c.): Sw							Concave	SI	lope (%): ²
Subregion (LRR or MLRA): LR	≀R R			Lat· 4	 1.648095301126	· 9	Long: -81.147	50709267378	Dat	um. WGS 1984
Soil Map Unit Name: PsB: Pla	tea silt	loam,	2 to 6	percen	t slopes			NWI classific	ation: PEM1C	
Are climatic / hydrologic conditi	ons on	the si	ite typi	cal for t	his time of year?	Yes X	No (If n	no, explain in R	emarks.)	
Are Vegetation, Soil	, o	r Hyd	rology		significantly dis	turbed?	Are "Normal Cir	rcumstances" p	resent? Yes _	X No
Are Vegetation, Soil	, 0	r Hyd	rology		_naturally proble	matic?	(If needed, expl	lain any answe	rs in Remarks.)	
SUMMARY OF FINDING	GS – A	Atta	ch sit	e ma	o showing sa	ampling po	int locations	s, transects	, important	features, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative		`	Yes Yes	X	No No No	within a W	npled Area /etland? onal Wetland Sit	·		
HYDROLOGY							Ca		Anna (mainimum	
Wetland Hydrology Indicato									ators (minimum o	of two required)
Primary Indicators (minimum	of one i	s requ	uired; d			(DO)		_ Surface Soil		
X Surface Water (A1)					ater-Stained Lea		<u>X</u>	_ Drainage Pa		
High Water Table (A2) X Saturation (A3)					quatic Fauna (B1 arl Deposits (B15			_ Moss Trim L	mes (BT6) Water Table (C2	2)
Water Marks (B1)					/drogen Sulfide (Crayfish Bur		-)
Sediment Deposits (B2)				-	xidized Rhizosph		Roots (C3) X	_	isible on Aerial I	magery (C9)
Drift Deposits (B3)					esence of Reduc	-			tressed Plants (
X Algal Mat or Crust (B4)					ecent Iron Reduc	. ,	oils (C6)	_ '	Position (D2)	,
Iron Deposits (B5)				Tr	nin Muck Surface	(C7)		_ Shallow Aqu	itard (D3)	
Inundation Visible on Aer	ial Imaç	gery (B7)	Ot	ther (Explain in F	Remarks)		_ Microtopogra	aphic Relief (D4))
Sparsely Vegetated Cond	cave Su	ırface	(B8)				<u>X</u>	_ FAC-Neutral	Test (D5)	
Field Observations:										
Surface Water Present?					epth (inches):	2				
Water Table Present?					epth (inches):	4				
Saturation Present? (includes capillary fringe)					epth (inches):	0			nt? Yes X	No
Describe Recorded Data (stre	am gaı	uge, n	nonitor	ing wel	l, aerial photos, p	previous inspec	ctions), if availab	ole:		
Remarks:										

			Sampling Point: Wetland LP-00
Absolute % Cover			Dominance Test worksheet:
		Otatus	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
			(//
			Total Number of Dominant Species Across All Strata: 2 (B)
			Percent of Dominant Species
			That Are OBL, FACW, or FAC:1 (A/B
			Presidence in description of
			Prevalence Index worksheet: Total % Cover of: Multiply by:
		er	OBL species 20 x 1 = 20
			FACW species 80 x 2 = 160
5	Yes	FAC	FAC species5 x 3 =15
			FACU species 0 x 4 = 0
			UPL species $0 \times 5 = 0$ Column Totals: $105 \times (A) \times 195 \times (B)$
			Column Totals:105
			Prevalence Index = B/A = 1.857142857
			Hydrophytic Vegetation Indicators:
			X 1 - Rapid Test for Hydrophytic Vegetation
_			X 2 - Dominance Test is >50%
	, rotal core		X 3 - Prevalence Index is ≤3.0 ¹
80	Yes	FACW	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
10	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
5	No	OBL	¹ Indicators of hydric soil and wetland hydrology must
5	No	OBL	be present, unless disturbed or problematic.
			Definitions of Vegetation Strata:
			Tree – Woody plants 3 in. (7.6 cm) or more in diamete
			at breast height (DBH), regardless of height.
			Sapling/shrub – Woody plants less than 3 in. DBH
			and greater than or equal to 3.28 ft (1 m) tall.
			Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
			Woody vines – All woody vines greater than 3.28 ft in height.
100	= Total Cove	er	
	No		
	No		Hydrophytic Vegetation
			Hydrophytic Vegetation Present? Yes X No
			Vegetation
		% Cover Species? No No = Total Cove 5 Yes Yes 10 No 5 No 5 No	% Cover Species? Status No

SOIL Sampling Point: Wetland LP-007

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)												
Depth (inches)	Matrix Color (moist)	%	Redo:	x Features	S Type ¹	Loc ²	<u>Texture</u>	Remarks				
0 - 18	10YR 4/1	90	10YR 5/8	10	Concer	PL	Silty clay loam					
												
												
								-				
-												
'Type: C=Co	ncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :				
Histosol			Polyvalue Belov	v Surface	(S8) (LRF	RR,		fluck (A10) (LRR K, L, MLRA 149B)				
Histic Ep	ipedon (A2)		MLRA 149B)		` , `			Prairie Redox (A16) (LRR K, L, R)				
Black His			Thin Dark Surfa					flucky Peat or Peat (S3) (LRR K, L, R)				
	n Sulfide (A4)		Loamy Mucky N			, L)		surface (S7) (LRR K, L, M)				
	Layers (A5)	(411)	Loamy Gleyed I)			Polyvalue Below Surface (S8) (LRR K, L)Thin Dark Surface (S9) (LRR K, L)				
	Below Dark Surface rk Surface (A12)	(A11)	C Depleted Matrix (F3) Redox Dark Surface (F6)					anganese Masses (F12) (LRR K, L, R)				
	ucky Mineral (S1)		Depleted Dark Surface (F7)					Piedmont Floodplain Soils (F19) (MLRA 149B)				
	leyed Matrix (S4)		_ Depleted Dark Surface (F7) _ Redox Depressions (F8)					Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
	edox (S5)		Redux Depress	10115 (1 0)				arent Material (F21)				
-	Matrix (S6)							hallow Dark Surface (TF12)				
	face (S7) (LRR R, M	LRA 149E	3)					(Explain in Remarks)				
³ Indicators of	hydrophytic vegetati	on and we	tland hydrology mus	t be prese	ent, unless	disturbed	or problemation).				
Restrictive L	.ayer (if observed):											
Type:												
Depth (inc	thes):						Hydric Soil	Present? Yes X No No				
Remarks:												









W



Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec C	City/County: Lake County	_ Sampling Date: 11/09/2021
Applicant/Owner: FirstEnergy	State: OH	
Investigator(s): BAO		
Landform (hillslope, terrace, etc.): Flat Local		Slope (%): ⁰
Subregion (LRR or MLRA): LRR R Lat: 41.6480606501	30326 Long: -81.14742819993057	7 Datum: WGS 1984
Subregion (LRR or MLRA): LRR R Lat: 41.6480606501 Soil Map Unit Name: PsB: Platea silt loam, 2 to 6 percent slopes	NWI classif	ication:_PEM1C
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes X No (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology significantly of	disturbed? Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally prot	olematic? (If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	Is the Sampled Area within a Wetland? Yes	No
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID: Upland	
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary India	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface So	il Cracks (B6)
Surface Water (A1) Water-Stained L	.eaves (B9) Drainage P	atterns (B10)
High Water Table (A2) Aquatic Fauna (I		
Saturation (A3) Marl Deposits (B		n Water Table (C2)
Water Marks (B1) Hydrogen Sulfide		` '
		Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Rec		Stressed Plants (D1)
<u> </u>		c Position (D2)
Iron Deposits (B5) Thin Muck Surfa Inundation Visible on Aerial Imagery (B7) Other (Explain in		
Inundation Visible on Aerial Imagery (B7) Other (Explain ir Sparsely Vegetated Concave Surface (B8)	FAC-Neutra	raphic Relief (D4)
Field Observations:	I AC-Neutr	ar rest (D3)
Surface Water Present? Yes No _X _ Depth (inches):		
Water Table Present? Yes No _X _ Depth (inches):		
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)		ent? Yes No _X
Describe Recorded Data (stream gauge, monitoring well, aerial photos	s, previous inspections), if available:	
Domorko		
Remarks:		

/EGETATION – Use scientific names of plants				Sampling Point: Upland LP-007
<u>Tree Stratum</u> (Plot size:) 1)		Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3. 4.				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.6666666666 (A/B)
6 7				Prevalence Index worksheet:
		= Total Cov	er	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15)				FACW species $0 \times 2 = 0$
1. Viburnum dentatum	10	Yes	FAC	FACT species $\frac{15}{95}$ $\times 3 = \frac{45}{380}$
2. Frangula alnus	5	Yes	FAC	FACU species
3		·		UPL species 0 $x 5 = 0$ Column Totals: 110 (A) 425 (B)
4				Prevalence Index = B/A = 3.72727272727272727272727272727272727272
5				
6				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
_	15	= Total Cov	er	3 - Prevalence Index is ≤3.0¹
Herb Stratum (Plot size: 5 1. Solidago canadensis	70	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Rubus allegheniensis	15	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Andropogon gerardii			FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4 5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8 9.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	95	= Total Cov	er	
Woody Vine Stratum (Plot size:)				
1		No		Hydrophytic
2				Vegetation
3				Present? Yes X No
4		= Total Cov		
Remarks: (Include photo numbers here or on a separate		. 5.6.1 000	<u></u>	1
Remarks: (Include photo numbers here or on a separate		= Total Cov	er	

SOIL Sampling Point: Upland LP-007

Profile Desc	ription: (Describe to	o the dep	th needed to docum	nent the i	ndicator o	or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Feature: %	<u>S</u> _Type ¹ _	_Loc ²	Texture	Remarks
0 - 18	10YR 4/2	90	10YR 5/8	10	Concer	M	Silty clay loam	
-								
-								
-								
-								
1Typo: C=Co	ncentration, D=Deple		-Doducod Matrix MS			———	² l ocation	: PL=Pore Lining, M=Matrix.
Hydric Soil I		SUOII, KIVI	-Neduced Matrix, Mc	o-iviaskeu	i Sanu Gra	aii i5.		for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Belov	v Surface	(S8) (LRR	RR,	2 cm M	fluck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B)					Prairie Redox (A16) (LRR K, L, R)
Black His	stic (A3) n Sulfide (A4)		Thin Dark Surfa Loamy Mucky N					flucky Peat or Peat (S3) (LRR K, L, R) urface (S7) (LRR K, L, M)
	Layers (A5)		Loamy Gleyed I			, -)		lue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	(A11)	X Depleted Matrix	(F3)			Thin D	ark Surface (S9) (LRR K, L)
	rk Surface (A12)		Redox Dark Sui	. ,				anganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1) leyed Matrix (S4)		Depleted Dark SRedox Depress		7)			ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
	edox (S5)			.0 (. 0)				arent Material (F21)
	Matrix (S6)							hallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	LRA 149I	3)				Other (Explain in Remarks)
3Indicators of	hydrophytic vegetati	on and we	etland hydrology mus	t be prese	ent, unless	disturbed	or problemation	·.
Restrictive L	ayer (if observed):			-				
Type:								
	:hes):						Hydric Soil	Present? Yes <u>X</u> No
Remarks:								





S



Soil

Project/Site: Leroy Center-Mayfield 138 kV Trail	nsmission Line Projec City/C	county: Lake County	Sa	ampling Date: 11/09/2021
Applicant/Owner: FirstEnergy				Sampling Point: Wetland LP-008
Investigator(s): BAO	Section			
Landform (hillslope, terrace, etc.): Swale			oncave	Slope (%): 1
Subregion (LRR or MLRA): LRR R				
Soil Map Unit Name: PsA: Platea silt loam, 0 to	2 percent slopes	!	NWI classification	on: N/A
Are climatic / hydrologic conditions on the site ty	pical for this time of year? Y	res X No (If no,	explain in Rem	arks.)
Are Vegetation, Soil, or Hydrolog	gy significantly distur	bed? Are "Normal Circu	ımstances" pres	ent? Yes X No
Are Vegetation, Soil, or Hydrolog	gy naturally problema	atic? (If needed, explain	n any answers i	n Remarks.)
SUMMARY OF FINDINGS – Attach s	site map showing sam	ppling point locations,	transects, ir	mportant features, etc.
	X No X No X No	Is the Sampled Area within a Wetland? If yes, optional Wetland Site	· · · · · · · · · · · · · · · · · · ·	
Remarks: (Explain alternative procedures here	e or in a separate report.)			
HYDROLOGY				
Wetland Hydrology Indicators:		Seco	ndary Indicator	s (minimum of two required)
Primary Indicators (minimum of one is required	l; check all that apply)	;	Surface Soil Cra	acks (B6)
X Surface Water (A1)	Water-Stained Leave	s (B9) <u>X</u> [Orainage Patter	ns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	!	Moss Trim Lines	s (B16)
Saturation (A3)	Marl Deposits (B15)	[Ory-Season Wa	ter Table (C2)
Water Marks (B1)	Hydrogen Sulfide Od	or (C1) (Crayfish Burrow	s (C8)
Sediment Deposits (B2)	Oxidized Rhizosphere	es on Living Roots (C3) S	Saturation Visib	le on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced	d Iron (C4) S	Stunted or Stres	sed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reductio	n in Tilled Soils (C6) X	Geomorphic Po	sition (D2)
Iron Deposits (B5)	Thin Muck Surface (C	C7) S	Shallow Aquitare	d (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Rer	marks) I	Microtopographi	c Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Te	st (D5)
Field Observations:				
	Depth (inches):	1		
	Depth (inches):	0		
Saturation Present? Yes No (includes capillary fringe) Describe Recorded Data (stream gauge, monit	Depth (inches):	Wetland Hydro		YesX No
Describe Recorded Data (Stream gauge, month	toring well, aerial photos, pre	vious irispections), ii avaliable	•	
Remarks:				

Tree Stratum (Plot size: 30)	Absolute	Dominant Indicator Species? Status	Dominance Test worksheet:
1			Number of Dominant Species That Are OBL, FACW, or FAC:1(A)
2			Total Number of Dominant
3			Species Across All Strata:1 (B)
4			Percent of Dominant Species
5			That Are OBL, FACW, or FAC:1 (A/B)
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
		_ = Total Cover	OBL species 5 x 1 = 5 FACW species 90 x 2 = 180
Sapling/Shrub Stratum (Plot size: 15)			racvi species x z =
1	-		AC species x 3 =
2		·	FACU species 0 x 4 = 0 UPL species 0 x 5 = 0
3			Column Totals: 95 (A) 185 (B)
4		·	
5			Prevalence Index = B/A = 1.9473684210
6			Hydrophytic Vegetation Indicators:
7			X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cover	X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		_ = Total Cover	X 3 - Prevalence Index is ≤3.0 ¹
1. Phalaris arundinacea	90	Yes FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Eleocharis obtusa			Problematic Hydrophytic Vegetation¹ (Explain)
3	·		¹ Indicators of hydric soil and wetland hydrology must
			be present, unless disturbed or problematic.
4			Definitions of Vegetation Strata:
5			_
6			Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7		·	
8		· 	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9			
10	-		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11			Woody vines – All woody vines greater than 3.28 ft in
12	-	. <u></u>	height.
	95	_ = Total Cover	
Woody Vine Stratum (Plot size:)			
1			
2.			Hydrophytic
3		·	Vegetation Present? Yes X No
1			
T		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet)	_ = Total Cover	
remarks. (include proto numbers here of on a separate	Silect.)		

Sampling Point: Wetland LP-008

SOIL Sampling Point: Wetland LP-008

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	x Feature: %	<u>S</u> Type ¹	_Loc ²	Texture	Remarks		
0 - 8	10R 4/1	95	10R 4/6	5	Concer	M	Silty clay loam	. tomamo		
8 - 16	10R 5/1	80	10R 4/6	20	Concer	М	Clay loam			
-							·			
							-			
							· ——			
							·			
							· ———			
							-			
1Tuno: C=Co	ncentration, D=Deple		-Doduced Metrix MS				21 acation	: PL=Pore Lining, M=Matrix.		
Hydric Soil I		elion, Rivi-	Reduced Matrix, Ms	s=iviasked	i Sanu Gra	airis.		for Problematic Hydric Soils ³ :		
Histosol			Polyvalue Belov		(S8) (LRF	RR,		Muck (A10) (LRR K, L, MLRA 149B)		
Histic Ep	ipedon (A2) stic (A3)		MLRA 149B) Thin Dark Surfa		.RR R. MI	RA 149B		Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R)		
Hydroge	n Sulfide (A4)		Loamy Mucky N	/lineral (F	1) (LRR K		Dark S	Surface (S7) (LRR K, L, M)		
	Layers (A5) Below Dark Surface	(A11)	Loamy Gleyed I X Depleted Matrix)			llue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L)		
Thick Da	rk Surface (A12)	()	Redox Dark Su	rface (F6)			Iron-M	anganese Masses (F12) (LRR K, L, R)		
	ucky Mineral (S1) leyed Matrix (S4)		Depleted Dark S Redox Depress		7)			ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)		
	edox (S5)		Redox Depless	10115 (1 0)				Red Parent Material (F21)		
	Matrix (S6)						Very Shallow Dark Surface (TF12)			
Dark Sur	face (S7) (LRR R, M	LRA 149E	3)				Other	(Explain in Remarks)		
	hydrophytic vegetati	on and we	tland hydrology mus	t be prese	ent, unless	disturbed	l or problemation	D		
Type:	.ayer (if observed):									
Depth (inc	:hes):						Hydric Soil	Present? Yes X No No		
Remarks:	<u>·</u>									











Soil

Project/Site: Leroy Center-Mayfield	138 kV Transmi	ission Line Projec City/C	County: Lake County		Sampling Date: 11/09/2021
Applicant/Owner: FirstEnergy					_ Sampling Point: Upland LP-008
Investigator(s): BAO			on, Township, Range: N/A		
Landform (hillslope, terrace, etc.):					Slope (%): ²
Subregion (LRR or MLRA): LRR R Soil Map Unit Name: PsA: Platea s	ilt loam, 0 to 2 pe	ercent slopes	zong.	NWI classifica	ation: N/A
Are climatic / hydrologic conditions of	on the site typica	Il for this time of year? Y	/es X No (I	f no, explain in Re	emarks.)
Are Vegetation, Soil	, or Hydrology	significantly distur	bed? Are "Normal of	Circumstances" pr	resent? Yes X No
Are Vegetation, Soil				xplain any answer	
SUMMARY OF FINDINGS -	- Attach site	map showing san	npling point location	ns, transects,	important features, etc.
Hydrophytic Vegetation Present?		(No	Is the Sampled Area within a Wetland?	Yes	No
Hydric Soil Present? Wetland Hydrology Present?	Yes^	No	If yes, optional Wetland		
Remarks: (Explain alternative prod	cedures here or	in a separate report)	ii yes, optionai wetiand	Site ID.	
HYDROLOGY					
Wetland Hydrology Indicators:			2	Secondary Indicat	ors (minimum of two required)
Primary Indicators (minimum of on	e is required; ch	eck all that apply)		Surface Soil C	Cracks (B6)
Surface Water (A1)	_	Water-Stained Leave	es (B9)	Drainage Patt	erns (B10)
High Water Table (A2)		Aquatic Fauna (B13)	-	Moss Trim Lir	nes (B16)
Saturation (A3)		Marl Deposits (B15)	-	Dry-Season V	Vater Table (C2)
Water Marks (B1)		_ Hydrogen Sulfide Od		Crayfish Burro	` '
Sediment Deposits (B2)		Oxidized Rhizospher			sible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Reduced			ressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduction		Geomorphic F	
Iron Deposits (B5)		Thin Muck Surface ((Shallow Aquit	
Inundation Visible on Aerial Im Sparsely Vegetated Concave		Other (Explain in Rer	marks)	Microtopograp FAC-Neutral 1	
Field Observations:	Surface (Bo)		<u> </u>	FAC-INEULIAI	168((D3)
	s No X	Depth (inches):			
		Depth (inches):			
		Depth (inches):	15 Wetland Hy	drology Present	? Yes No _X_
(includes capillary fringe)					
Describe Recorded Data (stream of	gauge, monitorin	g well, aerial photos, pre	evious inspections), if avail	able:	
Remarks:					

/EGETATION – Use scientific names of plants	S.			Sampling Point: Upland LP-008
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1			<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
2				Total Number of Dominant Species Across All Strata: 1 (B)
4. <u> </u>				Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by: OBL species 0 x 1 = 0
		= Total Cov	er/	ODL species X 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species0 x 2 =120 FAC species0 x 3 =0
1				FACU species 25 x 4 = 100
2		-		UPL species 0 x 5 = 0
3				Column Totals: 85 (A) 220 (B)
4				Prevalence Index = B/A = 2.588235294
5				Hydrophytic Vegetation Indicators:
6				X 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
<u>-</u>		= Total Cov	/er	$\frac{X}{X}$ 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5 1. Phalaris arundinacea	60	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Taraxacum officinale			FACU	Problematic Hydrophytic Vegetation¹ (Explain)
	· · · · · · · · · · · · · · · · · · ·		FACU	
3. Solidago altissima 4. Trifolium repens			FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8			·	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				Herb – All herbaceous (non-woody) plants, regardless of
10				size, and woody plants less than 3.28 ft tall.
11 12.				Woody vines – All woody vines greater than 3.28 ft in height.
		= Total Cov	/er	neight.
Woody Vine Stratum (Plot size:)				
1				
2				Hydrophytic Vegetation
3				Present? Yes X No
4.			-	
		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate				

SOIL Sampling Point: Upland LP-008

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator c	r confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>s</u>	2		
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 16	10R 4/2	97	10R 4/6	3	Concer	M,PL	Silty clay	
-								
			.					
-								
-								
			.					
-								
¹ Type: C=Co	ncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ins.	² Location	n: PL=Pore Lining, M=Matrix.
Hydric Soil I		,	,			-		for Problematic Hydric Soils ³ :
Histosol	(A1)	_	_ Polyvalue Belov	w Surface	(S8) (LRR	R,	2 cm l	Muck (A10) (LRR K, L, MLRA 149B)
Histic Ep	ipedon (A2)		MLRA 149B))			Coast	Prairie Redox (A16) (LRR K, L, R)
Black His		_	_ Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	_	_ Loamy Mucky N			L)		Surface (S7) (LRR K, L, M)
	Layers (A5)		_ Loamy Gleyed)		-	alue Below Surface (S8) (LRR K, L)
	Below Dark Surface rk Surface (A12)	(A11) <u>/</u>	Depleted Matrix Redox Dark Su					Park Surface (S9) (LRR K, L) Ianganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)	_	Redox Dark Su Depleted Dark S	. ,	7)			iont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)	_	_ Redox Depress		',			Spodic (TA6) (MLRA 144A, 145, 149B)
	edox (S5)	_		()				arent Material (F21)
	Matrix (S6)							Shallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	ILRA 149B)					Other	(Explain in Remarks)
2								
	hydrophytic vegetati	on and wetla	and hydrology mus	t be prese	nt, unless	disturbed	or problemati	C.
	ayer (if observed):							
Type:								
Depth (inc	:hes):						Hydric Soil	Present? Yes X No No
Remarks:								









Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line	Projec City/County: Lake County		Sampling Date: 11/09/2021
Applicant/Owner: FirstEnergy			Sampling Point: Wetland LP-009
Investigator(s): BAO			
Landform (hillslope, terrace, etc.): Swale			Slope (%): ²
Subregion (LRR or MLRA): LRR R Lat: 41.646 Soil Map Unit Name: PsA: Platea silt loam, 0 to 2 percent slop	es	NWI classificat	tion: N/A
Are climatic / hydrologic conditions on the site typical for this til	me of year? Yes X No	(If no, explain in Rei	marks.)
Are Vegetation, Soil, or Hydrology sign	ificantly disturbed? Are "Norma	l Circumstances" pre	esent? Yes X No
Are Vegetation, Soil, or Hydrology natu		explain any answers	
SUMMARY OF FINDINGS – Attach site map sh	owing sampling point location	ons, transects,	important features, etc.
Hydrophytic Vegetation Present? YesX No _ Hydric Soil Present? YesX No _ Wetland Hydrology Present? YesX No _	within a Wetland?	·	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicate	ors (minimum of two required)
Primary Indicators (minimum of one is required; check all that	apply)	Surface Soil C	racks (B6)
	Stained Leaves (B9)	X Drainage Patte	erns (B10)
High Water Table (A2) Aquation	Fauna (B13)	Moss Trim Line	es (B16)
X Saturation (A3) Marl De	eposits (B15)	Dry-Season W	ater Table (C2)
Water Marks (B1) Hydrog	en Sulfide Odor (C1)	Crayfish Burro	ws (C8)
	d Rhizospheres on Living Roots (C3)	X Saturation Visi	ible on Aerial Imagery (C9)
	ce of Reduced Iron (C4)	· 	essed Plants (D1)
	Iron Reduction in Tilled Soils (C6)	Geomorphic P	
	uck Surface (C7)	Shallow Aquita	, ,
	Explain in Remarks)	Microtopograp	
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutral T	est (D5)
Field Observations:			
Surface Water Present? Yes X No Depth			
Water Table Present? Yes X No Depth			
Saturation Present? Yes X No Depth (includes capillary fringe)		Hydrology Present	? Yes <u>X</u> No
Describe Recorded Data (stream gauge, monitoring well, aer	iai pnotos, previous inspections), if ava	aliable:	
Remarks:			

EGETATION – Use scientific names of plants				Sampling Point: Wetland LP-00
Tree Stratum (Plot size:)		Dominant Species?		Dominance Test worksheet: Number of Dominant Species
1 2				That Are OBL, FACW, or FAC:3 (A) Total Number of Dominant
3 4				Species Across All Strata:3 (B) Percent of Dominant Species
5				That Are OBL, FACW, or FAC:1 (A/B
6 7				Prevalence Index worksheet:
		= Total Cov	er	Total % Cover of: Multiply by: OBL species 10 x 1 = 10
Sapling/Shrub Stratum (Plot size: 15)			.	FACW species 90 x 2 = 180
1. Frangula alnus	10	Yes	FAC	FAC species10 x 3 =30
2.				FACU species 0 x 4 = 0
3.				UPL species0 x 5 =0
4				Column Totals:110 (A)220 (B)
5				Prevalence Index = B/A = 2
5				Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation
·		= Total Cov		X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)			.	X 3 - Prevalence Index is ≤3.0 ¹
1. Phalaris arundinacea	50	Yes	FACW	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2. Phragmites australis	40	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Juncus effusus 4.			OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.
7 3				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12		= Total Cov	 er	height.
Woody Vine Stratum (Plot size:30)			.	
1		No		
''				Hydrophytic
2				Vegetation
3				
2		= Total Cov		

SOIL Sampling Point: Wetland LP-009

Depth	Matrix	0/		x Features	- 1	. 2	.	5 .
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0 - 18	10YR 5/2	85	10YR 6/8	15	Concer	PL,M	Silty clay loam	
-								
							· 	
-								
							· 	
-								
		etion, RM	=Reduced Matrix, MS	S=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix.
Hydric Soil I								for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belov		(S8) (LRF	RR,		Muck (A10) (LRR K, L, MLRA 149B)
Histic Ep	ipedon (A2)		MLRA 149B) Thin Dark Surfa		RR R MI	RΔ 149R		Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		Loamy Mucky M					Surface (S7) (LRR K, L, M)
	Layers (A5)		Loamy Gleyed N			, –,		ilue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	(A11)	X Depleted Matrix	(F3)			Thin D	ark Surface (S9) (LRR K, L)
	rk Surface (A12)		Redox Dark Sur					anganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)		Depleted Dark S		7)			ont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4) edox (S5)		Redox Depress	ions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21)
	Matrix (S6)							Shallow Dark Surface (TF12)
	face (S7) (LRR R, M	ILRA 149	B)					(Explain in Remarks)
		on and w	etland hydrology mus	t be prese	nt, unless	disturbed	l or problemation	<u>. </u>
	ayer (if observed):							
Type:	h).						Huddia Call	Brananta Van Y Na
Depth (inc	nes):						Hydric Soil	Present? Yes X No No
Remarks:								











Soil

roject/Site: Lerroy Center-Mayfield 138 kV Transmission Line Project City/County: Lake County
Section, Township, Range; NA Section, NA Section, Township, Range; NA Section, Nation, Natio
Concave Conc
Long Salva Long Salva Long Salva Long Salva Salva Long Salva S
No Continue PsA: Plate a silt loam, 0 to 2 percent slopes NWI classification: N/A
re climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.) re Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No re Vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No X Is the Sampled Area within a Wetland? Yes No X Is the Sampled Area within a Wetland? Yes No X If yes, optional Wetland? Yes No If yes, optional Wetland Site ID: Upland LP-009 Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required: check all that apply) Surface Soil Cracks (B6) Drainage Patterns (B10) High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) Saturation (A3) Mari Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Suffide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent from Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches):
re Vegetation Soil or Hydrology significantly disturbed?
SUMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes NoX Is the Sampled Area within a Wetland? Yes NoX If yes, optional Wetland Site ID: Upland LP-009 Remarks: (Explain alternative procedures here or in a separate report.) HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) Saturation (A3)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes NoX
Hydrophytic Vegetation Present? Yes No X Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Present? Wetland Hydrology Indicators: Remarks: (Explain alternative procedures here or in a separate report.) Is the Sampled Area within a Wetland? Yes No Yes No X If yes, optional Wetland Site ID: Upland LP-009
Hydric Soil Present? Yes NoX Wetland Hydrology Present? Yes NoX If yes, optional Wetland?
Hydric Soil Present? Yes NoX Wetland Hydrology Present? Yes NoX If yes, optional Wetland?
Metland Hydrology Present? Yes No _X
Secondary Indicators (minimum of two required)
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No No Depth (inches): Water Table Present? Yes No No Wetland Hydrology Present?<
Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No No Depth (inches): Water Table Present? Yes No No Wetland Hydrology Present?<
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Saturation Present? Yes No X Depth (inches): Wetland Hydrology Present? Yes No X Depth (inches):
High Water Table (A2)
Saturation (A3)
Sediment Deposits (B2) Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Surface Water Present? Yes NoX Depth (inches):
Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) FAC-Neutral Test (D5) Surface Water Present? Yes NoX Depth (inches):
Algal Mat or Crust (B4)
Iron Deposits (B5)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No _X Depth (inches): Water Table Present? Yes No _X Depth (inches): Saturation Present? Yes No _X Depth (inches): Wetland Hydrology Present? Yes No _X
Sparsely Vegetated Concave Surface (B8) FAC-Neutral Test (D5) Field Observations: Surface Water Present?
Field Observations: Surface Water Present? Yes No _X Depth (inches): Water Table Present? Yes No _X Depth (inches): Saturation Present? Yes No _X Depth (inches): Wetland Hydrology Present? Yes No _X Depth (inches):
Water Table Present? Yes No _X Depth (inches): Saturation Present? Yes No _X Depth (inches): Wetland Hydrology Present? Yes No _X
Saturation Present? Yes No _X Depth (inches): Wetland Hydrology Present? Yes No _X
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
2008.100 (1000.100 2010 (01001.11 guide, 1101.10 ft protects, protects inoperation), in a temperation
Remarks:

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	-	= Total Co	ver	OBL species $0 \times 1 = 0$ $EACW species 10 \times 2 = 20$
Sapling/Shrub Stratum (Plot size: 15)				FACVV species x z =
1. Rubus allegheniensis	15	Yes	FACU	X 3
2				FACU species85 x 4 =340 UPL species20 x 5 =100
3				Column Totals: 115 (A) 440 (B)
4				(1)
5				Prevalence Index = B/A = 3.8260869568
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co	uor.	2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		Total Co	vei	3 - Prevalence Index is ≤3.0 ¹
1. Solidago canadensis	60	Yes	FACU	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2. Daucus carota		No	UPL	Problematic Hydrophytic Vegetation¹ (Explain)
3. Phalaris arundinacea		No	FACW	¹ Indicators of hydric soil and wetland hydrology must
T '/ ''			FACU	be present, unless disturbed or problematic.
				Definitions of Vegetation Strata:
5				_
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				Woody vines All woody vines are sten than 2.20 ft in
12				Woody vines – All woody vines greater than 3.28 ft in height.
	100	= Total Co	ver	
Woody Vine Stratum (Plot size:)				
1				
2.				Hydrophytic
3				Vegetation Present? Yes No X
4		- Total Co		
Remarks: (Include photo numbers here or on a separate	sheet)	= Total Co	vei	1
remarks. (include proto numbers here of on a separate	Silect.)			

Sampling Point: Upland LP-009

SOIL Sampling Point: Upland LP-009

Profile Desc	ription: (Describe t	o the deptl				or confirm	the absence	of indicators.)
Depth (in the ca)	Matrix	0/		ox Features	<u>.</u>	L = = ²	Tanduna	Domonto
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 12	10YR 3/2	100					Coarse sandy loam	Some gravel present
-								
-			_					
-								
-								
								-
-								
¹Type: C=Co	oncentration, D=Depl	etion RM=I	Reduced Matrix M	S=Masked	Sand Gra	ins	² I ocation	: PL=Pore Lining, M=Matrix.
Hydric Soil I		<u> </u>	toddood maant, m					for Problematic Hydric Soils ³ :
Histosol	(A1)	_	Polyvalue Belo	w Surface	(S8) (LRR	R,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)
-	ipedon (A2)		MLRA 149B	,				Prairie Redox (A16) (LRR K, L, R)
Black His		_	Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	-	Loamy Mucky I			L)		Surface (S7) (LRR K, L, M)
	Layers (A5) Below Dark Surface	_ (Δ11)	Loamy Gleyed Depleted Matri:)		-	alue Below Surface (S8) (LRR K, L) Park Surface (S9) (LRR K, L)
-	rk Surface (A12)		Redox Dark Su					anganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)	_	Depleted Dark	. ,	7)			ont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)	_	Redox Depress	sions (F8)			Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
	Matrix (S6)	U D A 440D)						Shallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	LKA 149B)	1				Other	(Explain in Remarks)
³ Indicators of	hydrophytic vegetati	on and wet	and hydrology mu	st be prese	nt, unless	disturbed	or problemation	C.
	ayer (if observed):		, 0,	•				
Type: Gra	avel or fill							
Depth (inc	thes): 12						Hydric Soil	Present? Yes No _X
Remarks:								





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Soil

Project/Site: Leroy Center-Mayfield 138 kV Transi	mission Line Projec City/County: Lake	County	Sampling Date: 11/09/2021
Applicant/Owner: FirstEnergy			Sampling Point: Wetland LP-010
Investigator(s): BAO			
Landform (hillslope, terrace, etc.): Swale			Slope (%): ³
Subregion (LRR or MLRA): LRR R			
Soil Map Unit Name: PsB: Platea silt loam, 2 to 6	percent slopes	NWI classific	eation: N/A
Are climatic / hydrologic conditions on the site typic	cal for this time of year? Yes X	No (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology	naturally problematic? ((If needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach sit	e map showing sampling poi	nt locations, transects	, important features, etc.
	X No If yes, optio	pled Area etland? Yes X nal Wetland Site ID: Wetland	
sample point for w-bao-110921-04 in depressiona			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; of	check all that apply)	Surface Soil	Cracks (B6)
X Surface Water (A1)	Water-Stained Leaves (B9)	X Drainage Pa	tterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim L	
Saturation (A3)	Marl Deposits (B15)	Dry-Season	Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Bur	` ,
Sediment Deposits (B2)	X Oxidized Rhizospheres on Living F		isible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4)		tressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled So	• • •	
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aqu	• •
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopogra	
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral	Test (D5)
Field Observations:	Double (inches)		
	Depth (inches): 1		
	Depth (inches):	W. (1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
(includes capillary fringe)	Depth (inches):	Wetland Hydrology Preser	nt? Yes X No
Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, previous inspect	tions), if available:	
Remarks:			
1			

30				Sampling Point: Wetland LP-01
	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
2				Total Number of Dominant Species Across All Strata: 2 (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.5 (A/B)
5				That Are OBL, FACW, or FAC: 0.5 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
45		= Total Cov	er	OBL species $\frac{5}{95}$ x 1 = $\frac{5}{190}$
Sapling/Shrub Stratum (Plot size: 15)				FACW species5
1. Rubus argutus	5	Yes	FACU	FACU species 5 x 4 = 20
2				UPL species 0 x 5 = 0
3				Column Totals: 110 (A) 230 (B)
4 .				Prevalence Index = B/A = 2.0909090909
5				Hydrophytic Vegetation Indicators:
5				1 - Rapid Test for Hydrophytic Vegetation
7	_			2 - Dominance Test is >50%
_	5	= Total Cov	er	X 3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5 1.				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Phalaris arundinacea	0.5	Yes	FACW	Problematic Hydrophytic Vegetation¹ (Explain)
3. Typha angustifolia			OBL	¹ Indicators of hydric soil and wetland hydrology must
4. Agrimonia parviflora			FAC	be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	105	= Total Cov	er	
Woody Vine Stratum (Plot size:)				
1				Lhudronhusia
2				Hydrophytic Vegetation
				Present? Yes X No
3				
3				

SOIL Sampling Point: Wetland LP-010

Profile Desc	ription: (Describe t	o the dep	th needed to docu	ment the i	ndicator o	or confirn	n the absence	of indicators.)
Depth	Matrix			x Feature	<u>s</u>	•		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 4	10R 4/2	98	10R 4/6	2	Concer	PL	Silty clay loam	
4 - 16	10R 4/1	95	10R 4/4	5	Concer	PL	Silty clay loam	
-								
-								
-								
-								
¹ Type: C=Co	oncentration, D=Depl	etion, RM:	=Reduced Matrix, M	S=Masked	Sand Gra	ins.	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil I								for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belo		(S8) (LRR	R,	· · · · · · · · · · · · · · · · · · ·	Muck (A10) (LRR K, L, MLRA 149B)
Black Hi	oipedon (A2)		MLRA 149B Thin Dark Surfa	•	RR R MI	RA 149R		Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		Loamy Mucky I					Surface (S7) (LRR K, L, M)
	Layers (A5)		Loamy Gleyed			,		alue Below Surface (S8) (LRR K, L)
Depleted	d Below Dark Surface	(A11)	X Depleted Matrix	x (F3)			Thin D	ark Surface (S9) (LRR K, L)
	ark Surface (A12)		Redox Dark Su	, ,				anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)		Depleted Dark		7)		· · · · · · · · · · · · · · · · · · ·	ont Floodplain Soils (F19) (MLRA 149B)
	Sleyed Matrix (S4)		Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	ledox (S5) Matrix (S6)							arent Material (F21) Shallow Dark Surface (TF12)
	rface (S7) (LRR R, M	LRA 149E	3)				-	(Explain in Remarks)
³ Indicators of	f hydrophytic vegetati	on and we	etland hydrology mus	st be prese	ent, unless	disturbed	d or problemation	c .
Restrictive L	ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes X No No
Remarks:								





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Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec	City/County: Lake County	Sampling Date: 11/09/2021
Applicant/Owner: FirstEnergy		te: OH Sampling Point: Upland LP-010
Investigator(s): BAO		· -
Landform (hillslope, terrace, etc.): Hillside Loc		lat Slope (%): ³
Subregion (LRR or MLRA): LRR R Lat:		
Soil Map Unit Name: PsB: Platea silt loam, 2 to 6 percent slopes	1	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes X No (If no,	explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	disturbed? Are "Normal Circu	mstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pro	blematic? (If needed, explain	n any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations,	transects, important features, etc.
Hydrophytic Vegetation Present? Yes	Is the Sampled Area within a Wetland?	Yes No
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site	
HYDROLOGY		
Wetland Hydrology Indicators:	Seco	ndary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained I		Orainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (I		Ory-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfic		Crayfish Burrows (C8)
	-	Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Re		Stunted or Stressed Plants (D1)
		Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surfa Inundation Visible on Aerial Imagery (B7) Other (Explain i		Shallow Aquitard (D3) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)
Field Observations:	<u>_</u> '	Ac-Neutral Test (D3)
Surface Water Present? Yes No X Depth (inches)		
Water Table Present? Yes No X Depth (inches)		
Saturation Present? Yes No X Depth (inches) (includes capillary fringe)		logy Present? Yes NoX
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:	
Remarks:		
Remarks.		

Trac Stratum (Diet size: 30	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co		OBL species x 1 = 0
Sapling/Shrub Stratum (Plot size: 15)		10tai 00	VCI	FACW species 40 x 2 = 80
				FAC species 10 x 3 = 30
1				FACU species 150 x 4 = 600
2				UPL species 0 x 5 = 0
3				Column Totals: 200 (A) 710 (B)
4				2.55
5				Prevalence Index = B/A = 3.55
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	<u> </u>	= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size:5		10141 00	• • • • • • • • • • • • • • • • • • • •	3 - Prevalence Index is ≤3.0 ¹
	60	Voo	FACU	4 - Morphological Adaptations ¹ (Provide supporting
				data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)
2. Erigeron annuus	10		FACU	Problematic Hydrophytic Vegetation (Explain)
Symphyotrichum lateriflorum			FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Phalaris arundinacea	10	No	FACW	
5. Agrimonia parviflora	10	No	FACW	Definitions of Vegetation Strata:
6. Schedonorus arundinaceus	70	Yes	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7 Agrostis stolonifera	10	No	FACW	at breast height (DBH), regardless of height.
8. Solidago canadensis	10	No	FACU	Sapling/shrub – Woody plants less than 3 in. DBH
Symphyotrichum lateriflorum	_		FAC	and greater than or equal to 3.28 ft (1 m) tall.
10. Agrimonia parviflora			FAC	Herb – All herbaceous (non-woody) plants, regardless of
44				size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	200	= Total Co	ver	
Woody Vine Stratum (Plot size: 30)				
1				
2				Hydrophytic Vegetation
3				Present? Yes No X
4				
		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)	-		

Sampling Point: Upland LP-010

SOIL Sampling Point: Upland LP-010

Profile Desc	ription: (Describe to	o the dep	th needed to docum	ent the i	ndicator	or confirm	n the absence	of indicators.)	
Depth	Matrix		Redox	Feature	<u>s</u> ,	2			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks	—
0 - 6	10R 4/3	100					Silty clay loam		
6 - 17	10R 4/2	98	10R 4/4	2	Concer	M	Silty clay loam		
-									
-									
-									
_									
							2		
'Type: C=Co	ncentration, D=Deple	etion, RM=	Reduced Matrix, MS	=Masked	Sand Gra	ains.		n: PL=Pore Lining, M=Matrix. s for Problematic Hydric Soils ³ :	
Histosol			Polyvalue Below	Surface	(S8) (LRF	RR,		Muck (A10) (LRR K, L, MLRA 149B)	
	ipedon (A2)		MLRA 149B)				Coast	Prairie Redox (A16) (LRR K, L, R)	
Black His			Thin Dark Surface					Mucky Peat or Peat (S3) (LRR K, L, R))
	n Sulfide (A4) Layers (A5)		Loamy Mucky M Loamy Gleyed N			, L)		Surface (S7) (LRR K, L, M) alue Below Surface (S8) (LRR K, L)	
	Layers (A5) Below Dark Surface	(A11)	Depleted Matrix)			Park Surface (S9) (LRR K, L)	
	rk Surface (A12)	(, , , ,	Redox Dark Sur					langanese Masses (F12) (LRR K, L, R	2)
	ucky Mineral (S1)		Depleted Dark S					iont Floodplain Soils (F19) (MLRA 149	
	leyed Matrix (S4)		Redox Depressi				·	Spodic (TA6) (MLRA 144A, 145, 149I	-
Sandy R	edox (S5)						Red Pa	arent Material (F21)	
	Matrix (S6)							Shallow Dark Surface (TF12)	
Dark Sur	face (S7) (LRR R, M	LRA 149E	3)				Other	(Explain in Remarks)	
³ Indicators of	hydrophytic vegetati	on and we	tland hydrology must	be prese	ent, unless	disturbed	or problemation	С.	
Restrictive L	.ayer (if observed):								
Type:									
Depth (inc	ches):						Hydric Soil	Present? Yes No _X	_
Remarks:									







Project/Site: Leroy Center-May	field 138 k	V Trans	mission Line Projec City/	County: Lake	County		Sampling Date: 11/09/2021
Applicant/Owner: FirstEnergy							_ Sampling Point: Wetland LP-0
Investigator(s): BAO			Sect	tion, Township	, Range: N/A		
Landform (hillslope, terrace, etc						Concave	Slope (%): 0
Subregion (LRR or MLRA): LR							
Soil Map Unit Name: Or: Orrvill	e silt loam	_				NWI classifica	ation: PEM1C
Are climatic / hydrologic condition	ons on the	site typi	cal for this time of year?				
Are Vegetation, Soil							resent? Yes X No
Are Vegetation, Soil					(If needed, expla		
SUMMARY OF FINDING					nt locations	, transects,	important features, et
Hydrophytic Vegetation Preser Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative		Yes Yes	X No X No X No		pled Area etland? enal Wetland Site		
HYDROLOGY							
Wetland Hydrology Indicator	rs:				Sec	condary Indicat	ors (minimum of two required)
Primary Indicators (minimum c	of one is re	quired; o	check all that apply)			Surface Soil (Cracks (B6)
X Surface Water (A1)			Water-Stained Leav	res (B9)	<u>X</u>	Drainage Pat	terns (B10)
High Water Table (A2)			Aquatic Fauna (B13	3)		Moss Trim Lir	nes (B16)
X Saturation (A3)			Marl Deposits (B15))	_	Dry-Season V	Vater Table (C2)
Water Marks (B1)			Hydrogen Sulfide O		_	Crayfish Burn	` '
Sediment Deposits (B2)			X Oxidized Rhizosphe	_	Roots (C3)		sible on Aerial Imagery (C9)
Drift Deposits (B3)			Presence of Reduce				ressed Plants (D1)
Algal Mat or Crust (B4)			Recent Iron Reducti			Geomorphic I	, ,
Iron Deposits (B5) Inundation Visible on Aeri	al Imaganı	(D7)	Thin Muck Surface (Shallow Aquit	
Sparsely Vegetated Conc		. ,	Other (Explain in Re	emarks)		FAC-Neutral	phic Relief (D4)
Field Observations:		,C (DO)				1 AO-Neutral	1631 (155)
Surface Water Present?	Yes X	Nο	Depth (inches):	2			
Water Table Present?			X Depth (inches):				
Saturation Present?			Depth (inches):	6	Wetland Hydr	ology Present	t? Yes X No
(includes capillary fringe) Describe Recorded Data (stream)		monitor	ing wall parial photos pr	rovious inonce	tions) if availabl	۵.	
Describe Recorded Data (stream	am gauge,	MONITOR	ing well, aerial priotos, pr	evious irispec	lioris), ii avaliabi	e.	
Remarks:							

Troe Stratum (Blot eize: 30	Absolute		Dominance Test worksheet:
Tiee Stratum (Flot Size)		Species? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC:1 (A)
2			Total Number of Dominant
3		·	Species Across All Strata:1 (B)
4			Percent of Dominant Species
5			That Are OBL, FACW, or FAC:1 (A/B)
6			
7			Prevalence Index worksheet:
·	-		
45		_ = Total Cover	OBL species 0 x 1 = 0 FACW species 95 x 2 = 190
Sapling/Shrub Stratum (Plot size: 15)			FAC species
1		No	FACU species 5 x 4 = 20
2		· 	UPL species
3			Column Totals: 100 (A) 210 (B)
4			(1)
5			Prevalence Index = B/A = 2.1
6			Hydrophytic Vegetation Indicators:
7			X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cover	X 2 - Dominance Test is >50%
5		_ = Total Cover	X 3 - Prevalence Index is ≤3.01
Herb Stratum (Plot size: 5 1. Phalaris arundinacea	95	Yes FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Solidago canadensis			Problematic Hydrophytic Vegetation¹ (Explain)
3			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4			
5		·	Definitions of Vegetation Strata:
6		·	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7			at breast height (DBH), regardless of height.
8			Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9			and greater than or equal to 0.20 ft (1 m) tail.
10	-		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11			
12.			Woody vines – All woody vines greater than 3.28 ft in height.
	100	= Total Cover	
Woody Vine Stratum (Plot size:30)	_		
		No	
1	-	110	Hydrophytic
2		·	Vegetation Present? Yes X No
3		· 	riesent? TesNO
4		· 	
		_ = Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet.)		

Sampling Point: Wetland LP-011

SOIL Sampling Point: Wetland LP-011

Profile Desc	ription: (Describe t	o the depti	n needed to docu	ment the in	ndicator o	or confirm	n the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Red Color (moist)	ox Features %	Type ¹	Loc ²	Texture	Remarks
								Remarks
0 - 18	10YR 4/2	90	10YR 5/8		Concer	PL_	Silty clay loam	
-								
								
-								
				-				
				-				<u> </u>
-								
-								
	-					-		
	oncentration, D=Depl	etion, RM=I	Reduced Matrix, M	1S=Masked	Sand Gra	ins.		: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							for Problematic Hydric Soils ³ :
Histosol		-	Polyvalue Belo		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)
	oipedon (A2)		MLRA 149E	•	DD D MI	D A 440B		Prairie Redox (A16) (LRR K, L, R)
Black His	n Sulfide (A4)	=	Thin Dark Surf Loamy Mucky					Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L, M)
	Layers (A5)	-	Loamy Gleyed			_,		alue Below Surface (S8) (LRR K, L)
	l Below Dark Surface	(A11)	X Depleted Matr				-	ark Surface (S9) (LRR K, L)
	ark Surface (A12)	_	Redox Dark S	. ,				anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	-	Depleted Dark		7)			ont Floodplain Soils (F19) (MLRA 149B)
-	leyed Matrix (S4) edox (S5)	=	Redox Depres	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21)
-	Matrix (S6)							Shallow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149B)				-	(Explain in Remarks)
	, , ,						_	,
	hydrophytic vegetati	on and wet	land hydrology mu	ist be prese	nt, unless	disturbed	or problemation	Э.
	ayer (if observed):							
Type:								
	ches):						Hydric Soil	Present? Yes X No No
Remarks:								







East







West



Soil

Project/Site: Leroy Center-Mayfield 138 kV Transi	mission Line Projec City/Co	ounty: Lake County	;	Sampling Date: 11/09/2021
Applicant/Owner: FirstEnergy				_ Sampling Point: Upland LP-011
Investigator(s): BAO	Sectio			
Landform (hillslope, terrace, etc.): Hillside				Slope (%): ¹⁵
Subregion (LRR or MLRA): LRR R				
Soil Map Unit Name: Or: Orrville silt loam			NWI classifica	tion: PEM1C
Are climatic / hydrologic conditions on the site typic	cal for this time of year? Yo			
Are Vegetation, Soil, or Hydrology				esent? Yes X No
Are Vegetation, Soil, or Hydrology			plain any answers	·
Are vegetation, John, or rividiology	naturally problema	nic: (ii rieeded, ex	nam any answers	s in Remarks.)
SUMMARY OF FINDINGS – Attach sit	e map showing sam	pling point location	s, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes	No X	Is the Sampled Area		
Hydric Soil Present? Yes	NoX	within a Wetland?	Yes	
Wetland Hydrology Present? Yes	No <u>X</u>	If yes, optional Wetland S	ite ID: Upland LP	-011
Remarks: (Explain alternative procedures here of	or in a separate report.)			
	. ,			
HYDROLOGY				
Wetland Hydrology Indicators:		S	econdary Indicate	ors (minimum of two required)
Primary Indicators (minimum of one is required; of	check all that apply)		_ Surface Soil C	
Surface Water (A1)	Water-Stained Leaves		Drainage Patte	
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lin	
Saturation (A3)	Marl Deposits (B15)	_		/ater Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odd		Crayfish Burro	
Sediment Deposits (B2)	Oxidized Rhizosphere		_ ′	ible on Aerial Imagery (C9)
	Presence of Reduced			
Drift Deposits (B3)	Recent Iron Reduction			essed Plants (D1)
Algal Mat or Crust (B4)	· · · · · · · · · · · · · · · · · · ·	, ,	_ Geomorphic P	
Iron Deposits (B5)	Thin Muck Surface (C		_ Shallow Aquita	
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Rem	narks)	Microtopograp	
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral T	est (D5)
Field Observations:				
	X Depth (inches):			
	X Depth (inches):			
	X Depth (inches):	Wetland Hyd	drology Present	? Yes No <u>X</u>
(includes capillary fringe) Describe Recorded Data (stream gauge, monitor	ing well aerial photos prev	vious inspections) if availa	hle:	
Describe Necorded Data (stream gauge, monitor	ing well, aerial priotos, pre-	vious irispections), ii availa	DIG.	
Remarks:				
Remarks.				

Number of Dominant Species That Are OBL, FACV, or FAC: 1 (A)	Tree Stratum (Plot size: 30)	Absolute Domina % Cover Species	ant Indicator s? Status	Dominance Test worksheet:
Species Across All Strata: 2 (B)				
Species Across All Strate: 2 (B)	2	. 		Total Number of Dominant
That Are OBL, FACW, or FAC:	3	· - <u></u> <u></u>		
That Are OBL, FACW, or FAC:	4			Percent of Dominant Species
Prevalence Index worksheet: Total % Cover of. Multiply by:				
Total % Cover of:				Branchage Index weather to
Sabling/Shrub Stratum (Plot size:15				
Sapling/Shrub Stratum				
FAC species O X 3 = 0	Carling/Chruh Ctratum (Dietaire: 15	= 10tal C	Jovei	
FACU species 70				
UPL species 0 x5 = 0 Column Totals: 100 (A) 340 (B)				
Column Totals: 100 (A) 340 (B)				
Frevalence Index = B/A = 3.4 Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 3 Schedonorus arundinaceus 10 No FACU 10 No FACU Frevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) 10 No FACU Frevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation fucation of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub - Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height. Woody Vines - All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Yes No	3	·		
Tevaler mark	4			3.4
Total Cover = To	5	·		Prevalence Index = B/A = 3.4
## Total Cover = Total Cove	6	. <u> </u>		Hydrophytic Vegetation Indicators:
Solidago altissima Solida	7	. <u> </u>		
Herb Stratum (Plot size:		= Total 0	Cover	
1. Solidago altissima 60 Yes FACU 2. Phalaris arundinacea 30 Yes FACW 3. Schedonorus arundinaceus 10 No FACU 4. Problematic Hydrophytic Vegetation ¹ (Explain) 4. Problematic Hydrophytic Vegetation¹ (Explain) 4. Problematic Hydrophytic Vegetation for on a separate sheet) 4. Problematic Hydrophytic Vegetation for one in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height. Woody Vine Stratum (Plot size: 30) 1. Woody Vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes No X	Herb Stratum (Plot size: 5)			_
Schedonorus arundinaceus 10 No FACU Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree — Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub — Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb — All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines — All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes No X			FACU	
be present, unless disturbed or problematic. Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Woody Vine Stratum (Plot size: 30) 1	2. Phalaris arundinacea	30Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes No X	3. Schedonorus arundinaceus	10No	FACU	¹ Indicators of hydric soil and wetland hydrology must
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Woody Vine Stratum (Plot size: 30) 1	4			be present, unless disturbed or problematic.
at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Woody Vine Stratum (Plot size: 30) 1.	5			Definitions of Vegetation Strata:
8. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. 100 = Total Cover Woody Vine Stratum (Plot size: 30) 1	6			
9	7	·		at breast neight (DBH), regardless of height.
9.	8	·		
10.	9			, , , ,
11	10			
12	11			
Woody Vine Stratum (Plot size:	12	. <u> </u>		
1		100 = Total 0	Cover	
1	Woody Vine Stratum (Plot size:30)			
2				
3				
4 = Total Cover				
= Total Cover				
		= Total 0	Cover	
	Remarks: (Include photo numbers here or on a separate			
	(,	,		

Sampling Point: Upland LP-011

SOIL Sampling Point: Upland LP-011

Profile Description: (Describe to the de	pth needed to docur	nent the indicator	or confirn	n the absence o	f indicators.)
Depth Matrix (inches) Color (moist) %	Redo Color (moist)	x Features	Loc ²	Texture	Remarks
0 - 16 10R 4/3 96	10R 4/6	4 Concer	М	Sandy clay loam	
<u> </u>				· -	
	<u> </u>				
	.			·	
<u> </u>	_				
				·	
-					
				·	
				·	
-					
				· <u></u> -	
				· -	
¹ Type: C=Concentration, D=Depletion, RI	M=Reduced Matrix, M	S=Masked Sand G	rains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:					or Problematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Belov	w Surface (S8) (LR	RR,	2 cm Mu	uck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 149B	,			rairie Redox (A16) (LRR K, L, R)
Black Histic (A3)		ace (S9) (LRR R, N			ucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)		Mineral (F1) (LRR I	(, L)		rface (S7) (LRR K, L, M)
Stratified Layers (A5)	Loamy Gleyed				ue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11)	Depleted Matrix				rk Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	Redox Dark Su				nganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1)	Depleted Dark				nt Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4)	Redox Depress	sions (F8)			podic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5)					rent Material (F21)
Stripped Matrix (S6)				-	allow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 14	9B)			Other (E	Explain in Remarks)
³ Indicators of hydrophytic vegetation and v	vetland hydrology mus	st be present, unles	s disturbed	or problematic.	
Restrictive Layer (if observed):					
Type:	_			Undria Sail D	Present? Yes No X
Depth (inches):	_			Hydric Soil P	Present? Yes NoX
Remarks:					







East



South



Soil

Project/Site: Leroy Center-Mag	yfield 138 k	V Transı	mission Line Projec City/C	County: Lake	County		Sampling Date: 11/10/202	21
Applicant/Owner: FirstEnergy					Si	tate: OH	_ Sampling Point: Wetland	l LP-012
Investigator(s): BAO			Section Sectio					
Landform (hillslope, terrace, etc.						Concave	Slope (%): 0	
Subregion (LRR or MLRA): LF	, ≀R R		Lat: 41.64270111666666	65	Lona: -81.1550	05191666666	Datum: WG	S 1984
Soil Map Unit Name: Or: Orrvi	lle silt loam					NWI classifica	tion: PSS1C	
Are climatic / hydrologic conditi			cal for this time of year?					
Are Vegetation, Soil							esent? Yes X No	
Are Vegetation, Soil	-		-		(If needed, expla	•		
SUMMARY OF FINDING						·	·	, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present?		Yes	X No X No		ppled Area etland? onal Wetland Site			
Lowland PEM wetland located	Jabutting A	ylworth (Creek;Phalaris dominated					
HYDROLOGY								
Wetland Hydrology Indicato	ors:				Sed	condary Indicat	ors (minimum of two requi	ired)
Primary Indicators (minimum	of one is re	quired; c				Surface Soil C		
X Surface Water (A1)			Water-Stained Leave		<u>X</u>	Drainage Patt		
High Water Table (A2)			Aquatic Fauna (B13)			Moss Trim Lir		
X Saturation (A3)			Marl Deposits (B15)			-	/ater Table (C2)	
Water Marks (B1)			Hydrogen Sulfide Od			Crayfish Burro	` '	
Sediment Deposits (B2)			X Oxidized Rhizospher	_	Roots (C3)		ible on Aerial Imagery (CS	∌)
Drift Deposits (B3)			Presence of Reduce				essed Plants (D1)	
Algal Mat or Crust (B4)			Recent Iron Reduction		oils (C6) <u>X</u>	Geomorphic F		
Iron Deposits (B5)		(D-)	Thin Muck Surface (0		_	Shallow Aquit	` '	
Inundation Visible on Aer			Other (Explain in Re	marks)		Microtopograp		
Sparsely Vegetated Cond Field Observations:	cave Surfac	e (B8)			<u> </u>	FAC-Neutral	est (D5)	
Surface Water Present?	Vec X	No	Depth (inches):	1				
Water Table Present?			Depth (inches):	8				
Saturation Present?			Depth (inches):	0	Wetland Hydr	ology Present	? Yes X No	
(includes capillary fringe)					_			
Describe Recorded Data (stre	am gauge,	monitor	ring well, aerial photos, pre	evious inspec	tions), if availabl	le:		
Remarks:								
1								

/EGETATION – Use scientific names of plants				Sampling Point: Wetland LP-01
<u>Tree Stratum</u> (Plot size:) 1)		Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2 3				That Are OBL, FACW, or FAC: (A) Total Number of Dominant Species Across All Strata: 1 (B)
5 5				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	er	OBL species25 x 1 =25
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 = 180
1				FAC species 0 x 3 = 0
2				FACU species 0 x 4 = 0
3				UPL species $0 \times 5 = 0$ Column Totals: $115 \times (\Delta) \times 205 \times (B)$
4				Column Totals:115
5				Prevalence Index = B/A = 1.7826086956
				Hydrophytic Vegetation Indicators:
6				X 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
F		= Total Cov	er	$\frac{X}{3}$ 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size:5) 1Phalaris arundinacea	80	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supportin data in Remarks or on a separate sheet)
2. Typha angustifolia	10	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Eupatorium perfoliatum	10	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Juncus effusus	10	No	OBL	be present, unless disturbed or problematic.
5. Rosa palustris	5	No	OBL	Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diamete
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				Herb – All herbaceous (non-woody) plants, regardless of
10				size, and woody plants less than 3.28 ft tall.
11 12.				Woody vines – All woody vines greater than 3.28 ft in
12		= Total Cov		height.
Woody Vine Stratum (Plot size:30)		Total Cov	J1	
1				Hydrophytic
2			-	Vegetation
3				Present? Yes X No
J				
3 4		= Total Cov		

SOIL Sampling Point: Wetland LP-012

Profile Desc	ription: (Describe to	o the dep	th needed to docun	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Redox Color (moist)	x Features %	<u>S</u> Type ¹	Loc ²	Texture	Remarks
0 - 20	10YR 3/1	95	10YR 5/6	5	Concer	PL	Clay loam	
-			_					
¹Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil I								for Problematic Hydric Soils ³ :
Histosol	(A1) ipedon (A2)		Polyvalue Belov MLRA 149B)		(S8) (LRF	R,	·	Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa		RR R, MI	RA 149B		flucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		Loamy Mucky M					urface (S7) (LRR K, L, M)
	Layers (A5)		Loamy Gleyed I)			lue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	X Depleted Matrix					ark Surface (S9) (LRR K, L)
	rk Surface (A12) lucky Mineral (S1)		Redox Dark Sur Depleted Dark S					anganese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)		Redox Depress		7)			Spodic (TA6) (MLRA 144A, 145, 149B)
	edox (S5)		Redox Depress	10110 (1 0)				arent Material (F21)
-	Matrix (S6)							hallow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149E	3)					Explain in Remarks)
	hydrophytic vegetati	on and we	tland hydrology mus	t be prese	ent, unless	disturbed	or problemation).
	ayer (if observed):							
Type:	Jan - No						11-1-1-1-0-11	Processia V. No.
Depth (inc	cnes):	-					Hydric Soil	Present? Yes X No
Remarks:								





Soil





W



Project/Site: Leroy Center-Mayfield 138 kV Transm	nission Line Projec City/County: La	ake County	Sampling Date: 11/10/2021
Applicant/Owner: FirstEnergy			Sampling Point: Upland LP-012
Investigator(s): BAO	Section, Towns		
Landform (hillslope, terrace, etc.): Hillside			Slope (%): 4
Subregion (LRR or MLRA): LRR R			
Soil Map Unit Name: Or: Orrville silt loam		NWI classifi	cation: PSS1C
Are climatic / hydrologic conditions on the site typica			
Are Vegetation, Soil, or Hydrology _			present? Yes X No
Are Vegetation, Soil, or Hydrology _	 ,	(If needed, explain any answe	· ———
Are vegetation, Soil, or Hydrology _	naturally problematic?	(ii fieeded, explain any answi	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sampling p	oint locations, transects	s, important features, etc.
	''`	ampled Area Wetland? Yes	No
	NO	ptional Wetland Site ID: Upland	
Remarks: (Explain alternative procedures here or	in a separate report)	ptional Wetland Site ID:	
Upland slope located adjacent to lowland PEM wet	tland		
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum of one is required; ch	neck all that apply)	Surface Soi	Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Pa	atterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim L	lines (B16)
Saturation (A3)	Marl Deposits (B15)	Dry-Season	Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Bu	rrows (C8)
Sediment Deposits (B2)	Oxidized Rhizospheres on Living	ng Roots (C3) Saturation \	isible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced Iron (C4) Stunted or S	Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled	Soils (C6) Geomorphic	Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aqu	uitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Remarks)	Microtopogr	aphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		FAC-Neutra	l Test (D5)
Field Observations:	V Double (South only		
	Depth (inches):		
	Depth (inches):	Wedler dillededes Dece	No. Voc
Saturation Present? Yes No? (includes capillary fringe)	X Depth (inches):	Wetland Hydrology Prese	nt? Yes No <u>X</u>
Describe Recorded Data (stream gauge, monitoring	ng well, aerial photos, previous insp	pections), if available:	
Remarks:			

'EGETATION – Use scientific names of plants	i.			Sampling Point: Upland LP-0
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1Acer saccharum	10	Yes	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2. Acer rubrum	5	Yes	FAC	Total Number of Dominant
3				Species Across All Strata: 6 (B)
ł				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.3333333333 (A/E
5				That Are OBL, FACW, or FAC: 0.333333333 (A/E
5				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	15	= Total Cov	er	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15)				FACW species 0 x 2 = 0
Frangula alnus	5	Yes	FAC	FAC species 10 x 3 = 30
Rubus allegheniensis	15	Yes	FACU	FACU species x 4 = 400
l				UPL species $0 \times 5 = 0$ Column Totals: $110 \times 6 \times 6 \times 6$
				Column Totals:110 (A)430 (B
·				Prevalence Index = B/A = 3.9090909090
3	<u> </u>	<u> </u>		Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
7. <u> </u>		= Total Cov		2 - Dominance Test is >50%
5		= Total Cov	eı	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5 1. Solidago canadensis	60	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supportine data in Remarks or on a separate sheet)
<u>2</u> Erigeron annuus	15	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3				¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
S				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
3				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
l1		-		
12				Woody vines – All woody vines greater than 3.28 ft in height.
	75	= Total Cov	er	
Noody Vine Stratum (Plot size:)				
I				
2 <u>.</u>				Hydrophytic
3.				Vegetation Present? Yes No X
1				
T-		= Total Cov		

SOIL Sampling Point: Upland LP-012

Profile Desc	ription: (Describe t	o the dept				or confirm	the absence	of indicators.)
Depth	Matrix Color (moist)	%	Color (moist)	x Features	Type ¹	Loc ²	Texture	Remarks
(inches)			Color (moist)	%	<u>rype</u>	LOC		Remarks
0 - 16	10YR 4/3	100					Fine sandy loam	
-								
-								
-			_	·				
-								
-								
-								
-								
1- 0.0							2, ,,	BL B. J. L. L. M. M. L.
Hydric Soil I	ncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ins.		r: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belo	w Surface	(S8) (I DD	D		Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)	-	MLRA 149B		(30) (LIXIX	ι,		Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa		RR R, ML	RA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	_	Loamy Mucky I					Surface (S7) (LRR K, L, M)
	Layers (A5)	-	Loamy Gleyed	Matrix (F2))		Polyva	alue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	Depleted Matri					eark Surface (S9) (LRR K, L)
	rk Surface (A12)	-	Redox Dark Su	, ,	7 \			langanese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1) leyed Matrix (S4)	-	Depleted DarkRedox Depress		7)			ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)	-	Redux Depress	sions (no)				arent Material (F21)
-	Matrix (S6)							Shallow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149B)					(Explain in Remarks)
	hydrophytic vegetati	on and wet	land hydrology mu	st be prese	nt, unless	disturbed	or problemation	C.
	.ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes No _X
Remarks:								











Project/Site: Leroy Center-May	yfield 138 kV Tra	nsmission Line Projec City/C	County: Lake County		Sampling Date: 11/10/2021
Applicant/Owner: FirstEnergy			•		Sampling Point: Wetland LP-013
Investigator(s): BAO		Section Section			
Landform (hillslope, terrace, etc			· · · · · · ·		Slope (%): 1
Soil Map Unit Name: EIC: Ells	worth silt loam, 6	to 12 percent slopes		NWI classifica	Datum: WGS 1984
Are climatic / hydrologic conditi	ons on the site ty	pical for this time of year? Y	'es X No	(If no, explain in Re	emarks.)
Are Vegetation, Soil	, or Hydrolo	gy significantly distur	bed? Are "Normal	Circumstances" p	resent? Yes X No
Are Vegetation, Soil	, or Hydrolog	gy naturally problem	atic? (If needed, e	explain any answer	rs in Remarks.)
SUMMARY OF FINDING	GS – Attach s	site map showing san	npling point location	ons, transects,	important features, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative	Yes Yes		Is the Sampled Area within a Wetland? If yes, optional Wetland	·	 '
Wetland consists of pond fring survey area which flows to NH		ndditional hydrology from S-B	AO-111021-01. Outfall f	rom pond flows int	o a stream channel outside
HYDROLOGY					
Wetland Hydrology Indicato	ors:			Secondary Indicat	tors (minimum of two required)
Primary Indicators (minimum	of one is required			Surface Soil (
Surface Water (A1)		Water-Stained Leave		X Drainage Pat	
X High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Li	
X Saturation (A3)		Marl Deposits (B15)		-	Vater Table (C2)
Water Marks (B1)		Hydrogen Sulfide Od		Crayfish Burn	` ,
Sediment Deposits (B2)		X Oxidized Rhizospher	-		sible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Reduced		· 	ressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduction		X Geomorphic I	
Iron Deposits (B5)	(D7)	Thin Muck Surface (0	*	Shallow Aquit	• •
Inundation Visible on Aer		Other (Explain in Rer	marks)	Microtopogra	
Sparsely Vegetated Cond	cave Surface (B8)		FAC-Neutral	Test (D5)
Field Observations:	Vaa Na	Y Donath (in also as)			
Surface Water Present?		Depth (inches):	2		
Water Table Present?		Depth (inches):	3 0 Wetland F	landural a sua Dura a sua	40 Vaa V Na
Saturation Present? (includes capillary fringe)	Yes _ ^ No	Depth (inches):	o wetiand r	lydrology Presen	t? Yes <u>X</u> No
Describe Recorded Data (stre	am gauge, moni	toring well, aerial photos, pre	evious inspections), if ava	ilable:	
Remarks:					
Nemarks.					

EGETATION – Use scientific names of plants				Sampling Point: Wetland LP-01
Tree Stratum (Plot size:) 1)		Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant Species Across All Strata: 3 (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.6666666666 (A/B
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	er	OBL species
Sapling/Shrub Stratum (Plot size: 15)				FACW species $\frac{105}{15}$ x 2 = $\frac{210}{45}$
1Rubus argutus	3	Yes	FACU	AC species x 3 =
2Frangula alnus	10	Yes	FAC	FACU species $3 \times 4 = 12$ UPL species $0 \times 5 = 0$
3				Column Totals: 123 (A) 267 (B)
4 5				Prevalence Index = B/A = 2.170731707;
				Hydrophytic Vegetation Indicators:
6				1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
5		= Total Cov	er	X 3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:5) 1Phalaris arundinacea	95	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Symphyotrichum novae-angliae	10	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Euthamia graminifolia 4.			FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_				Definitions of Vegetation Strata:
5				
6				Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.
3 9.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in height.
		= Total Cov		neight.
Woody Vine Stratum (Plot size:30)		- Total Cov	Ci	
1				Hydrophytic
2				Vegetation Present? Yes X No
3				riesent? res No
4.				
T		= Total Cov	er	
T-,		= Total Cov	er	

SOIL Sampling Point: Wetland LP-013

Profile Desc	ription: (Describe to	o the dept	h needed to docun	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Redox Color (moist)	x Features	S Type ¹	Loc ²	Texture	Remarks
0 - 17	10R 4/1	90	10R 4/4	10	Concer	PL	Silty clay loam	
-								
-								
1- 0.0							21 1:	- N. D. J. C. M. M. C.
Hydric Soil I	oncentration, D=Deple Indicators:	etion, Rivi=	Reduced Matrix, MS	s=iviasked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol Histic Ep	pipedon (A2)		Polyvalue Belov MLRA 149B) Thin Dark Surfa				2 cm M Coast I	fluck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) flucky Peat or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A4)		Loamy Mucky M	1ineral (F1) (LRR K		Dark S	urface (S7) (LRR K, L, M)
	l Layers (A5) d Below Dark Surface	(A11)	Loamy Gleyed NDepleted Matrix)			lue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L)
Thick Da	ark Surface (A12)	,	Redox Dark Sur	face (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1) sleyed Matrix (S4)		Depleted Dark S Redox Depress		7)			ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
	ledox (S5)		Nedox Depress	10113 (1 0)				arent Material (F21)
Stripped	Matrix (S6)						Very S	hallow Dark Surface (TF12)
Dark Sui	rface (S7) (LRR R, M	LRA 149B)				Other (Explain in Remarks)
	hydrophytic vegetati	on and we	tland hydrology mus	t be prese	ent, unless	disturbed	or problematio).
	_ayer (if observed):							
Type: Depth (inc	ches).						Hydric Soil	Present? Yes X No No
Remarks:							Tryuno con	riesent. res ne
rtomarto.								





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Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/0	County: Lake County	Sampling Date: 11/10/2021
	State: OH	
Investigator(s): BAO Sect		
Landform (hillslope, terrace, etc.): Hillside Local re		Slope (%): 10
Subregion (LRR or MLRA): LRR R Lat: 41.6422226666666	67 Long: -81.15662416666667	No. 7 Datum: WGS 1984
Subregion (LRR or MLRA): LRR R Lat: 41.64222266666666 Soil Map Unit Name: EIC: Ellsworth silt loam, 6 to 12 percent slopes	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year?		
Are Vegetation, Soil, or Hydrology significantly distu	rrbed? Are "Normal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally problem		
SUMMARY OF FINDINGS – Attach site map showing sar	mpling point locations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes NoX Hydric Soil Present? Yes NoX	Is the Sampled Area within a Wetland? Yes	No
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID: Upland L	
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil	Cracks (B6)
Surface Water (A1) Water-Stained Leave	es (B9) Drainage Pa	tterns (B10)
High Water Table (A2) Aquatic Fauna (B13)		nes (B16)
Saturation (A3) Marl Deposits (B15)		Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Oc		` '
		sible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduce		tressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reducti	• • • • • • • • • • • • • • • • • • • •	Position (D2)
Iron Deposits (B5) Thin Muck Surface (
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re Sparsely Vegetated Concave Surface (B8)	emarks) Microtopogra FAC-Neutral	
Field Observations:	FAC-Neutial	Test (D3)
Surface Water Present? Yes No _X _ Depth (inches):		
Water Table Present? Yes No _X Depth (inches):		
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	Wetland Hydrology Presen	t? Yes NoX
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections), if available:	
Damada		
Remarks:		

<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata:5 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co	ver	OBL species0 x 1 =0
Sapling/Shrub Stratum (Plot size: 15)	_	-		FACW species40
1. Frangula alnus	5	Yes	FAC	FAC species5 x 3 =15
	4.0		FACU	FACU species70 x 4 =280
			1700	UPL species0 x 5 =0
3				Column Totals:115 (A)375 (B)
4 5.				Prevalence Index = B/A = 3.2608695652
5				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co		2 - Dominance Test is >50%
5		= 10tal Co	vei	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5 1. Phalaris arundinacea	40	Yes	FACW	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Solidago canadensis		Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
		Yes		
Bromus arvensis 4				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				size, and woody plants less than 3.28 it tall.
12.				Woody vines – All woody vines greater than 3.28 ft in height.
	100	= Total Co	ver	neight.
Woody Vine Stratum (Plot size:)				
1				
2.				Hydrophytic
				Vegetation Present? Yes No X
3				
4		= Total Co		
Remarks: (Include photo numbers here or on a separate	sheet)	_ 10tal C0	vci	
remarks. (include prioto numbers here or on a separate	Sileet.)			

Sampling Point: Upland LP-013

SOIL Sampling Point: Upland LP-013

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the indicate	or or confirm	the absence of indic	cators.)
Depth	Matrix			x Features			
(inches)	Color (moist)	%	Color (moist)	<u>%</u> <u>Type</u>	Loc ²	<u>Texture</u>	Remarks
0 - 16	10R 3/2	100					
-							
-							
-							
			_				
			_				_
							_
¹ Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked Sand	Grains.		ore Lining, M=Matrix. blematic Hydric Soils³:
•			Polynyoluo Poloy	v Surface (SS) (I	DD D		•
Histosol	ipedon (A2)		Polyvalue Belov	v Surface (S8) (L	KK K,		(0) (LRR K, L, MLRA 149B) Redox (A16) (LRR K, L, R)
Black His			,	ce (S9) (LRR R ,	MI RA 149R)		eat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	•		lineral (F1) (LRR		-	S7) (LRR K, L, M)
	Layers (A5)	•	Loamy Gleyed I		κ, Ε)		ow Surface (S8) (LRR K, L)
	l Below Dark Surface	. (Λ11)	Depleted Matrix			•	face (S9) (LRR K, L)
		: (A11)					
	rk Surface (A12)	•	Redox Dark Su			-	se Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)		Depleted Dark S				dplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)	,	Redox Depress	ions (F8)			(TA6) (MLRA 144A, 145, 149B)
Sandy R	edox (S5)					Red Parent Ma	· · · ·
Stripped	Matrix (S6)					Very Shallow [Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	LRA 149B)			Other (Explain	in Remarks)
	hydrophytic vegetati	on and we	tland hydrology mus	t be present, unle	ess disturbed	or problematic.	
Restrictive L	.ayer (if observed):						
Type:							
Depth (inc	ches):					Hydric Soil Presen	t? Yes No _X
Remarks:							





c



Soil

Project/Site: Leroy Center-Mag	yfield 138 kV Trans	mission Line Projec City/C	county: Geauga County		Sampling Date: 10/21/2021	
Applicant/Owner: FirstEnergy			,		Sampling Point: Wetland LP-014	
Investigator(s): MJA		Section	on, Township, Range: N			
Landform (hillslope, terrace, etc					Slone (%): 2	
Subragion (LDD or MLDA): LE	3.) RR R	1 at: 41.64123849999999)	15743266666665	Datum: WGS 1984	
Soil Map Unit Name: PsB: Pla	tea silt loam 2 to 6	nercent slones	Long:		N/Δ	
Are climatic / hydrologic condit		•				
Are Vegetation, Soil	, or Hydrology	significantly distur	bed? Are "Norma	ll Circumstances" p	resent? Yes X No	
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed,	explain any answer	rs in Remarks.)	
SUMMARY OF FINDING	GS – Attach si	e map showing sam	npling point location	ons, transects	important features, etc.	
Hydrophytic Vegetation Prese	ent? Yes	X No	Is the Sampled Area			
Hydric Soil Present?		X No	within a Wetland?	Yes X	_ No	
Wetland Hydrology Present?		X No	If yes, optional Wetland	d Site ID. Wetland I	_P-014	
Remarks: (Explain alternative			ii yee, optional wettan	u one ib		
road via culvert and emerges			g		Vater from wetland flows under	
HYDROLOGY						
Wetland Hydrology Indicato	ors:			Secondary Indica	tors (minimum of two required)	
Primary Indicators (minimum	of one is required;	check all that apply)		Surface Soil (Cracks (B6)	
Surface Water (A1)		Water-Stained Leave	s (B9)	Drainage Patterns (B10)		
High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Li	nes (B16)	
Saturation (A3)		Marl Deposits (B15)		Dry-Season Water Table (C2)		
Water Marks (B1)		Hydrogen Sulfide Od	or (C1)	Crayfish Burrows (C8)		
Sediment Deposits (B2)		X Oxidized Rhizosphere	-		sible on Aerial Imagery (C9)	
Drift Deposits (B3)		Presence of Reduced			ressed Plants (D1)	
Algal Mat or Crust (B4)		Recent Iron Reductio		X Geomorphic Position (D2)		
Iron Deposits (B5)		Thin Muck Surface (C		Shallow Aqui	` '	
Inundation Visible on Aer		Other (Explain in Rer	narks)	· -	phic Relief (D4)	
Sparsely Vegetated Cond	cave Surface (B8)			X FAC-Neutral	Test (D5)	
Field Observations:		V 5 " " 1)				
Surface Water Present?		X Depth (inches):				
Water Table Present?		X Depth (inches):				
Saturation Present? (includes capillary fringe)		X Depth (inches):		Hydrology Presen	t? Yes <u>X</u> No	
Describe Recorded Data (stre	am gauge, monitor	ing well, aerial photos, pre	vious inspections), if ava	ailable:		
Domarko						
Remarks:						

			Sampling Point: Wetland LP-01
Absolute % Cover	Dominant Species?		Dominance Test worksheet:
			Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
			Total Number of Dominant Species Across All Strata: 2 (B)
			(2)
			Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B
			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
	= Total Cove	er	OBL species10 x 1 =10
			FACW species $\frac{130}{23}$ x 2 = $\frac{260}{33}$
3	No	FAC	FAC species 23 x 3 = 69 10 x 4 = 40
			FACU species 10 x 4 = 40 UPL species 0 x 5 = 0
			Column Totals: 173 (A) 379 (B
			Prevalence Index = B/A = 2.190751445(
			Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation
_			X 2 - Dominance Test is >50%
<u> </u>	= Total Cove	er	X 3 - Prevalence Index is ≤3.0 ¹
60	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supportin data in Remarks or on a separate sheet)
10	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
	No	OBL	¹ Indicators of hydric soil and wetland hydrology must
20	No	FAC	be present, unless disturbed or problematic.
30	No	FACW	Definitions of Vegetation Strata:
40	Yes	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
			Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
			Herb – All herbaceous (non-woody) plants, regardless of
			size, and woody plants less than 3.28 ft tall.
			Woody vines – All woody vines greater than 3.28 ft in height.
170	= Total Cove	er	
			Hydrophytic Vegetation
			Present? Yes X No
	3 60 10 20 30 40	= Total Cove 3 No 3 = Total Cove 60 Yes 10 No 20 No 30 No 40 Yes 170 = Total Cove	= Total Cover 3

SOIL Sampling Point: Wetland LP-014

Profile Desc	ription: (Describe t	o the dep	th needed to docu	ment the i	indicator o	or confirn	n the absence	of indicators.)			
Depth	Matrix			x Feature	<u>s</u> ,	2					
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks			
0 - 5	10YR 4/2	95	5YR 4/4	5	Concer	M,PL	Clay loam				
5 - 18	5Y 5/1	70	5YR 4/6	30	Concer	PL,M	Clay loam				
-											
-											
-											
-											
-											
							-				
							-				
							. ———				
1							2				
'Type: C=Co	oncentration, D=Deplementation D=Deplement D=Deplement	etion, RM=	Reduced Matrix, M	S=Masked	d Sand Gra	iins.		r PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :			
Histosol			Polyvalue Belo	w Surface	(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)			
-	pipedon (A2)				Prairie Redox (A16) (LRR K, L, R)						
Black His	stic (A3) n Sulfide (A4)		Thin Dark Surfa Loamy Mucky I					Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L, M)			
	l Layers (A5)		Loamy Gleyed			L)		alue Below Surface (S8) (LRR K, L)			
	Below Dark Surface	e (A11)	X Depleted Matrix		-,			Park Surface (S9) (LRR K, L)			
	ark Surface (A12)		Redox Dark Su	, ,			Iron-M	anganese Masses (F12) (LRR K, L, R)			
	lucky Mineral (S1)		Depleted Dark		7)		Piedmont Floodplain Soils (F19) (MLRA 149B)				
	Sleyed Matrix (S4)		Redox Depress	sions (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
-	ledox (S5) Matrix (S6)							Red Parent Material (F21)			
	rface (S7) (LRR R, M	LRA 149E	3)				Very Shallow Dark Surface (TF12)Other (Explain in Remarks)				
³ Indicators of	f hydrophytic vegetati	on and we	tland hydrology mus	st he nres	ent unless	disturbed	l or problemation	•			
	_ayer (if observed):	on and we	dana nyarology ma	ot be pres	orit, driicoo	diotarbed	Problemate				
Type:											
Depth (inc	ches):						Hydric Soil	Present? Yes X No No			
Remarks:											



Soil



Prominent redox!



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W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Ma	yfield 138 kV Trans	smission Line Pr	rojec City/Co	ounty: Geaug	ga County		Sampling Date: 1	0/21/2021
Applicant/Owner: FirstEnergy				,			Sampling Point	
			Sectio	n Township	Range: N	-		
							Slon	
Landform (hillslope, terrace, et	c.). RR R	41 64126	_ LOCALTER	ei (concave, c	.011vex, 1101	15746275	Slop	WGS 1984
Subregion (LRR or MLRA): LF	etaa silt laam 2 ta (Lat: 41.04120						:
Soil Map Unit Name: PsB: Pla						NWI classific		
Are climatic / hydrologic condit	ions on the site typ	ical for this time	of year? Ye	es X No	o	(If no, explain in R	emarks.)	
Are Vegetation, Soil	, or Hydrology	/signific	antly disturb	oed? Ai	re "Normal	Circumstances" p	resent? Yes>	< No
Are Vegetation, Soil	, or Hydrology	/ natura	lly problema	itic? (If	f needed, e	explain any answe	rs in Remarks.)	
SUMMARY OF FINDIN	GS – Attach si	ite map show	wing sam	pling poin	t locatio	ons, transects	, important fea	atures, etc.
Hydrophytic Vegetation Pres	ent? Yes	No	Х	Is the Samp	led Area			
Hydric Soil Present?		No		within a Wet		Yes	No	
Wetland Hydrology Present?		No	X	If ves option	al Wetland	I Site ID: Upland L	P-014	
Remarks: (Explain alternativ				ii yes, option	ur vvetiane	Ollo ID.		
HYDROLOGY								
Wetland Hydrology Indicate	ors:					Secondary Indica	tors (minimum of t	wo required)
Primary Indicators (minimum	of one is required;	check all that a	oply)			Surface Soil	Cracks (B6)	
Surface Water (A1)		Water-Sta	ined Leaves	s (B9)		Drainage Pat	terns (B10)	
High Water Table (A2)		Aquatic Fa	auna (B13)		Moss Trim Lines (B16)			
Saturation (A3)		Marl Depo			Dry-Season Water Table (C2)			
Water Marks (B1)		Hydrogen				Crayfish Burr		
Sediment Deposits (B2)		Oxidized I		_	oots (C3)		sible on Aerial Ima	
Drift Deposits (B3)		Presence		, ,	· · · · · · · · · · · · · · · · · · ·			
Algal Mat or Crust (B4)				n in Tilled Soil:	Soils (C6) Geomorphic Position (D2) Shallow Aquitard (D3)			
Iron Deposits (B5) Inundation Visible on Ae	rial Imagery (R7)	Thin Muck Other (Ex						
Sparsely Vegetated Con		Outer (Ex	piairi ii i i i i i	iaiko)		FAC-Neutral		
Field Observations:							1001 (20)	
Surface Water Present?	Yes No _	X Depth (in	iches).					
Water Table Present?	Yes No							
Saturation Present?	Yes No			,	Wetland F	lydrology Presen	t? Yes	No X
(includes capillary fringe) Describe Recorded Data (stre	an sausa manits	ring wall parial	nhataa nray	vious inspectio	ana) if ava	ilabla		
Describe Recorded Data (stre	am gauge, monito	oring well, aerial	priotos, prev	vious inspection	ons), ir ava	iliable:		
Remarks:								

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:		
1				Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)		
2				Total Number of Dominant		
3				Species Across All Strata: 2 (B)		
4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC: 0 (A/B)		
6						
				Prevalence Index worksheet:		
7						
45		_ = Total Co	ver	OBL species X 1 =		
Sapling/Shrub Stratum (Plot size: 15)				FACW species0 x 2 =0 FAC species0 x 3 =0		
1				FACU species 155 x 4 = 620		
2				UPL species 0 x 5 = 0		
3				Column Totals: 155 (A) 620 (B)		
4						
5				Prevalence Index = B/A = 4		
6				Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation		
		= Total Co	ver	2 - Dominance Test is >50%		
Herb Stratum (Plot size:5			VCI	3 - Prevalence Index is ≤3.0 ¹		
1. Schedonorus arundinaceus	70	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
2. Andropogon virginicus	<u> </u>	Yes	FACU	Problematic Hydrophytic Vegetation¹ (Explain)		
3. Potentilla simplex		No	FACU	¹ Indicators of hydric soil and wetland hydrology must		
4. Rosa multiflora			FACU	be present, unless disturbed or problematic.		
·· ·				Definitions of Vegetation Strata:		
5				_		
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
7				Senting Johnsto Mandy plants loss than 2 in DDI		
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.		
9				Herb – All herbaceous (non-woody) plants, regardless of		
10				size, and woody plants less than 3.28 ft tall.		
11				Woody vines – All woody vines greater than 3.28 ft in		
12				height.		
	155	= Total Co	ver			
Woody Vine Stratum (Plot size:)						
1						
2				Hydrophytic		
3.				Vegetation Present? Yes No X		
4.						
·· 		= Total Co	ver			
Remarks: (Include photo numbers here or on a separate	sheet)	Total Co	vei			
Tromance: (molado prioto namboro noto en en a coparato	0.1001.)					

Sampling Point: Upland LP-014

SOIL Sampling Point: Upland LP-014

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the i	ndicator o	or confirm	n the absence	e of indicators.)		
Depth	Matrix			x Feature:	<u>s</u> .					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 18	10YR 4/3	90	10YR 4/6	10	Concer	М	Clay loam			
-										
				-						
-										
-										
-										
	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ins.		n: PL=Pore Lining, M=Matrix.		
Hydric Soil I								s for Problematic Hydric Soils ³ :		
Histosol			Polyvalue Belov		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)		
	pipedon (A2)		MLRA 149B	,	DD D MI	D A 440D		Prairie Redox (A16) (LRR K, L, R)		
Black His	stic (A3) n Sulfide (A4)		Thin Dark Surfa Loamy Mucky N					Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L, M)		
	l Layers (A5)		Loamy Gleyed			L)		alue Below Surface (S8) (LRR K, L)		
	d Below Dark Surface	(A11)	Depleted Matrix		,			Dark Surface (S9) (LRR K, L)		
	ark Surface (A12)	, (, ,	Redox Dark Su					Manganese Masses (F12) (LRR K, L, R)		
	lucky Mineral (S1)		Depleted Dark		7)			nont Floodplain Soils (F19) (MLRA 149B)		
	sleyed Matrix (S4)		Redox Depress		.,			Spodic (TA6) (MLRA 144A, 145, 149B)		
	ledox (S5)			- (-)				Parent Material (F21)		
-	Matrix (S6)						Very Shallow Dark Surface (TF12)			
	rface (S7) (LRR R, M	LRA 149E	3)					(Explain in Remarks)		
	, ,,		•					,		
³ Indicators of	hydrophytic vegetati	on and we	tland hydrology mus	st be prese	ent, unless	disturbed	l or problemati	C.		
Restrictive L	ayer (if observed):									
Type:										
Depth (inc	ches):						Hydric Soi	I Present? Yes No _X		
Remarks:							1 -			
· · · · · · · · · · · · · · · · · · ·										





N Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-May	yfield 138 kV	Γransmis	ssion Line Projec City/0	County: Geau	iga County	S	ampling Date: 10/21/202	21
Applicant/Owner: FirstEnergy				-			Sampling Point: Wetland	
Investigator(s): MJA			Secti	ion, Township	, Range: N/A			
Landform (hillslope, terrace, etc						Flat	Slope (%): 0	
Subregion (LRR or MLRA): LR								
Soil Map Unit Name: PsB: Pla	tea silt loam, 2	2 to 6 per	rcent slopes			NWI classificati	on: N/A	
Are climatic / hydrologic conditi	ons on the site	e typical	for this time of year? `	Yes N	No X (If n	o, explain in Rem	narks.)	
Are Vegetation, Soil	, or Hydro	ology	significantly distu	ırbed?	Are "Normal Cir	cumstances" pre	sent? Yes X No_	
Are Vegetation, Soil								
SUMMARY OF FINDING	3S – Attac	h site ı	map showing sar	mpling poi	nt locations	, transects, i	mportant features,	etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative	Y Y	es X es X			etland?	Yes X e ID: Wetland LP		
HYDROLOGY								
Wetland Hydrology Indicato	rs:				<u>Se</u>	condary Indicator	rs (minimum of two requi	red)
Primary Indicators (minimum	of one is requ	ired; che	ck all that apply)			Surface Soil Cra		
Surface Water (A1)			_ Water-Stained Leave			Drainage Patter		
X High Water Table (A2)			_ Aquatic Fauna (B13)			Moss Trim Line		
X Saturation (A3)			_ Marl Deposits (B15)			Dry-Season Wa		
Water Marks (B1)			_ Hydrogen Sulfide Od			Crayfish Burrow	` '	2)
Sediment Deposits (B2) Drift Deposits (B3)			Oxidized RhizosphePresence of Reduce		(C3)		ole on Aerial Imagery (C9 ssed Plants (D1)	")
Algal Mat or Crust (B4)			Recent Iron Reduction			Geomorphic Po	, ,	
Iron Deposits (B5)			_ Thin Muck Surface (Shallow Aquitar		
Inundation Visible on Aer	ial Imagery (P		_ Other (Explain in Re			Microtopograph		
Sparsely Vegetated Cond				,,,,,,,		FAC-Neutral Te		
Field Observations:						, , , , , , , , , , , , , , , , , ,		
Surface Water Present?	Yes	No X	Depth (inches):					
Water Table Present?			Depth (inches):	2				
Saturation Present? (includes capillary fringe)	Yes X	No	Depth (inches):	0	-	rology Present?	Yes <u>X</u> No	
Describe Recorded Data (stre	am gauge, m	onitoring	well, aerial photos, pro	evious inspect	ions), if availab	le:		
Remarks:								

VEGETATION – Use scientific names of plants.

		Sampling Point: Wetland LP-01
		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
		Total Number of Dominant Species Across All Strata:1 (B)
		Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B)
		Prevalence Index worksheet:
		Total % Cover of: Multiply by:
-	= Total Cover	OBL species10 x 1 =10
		FACW species x 2 = 200
		FAC species x 3 = 0
		FACU species 0 x 4 = 0
		UPL species
		Column Totals:110(A)210(B)
		Prevalence Index = B/A = 1.9090909090
		-
	·	Hydrophytic Vegetation Indicators:
	·	X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%
	= Total Cover	$\frac{X}{X}$ 3 - Prevalence Index is $\leq 3.0^{\circ}$
100	Yes FACW	4 - Morphological Adaptations ¹ (Provide supporting
		Problematic Hydrophytic Vegetation¹ (Explain)
		¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		-
	·	Definitions of Vegetation Strata:
		Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
		Herb – All herbaceous (non-woody) plants, regardless of
		size, and woody plants less than 3.28 ft tall.
		Woody vines – All woody vines greater than 3.28 ft in
		height.
110	= Total Cover	
		Hydrophytic
		Vegetation Present? Yes X No
		- 110001111 100 110
	= Total Cover	
		% Cover Species? Status

SOIL Sampling Point: Wetland LP-015

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the i	ndicator o	r confirm	the absence	of indicators.)		
Depth	Matrix			x Feature:	<u>3</u>	2				
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks		
4 - 18	2.5Y 5/1	80	5YR 4/6	20	Concer	PL,M	Clay			
0 - 4	2.5Y 4/2	100					Clay loam			
-										
-										
-										
_										
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ins.		: PL=Pore Lining, M=Matrix.		
Hydric Soil I						_		for Problematic Hydric Soils ³ :		
Histosol	(A1) pipedon (A2)		Polyvalue Belov MLRA 149B		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)		
Black His			Thin Dark Surfa		.RR R, ML	RA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4)		Loamy Mucky N			L)		Surface (S7) (LRR K, L, M)		
	Layers (A5)	(444)	Loamy Gleyed)			llue Below Surface (S8) (LRR K, L)		
	l Below Dark Surface ork Surface (A12)	: (A11)	X Depleted MatrixRedox Dark Su					ark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R)		
	lucky Mineral (S1)		Depleted Dark	. ,	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)			
Sandy G	leyed Matrix (S4)		Redox Depress					Spodic (TA6) (MLRA 144A, 145, 149B)		
-	edox (S5)							arent Material (F21)		
	Matrix (S6) face (S7) (LRR R, M	LRA 149E	3)				Very Shallow Dark Surface (TF12) Other (Explain in Remarks)			
	hydrophytic vegetati	on and we	tland hydrology mus	t be prese	ent, unless	disturbed	or problemation	<u>></u> .		
Type:	Layer (ii observeu).									
Depth (inc	ches):						Hydric Soil	Present? Yes X No No		
Remarks:										





Soil





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WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission	Line Projec City/County: Geau	iga County	Sampling Date: 10/21/2021		
Applicant/Owner: FirstEnergy			Sampling Point: Upland LP-015		
Investigator(s): MJA					
Landform (hillslope, terrace, etc.): Flat			Slope (%): ⁰		
Subregion (LRR or MLRA): LRR R Lat: 41	.63840766666667	Long: -81.161663333333334	Natum: WGS 1984		
Subregion (LRR or MLRA): LRR R Lat: 41 Soil Map Unit Name: PsB: Platea silt loam, 2 to 6 percent	slopes	NWI classific	ation: N/A		
Are climatic / hydrologic conditions on the site typical for th	is time of year? Yes N	No X (If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" p	resent? Yes X No		
Are Vegetation, Soil, or Hydrology		If needed, explain any answer			
SUMMARY OF FINDINGS – Attach site map	showing sampling poin	nt locations, transects	, important features, etc.		
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes N	No X within a We	etland? Yes			
Wetland Hydrology Present? Yes N	No X If yes, optio	nal Wetland Site ID: Upland L	P-015		
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)		
Primary Indicators (minimum of one is required; check all	that annly)	Surface Soil			
· · · · · · · · · · · · · · · · · · ·	iter-Stained Leaves (B9)	Drainage Pat			
	uatic Fauna (B13)	Moss Trim Li			
	rl Deposits (B15)	Dry-Season Water Table (C2)			
	drogen Sulfide Odor (C1)	Crayfish Burr			
	idized Rhizospheres on Living F	Roots (C3) Saturation Vi	sible on Aerial Imagery (C9)		
Drift Deposits (B3) Pre	esence of Reduced Iron (C4)	Stunted or St	ressed Plants (D1)		
Algal Mat or Crust (B4) Re	cent Iron Reduction in Tilled So	ils (C6) Geomorphic	Position (D2)		
	n Muck Surface (C7)	Shallow Aqui			
	ner (Explain in Remarks)	Microtopogra			
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral	Test (D5)		
Field Observations:					
Surface Water Present? Yes No X De					
Water Table Present? Yes No X De		Wedler dilledele en Beren	10 V N- V		
Saturation Present? Yes No _X _ De (includes capillary fringe)	eptn (inches):	Wetland Hydrology Presen	t? Yes No _X		
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspect	ions), if available:			
Remarks:					
Tromano.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30)	Absolute	Dominant Indicator Species? Status	Dominance Test worksheet:
1			Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2			(1)
3			Total Number of Dominant Species Across All Strata: 3 (B)
4			Percent of Dominant Species That Are OBL, FACW, or FAC: 0.666666666 (A/B)
5			(
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
		_ = Total Cover	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15)			FACW species 30
1			FACULADOSIOS 50 x 4 = 200
2			X 4 =
3			01 L 3pccic3 X 0 =
4			Column Totals:120 (A)380 (B)
5			Prevalence Index = B/A = 3.1666666666
6			Hydrophytic Vegetation Indicators:
7			1 - Rapid Test for Hydrophytic Vegetation
		= Total Cover	X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5		-	3 - Prevalence Index is ≤3.0 ¹
1. Setaria faberi	50	Yes FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Phalaris arundinacea	30	Yes FACW	Problematic Hydrophytic Vegetation¹ (Explain)
3. Panicum virgatum	40	Yes FAC	¹ Indicators of hydric soil and wetland hydrology must
4			be present, unless disturbed or problematic.
5			Definitions of Vegetation Strata:
6			Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7			
8			Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9			Howh All hasheeseeve (non-woody) slents, secondless of
10			Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11			Woody vines – All woody vines greater than 3.28 ft in
12			height.
	120	= Total Cover	
Woody Vine Stratum (Plot size:)			
1			
2.			Hydrophytic
3			Vegetation Present? Yes X No
4.			
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet.)	-	1
(,		

Sampling Point: Upland LP-015

SOIL Sampling Point: Upland LP-015

Profile Desc	ription: (Describe t	o the dep	th needed to docun	nent the i	ndicator	or confirm	n the absence	of indicators.)			
Depth	Matrix		Redox	K Feature:	<u>S</u> _ 1	. 2	_				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0 - 8	10YR 4/2	100					Silty loam				
8 - 18	10YR 4/3	90	10YR 5/8	10	Concer	М	Silty clay loam				
							· 	-			
							· 				
-											
-											
				-			· 				
							. ———				
-											
1Typo: C=C	oncentration, D=Depl	otion DM-	-Poducod Matrix MS		Sand Gr		² Location	: PL=Pore Lining, M=Matrix.			
Hydric Soil I		elion, Kivi-	-Reduced Matrix, Mc	-Wasket	i Sariu Gra	11115.		for Problematic Hydric Soils	3:		
Histosol			Polyvalue Below	v Surface	(S8) (LRF	R.		fuck (A10) (LRR K, L, MLRA			
	pipedon (A2)		MLRA 149B)		() (,		Prairie Redox (A16) (LRR K, L	-		
Black Hi	stic (A3)		Thin Dark Surfa	ce (S9) (L	RR R, MI	RA 149B					
	n Sulfide (A4)		Loamy Mucky M			, L)		urface (S7) (LRR K, L, M)			
	Layers (A5)	(444)	Loamy Gleyed N)			lue Below Surface (S8) (LRR	K, L)		
	d Below Dark Surface ark Surface (A12)	e (A11)	Depleted Matrix Redox Dark Sur					ark Surface (S9) (LRR K, L)	K I D)		
	lucky Mineral (S1)		Depleted Dark S					Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B)			
	sleyed Matrix (S4)		Redox Depressi		.,		Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
	edox (S5)			, ,			Red Parent Material (F21)				
Stripped	Matrix (S6)						Very Shallow Dark Surface (TF12)				
Dark Su	rface (S7) (LRR R, M	ILRA 149E	3)				Other (Explain in Remarks)				
3											
	hydrophytic vegetati ayer (if observed):	ion and we	tiand nydrology mus	t be prese	ent, uniess	aisturbea	T or problemation	i.			
	Layer (ii observeu).										
Type: Depth (inc	phoe):						Hydric Soil	Present? Yes No	_ X		
	siles)						Hydric 30ii	riesent? Tes No			
Remarks:											





Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Project/Site:	jec City/County: Geauga C	County	Sampling Date: 10/21/2021
Applicant/Owner: FirstEnergy			Sampling Point: Wetland LP-016
Investigator(s): MJA			
Landform (hillslope, terrace, etc.): Undulating			Slope (%): 1
Subregion (LRR or MLRA): LRR R Lat: 41.634359			
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slop	es Eon	9 NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes No X	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Are "	Normal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If ne	eeded, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling point lo	ocations, transects	important features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No Remarks: (Explain alternative procedures here or in a separate root of the separate root of	within a Wetlan If yes, optional V	Area nd? Yes X Wetland Site ID: Wetland I	
HYDROLOGY		Canandam Indian	to an (maining one of the an action of
Wetland Hydrology Indicators:	I. A		tors (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	•	Surface Soil (
	ned Leaves (B9)	Drainage Pat	
High Water Table (A2) Aquatic Fau		Moss Trim Li	
Saturation (A3) Marl Depos			Vater Table (C2)
	Sulfide Odor (C1)	Crayfish Burr	` ,
	nizospheres on Living Roots		sible on Aerial Imagery (C9)
	f Reduced Iron (C4) Reduction in Tilled Soils (C	·	ressed Plants (D1)
Iron Deposits (B5) Thin Muck \$		Shallow Aqui	
	ain in Remarks)	Microtopogra	
Sparsely Vegetated Concave Surface (B8)	alli ili Reiliaiks)	X FAC-Neutral	
Field Observations:		A TAC-Neutral	1651 (D3)
Surface Water Present? Yes No _X Depth (incl	hee).		
Water Table Present? Yes No _X Depth (incl	*		
Saturation Present? Yes No X Depth (incl		tland Hydrology Presen	t? Yes X No
(includes capillary fringe)	vve	ciana nyarology Fresen	t: les <u>∧</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial pl	notos, previous inspections), if available:	
Remarks:			
Remarks.			

VEGETATION – Use scientific names of plants.

Troe Stratum (Blot size: 30	Absolute			Dominance Test worksheet:	
Tree Stratum (Plot size:) 1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)	
2					
3				Total Number of Dominant Species Across All Strata: 2 (B)	
4					
				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B)	
5					
6				Prevalence Index worksheet:	
7				Total % Cover of: Multiply by:	
		= Total Cov	/er	OBL species40 x 1 =40	
Sapling/Shrub Stratum (Plot size: 15)				FACW species 105 x 2 = 210 EAC species 0 x 3 = 0	
1. Salix sericea	5	Yes	OBL	1 AC species	
2			<u> </u>	TACO species X4 =	
3				01 L 3pccic3 X 0 =	
4				Column Totals:155 (A)290 (B)	
5				Prevalence Index = B/A = 1.8709677419	
6				Hydrophytic Vegetation Indicators:	
7				X 1 - Rapid Test for Hydrophytic Vegetation	
		= Total Cov	/er	X 2 - Dominance Test is >50%	
Herb Stratum (Plot size:5)		-		X 3 - Prevalence Index is ≤3.0 ¹	
1. Phalaris arundinacea	90	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
2Typha latifolia	5	No	OBL	Problematic Hydrophytic Vegetation¹ (Explain)	
3. Solidago canadensis			FACU	¹ Indicators of hydric soil and wetland hydrology must	
4. Juncus effusus	4.5		OBL	be present, unless disturbed or problematic.	
5. Symphyotrichum novae-angliae	5		FACW	Definitions of Vegetation Strata:	
0	15	No	OBL		
			FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	
			FACW		
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
9		-	- ——	Herb – All herbaceous (non-woody) plants, regardless of	
10		-		size, and woody plants less than 3.28 ft tall.	
11				Woody vines – All woody vines greater than 3.28 ft in	
12				height.	
	150	= Total Cov	/er		
Woody Vine Stratum (Plot size:)					
1					
2				Hydrophytic	
3				Vegetation Present? Yes X No	
4			·		
T-	-	= Total Cov	/or		
Remarks: (Include photo numbers here or on a separate	sheet)	_ = 10tal C0	/CI		
Tremane. (molade prote numbers here of on a separate	once.,				

Sampling Point: Wetland LP-016

SOIL Sampling Point: Wetland LP-016

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator o	or confirm	the absence	of indicators.)	
Depth	Matrix			x Features	<u>S</u> _ 1	. 2			
(inches)	Color (moist)	%	Color (moist)	<u></u> %	Type ¹	Loc ²	Texture	Remarks	
0 - 10	10YR 4/1	80	5YR 3/3	20	Concer	PL,M	Silty clay		
-									
	-								
-									
-									
-									
-									
-									
1- 0.0							21	BL B. III III III	
Hydric Soil I	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	iins.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :	
-			Dalvaralus Dalas	Cf	(CO) /L DD			· · · · · · · · · · · · · · · · · · ·	
Histosol	(AT) pipedon (A2)		Polyvalue Below MLRA 149B)		(58) (LKK	к,		Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)	
Black Hi			Thin Dark Surfa		RRR MI	RA 149R)		Mucky Peat or Peat (S3) (LRR K, L, R)	
	n Sulfide (A4)	•	Loamy Mucky N					Surface (S7) (LRR K, L, M)	
	Layers (A5)	•	Loamy Gleyed I			_/		llue Below Surface (S8) (LRR K, L)	
	l Below Dark Surface	(A11)	X Depleted Matrix		,		Thin Dark Surface (S9) (LRR K, L)		
Thick Da	ark Surface (A12)		Redox Dark Su				Iron-Manganese Masses (F12) (LRR K, L, R)		
Sandy M	lucky Mineral (S1)		Depleted Dark S	Surface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
	leyed Matrix (S4)		Redox Depress	ions (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
-	edox (S5)						Red Parent Material (F21)		
	Matrix (S6)						Very Shallow Dark Surface (TF12)		
Dark Sui	face (S7) (LRR R, M	LRA 149B)				Other	(Explain in Remarks)	
31-4:-4	: h					ام مادر بام ما		_	
	hydrophytic vegetati ayer (if observed):		land nydrology mus	t be prese	ent, uniess	aisturbea	or problematic	<i>).</i>	
Type: Ro		Х							
								v	
Depth (inc	ches): 10						Hydric Soil	Present? Yes X No No	
Remarks:									





Soil E





S N





W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-May	yfield 138 kV	Transmi	ission Line Projec City/C	County: Geauga	County	Sa	ampling Date: 10/	21/2021
Applicant/Owner: FirstEnergy			-	-			Sampling Point:	
Investigator(s): MJA								
Landform (hillslope, terrace, etc						ncave	Slope	(%): 1
Subregion (LRR or MLRA): LR								
Soil Map Unit Name: MgB: Ma	honing silt lo	am, 2 to	6 percent slopes		N	WI classification	on: N/A	
Are climatic / hydrologic conditi	ons on the si	te typica	al for this time of year? Y	/es No _	X (If no, e	explain in Rem	arks.)	
Are Vegetation, Soil	, or Hyd	rology	significantly distur	rbed? Are	"Normal Circun	nstances" pres	sent? Yes X	No
Are Vegetation, Soil					needed, explain			
SUMMARY OF FINDING	GS – Attac	ch site	map showing san	npling point	locations, ti	ransects, ii	mportant feat	ures, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present?	,	Yes X	X No X No X No		ed Area and? I Wetland Site II	<u> </u>		
Remarks: (Explain alternative				If yes, optional	l Wetland Site II): Welland Er	-017	
water at time of survey. Rainir	ng during sur	vey.						
HYDROLOGY								
Wetland Hydrology Indicato	ors:						s (minimum of two	o required)
Primary Indicators (minimum	of one is requ	uired; ch				urface Soil Cra		
Surface Water (A1)		_	Water-Stained Leave			rainage Patterns (B10)		
X High Water Table (A2)			Aquatic Fauna (B13)			oss Trim Lines (B16)		
X Saturation (A3)			Marl Deposits (B15)		Dry-Season Water Table (C2)			
Water Marks (B1)			Hydrogen Sulfide Od			rayfish Burrow	, ,	(20)
Sediment Deposits (B2)			Oxidized Rhizospher				le on Aerial Image	ery (C9)
Drift Deposits (B3)			Presence of Reduced		· · · · · · · · · · · · · · · · · · ·		ssed Plants (D1)	
Algal Mat or Crust (B4)			Recent Iron Reduction			eomorphic Po		
Iron Deposits (B5)	ial Imagany (Thin Muck Surface ((•		hallow Aquitar		
Inundation Visible on Aer			Other (Explain in Rer	marks)		icrotopograph		
Sparsely Vegetated Cond Field Observations:	cave Surface	(88)			<u>^</u>	AC-Neutral Te	St (DS)	
Surface Water Present?	Voc	No X	C Depth (inches):					
Water Table Present?			Depth (inches):	3				
			Depth (inches):		/etland Hydrolo	au Brasant?	Vaa V	Na.
Saturation Present? (includes capillary fringe)	res	NO	Depth (inches).	o W	retiand Hydroid	gy Present?	res 🔨 i	No
Describe Recorded Data (stre	eam gauge, n	nonitorin	ng well, aerial photos, pre	evious inspection	ns), if available:			
Remarks:								
Remarks.								

VEGETATION – Use scientific names of plants.

EGETATION – Use scientific names of plants				Sampling Point: Wetland LP-01			
Tree Stratum (Plot size:)		Dominant Species?		Dominance Test worksheet: Number of Dominant Species			
l				That Are OBL, FACW, or FAC:1 (A)			
i				Total Number of Dominant Species Across All Strata: 1 (B)			
i				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B			
)				Prevalence Index worksheet:			
				Total % Cover of: Multiply by:			
		= Total Cov	er	OBL species10 x 1 =10			
Sapling/Shrub Stratum (Plot size: 15)				FACW species107 x 2 =214			
				FAC species5 x 3 =15			
				FACU species 10 x 4 = 40			
				UPL species x 5 = 0			
				Column Totals:(A)(B)			
·				Prevalence Index = B/A = 2.1136363636			
				Hydrophytic Vegetation Indicators:			
				X 1 - Rapid Test for Hydrophytic Vegetation			
		= Total Cov		X 2 - Dominance Test is >50%			
lerb Stratum (Plot size:5)		- Total Gov	O1	X 3 - Prevalence Index is ≤3.0¹			
Phalaris arundinacea	90	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supportin data in Remarks or on a separate sheet)			
Symphyotrichum lanceolatum	10	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)			
Apocynum cannabinum		No	FAC	¹ Indicators of hydric soil and wetland hydrology must			
Scirpus cyperinus	40		OBL	be present, unless disturbed or problematic.			
Verbena hastata	2		FACW	Definitions of Vegetation Strata:			
Solidago canadensis	4.0	No	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.			
Doellingeria umbellata	5	No	FACW				
				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
 0				Herb – All herbaceous (non-woody) plants, regardless of			
0 1				size, and woody plants less than 3.28 ft tall.			
2.				Woody vines – All woody vines greater than 3.28 ft in height.			
		= Total Cov	er	neight.			
/oody Vine Stratum (Plot size:)							
				Hydrophytic			
				Vegetation			
·							
l		= Total Cov					

SOIL Sampling Point: Wetland LP-017

Profile Desc	ription: (Describe to	the depth	needed to docun	nent the i	ndicator o	or confirm	the absence	of indicators.)	
Depth	Matrix			x Feature		. 2	- .		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0 - 18	2.5Y 5/2	85	5YR 4/6	5	Concer	PL_	Silty clay		
-			10YR 5/8	10		M			
-									
		 =	_						
-									
		 -							
-									
-									
-									
1Typo: C=Co	oncentration, D=Deple		Poducod Matrix MS		Sand Gra		2l ocation	: PL=Pore Lining, M=Matrix.	
Hydric Soil I		tion, Kivi-r	veduced Matrix, Mc	o-iviasket	i Sanu Gra	iii 15.		for Problematic Hydric Soils ³ :	
Histosol			Polyvalue Belov	v Surface	(S8) (LRR	R,	2 cm N	luck (A10) (LRR K, L, MLRA 149B)	
	ipedon (A2)		MLRA 149B)					Prairie Redox (A16) (LRR K, L, R)	
Black His		_	Thin Dark Surfa				5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4) I Layers (A5)	_	Loamy Mucky N Loamy Gleyed N			, L)	Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L)		
	Below Dark Surface	(A11)	Depleted Matrix		.,		Thin Dark Surface (S9) (LRR K, L)		
	rk Surface (A12)	_	Redox Dark Sur				Iron-Manganese Masses (F12) (LRR K, L, R)		
	lucky Mineral (S1)	_	Depleted Dark S		7)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
-	leyed Matrix (S4) edox (S5)	_	Redox Depress	ions (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21)		
-	Matrix (S6)						Very Shallow Dark Surface (TF12)		
	face (S7) (LRR R, M	LRA 149B)						Explain in Remarks)	
3, ,, ,									
	hydrophytic vegetation	on and weti	and nydrology mus	t be prese	ent, uniess	aisturbea	or problematic	i.	
Type:	ayer (ii observeu).								
	ches):						Hvdric Soil	Present? Yes X No No	
Remarks:									





Soil S





 N



Ε

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/	County: Geauga County	Sampling Date: 10/21/2021	
Applicant/Owner: FirstEnergy	State: OH	Sampling Point: Upland LP-016,017	
Investigator(s): MJA Section S			
Landform (hillslope, terrace, etc.): Undulating Local re		Slope (%): 1	
Subregion (LRR or MLRA): LRR R Lat: 41.6339178333333			
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classi	fication: N/A	
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes No X (If no, explain in	Remarks.)	
Are Vegetation, Soil, or Hydrology significantly distu	urbed? Are "Normal Circumstances	" present? Yes X No	
Are Vegetation, Soil, or Hydrology naturally problen			
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point locations, transec	ts, important features, etc.	
Hydrophytic Vegetation Present? Yes NoX	Is the Sampled Area		
Hydric Soil Present? Yes X No	within a Wetland? Yes		
Wetland Hydrology Present? Yes X No Remarks: (Explain alternative procedures here or in a separate report.)	If yes, optional Wetland Site ID: Upland	I LP-016,017	
Upland data form for W-MJA-102121-05 and W-MJA-102121-06. Data poi	nt in maintained powerline easement. Rain	ning during survey.	
HYDROLOGY			
Wetland Hydrology Indicators:		cators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)	Surface Sc		
Surface Water (A1) Water-Stained Leav		Patterns (B10)	
X High Water Table (A2) Aquatic Fauna (B13	n Lines (B16)		
Saturation (A3) Marl Deposits (B15)		n Water Table (C2)	
Water Marks (B1) Hydrogen Sulfide O		urrows (C8)	
		Visible on Aerial Imagery (C9)	
Drift Deposits (B3) Presence of Reduce		Stressed Plants (D1)	
Algal Mat or Crust (B4) Recent Iron Reducti	, ,	ic Position (D2)	
Iron Deposits (B5) Thin Muck Surface (Inundation Visible on Aerial Imagery (B7) Other (Explain in Re		quitard (D3) graphic Relief (D4)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re Sparsely Vegetated Concave Surface (B8)	· · · · · · · · · · · · · · · · · · ·	al Test (D5)	
Field Observations:	FAC-Neuti	ai Test (D3)	
Surface Water Present? Yes No _X _ Depth (inches):			
Water Table Present? Yes X No Depth (inches):	12		
Saturation Present? Yes No _X Depth (inches):	Wetland Hydrology Pres	ent? Yes X No	
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	revious inspections), if available:		
Remarks:			

VEGETATION – Use scientific names of plants.

EGETATION – Use scientific names of plant	ts.			Sampling Point: Upland LP-016,017			
<u>Tree Stratum</u> (Plot size:) 1)		Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)			
2				Total Number of Dominant Species Across All Strata: 3 (B)			
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.333333333333333333333333333333333333			
S				Prevalence Index worksheet:			
' <u>. </u>				Total % Cover of: Multiply by:			
		= Total Cov	/er	OBL species10 x 1 =10			
Sapling/Shrub Stratum (Plot size: 15)				FACW species68			
Frangula alnus	3	No	FAC	FAC species3 x 3 =9			
				FACU species133 x 4 =532			
				UPL species 0 x 5 = 0			
				Column Totals:(A)(B)			
l				Prevalence Index = B/A = 3.2102803738			
5				Hydrophytic Vegetation Indicators:			
S				1 - Rapid Test for Hydrophytic Vegetation			
·				2 - Dominance Test is >50%			
	3	= Total Cov	/er	3 - Prevalence Index is ≤3.0 ¹			
Herb Stratum (Plot size:5)Solidago canadensis	30	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
Agrostis gigantea	55	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)			
Phleum pratense	20	No	FACU	¹ Indicators of hydric soil and wetland hydrology must			
Dactylis glomerata	15	No	FACU	be present, unless disturbed or problematic.			
5. Potentilla simplex	40		FACU	Definitions of Vegetation Strata:			
5. Doellingeria umbellata	5	No	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH			
Rubus allegheniensis	15	No	FACU				
B. Fragaria virginiana			FACU				
Symphyotrichum pilosum	3	No	FACU	and greater than or equal to 3.28 ft (1 m) tall.			
Symphyotrichum lanceolatum	3	No	FACW	Herb – All herbaceous (non-woody) plants, regardless of			
1. Phalaris arundinacea	5	No	FACW	size, and woody plants less than 3.28 ft tall.			
2. Juncus effusus	10	No	OBL	Woody vines – All woody vines greater than 3.28 ft in height.			
	211	= Total Cov		neight.			
Voody Vine Stratum (Plot size:)		- Total Cov	7 C 1				
		-					
2				Hydrophytic Vegetation			
3		-		Present? Yes No X			
4							
		= Total Cov	/er				
Remarks: (Include photo numbers here or on a separat	e sheet.)	<u> </u>					

SOIL Sampling Point: Upland LP-016,017

Profile Desc	ription: (Describe t	o the dept	h needed to docui	ment the i	indicator o	or confirm	the absence	of indicators.)	
Depth	Matrix			x Feature	<u>s</u> _ ,	. 2	_		
(inches) 0 - 14	2.5Y 4/2	<u>%</u> 98	Color (moist) 7.5YR 4/6	<u>%</u> 2	Type ¹ Concer	Loc ²	Texture Silty clay	Remarks	
14 - 18	2.5Y 5/2	77	5YR 4/6	3	Concer	PL	Clay		
- 14 10	2.51 5/2			-			Clay		
			10YR 5/8	20	Concer	M			
					 .				
-									
-									
	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	d Sand Gra	ins.		PL=Pore Lining, M=Matrix.	
Hydric Soil I Histosol			Polyvalue Belo	w Surface	(S8) (I RR	R		for Problematic Hydric Soils ³ : luck (A10) (LRR K, L, MLRA 149B)	
	ipedon (A2)	-	MLRA 149B		(SO) (EIXIX	. т.,		Prairie Redox (A16) (LRR K, L, R)	
Black His		· -	Thin Dark Surfa				5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4) I Layers (A5)	· -	Loamy Mucky I Loamy Gleyed			L)	Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L)		
	l Below Dark Surface	e (A11)	X Depleted Matrix		-)		Thin Dark Surface (S9) (LRR K, L)		
	rk Surface (A12)	-	Redox Dark Su	, ,			Iron-Manganese Masses (F12) (LRR K, L, R)		
	lucky Mineral (S1)	-	Depleted Dark		7)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
-	leyed Matrix (S4) edox (S5)	-	Redox Depress	SIONS (FO)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21)		
-	Matrix (S6)						Very Shallow Dark Surface (TF12)		
Dark Sur	face (S7) (LRR R, M	ILRA 149B)				Other (Explain in Remarks)		
³ Indicators of	hydrophytic vegetati	ion and wet	land hydrology mus	st be prese	ent, unless	disturbed	or problematic		
	ayer (if observed):								
Type:	shoo):						Hydria Sail	Present? Yes X No	
Remarks:	ches):						nyaric Soii	Present? Tes NO	
remano.									





Soil E

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/0	County Sampling Date: 10/22/2021					
	State: OH Sampling Point: Wetland LP-018					
Investigator(s): MJA Section S						
Landform (hillslope, terrace, etc.): Flat Local re						
	56 Long: -81.17150566666668 Datum: WGS 1984					
	NWI classification: N/A					
Are climatic / hydrologic conditions on the site typical for this time of year? $^{\backprime}$	Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly distu	rbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problem	natic? (If needed, explain any answers in Remarks.)					
	mpling point locations, transects, important features, etc.					
Lhydrophytic Vegetation Procent? Yes X No.	Is the Sampled Area					
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	within a Wetland? Yes X No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland LP-018					
Remarks: (Explain alternative procedures here or in a separate report.)	ii yes, optional wetiand Site ib.					
PEM wetland in maintained powerline easement. T-line structures in wetlar						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) Water-Stained Leave	es (B9) Drainage Patterns (B10)					
X High Water Table (A2) Aquatic Fauna (B13)						
X Saturation (A3) Marl Deposits (B15)						
Water Marks (B1) Hydrogen Sulfide Oc	dor (C1) Crayfish Burrows (C8)					
	neres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (B3) Presence of Reduce						
Algal Mat or Crust (B4) Recent Iron Reduction						
Iron Deposits (B5) Thin Muck Surface (
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re Sparsely Vegetated Concave Surface (B8)						
Field Observations:	X FAC-Neutral Test (D5)					
Surface Water Present? Yes No _X _ Depth (inches):						
Water Table Present? Yes X No Depth (inches):	1					
Saturation Present? Yes X No Depth (inches):	0 Wetland Hydrology Present? Yes X No					
(includes capillary fringe)	wettand frydrology Fresent: Fes X					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:					
Remarks:						
Tromano.						

VEGETATION – Use scientific names of plants.

YEGETATION – Use scientific names of plant	S.			Sampling Point: Wetland LP-018
Tree Stratum (Plot size:) 1)		Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 2 (B)
3 I				Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)
5				That Ale OBE, I AGW, GIT AC (AB,
)				Prevalence Index worksheet: Total % Cover of: Multiply by:
		= Total Cov	er	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15)	_	•		FACW species 120 x 2 = 240
Cornus alba	15	Yes	FACW	FAC species
				FACU species 2 x 4 = 8
				UPL species 2 x 5 = 10 Column Totals: 124 (Δ) 258 (R)
				Column Totals:124 (A)258 (B)
				Prevalence Index = $B/A = 2.0806451612$
3				Hydrophytic Vegetation Indicators:
				X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov		X 2 - Dominance Test is >50%
Herb Stratum (Plot size: 5)		- Total Gov	CI .	X 3 - Prevalence Index is ≤3.0 ¹
Phalaris arundinacea	90	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supportin data in Remarks or on a separate sheet)
Onoclea sensibilis	5	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Symphyotrichum lanceolatum			FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Daucus carota			UPL	
Dipsacus fullonum	_ 2	<u>No</u>	FACU	Definitions of Vegetation Strata:
)				Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.
3				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
0				Herb – All herbaceous (non-woody) plants, regardless of
1				size, and woody plants less than 3.28 ft tall.
2				Woody vines – All woody vines greater than 3.28 ft in height.
	109	= Total Cov	er	
Voody Vine Stratum (Plot size:)		•		
·				
				Hydrophytic
3				Vegetation Present? Yes X No
I.				
·		= Total Cov		
Remarks: (Include photo numbers here or on a separate	e sheet)	- Total Cov	<u> </u>	
tomation (morado prioto namboro noro er en a doparato	3 011001.)			

SOIL Sampling Point: Wetland LP-018

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the i	ndicator o	or confirm	the absence	of indicators.)		
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	x Feature	<u>s</u> _Type ¹	Loc ²	<u>Texture</u>	Remarks		
0 - 8	10YR 4/1	98	5YR 3/4	2	Concer	PL	Silty clay			
8 - 18	10YR 4/1	55	7.5YR 4/6	25	Concer	М	Clay			
-			Gley 1 6/_	20	Depleti	М				
-										
-										
-										
-										
-										
-										
-										
¹Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ins.	² Location:	: PL=Pore Lining, M=Matrix.		
Hydric Soil		,						for Problematic Hydric Soils ³ :		
Histosol	(A1) pipedon (A2)		Polyvalue Below MLRA 149B		(S8) (LRR	! R,		Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K L R)		
Black Hi	stic (A3)		Thin Dark Surfa	, ace (S9) (L				Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4) I Layers (A5)		Loamy Mucky Muc			L)	Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L)			
	d Below Dark Surface	e (A11)	X Depleted Matrix		.,		Thin Dark Surface (S9) (LRR K, L)			
	ark Surface (A12)		Redox Dark Su					Iron-Manganese Masses (F12) (LRR K, L, R)		
	lucky Mineral (S1) sleyed Matrix (S4)		Depleted Dark : Redox Depress		7)		Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spedic (TA6) (MLRA 144A 145 149B)			
	ledox (S5)		Redux Depress	10115 (F0)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21)			
-	Matrix (S6)						Very Shallow Dark Surface (TF12)			
Dark Su	rface (S7) (LRR R, M	LRA 149E	3)				Other (Explain in Remarks)			
	hydrophytic vegetati	on and we	tland hydrology mus	st be prese	ent, unless	disturbed	or problematic).		
	_ayer (if observed):									
Type: Depth (inc	ches):						Hydric Soil	Present? Yes X No No		
Remarks:	,						,			





Soil S





E W



Ν

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Tra	ansmission Line Projec City/C	County: Geauga County	Sampling Date:
Applicant/Owner: FirstEnergy	-		H Sampling Point: Wetland LP-019
Investigator(s): MJA			
Landform (hillslope, terrace, etc.): Depression			ve Slope (%): ¹
Subregion (LRR or MLRA): LRR R Soil Map Unit Name: MgB: Mahoning silt loam	, 2 to 6 percent slopes	NWI c	classification: N/A
Are climatic / hydrologic conditions on the site t	ypical for this time of year? Y	es X No (If no, expla	ain in Remarks.)
Are Vegetation, SoilX, or Hydrold	gy significantly distur	bed? Are "Normal Circumsta	nces" present? Yes X No
Are Vegetation, Soil, or Hydrold	gy naturally problema	atic? (If needed, explain any	answers in Remarks.)
SUMMARY OF FINDINGS – Attach	site map showing san	npling point locations, tran	sects, important features, etc.
		Is the Sampled Area within a Wetland? If yes, optional Wetland Site ID: Wetland	
PEM wetland in an old unmaintained agricultu	rai neid. Evidence di filsione s	suii disturbance.	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary	y Indicators (minimum of two required)
Primary Indicators (minimum of one is require	d; check all that apply)	Surfac	ce Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leave	s (B9) Draina	age Patterns (B10)
X High Water Table (A2)	Aquatic Fauna (B13)		Trim Lines (B16)
X Saturation (A3)	Marl Deposits (B15)		eason Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Od		sh Burrows (C8)
Sediment Deposits (B2)	X Oxidized Rhizospher		ation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced		ed or Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reductio		norphic Position (D2)
Iron Deposits (B5)	Thin Muck Surface (C		ow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)			topographic Relief (D4)
Sparsely Vegetated Concave Surface (Bi	3)		Neutral Test (D5)
	o X Depth (inches):		
	Depth (inches):	1	
	Depth (inches):		Present? Yes X No
(includes capillary fringe)			
Describe Recorded Data (stream gauge, mor	itoring well, aerial photos, pre	evious inspections), if available:	
Remarks:			
Surface water nearby			
·			

bsolute 6 Cover	Dominant I Species?	ndicator	
		Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
			Total Number of Dominant Species Across All Strata: 2 (B)
			Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B)
			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
	= Total Cove	r	OBL species 23 x 1 = 23
			FACW species 0 x 2 = 0
			FAC species x 3 = 300
			FACU species 10 x 4 = 40
			UPL species $0 \times 5 = 0$
			Column Totals:133 (A)363 (B)
			Prevalence Index = B/A = 2.7293233082
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			X 2 - Dominance Test is >50%
	= Total Cove	er	$\frac{X}{3}$ 3 - Prevalence Index is $\leq 3.0^{1}$
70	Yes	FAC	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5	No	OBL	Problematic Hydrophytic Vegetation¹ (Explain)
		FACU	¹ Indicators of hydric soil and wetland hydrology must
15	No	OBL	be present, unless disturbed or problematic.
30	Yes	FAC	Definitions of Vegetation Strata:
3	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.
			Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
			Herb – All herbaceous (non-woody) plants, regardless of
			size, and woody plants less than 3.28 ft tall.
			Woody vines – All woody vines greater than 3.28 ft in
			height.
133	= Total Cove	r	
			Hydrophytic Vegetation
			Present? Yes X No
	= Total Cove	r	
et.)			
	70 5 10 15 30 3	= Total Cove = Total Cove 70	= Total Cover = Total Cover = Total Cover 70

SOIL Sampling Point: Wetland LP-019

Profile Desc	ription: (Describe to	o the depti	h needed to docun	ent the i	ndicator	or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Redox Color (moist)	K Features	Type ¹	Loc ²	Texture	Remarks
0 - 18	2.5Y 4/1	95	7.5YR 4/6	5	Concer	PL	Silty clay	
-								
-								
-								
							2	
'Type: C=Co	ncentration, D=Deple	etion, RM=I	Reduced Matrix, MS	S=Masked	Sand Gra	ins.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol Histic Ep Black His Hydroge Stratified Depleted Thick Da Sandy M Sandy G Sandy R Stripped Dark Sun	(A1) bipedon (A2) stic (A3) n Sulfide (A4) I Layers (A5) I Below Dark Surface ark Surface (A12) lucky Mineral (S1) bleyed Matrix (S4) edox (S5) Matrix (S6) face (S7) (LRR R, M hydrophytic vegetaticayer (if observed):	LRA 149B		ce (S9) (L lineral (F1 Matrix (F2 (F3) face (F6) Surface (F ons (F8)	.RR R, ML) (LRR K,)	.RA 149B) L)	2 cm N Coast I 5 cm N Dark S Polyva Thin Do Iron-Mooding Piedmooding Mesic Side Side Side Side Side Side Side Side	Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R) urface (S7) (LRR K, L, M) Iue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21) hallow Dark Surface (TF12) (Explain in Remarks)
Remarks:								





Soil E





S W



Ν

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Project	jec City/County: Geaug	ga County	Sampling Date: 10/22/2021
Applicant/Owner: FirstEnergy			Sampling Point: Upland LP-018,019
Investigator(s): MJA			
Landform (hillslope, terrace, etc.): Flat			Slope (%): ³
Subregion (LRR or MLRA): LRR R Lat: 41.631744			
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slop	es	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes X No	o (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? A	re "Normal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally		f needed, explain any answer	
SUMMARY OF FINDINGS – Attach site map show	ing sampling poin	t locations, transects,	, important features, etc.
Hydrophytic Vegetation Present? Yes NoX			No
Hydric Soil Present? Yes NoX Wetland Hydrology Present? Yes NoX	<u> </u>	al Wetland Site ID: Upland LI	
Wetland Hydrology Present? Yes NoX Remarks: (Explain alternative procedures here or in a separate re		al Wetland Site ID: Opiand El	-010,010
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicat	tors (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	oly)	Surface Soil (Cracks (B6)
	ned Leaves (B9)	Drainage Pat	terns (B10)
High Water Table (A2) Aquatic Fau		Moss Trim Lii	, ,
Saturation (A3) Marl Depos		· · · · · · · · · · · · · · · · · · ·	Vater Table (C2)
	Sulfide Odor (C1)	Crayfish Burn	` '
	hizospheres on Living R		sible on Aerial Imagery (C9)
	f Reduced Iron (C4)		ressed Plants (D1)
<u> </u>	Reduction in Tilled Soil	• • • • •	
Iron Deposits (B5) Thin Muck S Inundation Visible on Aerial Imagery (B7) Other (Expl	ain in Remarks)	Shallow Aquit Microtopogra	
Sparsely Vegetated Concave Surface (B8)	alli ili Nelliaiks)	FAC-Neutral	
Field Observations:		1710 11001101	1601 (150)
Surface Water Present? Yes No _X Depth (incl	hes):		
Water Table Present? Yes No _X _ Depth (incl	*		
Saturation Present? Yes No X Depth (includes capillary fringe)		Wetland Hydrology Presen	t? Yes No _X_
Describe Recorded Data (stream gauge, monitoring well, aerial pl	hotos, previous inspection	ons), if available:	
Remarks:			
Tremund.			

EGETATION – Use scientific names of plants				Sampling Point: Upland LP-018,019			
Tree Stratum (Plot size:) 1)		Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)			
2 3				Total Number of Dominant Species Across All Strata: 3 (B)			
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.3333333333 (A/B)			
6							
7				Prevalence Index worksheet: Total % Cover of: Multiply by:			
		= Total Cov	er	OBL species x 1 = 0			
Sapling/Shrub Stratum (Plot size: 15)				FACW species 45 x 2 = 90			
				FAC species0 x 3 =0			
				FACU species105			
<u> </u>				UPL species10 x 5 =50			
l <u>. </u>				Column Totals:160 (A)560 (B)			
l <u>. </u>				Prevalence Index = B/A = 3.5			
5				Hydrophytic Vegetation Indicators:			
5				1 - Rapid Test for Hydrophytic Vegetation			
/				2 - Dominance Test is >50%			
	-	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹			
Herb Stratum (Plot size:5) Setaria faberi	40	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
Cyperus strigosus	25	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)			
3. Dipsacus fullonum 4.	20	No	FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
5. Persicaria pensylvanica	20	No	FACW	Definitions of Vegetation Strata:			
S. Cirsium vulgare	10	No	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter			
7. Daucus carota	10	No	UPL	at breast height (DBH), regardless of height.			
B. Potentilla indica			FACU	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
9 10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
11				Woody vines – All woody vines greater than 3.28 ft in			
2				height.			
	160	= Total Cov	er				
Noody Vine Stratum (Plot size:)							
		-		Hydrophytic			
2				Vegetation			
3				Present? Yes No X			
4							

SOIL Sampling Point: Upland LP-018,019

Profile Desc	ription: (Describe to	o the dep	oth needed to docum	nent the i	ndicator	or confirn	n the absence	of indicators.)
Depth	Matrix			x Feature		. 2		
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 18	10YR 2/2	98	2.5YR 3/4	2	Concer	М	Silty clay loam	
-								
						-	·	
-								
							·	
-								
	_							
-								
							· ——	
¹ Type: C=Co	ncentration, D=Deple	etion, RM	=Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indicators	for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Belov		(S8) (LRF	RR,		/luck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B)					Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4) Layers (A5)		Loamy Mucky N Loamy Gleyed I			, L)		Surface (S7) (LRR K, L, M) Ilue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	Depleted Matrix		.)		-	ark Surface (S9) (LRR K, L)
	rk Surface (A12)	(/ (/ / / /	Redox Dark Sui					anganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)		Depleted Dark S	, ,				ont Floodplain Soils (F19) (MLRA 149B)
Sandy G	eyed Matrix (S4)		Redox Depress	ions (F8)			Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
	Matrix (S6)							hallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	LRA 149	B)				Other	(Explain in Remarks)
³ Indicators of	hydronhytic yegetati	on and w	etland hydrology mus	t he nres	ant unless	dieturhed	l or problematic	
	ayer (if observed):	on and w	etianu nyurology mus	t be prese	ont, unicoo	distarbed		,
Type:	ayo: (oboo! vou):							
	hes):						Hydric Soil	Present? Yes No _X
	1163)						Tiyunc 30ii	riesent: resNox_
Remarks:								





Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Ma	yfield 138 kV Tran:	smission Line Projec	City/County: Gea	auga County	;	Sampling Date: 10/22/2021
Applicant/Owner: FirstEnergy			· , , <u>—</u>			Sampling Point: Wetland LP-020
Investigator(s): MJA			Section Township	n Range N/	<u> </u>	
						Slone (%): 2
C. L: (LDD ALLDA) LE	SR R	41 63071333	333335	-81.1	174059	Slope (%): 2 Datum: WGS 1984
Subregion (LRR or MLRA):	llowerth eilt leem '	_ Lat:	oo orodod	Long:	17-1000	Datum:
Soil Map Unit Name: EhD2: E						
Are climatic / hydrologic condit	ions on the site typ	pical for this time of ye	ear? Yes X	No ((If no, explain in Re	marks.)
Are Vegetation X, Soil	, or Hydrolog	ysignificantly	y disturbed?	Are "Normal	Circumstances" pr	esent? Yes X No
Are Vegetation, Soil	, or Hydrology	y naturally pr	roblematic?	(If needed, e	explain any answers	s in Remarks.)
SUMMARY OF FINDING	GS – Attach si	ite map showing	g sampling po	int locatio	ons, transects,	important features, etc.
Hydrophytic Vegetation Prese	ent? Yes	X No	Is the San	npled Area	.,	
Hydric Soil Present?		X No	:41=: \A	Vetland?	Yes X	_ No
Wetland Hydrology Present?		X No		onal Wetland	Site ID: Wetland L	P-020
Remarks: (Explain alternative						
HYDROLOGY						
Wetland Hydrology Indicate	ors:				Secondary Indicate	ors (minimum of two required)
Primary Indicators (minimum	of one is required;	check all that apply)			Surface Soil C	Cracks (B6)
Surface Water (A1)		Water-Stained	Leaves (B9)		Drainage Patt	erns (B10)
X High Water Table (A2)		Aquatic Fauna	a (B13)		Moss Trim Lin	es (B16)
X Saturation (A3)		Marl Deposits			Dry-Season W	/ater Table (C2)
Water Marks (B1)		Hydrogen Sulf			Crayfish Burro	
Sediment Deposits (B2)		X Oxidized Rhize	· -	Roots (C3)		ible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of R		(00)		essed Plants (D1)
Algal Mat or Crust (B4)		· · · · · · · · · · · · · · · · · · ·	eduction in Tilled S	6011S (C6)	X Geomorphic F	, ,
Iron Deposits (B5) Inundation Visible on Aei	rial Imagary (P7)	Thin Muck Sur		Shallow Aquita	, ,	
Sparsely Vegetated Con-	• • • •	Other (Explain	illi Relliaiks)		Microtopograp X FAC-Neutral 1	
Field Observations:	Save Surface (Bo)			1	A TAC-Neutiai i	
Surface Water Present?	Ves No	X Depth (inches	a).			
Water Table Present?	<u> </u>	Depth (inches	•			
Saturation Present?		Depth (inches		Wetland H	lydrology Present	? Yes X No
(includes capillary fringe)					-	. 103 <u>X</u> NO
Describe Recorded Data (stre	eam gauge, monito	oring well, aerial phot	tos, previous inspec	ctions), if ava	ilable:	
Remarks:						
rtomanto.						

/EGETATION – Use scientific names of pla	nts.			Sampling Point: Wetland LP-020
Tree Stratum (Plot size:30) 1	<u></u>	Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant Species Across All Strata: 2 (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B)
5				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	er	OBL species110 x 1 =110
Sapling/Shrub Stratum (Plot size: 15	_)			FACW species x 2 = 80
		-		FAC species 0 x 3 = 0
				FACU species 0 x 4 = 0
<u>-</u>				UPL species 0 x 5 = 0 Column Totals: 150 (Δ) 190 (Β)
				Column Totals:150 (A)190 (B)
				Prevalence Index = B/A = 1.26666666666
				Hydrophytic Vegetation Indicators:
<u> </u>				X 1 - Rapid Test for Hydrophytic Vegetation
· <u> </u>				X 2 - Dominance Test is >50%
	-	= Total Cov	er	X 3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:5)Carex lurida	55	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Scirpus cyperinus	30	Yes	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Typha latifolia	20	No	OBL	¹ Indicators of hydric soil and wetland hydrology must
Eupatorium perfoliatum		No	FACW	be present, unless disturbed or problematic.
5. Phragmites australis	10	No	FACW	Definitions of Vegetation Strata:
Dhalaria arundinaaa	20	No	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
	5	No	OBL	at breast height (DBH), regardless of height.
3				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
)				Herb – All herbaceous (non-woody) plants, regardless of
0				size, and woody plants less than 3.28 ft tall.
1		-		Woody vines – All woody vines greater than 3.28 ft in
2				height.
	150	= Total Cov	er	
Voody Vine Stratum (Plot size: 30)				
<u> </u>				
2				Hydrophytic Vegetation
3				Present? Yes X No
1.				
		= Total Cov	er	
Remarks: (Include photo numbers here or on a separ				
include photo numbers here of on a separ	ate silect.)			

SOIL Sampling Point: Wetland LP-020

Profile Desc	ription: (Describe t	o the dept	n needed to docu	ment the i	indicator o	or confirn	n the absence	of indicators.)
Depth	Matrix			x Feature	<u>s</u> _ 1	. 2		
(inches) 0 - 10	Color (moist)	<u>%</u>	Color (moist) 5YR 5/8	<u>%</u>	Type ¹	Loc ²	Texture Silbu days learn	Remarks Some sand
	10YR 4/1	90		10	Concer	PL,M	Silty clay loam	Some sand
10 - 18	10YR 2/2	90	2.5YR 3/6	10	Concer	PL,M	Silty clay loam	
-								
-			_		·			
						-		
								<u> </u>
-		-				1		
-								
						-		
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						-		
Hydric Soil I	oncentration, D=Depl	etion, RM=I	Reduced Matrix, M	S=Masked	d Sand Gra	iins.		r: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belo	w Surface	(S8) (LRR	R.		Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)	_	MLRA 149B		(, (,		Prairie Redox (A16) (LRR K, L, R)
Black His		=	Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4) I Layers (A5)	=	Loamy Mucky I Loamy Gleyed			L)		Surface (S7) (LRR K, L, M) alue Below Surface (S8) (LRR K, L)
	l Below Dark Surface	(A11)	Coarry GleyedDepleted Matrix		-)			Park Surface (S9) (LRR K, L)
Thick Da	rk Surface (A12)	·	Redox Dark Su	ırface (F6)			Iron-M	langanese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	=	Depleted Dark		7)			ont Floodplain Soils (F19) (MLRA 149B)
-	leyed Matrix (S4) edox (S5)	=	Redox Depress	SIONS (FO)				Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21)
-	Matrix (S6)							Shallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	ILRA 149B)	1				Other	(Explain in Remarks)
³ Indicators of	hydrophytic vegetati	ion and wet	and hydrology mus	et he nres	ant unless	disturbed	l or problemation	2
	ayer (if observed):	on and wet	land frydrology frids	st be prese	erit, uriless	disturbed	Tor problematic	J.
Type:	,							
Depth (inc	ches):						Hydric Soil	Present? Yes X No
Remarks:							L	





l E





S W



Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Applicant/Owner FirstEnergy State: OH Sampling Point: Westand LP-Q2TE Investigator(s): MJA Section. Township, Range: NVA Section. Township, Range: NVA Section. Township, Range: NVA Local relief (concave, convex, none): Concave Sipe (%): 2 Subregion (LRR or MLRA): LRR R Lat: 41.629746999999995 Long; 51.17408050000001 Datum: WGS 1984 Soil Map Unit Name: EhDZ: Elisworth sitt loam. 12 to 18 percent slopes, croded NWI classification; NVA ver climatic? hydrologic conditions on the site bytical for this time of year? Yes X No (ff no, explain in Remarks.) Were Vegetation Soil or Hydrology Industrially problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No Wetland Hydrology Present (Az Aquatic Founa (B13) Moss Trim Lines (B16) Dry-Season Water Table (Az) Aquatic Founa (B13) Moss Trim Lines (B16) Dry-Season Water Table (Az) Aquatic Founa (B13) Moss Trim Lines (B16) X Geomorphic Position (D2) Drift Deposits (B3) Presence of Reduced Iron (C4) Sturded Ordinator (D3) Sturded Ordinator (D3) Indicators (D3) Microlopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) X FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes X No Depth (inches): Ve
Local relief (concave, convex, none): Concave Slope (%): 2 Subregion (LRR or M.I.Ra): LRR R Lat: 41.62974699999995 Long: -81.1748085000001 Datum: WGS 1984 Soli Map Unit Name: EMD2: Elisworth sitt loam, 12 to 18 percent slopes, eroded NWI classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (ff. no, explain in Remarks.) Are Vegetation Soli or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation Soli or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No (ff. needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No (ff. needed, explain any answers in Remarks.) Wetland Hydrology Present? Yes X No (ff. needed, explain any answers in Remarks.) Wetland Hydrology Present? Yes X No (ff. needed, explain any answers in Remarks.) Wetland Hydrology Present? Yes X No (ff. needed, explain any answers in Remarks.) Wetland Hydrology Present? Yes X No (ff. needed, explain any answers in Remarks.) Wetland Hydrology Present? Yes X No (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, expla
Local relief (concave, convex, none): Concave Slope (%): 2 Subregion (LRR or M.I.Ra): LRR R Lat: 41.62974699999995 Long: -81.1748085000001 Datum: WGS 1984 Soli Map Unit Name: EMD2: Elisworth sitt loam, 12 to 18 percent slopes, eroded NWI classification: N/A Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (ff. no, explain in Remarks.) Are Vegetation Soli or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation Soli or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No (ff. needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No (ff. needed, explain any answers in Remarks.) Wetland Hydrology Present? Yes X No (ff. needed, explain any answers in Remarks.) Wetland Hydrology Present? Yes X No (ff. needed, explain any answers in Remarks.) Wetland Hydrology Present? Yes X No (ff. needed, explain any answers in Remarks.) Wetland Hydrology Present? Yes X No (ff. needed, explain any answers in Remarks.) Wetland Hydrology Present? Yes X No (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, explain any answers in Remarks.) Wetland Hydrology Indicators (ff. needed, expla
Soli May Unit Name: ENDZ: Ellsworth silt loam, 12 to 18 percent slopes, eroded
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.) Are Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes X No Are Vegetation Soil or Hydrology Inaturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No State Soil Present. HYDROLOGY Wettand Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required: check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) X Saturation (A3) Aquatic Fauna (B13) Moss Trim Lines (B16) X Saturation (A3) Mari Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Caryfish Burrows (C8) Sediment Deposits (B2) X Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) State of Crayfish Burrows (C8) John Deposits (B3) Presence of Reduced Iron (C4) Shallow of Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Shallow Aguitard (D3) In Indiation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) Field Observations: Vegetated C
Are Vegetation
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes X No within a Wetland? Hydric Soil Present? Yes X No flyes, optional Wetland Site ID, Wetland LP-021E Remarks: (Explain alternative procedures here or in a separate report.) PEM portion of PEM/PSS complex along stream. Data point taken downslope of road in maintained powerline easement. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Water-Stained Leaves (B9) Surface Water (A1) A High Water Table (A2) A Aquatic Fauna (B13) Water Marks (B1) Secondary Indicators (minimum of two required) Moss Trim Lines (B16) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Sediment Deposits (B2) Sediment Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Sparsely Vegetated Concave Surface (B8) Field Observations: Ves X No Depth (inches): Ves X No Depth (inches): Ves A No Depth (inches): Ves A No Depth (inches): Ves A No Depth (inches): Ves Wetland Hydrology Present? Ves X No Depth (inches): Ves Wetland Hydrology Present? Ves X No Depth (inches): Ves Wetland Hydrology Present? Ves X No Depth (inches): Ves Wetland Hydrology Present? Ves X No Depth (inches): Ves Wetland Hydrology Present? Ves X No Depth (inches): Ves Wetland Hydrology Present? Ves X No Depth (inches): Ves Wetland Hydrology Present? Ves X No Depth (inches): Ves Wetland Hydrology Present? Ves X No Depth (inches): Ves Wetland Hydrology Present? Ves X No Depth (inches): Ves Wetland Hydrology Present? Ves X No Depth (inches): Ves Wetland Hydrology Present? Ves X No Depth (inches): Ves Wetland Hydrology Present? Ves X No Depth (inches): Ves X No Depth (inches): 12 Ves X No Depth (inches): 12 Ves X No Depth (inches): 13 Ves X No Depth (inches): 14 Ves X No Depth (inches): 14 Ves X No Depth (in
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present?
Hydrophytic Vegetation Present? Yes X No within a Wetland? Yes X No Wetland Hydrology Present? Yes X No If yes, optional Wetland Site ID: Wetland LP-021E Remarks: (Explain alternative procedures here or in a separate report.) PEM portion of PEM/PSS complex along stream. Data point taken downslope of road in maintained powerfline easement. HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Surface Water (A1) Aquatic Fauna (B13) Moss Trim Lines (B16) X High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) X Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) X Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2) Inon Deposits (B3) Presence of Reduced Iron (C4) Sharing (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): 6 Wetland Hydrology Present? Yes No Depth (inches): 12 Saturation Present? Yes No Depth (inches): 6 Wetland Hydrology Present? Yes No Depth (inches): 12 Saturation Present? Yes No Depth (inches): 14 Wetland Hydrology Present? Yes No Depth (inches): 15 Wetland Hydrology Present? Yes No Depth (inches): 14 Wetland Hydrology Present? Yes No Depth (inches): 15 Wetland Hydrology Present? Yes No Depth (inches): 14 Wetland Hydrology Pre
Hydric Soil Present? Yes X No
HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) X High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) X Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) X Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes X No Depth (inches): 12 Saturation Present? Yes X No Depth (inches): 6 Wetland Hydrology Present? Yes X No (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Wetland Hydrology Indicators: (minimum of one is required; check all that apply) Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) X High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16) X Saturation (A3) Marl Deposits (B15) Dry-Season Water Table (C2) Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) X Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) X Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) X FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes X No Depth (inches): Water Table Present? Yes X No Depth (inches): Wetland Hydrology Present? Yes X No Saturation Present? Yes
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Surface Water (A1) Water-Stained Leaves (B9) Drainage Patterns (B10) X_ High Water Table (A2) Aquatic Fauna (B13) Moss Trim Lines (B16)
X High Water Table (A2)
X Saturation (A3)
Water Marks (B1) Hydrogen Sulfide Odor (C1) Crayfish Burrows (C8) Sediment Deposits (B2) X Oxidized Rhizospheres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Drift Deposits (B3) Presence of Reduced Iron (C4) Stunted or Stressed Plants (D1) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Geomorphic Position (D2) Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) X FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes No Depth (inches):
Sediment Deposits (B2)
Drift Deposits (B3)
Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aquitard (D3) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) X_FAC-Neutral Test (D5) Sparsely Vegetated Concave Surface (B8) X_FAC-Neutral Test (D5) Surface Water Present? Yes No Depth (inches): Ves X_No
Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Microtopographic Relief (D4) Sparsely Vegetated Concave Surface (B8) X_FAC-Neutral Test (D5) Field Observations: Surface Water Present? Yes NoX_ Depth (inches): Water Table Present? YesX_ No Depth (inches): 12 Saturation Present? YesX_ No Depth (inches): 6
Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes No _X Depth (inches): Water Table Present? Yes _X No Depth (inches): 12 Saturation Present? Yes _X No Depth (inches): 6 Wetland Hydrology Present? Yes _X No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Field Observations: Surface Water Present? Yes No _X _ Depth (inches): Water Table Present? Yes _X No Depth (inches): 12 Saturation Present? Yes _X No Depth (inches): 6
Surface Water Present? Yes No _X _ Depth (inches): Water Table Present? Yes _X _No Depth (inches): 12 Saturation Present? Yes _X _No Depth (inches): 6 Wetland Hydrology Present? Yes _X _No Output (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Water Table Present? Yes X No Depth (inches): 12 Saturation Present? Yes X No Depth (inches): 6 Wetland Hydrology Present? Yes X No Secrible Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Saturation Present? Yes X No Depth (inches): 6 Wetland Hydrology Present? Yes X No Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:
Remarks:

	3 .			Sampling Point: Wetland LP-021		
Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:		
1				Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)		
2						
3				Total Number of Dominant Species Across All Strata:3 (B)		
1				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC:1 (A/B)		
5				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
		= Total Cov	ver .	OBL species75 x 1 =75		
Sapling/Shrub Stratum (Plot size: 15)				FACW species $\frac{55}{}$ x 2 = $\frac{110}{}$		
l				FAC species		
2				FACU species 0 x 4 = 0 UPL species 0 x 5 = 0		
3				Column Totals: 130 (A) 185 (B)		
1				4.40007700004		
5				Trevalence index - DIA -		
3				Hydrophytic Vegetation Indicators:		
7		-		 X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 		
_		= Total Cov	er	X 3 - Prevalence Index is ≤3.0¹		
Herb Stratum (Plot size: 5)			0.51	4 - Morphological Adaptations ¹ (Provide supporting		
1. Typha latifolia			OBL	data in Remarks or on a separate sheet)		
2. Lythrum salicaria	30	Yes	OBL	Problematic Hydrophytic Vegetation¹ (Explain)		
3. Agrostis gigantea			FACW FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
4. Eupatorium perfoliatum	5	No	TACW	Definitions of Vegetation Strata:		
5			· <u></u>			
5				Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.		
7				Sapling/shrub – Woody plants less than 3 in. DBH		
9.		-		and greater than or equal to 3.28 ft (1 m) tall.		
10				Herb – All herbaceous (non-woody) plants, regardless of		
11				size, and woody plants less than 3.28 ft tall.		
12.				Woody vines – All woody vines greater than 3.28 ft in height.		
	130	= Total Cov	ver	neight.		
Noody Vine Stratum (Plot size:)						
l <u>. </u>						
2				Hydrophytic Vegetation		
	·			Present? Yes X No		
3						
34						

SOIL Sampling Point: Wetland LP-021E

Profile Description: (Describe to the de	pth needed to docur	ment the indica	tor or confiri	m the absence of	of indicators.)
Depth Matrix		x Features	1 . 2		
(inches) Color (moist) %	Color (moist)	% Typ	e ¹ Loc ²	<u>Texture</u>	Remarks
0 - 18 10YR 3/2 95	2.5YR 3/4	5 Con	cer PL	Silty clay loam	
-					
	-				
-					
	-				
				_	
-					
			_		
-					
	-				
<u> </u>					
-					
	-				
¹ Type: C=Concentration, D=Depletion, RI	M=Reduced Matrix, MS	S=Masked Sand	Grains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:					for Problematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Belov	w Surface (S8) (LRR R,	2 cm M	uck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 149B)		Coast F	Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3)	Thin Dark Surfa	ace (S9) (LRR R	, MLRA 149E	3) 5 cm M	ucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)		Mineral (F1) (LR	R K, L)		urface (S7) (LRR K, L, M)
Stratified Layers (A5)	Loamy Gleyed				ue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11)	Depleted Matrix				ark Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	X Redox Dark Su				inganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1)	Depleted Dark			·	ent Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4)	Redox Depress	sions (F8)			Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5)					rent Material (F21)
Stripped Matrix (S6)					nallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 14	9B)			Other (E	Explain in Remarks)
³ Indicators of hydrophytic vegetation and v	votland hydrology mus	et ha procent ur	loce dieturbo	d or problematic	
Restrictive Layer (if observed):	veliand hydrology mus	st be present, ur	iless disturbed		
, , , , , ,					
Type:	=				- v
Depth (inches):	_			Hydric Soil I	Present? Yes X No No
Remarks:					
İ					





N E





S W



Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-May	yfield 138 kV Tran	smission Line Projec City/C	County: Geauga County		Sampling Date: 10/22/2021
Applicant/Owner: FirstEnergy			-		Sampling Point: Wetland LP-021S
Investigator(s): MJA					· ·
Landform (hillslope, terrace, etc.				: Flat	Slope (%): ⁰
Subregion (LRR or MLRA): LR	RR R	Lat: 41.63015161666667	7 Long: -81.175	506549999999	Datum: WGS 1984
Soil Map Unit Name: EhD2: El	Isworth silt loam,	12 to 18 percent slopes, ero	oded	_ NWI classificat	tion: N/A
Are climatic / hydrologic condition	ons on the site typ	oical for this time of year? Y	/es X No (If r	no, explain in Rei	marks.)
Are Vegetation, Soil	, or Hydrolog	y significantly distur	bed? Are "Normal Ci	rcumstances" pre	esent? Yes X No
Are Vegetation, Soil	, or Hydrology	y naturally problema	atic? (If needed, exp	lain any answers	in Remarks.)
SUMMARY OF FINDING	3S – Attach s	ite map showing san	npling point locations	s, transects,	important features, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative	Yes _ Yes _		Is the Sampled Area within a Wetland? If yes, optional Wetland Si	· ·	
PSS portion of a PEM/PSS co	mplex along an in	termittent stream. Data poir	it taken in maintained powe	nine easement.	
HYDROLOGY					
Wetland Hydrology Indicato	rs:		Se	econdary Indicato	ors (minimum of two required)
Primary Indicators (minimum	of one is required;	check all that apply)		_ Surface Soil C	racks (B6)
Surface Water (A1)		Water-Stained Leave		_ Drainage Patte	
X High Water Table (A2)		Aquatic Fauna (B13)		_ Moss Trim Line	
X Saturation (A3)		Marl Deposits (B15)		-	ater Table (C2)
Water Marks (B1)		Hydrogen Sulfide Od		_ Crayfish Burro	` '
Sediment Deposits (B2)		X Oxidized Rhizospher			ble on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Reduced		Stunted or StreetGeomorphic P	essed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduction	` '		` '
Iron Deposits (B5) Inundation Visible on Aer	ial Imagary (P7)	Thin Muck Surface (0		_ Shallow Aquita	` '
Sparsely Vegetated Cond		Other (Explain in Rer		MicrotopograpFAC-Neutral T	
Field Observations:	ave Surface (Bo)			_ FAC-Neuliai i	esi (D3)
Surface Water Present?	Yes No	X Depth (inches):			
Water Table Present?		Depth (inches):	1		
Saturation Present?		Depth (inches):		Irology Present	? Yes X No
(includes capillary fringe)					
Describe Recorded Data (stre	am gauge, monito	oring well, aerial photos, pre	evious inspections), if availal	ble:	
Remarks:					

				Sampling Point: Wetland LP-0218
Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1		-		Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
2.				
3				Total Number of Dominant Species Across All Strata: 5 (B)
i <u>. </u>				Percent of Dominant Species
j				That Are OBL, FACW, or FAC:1 (A/B)
3				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	/er	OBL species45 x 1 =45
Sapling/Shrub Stratum (Plot size: 15)				FACW species $\frac{125}{15}$ $\times 2 = \frac{250}{45}$
. Cornus alba	20	Yes	FACW	FAC species X 3 = 10
2. Salix interior	40	Yes	FACW	FACU species x 4 = 84 UPL species 0 x 5 = 0
Frangula alnus	15	Yes	FAC	Column Totals: 206 (A) 424 (B)
l <u>. </u>				
5		-		Prevalence Index = B/A = 2.058252427
5				Hydrophytic Vegetation Indicators:
7		-	·	 X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%
	75	= Total Cov	/er	$\frac{X}{X}$ 3 - Prevalence Index is $\leq 3.0^{\circ}$
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations¹ (Provide supporting
Solidago canadensis		No	FACU	data in Remarks or on a separate sheet)
Eupatorium perfoliatum	15	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Juncus effusus		Yes	OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Agrostis gigantea	50	Yes	FACW	
5. Dipsacus fullonum			FACU	Definitions of Vegetation Strata:
S. Carex lurida	10	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				Sapling/shrub – Woody plants less than 3 in. DBH
3				and greater than or equal to 3.28 ft (1 m) tall.
) 10.			·	Herb – All herbaceous (non-woody) plants, regardless of
0 11				size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
	131	= Total Cov	/or	height.
Noody Vine Stratum (Plot size:30)		- Total Oo	, C1	
				Hydrophytic
				Vegetation Present? Yes X No
2				Fresent? TesNO
				riesent? Tes No

SOIL Sampling Point: Wetland LP-021S

Depth Mark Color (mosts) % Color (mosts) % Depth Color (mo	Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator c	r confirm	n the absence	of indicators.)
10	•					<u>3</u>	L = - ²	Tauduma	Damarka
									Remarks
Hydric Soil Indicators: Histosol (A1)	0 - 18	10YR 3/1	95	5YR 4/6	5	Concer	PL,M	Silty clay loam	
Hydric Soil Indicators: Histosol (A1)	-								
Hydric Soil Indicators: Histosol (A1)	-			_					
Hydric Soil Indicators: Histosol (A1)	-	-		-					
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)	-								
Hydric Soil Indicators: Histosol (A1)					•				
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)	-								
Hydric Soil Indicators: Histosol (A1)				_					
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)	-								
Hydric Soil Indicators: Histosol (A1)	¹ Type: C=Co	ncentration D=Deple	etion RM=F	Reduced Matrix MS	S=Masked	Sand Gra	ins	² I ocation	· PI =Pore Lining M=Matrix
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, M) Mesic Spodic (TA6) (MLRA 149B) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, R) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S7) Stripped Matrix (S6) Dark Surface (S7) (LRR K, MLRA 149B) Sandy Redox (S7) (LRR K, MLRA 149B) Sandy Redox (S8) Hydric Soil Present? Yes X No			00011, 1001	toddood Matrix, Me	- Macked	Carra Cra			
Black Histic (A3)	Histosol	(A1)		Polyvalue Belov	w Surface	(S8) (LRR	R,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) X Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.** **Restrictive Layer (if observed):** Type: Depth (inches): Hydric Soil Present? Yes X No									, , , , , , , , , , , , , , , , , , , ,
Stratified Layers (A5)			_						
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) X Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No			_				L)		
Thick Dark Surface (A12))		-	
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed):									
Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed):		, ,	_		, ,	7)			
Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed):	-		_	Redox Depress	ions (F8)				
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	-								
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No			L D A 440B\					-	
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Dark Sur	lace (57) (LRK K, IVI	LKA 149D)					Other	(Explain in Remarks)
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	³ Indicators of	hydrophytic vegetati	on and wetl	and hydrology mus	t be prese	ent, unless	disturbed	or problemation	Σ.
Depth (inches): Hydric Soil Present? Yes X No					· · · · · · · · · · · · · · · · · · ·				
	Type:								
Remarks:	Depth (inc	:hes):						Hydric Soil	Present? Yes X No No
	Remarks:							_	





Soil S





E N



W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/0	County: Geauga County	Sampling Date: 10/22/2021
Applicant/Owner: FirstEnergy		Sampling Point: Upland LP-020,021
Investigator(s): MJA Section		
Landform (hillslope, terrace, etc.): Shoulder slope Local re		Slope (%): ¹⁵
Subregion (LRR or MLRA): LRR R Lat: 41.6307908333333 Soil Map Unit Name: EhD2: Ellsworth silt loam, 12 to 18 percent slopes, ero	oded NWI classific	cation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? $^{\backprime}$	Yes X No (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology significantly distu	rbed? Are "Normal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problem	natic? (If needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sar	mpling point locations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes NoX	Is the Sampled Area within a Wetland? Yes	No
Hydric Soil Present? Yes NoX		
Wetland Hydrology Present? Yes NoX Remarks: (Explain alternative procedures here or in a separate report.)	If yes, optional Wetland Site ID: Upland L	.P-020,021
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil	Cracks (B6)
Surface Water (A1) Water-Stained Leave		tterns (B10)
High Water Table (A2) Aquatic Fauna (B13)		, ,
Saturation (A3) Marl Deposits (B15)		Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Od		` ,
Sediment Deposits (B2) Oxidized Rhizosphe		isible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduce		tressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduction Iron Deposits (B5) Thin Muck Surface (Position (D2)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re		
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral	
Field Observations:		1001 (20)
Surface Water Present? Yes No _X _ Depth (inches):		
Water Table Present? Yes No _X Depth (inches):		
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	Wetland Hydrology Preser	nt? Yes No X
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pro	evious inspections), if available:	
Remarks:		
Tomano.		

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Dominant
3				Species Across All Strata:4 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co		OBL species0 x 1 =0
Sapling/Shrub Stratum (Plot size: 15)		- Total Go	•••	FACW species 0 x 2 = 0
				FAC species 0 x 3 = 0
1				FACU species
2				UPL species30 x 5 =150
3				Column Totals:100 (A)430 (B)
4				Prevalence Index = B/A = 4.3
5				
6		-		Hydrophytic Vegetation Indicators:
7	·			1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
		= Total Co	ver	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5)	20	V	EACH	4 - Morphological Adaptations ¹ (Provide supporting
1. Schedonorus arundinaceus			FACU	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)
2. Daucus carota		Yes	UPL	Problematic Hydrophytic Vegetation (Explain)
3. Trifolium pratense			FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Plantago lanceolata			FACU	
5. Symphyotrichum pilosum	5	No	FACU	Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				and greater than or equal to 5.20 ft (1 m) tail.
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				Woody vines – All woody vines greater than 3.28 ft in height.
	100	= Total Co	ver	
Woody Vine Stratum (Plot size: 30)		•		
1				
2.				Hydrophytic
3				Vegetation Present? Yes No X
4				
T		= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet)	_ Total 00	VCI	
Tremaine. (moduce priote numbers here of on a separate	oncot.)			

Sampling Point: Upland LP-020,021

SOIL Sampling Point: Upland LP-020,021

Depth (inches)
0 - 18
- - - -
<u>-</u>
<u> </u>
<u> </u>
-
-
<u>-</u>
_ -
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M)
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L)
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5) Red Parent Material (F21)
Stripped Matrix (S6) Very Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if observed):
Type:
Depth (inches): Hydric Soil Present? Yes No X
Remarks:





S Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec	City/County: Geauga County	Sampling Date: 09/10/2021
Applicant/Owner: FirstEnergy	State: OH	
Investigator(s): BCR		
Landform (hillslope, terrace, etc.): Footslope Loc		Slope (%): 4
Subregion (LRR or MLRA): LRR R Lat: 41.628759333	12719 Long: -81.17751000030655	
Subregion (LRR or MLRA): LRR R Lat: 41.628759333′ Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classifi	cation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes X No (If no, explain in F	Remarks.)
Are Vegetation X, Soil X, or Hydrology X significantly	disturbed? Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pro		
SUMMARY OF FINDINGS – Attach site map showing	sampling point locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? YesX No Hydric Soil Present? YesX No	Is the Sampled Area within a Wetland?	
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland	LP-022
HYDROLOGY		
	Socondary India	ators (minimum of two required)
Wetland Hydrology Indicators:		
Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water Stained I	Surface Soil	
Surface Water (A1) Water-Stained L		
High Water Table (A2) Aquatic Fauna (Saturation (A3) Marl Deposits (B		Water Table (C2)
Saturation (A3) Marl Deposits (E Water Marks (B1) Hydrogen Sulfid		
		risible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Rec		Stressed Plants (D1)
	duction in Tilled Soils (C6) X Geomorphic	
Iron Deposits (B5) Thin Muck Surfa		
Inundation Visible on Aerial Imagery (B7) Other (Explain in	n Remarks) Microtopogr	aphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutra	l Test (D5)
Field Observations:		
Surface Water Present? Yes No _X _ Depth (inches).	:	
Water Table Present? Yes No _X _ Depth (inches).	:	
Saturation Present? Yes No _X _ Depth (inches): (includes capillary fringe)	,	nt? Yes X No
Describe Recorded Data (stream gauge, monitoring well, aerial photos	s, previous inspections), if available:	
Remarks:		

EGETATION – Use scientific names of plants.				Sampling Point: Wetland LP-02
Tree Stratum (Plot size:) 1)		Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant Species Across All Strata: 2 (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B
5				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	er	OBL species55 x 1 =55
Sapling/Shrub Stratum (Plot size: 15)				FACW species32
				FAC species $0 \times 3 = 0$
·				FACU species
·				UPL species $0 \times 5 = 0$
				Column Totals: 94 (A) 147 (B)
				Prevalence Index = B/A = 1.5638297872
				Hydrophytic Vegetation Indicators:
				X 1 - Rapid Test for Hydrophytic Vegetation
' <u>. </u>				X 2 - Dominance Test is >50%
5		= Total Cov	er	X 3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:5)Impatiens capensis	30	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Persicaria sagittata	30	Yes	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
Leersia oryzoides	15	No	OBL	¹ Indicators of hydric soil and wetland hydrology must
. Senecio hieraciifolius	5	No	FACU	be present, unless disturbed or problematic.
5Lobelia inflata	2	No	FACU	Definitions of Vegetation Strata:
Eupatorium perfoliatum	2	No	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diamete
Juncus effusus	10	No	OBL	at breast height (DBH), regardless of height.
3				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
				Herb – All herbaceous (non-woody) plants, regardless of
0				size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
2				height.
	94	= Total Cov	er	
Voody Vine Stratum (Plot size: 30)				
				Hydrophytic
<u>)</u>				Vegetation
3				Present? Yes X No
4.				
		= Total Cov	er	
		= Total Cov	er	

SOIL Sampling Point: Wetland LP-022

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the i	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>s</u>			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 18	10YR 4/1	95	5YR 4/6	5	Concer	PL	Silty clay	
-								
-								
								<u> </u>
-								
-								
1								
	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ins.		n: PL=Pore Lining, M=Matrix.
Hydric Soil I								for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belov		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)		MLRA 149B	•	DD D MI	D A 440D)		Prairie Redox (A16) (LRR K, L, R)
Black His	stic (A3) n Sulfide (A4)		Thin Dark Surfa Loamy Mucky N					Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L, M)
	l Layers (A5)		Loamy Gleyed			L)		alue Below Surface (S8) (LRR K, L)
	d Below Dark Surface	(A11)	X Depleted Matrix		,			Dark Surface (S9) (LRR K, L)
	ark Surface (A12)	, (, ,	Redox Dark Su	. ,				langanese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)		Depleted Dark		7)			nont Floodplain Soils (F19) (MLRA 149B)
	sleyed Matrix (S4)		Redox Depress		.,		·	Spodic (TA6) (MLRA 144A, 145, 149B)
	ledox (S5)			(- /				arent Material (F21)
-	Matrix (S6)							Shallow Dark Surface (TF12)
	rface (S7) (LRR R, M	LRA 149E	3)					(Explain in Remarks)
	, ,,		•					,
³ Indicators of	f hydrophytic vegetati	on and we	tland hydrology mus	st be prese	ent, unless	disturbed	or problemati	c.
Restrictive L	ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soi	Present? Yes X No
Remarks:								
· · · · · · · · · · · · · · · · · · ·								





Soil N





E S



W

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/C	County Sampling Date: 09/10/2021
Applicant/Owner: FirstEnergy	
• , , -	
Landform (hillslope, terrace, etc.): Footslope Local rel	
	B Long: -81.17752349999999 Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Y	'es X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problems	
	npling point locations, transects, important features, etc.
The decade the Venetation Proceeds	Is the Sampled Area
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes X No	within a Wetland? Yes No
Wetland Hydrology Present? Yes No	If yes, optional Wetland Site ID: Upland LP-022
Remarks: (Explain alternative procedures here or in a separate report.)	if yes, optional wetland Site id:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leave	
High Water Table (A2) Aquatic Fauna (B13)	
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Od	
Sediment Deposits (B2) Oxidized Rhizospher	es on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduced	
Algal Mat or Crust (B4) Recent Iron Reduction	
Iron Deposits (B5) Thin Muck Surface (0	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rer	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _X _ Depth (inches): Water Table Present? Yes No _X _ Depth (inches):	
Water Table Present? Yes No _X _ Depth (inches): Saturation Present? Yes No _X _ Depth (inches):	Wetland Hydrology Propent? Voc. No. V
(includes capillary fringe)	Wetland Hydrology Present? Yes No X
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	
Tromano.	

Tree Stratum (Plot size: 30)	Absolute	Dominant Species?		Dominance Test worksheet:
1			·	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2				
3				Total Number of Dominant Species Across All Strata: 1 (B)
4				
				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B)
5				
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co	ver	OBL species 33 x 1 = 33 EACW species 18 x 2 = 36
Sapling/Shrub Stratum (Plot size: 15)				1 ACVV species
1				1 AC species x 3 =
2				ACU species x 4 =
3		-		UPL species 0 x 5 = 0 Column Totals: 156 (A) 489 (B)
4				Column Totals. (A) 400 (B)
5				Prevalence Index = B/A = 3.1346153846
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size:5)				3 - Prevalence Index is ≤3.0 ¹
1. Solidago canadensis	80	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2 Juncus effusus	30	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Cyperus esculentus	10	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Symphyotrichum pilosum	25		FACU	be present, unless disturbed or problematic.
5. Eupatorium perfoliatum	8	No	FACW	Definitions of Vegetation Strata:
6. Scirpus atrovirens	3	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7		-		at breast height (DBH), regardless of height.
8			- ——	Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
12	156	= Total Co		height.
Was da Visa Otasham (Distains 30		- 10tal C0	vei	
Woody Vine Stratum (Plot size:)				
1		-		Hydrophytic
2				Vegetation
3				Present? Yes No X
4				
	-	= Total Co	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Sampling Point: Upland LP-022

SOIL Sampling Point: Upland LP-022

Depth
0 - 18
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M)
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L)
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5) Red Parent Material (F21)
Stripped Matrix (S6) Very Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if observed):
Type:
Depth (inches): Hydric Soil Present? Yes X No
Remarks:





U-BCR-091021-01

Project/Site: Leroy Center-Mayfield 138 kV Transmission L	ine Projec City/County: Geaug	a County	Sampling Date: 09/10/2021
Applicant/Owner: FirstEnergy			Sampling Point: Wetland LP-023
Investigator(s): BCR			
Landform (hillslope, terrace, etc.): Flat			Slope (%): 1
Subregion (LRR or MLRA): LRR R Lat: 41.6 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percentage of the substitution of	ent slopes	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes X No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrologys	ignificantly disturbed? Ar	e "Normal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology n		needed, explain any answer	
SUMMARY OF FINDINGS – Attach site map	showing sampling poin	t locations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Yes X No No No No No No No No No N	within a Wet	land? Yes X	
Wetland Hydrology Present? Yes X No.	If yes, option	al Wetland Site ID: Wetland L	_P-023
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicat	ors (minimum of two required)
Primary Indicators (minimum of one is required; check all t	hat annly)	Surface Soil (
•	er-Stained Leaves (B9)	Surface Son C	
	atic Fauna (B13)	Moss Trim Lir	
	Deposits (B15)		Vater Table (C2)
	rogen Sulfide Odor (C1)	Crayfish Burn	
	ized Rhizospheres on Living Ro		sible on Aerial Imagery (C9)
	ence of Reduced Iron (C4)		ressed Plants (D1)
	ent Iron Reduction in Tilled Soils	s (C6) X Geomorphic I	Position (D2)
Iron Deposits (B5) Thin	Muck Surface (C7)	Shallow Aquit	ard (D3)
Inundation Visible on Aerial Imagery (B7) Other	er (Explain in Remarks)	Microtopogra	phic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutral	Test (D5)
Field Observations:			
Surface Water Present? Yes No _X Dep	oth (inches):		
Water Table Present? Yes No X Dep	oth (inches):		
Saturation Present? Yes No X Dep (includes capillary fringe)	, ,	Wetland Hydrology Present	t? Yes <u>X</u> No
Describe Recorded Data (stream gauge, monitoring well, a	aeriai pnotos, previous inspectio	ons), if available:	
Remarks:			

			Sampling Point: Wetland LP-02
Absolute % Cover	Dominant Species?		Dominance Test worksheet:
		<u> Otatas</u>	Number of Dominant Species That Are OBL, FACW, or FAC:5 (A)
			(v)
			Total Number of Dominant Species Across All Strata: 5 (B)
			(2)
			Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/E
			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
	= Total Cove	er	OBL species 75 x 1 = 75 FACW species 30 x 2 = 60
			FACW species $\frac{30}{55}$ x 2 = $\frac{60}{165}$
		FAC	FACU species 0 x 4 = 0
			UPL species 0 x 5 = 0
			Column Totals: 160 (A) 300 (B
			4.075
			Prevalence Index = B/A = 1.875
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
20	= Total Cove	er	X 2 - Dominance Test is >50%
			X 3 - Prevalence Index is ≤3.0 ¹
30	Yes	FAC	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
15	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
30	Yes	OBL	¹ Indicators of hydric soil and wetland hydrology must
20	Yes	OBL	be present, unless disturbed or problematic.
5	No	FACW	Definitions of Vegetation Strata:
10	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diamete
20	Yes	FACW	at breast height (DBH), regardless of height.
5	No	FAC	Sapling/shrub – Woody plants less than 3 in. DBH
5	No	FACW	and greater than or equal to 3.28 ft (1 m) tall.
			Herb – All herbaceous (non-woody) plants, regardless of
			size, and woody plants less than 3.28 ft tall.
			Woody vines – All woody vines greater than 3.28 ft in height.
140	= Total Cove	er er	neight.
	rotal core		
			Hydrophytic
			Vegetation Present? Yes X No
	= Total Cove		
	20 20 30 15 30 20 5 10 20 5 5	= Total Cove 20 Yes 20 = Total Cove 30 Yes 15 No 30 Yes 20 Yes 5 No 10 No 20 Yes 5 No 5 No 5 No 5 No	= Total Cover 20 Yes FAC 20 = Total Cover 30 Yes FAC 15 No OBL 30 Yes OBL 20 Yes OBL 5 No FACW 10 No OBL 20 Yes FACW 5 No FACW 5 No FACW 5 No FACW

SOIL Sampling Point: Wetland LP-023

Profile Desc	ription: (Describe t	o the dep	th needed to docun	nent the i	indicator o	or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Feature %	<u>S</u> _Type ¹	_Loc ²	Texture	Remarks
0 - 14	10YR 4/1	85	5YR 4/6	15	Concer	PL,M	Silty clay	Kemarks
14 - 18	2.5Y 6/2	70	5YR 5/8	30	Concer	PL,M	Silty clay	
-								
-								
-								
¹Type: C=Co	ncentration, D=Depl	etion. RM	=Reduced Matrix, MS	= S=Masked	Sand Gra	ains.	2Location	: PL=Pore Lining, M=Matrix.
Hydric Soil I		<u> </u>	Tradesia manny me					for Problematic Hydric Soils³:
Histosol	(A1) ipedon (A2)		Polyvalue Belov MLRA 149B)		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa		LRR R, ML	RA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4) Layers (A5)		Loamy Mucky M Loamy Gleyed N			, L)		furface (S7) (LRR K, L, M) lue Below Surface (S8) (LRR K, L)
	Below Dark Surface	e (A11)	X Depleted Matrix		-)		-	ark Surface (S9) (LRR K, L)
	rk Surface (A12)		Redox Dark Sur	, ,				anganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1) leyed Matrix (S4)		Depleted Dark S Redox Depress		-7)			ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
	Matrix (S6) face (S7) (LRR R, M	LRA 149I	3)					hallow Dark Surface (TF12) (Explain in Remarks)
		on and we	etland hydrology mus	t be prese	ent, unless	disturbed	or problemation).
	ayer (if observed):							
Type: Depth (inc	hes):						Hydric Soil	Present? Yes X No No
Remarks:	,							





Soil W





S E



Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Pr	ojec City/County: Geauga County	,	Sampling Date: 09/10/2021
Applicant/Owner: FirstEnergy			Sampling Point: Wetland LP-024E
Investigator(s): BCR			
Landform (hillslope, terrace, etc.): Flat			Slope (%): 1
Subregion (LRR or MLRA): LRR R Lat: 41.62718 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slo	pes	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes X No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology signific	antly disturbed? Are "Norma	al Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology natura		explain any answer	
SUMMARY OF FINDINGS – Attach site map show	ving sampling point locati	ons, transects,	, important features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	within a Wetland?	Yes X	
Wetland Hydrology Present? Yes X No	If yes, optional Wetlan	ıd Site ID: Wetland I	LP-024E
LIVEROLOGY			
HYDROLOGY		Casandan Indian	to un (maining une of true un accionad)
Wetland Hydrology Indicators:			tors (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap		Surface Soil (
	ined Leaves (B9)	Drainage Pat	
High Water Table (A2) Aquatic Fa		Moss Trim Li	
Saturation (A3) Marl Depo			Water Table (C2)
	Sulfide Odor (C1)	Crayfish Burn	` '
	Rhizospheres on Living Roots (C3) of Reduced Iron (C4)		sible on Aerial Imagery (C9) ressed Plants (D1)
	on Reduction in Tilled Soils (C6)	X Geomorphic I	, ,
Iron Deposits (B5) Thin Much		Shallow Aquit	
	olain in Remarks)	Microtopogra	` '
Sparsely Vegetated Concave Surface (B8)	olam m remaine)	X FAC-Neutral	
Field Observations:			
Surface Water Present? Yes No _X _ Depth (in	ches):		
Water Table Present? Yes No X Depth (in			
Saturation Present? Yes No X Depth (in (includes capillary fringe)		Hydrology Presen	t? Yes <u>X</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections), if av	ailable:	
Remarks:			
Tremains.			

/EGETATION – Use scientific names of plants	6.			Sampling Point: Wetland LP-024
Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant Species Across All Strata: 3 (B)
3				(Z)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.6666666666 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	/er	OBL species85 x 1 =85
Sapling/Shrub Stratum (Plot size: 15)				FACW species10 x 2 =20
1				FAC species x 3 = 0
2				FACU species x 4 = 80
3.				UPL species 0 x 5 = 0
4.				Column Totals:115 (A)185 (B)
5	· · ·			Prevalence Index = B/A = 1.608695652
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
·		= Total Cov	/er	X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		10101 001		$\frac{X}{2}$ 3 - Prevalence Index is $\leq 3.0^{1}$
1. Scirpus cyperinus	50	Yes	OBL	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2. Solidago canadensis	20	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Agrostis gigantea	10	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
4Juncus effusus	20	Yes	OBL	be present, unless disturbed or problematic.
5 Mentha X piperita	5	No	OBL	Definitions of Vegetation Strata:
6. Lythrum salicaria	10	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12		= Total Cov	/er	height.
Woody Vine Stratum (Plot size:30)				
1				
2				Hydrophytic Vegetation
3				Present? Yes X No
4			·	
4		= Total Cov		

SOIL Sampling Point: Wetland LP-024E

Depth	Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator c	or confirm	the absence	of indicators.)
10	•					<u>3</u>	L = = 2	Tauduma	Damarka
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Histosol (A1) Histosol (A2) Histo Epipedon (A2) Histo (A3) Histo Histo (A3) Histo Histo (A3) Histo Histo (A3) Histo Epipedon (A2) Epipedon (A2) Epipedon (A2) Epipedon (A2) Histo Epipedon (A2) Epi									Remarks
Hydric Soil Indicators: Histosol (A1)	0 - 18	10YR 3/2	90	5YR 4/6	10	Concer	PL,M	Silty clay loam	
Hydric Soil Indicators: Histosol (A1)	-								
Hydric Soil Indicators: Histosol (A1)	-			_					
Hydric Soil Indicators: Histosol (A1)	-	-		-					
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)	-								
Hydric Soil Indicators: Histosol (A1)	-								
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)									-
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)	-								
Hydric Soil Indicators: Histosol (A1)				_					
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)	-								
Hydric Soil Indicators: Histosol (A1)	¹ Type: C=Co	ncentration D=Deple	etion RM=F	Reduced Matrix MS	S=Masked	Sand Gra	ins	² I ocation	· PI =Pore Lining M=Matrix
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Thick Dark Surface (A11) Sandy Mucky Mineral (S1) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, R) Redox Depressions (F8) Redox Depressions (F8) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Alloicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No			00001, 1000 1	toddood Matrix, Me	o macked	Carra Cra			
Black Histic (A3)	Histosol	(A1)	_	Polyvalue Belov	w Surface	(S8) (LRR	R,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11)X Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.** **Restrictive Layer (if observed):** Type: Depth (inches): Hydric Soil Present? Yes X No									
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11)X Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Other (Explain in Remarks) Sandy Redox (S7) (LRR R, MLRA 149B) Depth (inches): Hydric Soil Present? YesX No			_						
Depleted Below Dark Surface (A11)			_				L)		
Thick Dark Surface (A12)			- (Δ11))		-	
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed):			(7(11)						
Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed):		, ,	_		, ,	7)			
Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	-		_	Redox Depress	ions (F8)				
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	-								
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No			L D A 440B\					-	
Restrictive Layer (if observed): Type: Hydric Soil Present? Yes X No	Dark Sur	lace (57) (LRK K, IVI	LKA 149D)					Other	(Explain in Remarks)
Restrictive Layer (if observed): Type: Hydric Soil Present? Yes X No	³ Indicators of	hydrophytic vegetati	on and wetl	and hydrology mus	st be prese	ent, unless	disturbed	or problemation	Σ.
Depth (inches): Hydric Soil Present? Yes X No									
	Type:								
Remarks:	Depth (inc	:hes):						Hydric Soil	Present? Yes X No No
	Remarks:								





Soil N





W



Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/C	County: Geauga County Sampling Date: 09/10/2021
Applicant/Owner: FirstEnergy	OII
Investigator(s): BCR Secti	
Landfarm (hillaton tarress etc.). Undulating	Usef (accessed accessed accessed Rolling Classe (9/1), 1
Landform (hillslope, terrace, etc.): Undulating Local rel	ler (concave, convex, none): 10011119 Slope (%): 1
	65 Long: -81.17997999992694 Datum: WGS 1984
	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	res X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed.	rbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problem	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing san	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland LP-024S
Remarks: (Explain alternative procedures here or in a separate report.)	ii yee, epitoriai Protiana ette 15.
HADBOLOGA	
HYDROLOGY Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leave	·
High Water Table (A2) Aquatic Fauna (B13)	
Saturation (A3) Marl Deposits (B15)	
Water Marks (B1) Hydrogen Sulfide Od	
Sediment Deposits (B2) X Oxidized Rhizospher	res on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduce	
Algal Mat or Crust (B4) Recent Iron Reduction	
Iron Deposits (B5) Thin Muck Surface (
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rel Sparsely Vegetated Concave Surface (B8)	marks) Microtopographic Relief (D4) X FAC-Neutral Test (D5)
Field Observations:	A TAC-Neutral Test (D3)
Surface Water Present? Yes No _X _ Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No _X Depth (inches):	Wetland Hydrology Present? Yes X No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	evious inspections). if available:
J. J	
Daniela	
Remarks:	

/EGETATION – Use scientific names of plants				Sampling Point: Wetland LP-024
Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2.				
3				Total Number of Dominant Species Across All Strata: 3 (B)
I				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:1 (A/B
S				Providence in devivorable back
·				Prevalence Index worksheet:
		= Total Cov	er	OBL species 40 x 1 = 40
Sapling/Shrub Stratum (Plot size: 15)				FACW species 50
Frangula alnus	50	Yes	FAC	FAC species x 3 = 150
				FACU species 0 x 4 = 0
<u>. </u>				UPL species $0 \times 5 = 0$ Column Totals: $140 \times 6 \times 140 \times 14$
				Column Totals:140 (A)290 (B)
i				Prevalence Index = B/A = 2.071428571
S				Hydrophytic Vegetation Indicators:
·				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov		X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)				X 3 - Prevalence Index is ≤3.0¹
Scirpus cyperinus	10	No	OBL	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Juncus effusus	20	Yes	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Carex scoparia	50	Yes	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Scirpus atrovirens	10	No	OBL	be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
5				Tree – Woody plants 3 in. (7.6 cm) or more in diamete
7				at breast height (DBH), regardless of height.
3				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
)				
0				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
1				Woody vines – All woody vines greater than 3.28 ft in
2		-		height.
	90	= Total Cov	er	
Voody Vine Stratum (Plot size:)				
		-		Hederaled's
2				Hydrophytic Vegetation
3				Present? Yes X No
1				

SOIL Sampling Point: Wetland LP-024S

Profile Desc	ription: (Describe t	o the depth	needed to docu	ment the i	indicator o	r confirm	the absence	of indicators.)
Depth	Matrix			x Feature	<u>s</u> ,	2		
(inches) 0 - 8	Color (moist)	<u>%</u> _	Color (moist)		Type ¹	Loc ²	Texture	Remarks
0 - 8	10YR 4/2	70	5YR 4/6	30	Concer	PL,M	Silty clay	
8 - 14	2.5Y 6/4	70	10YR 5/8	30	Concer	M	Silty clay	
-								
								-
-								
-								
-								
_								
1 _{Type:} C=C			Poducod Matrix M	C-Mookes			21 continu	DI - Doro Lining M-Metrix
Hydric Soil I	ncentration, D=Depl	elion, Rivi=r	Reduced Matrix, M	S=IVIASKE	a Sand Gra	IIIS.		r PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belo	w Surface	(S8) (LRR	R.		Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)	_	MLRA 149B		()(,		Prairie Redox (A16) (LRR K, L, R)
Black His		_	Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	-	Loamy Mucky I			L)		Surface (S7) (LRR K, L, M)
	l Layers (A5) I Below Dark Surface	_ (Δ11)	Loamy Gleyed X Depleted Matri:		<u>(')</u>			alue Below Surface (S8) (LRR K, L) Park Surface (S9) (LRR K, L)
	ark Surface (A12)		Redox Dark Su					anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	_	Depleted Dark	, ,				ont Floodplain Soils (F19) (MLRA 149B)
-	leyed Matrix (S4)	_	Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
	Matrix (S6) face (S7) (LRR R, M	II D A 140B)					-	Shallow Dark Surface (TF12) (Explain in Remarks)
Dark Sui	lace (57) (LIKITIT, IVI	ILIXA 1490)					Other	(Explain in Remarks)
³ Indicators of	hydrophytic vegetati	ion and wet	and hydrology mu	st be prese	ent, unless	disturbed	or problemation	o.
Restrictive L	ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes X No No
Remarks:								





Soil





S W



Ε

Project/Site: Leroy Center-Mayfield 138 kV Transmis	sion Line Projec City/County	Geauga County	Sampling Date: 09/10/2021
Applicant/Owner: FirstEnergy			Sampling Point: Upland LP-023,024
Investigator(s): BCR	Section, To		
Landform (hillslope, terrace, etc.): Shoulder slope			Slope (%): ²
Subregion (LRR or MLRA): LRR R La Soil Map Unit Name: MgA: Mahoning silt loam, 0 to 2	? percent slopes	NWI clas	ssification: N/A
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes X	No (If no, explain	in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstance	es" present? Yes X No
Are Vegetation, Soil, or Hydrology			
SUMMARY OF FINDINGS – Attach site r	nap showing samplin	g point locations, transe	cts, important features, etc.
		ne Sampled Area nin a Wetland? Yes	No
	NO	es, optional Wetland Site ID: Upla	
Remarks: (Explain alternative procedures here or in	a separate report.)	s, optional Wetland Site ID.	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary In	dicators (minimum of two required)
Primary Indicators (minimum of one is required; che	ck all that apply)	Surface	Soil Cracks (B6)
Surface Water (A1)	_ Water-Stained Leaves (B9) Drainage	e Patterns (B10)
	_ Aquatic Fauna (B13)		m Lines (B16)
	_ Marl Deposits (B15)		son Water Table (C2)
	_ Hydrogen Sulfide Odor (C		Burrows (C8)
	_ Oxidized Rhizospheres on		on Visible on Aerial Imagery (C9)
	Presence of Reduced Iron		or Stressed Plants (D1)
1 · · ·	Recent Iron Reduction in T	, , <u>—</u>	ohic Position (D2)
	Thin Muck Surface (C7)Other (Explain in Remarks		Aquitard (D3) ographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	_ Other (Explain in Remarks		utral Test (D5)
Field Observations:		170-1400	
Surface Water Present? Yes No _X	Depth (inches):		
Water Table Present? Yes No _X			
Saturation Present? Yes No _X		Wetland Hydrology Pre	esent? Yes No _X_
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous	inspections), if available:	
	, p, p	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Remarks:			

/EGETATION – Use scientific names of plants	-			Sampling Point: Upland LP-023,024
Tree Stratum (Plot size:)	Absolute	Dominant Species?		Dominance Test worksheet:
1			Status	Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
2				
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.5 (A/B)
6				
7				Prevalence Index worksheet: Total % Cover of: Multiply by:
		= Total Cov	er	OBL species5 x 1 =5
Sapling/Shrub Stratum (Plot size: 15)				FACW species 20 x 2 = 40
1				FAC species30 x 3 =90
2				FACU species 45 x 4 = 180
3				UPL species $0 \times 5 = 0$
4				Column Totals:(A)(B)
5				Prevalence Index = B/A = 3.15
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov		2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		- Total Gov	Ci	3 - Prevalence Index is ≤3.0 ¹
1. Solidago canadensis	30	Yes	FACU	 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2Apocynum cannabinum	30	Yes	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Agrostis gigantea	10	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Elymus virginicus	10	No	FACW	be present, unless disturbed or problematic.
5. Agrostis perennans	10	No	FACU	Definitions of Vegetation Strata:
6. Mentha X piperita	5	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. Lotus corniculatus	5	No	FACU	at breast height (DBH), regardless of height.
8.				Sapling/shrub – Woody plants less than 3 in. DBH
9.				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in height.
	100	= Total Cov	er	norgin.
Woody Vine Stratum (Plot size:30)		•		
1				
2.				Hydrophytic
3	· · · · · · · · · · · · · · · · · · ·			Vegetation Present? Yes No X
J.				
		= Total Cov	er	

SOIL Sampling Point: Upland LP-023,024

Profile Description: (Describe to the d	epth needed to docu	ment the indica	ator or confirn	n the absence	of indicators.)
Depth Matrix		ox Features	¹ ²	Tauduma	Damarka
(inches) Color (moist) %	Color (moist)	%Ty	pe ¹ Loc ²	<u>Texture</u>	Remarks
0 - 10 10YR 3/3				Silty clay loam	
-					
-			· · · · · · · · · · · · · · · · · · ·		
					<u> </u>
-					
					<u> </u>
-					
-			·		
-					
-					
17. 00				2, ,,	BL B. III WALL
¹ Type: C=Concentration, D=Depletion, R Hydric Soil Indicators:	M=Reduced Matrix, M	S=Masked San	d Grains.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Belo	w Surface (S8)	(I DD D		Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 149B		(LIKIK IK,		Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3)		, ace (S9) (LRR I	R, MLRA 149B		Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)		Mineral (F1) (LF			Surface (S7) (LRR K, L, M)
Stratified Layers (A5)	Loamy Gleyed	Matrix (F2)		Polyva	llue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11)	Depleted Matri				ark Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	Redox Dark Su	, ,			anganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Depleted Dark Redox Depress				ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5)	Nedox Depress	510113 (1 0)			arent Material (F21)
Stripped Matrix (S6)					Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 14	19B)				(Explain in Remarks)
³ Indicators of hydrophytic vegetation and	wetland hydrology mu	st be present, u	nless disturbed	or problemation	2.
Restrictive Layer (if observed): X					
Type: Gravel	<u> </u>				
Depth (inches): 10	_			Hydric Soil	Present? Yes NoX
Remarks:					





Soil SW

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/	County: Geauga County Sampling Date: 09/29/2021
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-025
Investigator(s): BCR Sect	tion, Township, Range: N/A
Landform (hillslope, terrace, etc.): Undulating Local re	
Subregion (LRR or MLRA): LRR R Lat: 41.6246001671430	Description
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distu	urbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problem	natic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sai	mpling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? YesX No Hydric Soil Present? YesX No Wetland Hydrology Present? YesX No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-025
HYDROLOGY Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leav	
High Water Table (A2) Aquatic Fauna (B13	
Saturation (A3) Marl Deposits (B15)	
Water Marks (B1) Hydrogen Sulfide O	
Sediment Deposits (B2) Oxidized Rhizosphe	eres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduce	ed Iron (C4) Stunted or Stressed Plants (D1)
X Algal Mat or Crust (B4) Recent Iron Reducti	ion in Tilled Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface (
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _X _ Depth (inches):	
Water Table Present? Yes No _X _ Depth (inches):	Western I Health Laws Borners (O. Vern. V. No.
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes X No No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	revious inspections), if available:
Remarks:	
Notificing.	

EGETATION – Use scientific names of plants	3.			Sampling Point: Wetland LP-02
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
l				Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
2				Total Number of Dominant
i <u> </u>				Species Across All Strata: 2 (B)
a				Percent of Dominant Species
i	<u> </u>			That Are OBL, FACW, or FAC:1 (A/B
i				Prevalence Index worksheet:
	<u> </u>			Total % Cover of: Multiply by:
		= Total Cov	er	OBL species x 1 = 75
apling/Shrub Stratum (Plot size: 15)				FACW species 10 x 2 = 20
				X 3 = 10
				FACU species $\begin{array}{ccc} 10 & \text{x 4} = & 40 \\ \text{UPL species} & 0 & \text{x 5} = & 0 \\ \end{array}$
				Column Totals: 110 (A) 180 (B)
	<u> </u>			4 00000000
	<u> </u>			Frevalence index - B/A -
	<u> </u>			Hydrophytic Vegetation Indicators:
				X 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%
_		= Total Cov	er	X 3 - Prevalence Index is ≤3.0¹
erb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supportin
Scirpus atrovirens	5	<u>No</u>	OBL	data in Remarks or on a separate sheet)
Juncus effusus		Yes	OBL_	Problematic Hydrophytic Vegetation ¹ (Explain)
Symphyotrichum pilosum			FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Cyperus esculentus		No	FACW	
Echinochloa crus-galli			FAC	Definitions of Vegetation Strata:
Dichanthelium acuminatum		No No	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
Ludwigia palustris	40	Yes	OBL	
Andropogon virginicus	5	No	FACU	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
		-		Herb – All herbaceous (non-woody) plants, regardless of
0				size, and woody plants less than 3.28 ft tall.
1				Woody vines – All woody vines greater than 3.28 ft in
2				height.
(See to Vice Otenture (Diet siege 30	110	= Total Cov	er	
/oody Vine Stratum (Plot size:)				
				Hydrophytic
				Vegetation Present? Yes X No
<u>-</u>		-		100 110
<u>. </u>		= Total Cov		

SOIL Sampling Point: Wetland LP-025

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the i	indicator o	or confirm	n the absence	of indicators.)		
Depth	Matrix		Redo	x Feature	<u>s</u> ,	2				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks		
0 - 8	10YR 4/2	95	10YR 3/4	5	Concer	M	Silty clay loam			
8 - 18	10YR 5/1	70	10YR 5/8	30	Concer	М	Silty clay			
-										
-										
-										
					·					
					-					
							<u> </u>			
-										
Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	d Sand Gra	ins.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :		
Histosol			Polyvalue Belov	w Surface	(S8) (I RR	R		•		
	pipedon (A2)		MLRA 149B		(00) (2.111	,	2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)			
Black Hi			Thin Dark Surfa				5 cm Mucky Peat or Peat (S3) (LRR K, L, R)			
	n Sulfide (A4)		Loamy Mucky N			L)		Surface (S7) (LRR K, L, M)		
	l Layers (A5) l Below Dark Surface	(A11)	Loamy Gleyed X Depleted Matrix		()			alue Below Surface (S8) (LRR K, L) Park Surface (S9) (LRR K, L)		
	ark Surface (A12)	, (, (, , , ,	Redox Dark Su					anganese Masses (F12) (LRR K, L, R)		
	lucky Mineral (S1)		Depleted Dark	Surface (F	- 7)			ont Floodplain Soils (F19) (MLRA 149B)		
	sleyed Matrix (S4)		Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)		
-	ledox (S5)						Red Parent Material (F21)			
	Matrix (S6) rface (S7) (LRR R, M	II R	8)				Very Shallow Dark Surface (TF12) Other (Explain in Remarks)			
	(27)		• /							
	hydrophytic vegetati	ion and we	tland hydrology mus	st be prese	ent, unless	disturbed	d or problemation	S.		
Type:	Layer (ii observed).									
Depth (inc	ches):						Hydric Soil	Present? Yes X No No		
Remarks:										





Soil





E S



W

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/	County: Geauga County	Sampling Date: 09/29/2021				
	State: OH					
Investigator(s): BCR Sec						
• , ,	elief (concave, convex, none): Undulating	Slope (%): ²				
Subregion (LRR or MLRA): LRR R Lat: 41.6246334999999 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classific	ation: N/A				
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in R	emarks.)				
Are Vegetation, Soil, or Hydrology significantly distu	urbed? Are "Normal Circumstances" p	resent? Yes X No				
Are Vegetation, Soil, or Hydrology naturally problem						
SUMMARY OF FINDINGS – Attach site map showing sa	mpling point locations, transects	, important features, etc.				
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland?	No				
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Upland L	P-025				
HYDROLOGY						
Wetland Hydrology Indicators:		tors (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil					
Surface Water (A1) Water-Stained Leav		Drainage Patterns (B10)				
High Water Table (A2) Aquatic Fauna (B13		Moss Trim Lines (B16)				
Saturation (A3) Marl Deposits (B15)		Dry-Season Water Table (C2) Crayfish Burrows (C8)				
Water Marks (B1) Hydrogen Sulfide O Sediment Deposits (B2) X Oxidized Rhizosphe		sible on Aerial Imagery (C9)				
Sediment Deposits (B2) Oxidized Knizospire Oxidized Knizospire Presence of Reduce		ressed Plants (D1)				
Algal Mat or Crust (B4) Recent Iron Reduct						
Iron Deposits (B5) Thin Muck Surface						
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re						
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral	Test (D5)				
Field Observations:						
Surface Water Present? Yes NoX _ Depth (inches):						
Water Table Present? Yes No _X Depth (inches):						
Saturation Present? Yes No _X _ Depth (inches): (includes capillary fringe)	Wetland Hydrology Presen	t? Yes X No				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	revious inspections), if available:					
Remarks:						

EGETATION – Use scientific names of plants	·.			Sampling Point: Upland LP-
<u>Tree Stratum</u> (Plot size:) 1)		Species?	<u>Status</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A
2.				That Are OBL, FACW, or FAC: 2 (A Total Number of Dominant
3				Species Across All Strata:3 (B
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.6666666666 (A
3				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
_		= Total Cov	er	OBL species x 1 = 50
Sapling/Shrub Stratum (Plot size: 15)				FACW species 1 x 2 = 2 FAC species 5 x 3 = 15
				FAC species 5 x 3 = 15 FACU species 37 x 4 = 148
)				UPL species1 x 5 = 5
3				Column Totals: 94 (A) 220 (
				Prevalence Index = B/A = 2.3404255319
5				
S				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
	-	= Total Cov	er	X 3 - Prevalence Index is ≤3.0¹
Herb Stratum (Plot size:5) 1. Scirpus atrovirens	30	Yes	OBL	4 - Morphological Adaptations ¹ (Provide support data in Remarks or on a separate sheet)
2. Juncus effusus	20		OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
Symphyotrichum pilosum	_		FACU	¹ Indicators of hydric soil and wetland hydrology mus
4. Schedonorus arundinaceus	30	Yes	FACU	be present, unless disturbed or problematic.
5. Juncus tenuis	5	No	FAC	Definitions of Vegetation Strata:
5. Daucus carota		No	UPL	Tree – Woody plants 3 in. (7.6 cm) or more in diame
-	2	No	FACU	at breast height (DBH), regardless of height.
	1		FACW	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
l1				Woody vines – All woody vines greater than 3.28 ft in
12				height.
M. 1. M. O. 1. (D. 1.)	94	= Total Cov	er	
Moody Vine Stratum (Plot size:30)				
1				Hydrophytic
2				Vegetation Present? Yes X No
3		-		100 <u> </u>
+,		= Total Cov	· · · · · · · · · · · · · · · · · · ·	
		- Total Cov	CI	

SOIL Sampling Point: Upland LP-025

Profile Desc	ription: (Describe t	o the dept	th needed to docur	nent the i	ndicator o	or confirm	the absence	of indicators.)	
Depth	Matrix			x Features	<u>s</u> _ 1	. 2			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks	
0 - 8	10YR 4/2	100					Silty clay loam		
8 - 18	2.5Y 5/4	65	7.5YR 5/8	33	Concer	M	Silty clay		
-			5YR 3/4	2	Concer	PL			
-									
								-	
-									
-									
-									
-									
-									
¹Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ins.	² Location	: PL=Pore Lining, M=Matrix.	
Hydric Soil I		,	,					for Problematic Hydric Soils ³ :	
Histosol			Polyvalue Belov		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)	
	ipedon (A2)		MLRA 149B	•	DD D 141	D 4 4 40 D		Prairie Redox (A16) (LRR K, L, R)	
Black His	stic (A3) n Sulfide (A4)		Thin Dark Surfa Loamy Mucky N					Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L, M)	
	Layers (A5)		Loamy Gleyed			_,		alue Below Surface (S8) (LRR K, L)	
	Below Dark Surface	(A11)	Depleted Matrix		,		Thin D	ark Surface (S9) (LRR K, L)	
	rk Surface (A12)		Redox Dark Su	, ,				anganese Masses (F12) (LRR K, L, R)	
	lucky Mineral (S1) leyed Matrix (S4)		Depleted Dark : Redox Depress		7)		·	ont Floodplain Soils (F19) (MLRA 149B) Specie (TA6) (MLRA 144A 145 149B)	
-	edox (S5)		Nedox Depless	sions (i o)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21)		
-	Matrix (S6)						Very Shallow Dark Surface (TF12)		
Dark Sur	face (S7) (LRR R, N	ILRA 149B	3)				Other	(Explain in Remarks)	
3Indicators of	hydrophytic vegetat	ion and wa	tland budralagy mus	t ha proof	nt unlace	diaturbad	or problematic		
	ayer (if observed):	ion and we	liand flydrology mus	st be prese	iii, uiiless	disturbed	or problematic	<i>5.</i>	
Type:	,								
	ches):						Hydric Soil	Present? Yes No _X	
Remarks:	·								





Soil



Ε



S



W

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Proj	ec City/County: Geauga Co	ounty	Sampling Date: 09/29/2021		
Applicant/Owner: FirstEnergy	· ·		Sampling Point: Wetland LP-026		
Investigator(s): BCR	Section, Township, Rang				
Landform (hillslope, terrace, etc.): Depression		-	Slope (%): ²		
Subregion (LRR or MLRA): LRR R Lat: 41.622274					
Soil Map Unit Name: Ho: Holly silt loam, frequently flooded		NWI classific	ation: N/A		
Are climatic / hydrologic conditions on the site typical for this time o	f year? Yes X No	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrology significal	ntly disturbed? Are "N	Normal Circumstances" p	resent? Yes X No		
Are Vegetation, Soil, or Hydrology naturally	•	eded, explain any answe			
SUMMARY OF FINDINGS – Attach site map show	ing sampling point lo	cations, transects	, important features, etc.		
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No Remarks: (Explain alternative procedures here or in a separate re	within a Wetland If yes, optional W	Area d? Yes X /etland Site ID: Wetland			
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)		
Primary Indicators (minimum of one is required; check all that app	ly)	Surface Soil	Cracks (B6)		
	ed Leaves (B9)	Drainage Patterns (B10)			
High Water Table (A2) Aquatic Fau		Moss Trim Lines (B16)			
Saturation (A3) Marl Depos		Dry-Season	Water Table (C2)		
	ulfide Odor (C1)	Crayfish Buri	rows (C8)		
	nizospheres on Living Roots	(C3) Saturation Vi	sible on Aerial Imagery (C9)		
	Reduced Iron (C4)		tressed Plants (D1)		
Algal Mat or Crust (B4) Recent Iron	Reduction in Tilled Soils (Co	6) X Geomorphic	Position (D2)		
Iron Deposits (B5) Thin Muck S		Shallow Aqui	, ,		
Inundation Visible on Aerial Imagery (B7) Other (Expl	ain in Remarks)	Microtopogra	phic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutral	Test (D5)		
Field Observations:					
Surface Water Present? Yes No _X Depth (incl	·				
Water Table Present? Yes No _X _ Depth (incl					
Saturation Present? Yes No X Depth (includes capillary fringe)	ŕ	land Hydrology Presen	t? Yes <u>X</u> No		
Describe Recorded Data (stream gauge, monitoring well, aerial pl	notos, previous inspections),	, if available:			
Remarks:					

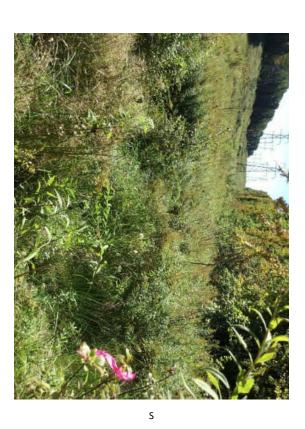
			Sampling Point: Wetland LP-02		
	Species?		Dominance Test worksheet: Number of Dominant Species		
			That Are OBL, FACW, or FAC: 2 (A)		
			Total Number of Dominant Species Across All Strata: 2 (B)		
			Percent of Dominant Species		
			That Are OBL, FACW, or FAC:1 (A/B		
			Prevalence Index worksheet:		
			Total % Cover of: Multiply by:		
	= Total Cove	er	OBL species65 x 1 =65		
			FACW species $\frac{25}{0}$ x 2 = $\frac{50}{0}$		
			rac species x 3 =		
			FACU species $0 \times 4 = 0$ UPL species $0 \times 5 = 0$		
			Column Totals: 90 (A) 115 (B)		
			Prevalence Index = B/A = 1.294117647(
			Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation		
			X 2 - Dominance Test is >50%		
= Total Cover			$\frac{X}{3}$ - Prevalence Index is $\leq 3.0^{1}$		
50	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supportine data in Remarks or on a separate sheet)		
			Problematic Hydrophytic Vegetation¹ (Explain)		
			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
	140		Definitions of Vegetation Strata:		
50	Yes	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diamete		
30	Yes	FACW	at breast height (DBH), regardless of height.		
10	No	OBL	Sapling/shrub – Woody plants less than 3 in. DBH		
10	No	OBL	and greater than or equal to 3.28 ft (1 m) tall.		
			Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
			Woody vines – All woody vines greater than 3.28 ft in		
			height.		
90	= Total Cove	er			
			Undrambutia		
			Hydrophytic Vegetation		
			Present? Yes X No		
		## Cover Species? ## Total Cover Species. ##	% Cover Species? Status		

SOIL Sampling Point: Wetland LP-026

Profile Desc	ription: (Describe t	o the dep	th needed to docu	ment the i	indicator o	or confirm	m the absence	of indicators.)			
Depth	Matrix			x Feature	<u>s</u>	2					
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks			
0 - 18	10YR 3/1	90	10YR 4/6	10	Concer	M	Silty clay loam				
0 - 18	10YR 3/1	90	10YR 4/6	10	Concer	M	Silty clay loam				
-						-					
-											
-							-				
-											
-											
-											
-						-					
¹ Type: C=Co	oncentration, D=Depl	etion. RM=	Reduced Matrix. M	S=Masked	d Sand Gra	ins.	² Location	: PL=Pore Lining, M=Matrix.			
Hydric Soil I		<u> </u>	,					for Problematic Hydric Soils ³ :			
Histosol			Polyvalue Belo		(S8) (LRR	R,	· · · · · · · · · · · · · · · · · · ·	Muck (A10) (LRR K, L, MLRA 149B)			
Black His	oipedon (A2) stic (A3)		MLRA 149B Thin Dark Surfa	,	LRR R, ML	.RA 149E	Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)				
	n Sulfide (A4)		Loamy Mucky I					Surface (S7) (LRR K, L, M)			
	I Layers (A5)		Loamy Gleyed		2)			alue Below Surface (S8) (LRR K, L)			
	Below Dark Surface	e (A11)	Depleted Matrix					eark Surface (S9) (LRR K, L)			
	rk Surface (A12) lucky Mineral (S1)		X Redox Dark Su Depleted Dark	, ,				anganese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B)			
	eleyed Matrix (S4)		Redox Depress		')		· · · · · · · · · · · · · · · · · · ·	Spodic (TA6) (MLRA 144A, 145, 149B)			
	edox (S5)			()				arent Material (F21)			
-	Matrix (S6)							Very Shallow Dark Surface (TF12)			
Dark Sur	face (S7) (LRR R, M	LRA 149E	3)				Other (Explain in Remarks)				
³ Indicators of	hydrophytic vegetati	on and we	tland hydrology mus	st be prese	ent, unless	disturbed	d or problemation	2.			
	ayer (if observed):										
Type: Depth (inc	choc):						Hydric Soil	Present? Yes X No No			
Remarks:							Hydric 30ii	Fresent: TesNO			
r tomanto.											











W

Project/Site: Leroy Center-Mayfield 138 kV Trans	mission Line Projec City/County:	Geauga County	Sampling Date: 09/29/2021			
Applicant/Owner: FirstEnergy		State: OH	· · · · · · · · · · · · · · · · · · ·			
Investigator(s): BCR	Section, Tov					
Landform (hillslope, terrace, etc.): Footslope			Slope (%): 1			
Subregion (LRR or MLRA): LRR R						
Soil Map Unit Name: Ho: Holly silt loam, frequent	y flooded	NWI classifi	cation: N/A			
Are climatic / hydrologic conditions on the site typic	cal for this time of year? Yes X	No (If no, explain in F	Remarks.)			
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes X No			
Are Vegetation, Soil, or Hydrology		(If needed, explain any answe				
SUMMARY OF FINDINGS – Attach sit	e map showing sampling	g point locations, transects	s, important features, etc.			
	X No withi	e Sampled Area n a Wetland? Yes X s, optional Wetland Site ID: Wetland				
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Indic	ators (minimum of two required)			
Primary Indicators (minimum of one is required;	check all that apply)	Surface Soi	Cracks (B6)			
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Pa	atterns (B10)			
High Water Table (A2)	Aquatic Fauna (B13)	Moss Trim L	Moss Trim Lines (B16)			
Saturation (A3)	Marl Deposits (B15)	-	Dry-Season Water Table (C2)			
Water Marks (B1)	Hydrogen Sulfide Odor (C1)		,			
Sediment Deposits (B2)	X Oxidized Rhizospheres on L		/isible on Aerial Imagery (C9)			
Drift Deposits (B3)	Presence of Reduced Iron (Stressed Plants (D1)			
Algal Mat or Crust (B4)	Recent Iron Reduction in Til					
Iron Deposits (B5)	Thin Muck Surface (C7)	Shallow Aqu	, ,			
Inundation Visible on Aerial Imagery (B7)Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)	Microtopogr	aphic Relief (D4)			
Field Observations:			Test (D3)			
	X Depth (inches):					
	X Depth (inches):					
Saturation Present? Yes No _	X Depth (inches):	Wetland Hydrology Prese	nt? Yes X No			
(includes capillary fringe) Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, previous i	nspections), if available:				
		,				
Remarks:						

				Sampling Point: Wetland LP-02
ree Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
CONTRACTOR (FIRST SIZE)			Otatus	Number of Dominant Species That Are OBL FACW or FAC: 3 (A)
				That Are OBL, FACW, or FAC:3 (A)
				Total Number of Dominant Species Across All Strata: 3 (B)
				(2)
				Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/E
				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
45		= Total Cov	er	OBL species 25 x 1 = 25 FACW species 75 x 2 = 150
apling/Shrub Stratum (Plot size: 15)				FACW species $\frac{75}{20}$ x 2 = $\frac{150}{60}$ FAC species $\frac{20}{30}$ x 3 = $\frac{60}{30}$
				FACU species 0 x 4 = 0
				UPL species 0 x 5 = 0
				Column Totals: 120 (A) 235 (B
				4.050000000
				Prevalence Index = B/A = 1.958333333.
				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov	er	$\frac{X}{X}$ 2 - Dominance Test is >50% $\frac{X}{X}$ 3 - Prevalence Index is ≤3.0 ¹
erb Stratum (Plot size:5				3 - Prevalence Index is \$3.0 4 - Morphological Adaptations ¹ (Provide supporting the support in the
Agrostis gigantea	30	Yes	FACW	data in Remarks or on a separate sheet)
Carex Iurida	10	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
Symphyotrichum lanceolatum	15	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
Eupatorium perfoliatum	10	No	FACW	be present, unless disturbed or problematic.
Scirpus cyperinus	5	No	OBL	Definitions of Vegetation Strata:
Juncus effusus	5	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
Phalaris arundinacea	20	Yes	FACW	at breast height (DBH), regardless of height.
Carex vulpinoidea	5	No	OBL	Sapling/shrub – Woody plants less than 3 in. DBH
Juncus tenuis	20	Yes	FAC	and greater than or equal to 3.28 ft (1 m) tall.
)				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
l				
2.				Woody vines – All woody vines greater than 3.28 ft in height.
	120	= Total Cov	er	
30				
oody Vine Stratum (Plot size:)				
oody Vine Stratum (Plot size:30)				
				Hydrophytic
				Hydrophytic Vegetation Present? Yes X No
				Vegetation
				Vegetation

SOIL Sampling Point: Wetland LP-027

	Matrix Color (moist)	%	Color (moist)	ox Features %	Type ¹	Loc ²	Texture	Remarks
nches) 0 - 4	10YR 4/1	95	5YR 3/4	- - 70 - 5	Concer	PL	Silty clay loam	Remarks
	10YR 4/1		5YR 4/6					
18	101 R 4/1	80	51K 4/6	20	Concer	M	Silty clay loam	
-								
-								
-								
-								
-								
	ncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix.
dric Soil Ir						_		for Problematic Hydric Soils ³ :
_ Histosol (A1) pedon (A2)		Polyvalue Belo MLRA 149B		S8) (LRF	RR,		Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)
_ Histic Epi _ Black His			Thin Dark Surfa		RR R, MI	RA 149B		flucky Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		Loamy Mucky		(LRR K	, L)		surface (S7) (LRR K, L, M)
	Layers (A5)	(044)	Loamy Gleyed					llue Below Surface (S8) (LRR K, L)
	Below Dark Surface k Surface (A12)	e (A11)	X Depleted Matri Redox Dark Su					ark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)		Depleted Dark		')			ont Floodplain Soils (F19) (MLRA 149E
_	eyed Matrix (S4)		Redox Depress				Mesic	Spodic (TA6) (MLRA 144A, 145, 149B
_ Sandy Re								arent Material (F21)
	Matrix (S6) face (S7) (LRR R, N	II R A 149F	8)					hallow Dark Surface (TF12) (Explain in Remarks)
_ Stripped I		ILIKA 140L	•)				outer ((Explain in Remarks)
	(= : , (= : : : , :			st be preser	nt, unless	disturbed	or problemation).
_ Dark Surf	hydrophytic vegetat	ion and we	tiand nydrology mu					
_ Dark Surf		ion and we	elland nydrology mu					
_ Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	eland nydrology mu				Hydric Soil	Procent? Vos X No
Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	nana nyarology mu				Hydric Soil	Present? Yes X No No
Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	uano nyorology mu				Hydric Soil	Present? Yes X No
Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	nano nyorology mu				Hydric Soil	Present? Yes X No
Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	nano nyorology mu				Hydric Soil	Present? Yes X No
Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	nano nyorology mu				Hydric Soil	Present? Yes X No
Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	nano nyorology mu				Hydric Soil	Present? Yes X No
Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	nano nyorology mu				Hydric Soil	Present? Yes X No
Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	nano nyorology mu				Hydric Soil	Present? Yes X No
Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	nano nyorology mu				Hydric Soil	Present? Yes X No
_ Dark Surf ndicators of estrictive La Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	nano nyorology mu				Hydric Soil	Present? Yes X No
_ Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	nano nyorology mu				Hydric Soil	Present? Yes X No
Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	nano nyorology mu				Hydric Soil	Present? Yes X No
_ Dark Surf ndicators of estrictive La Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	nano nyorology mu				Hydric Soil	Present? Yes X No
Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	nano nyorology mu				Hydric Soil	Present? Yes X No No
Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	nano nyorology mu				Hydric Soil	Present? Yes X No No





Soil E





N S



W

Project/Site: Leroy Center-Mayfield 138 kV Trans	mission Line Projec City/C	county: Geauga County	s	Sampling Date: 09/29/2021
Applicant/Owner: FirstEnergy		-		Sampling Point: Upland LP-026,027
Investigator(s): BCR		on, Township, Range: N/A		
Landform (hillslope, terrace, etc.): Shoulder slope			Convex	Slope (%): 1
Subregion (LRR or MLRA): LRR R				
Soil Map Unit Name: Ho: Holly silt loam, frequent	ly flooded		_ NWI classificati	ion:_N/A
Are climatic / hydrologic conditions on the site typi	ical for this time of year? Y	res X No (If i	no, explain in Ren	narks.)
Are Vegetation, Soil, or Hydrology	significantly distur	bed? Are "Normal Ci	rcumstances" pre	esent? Yes X No
Are Vegetation, Soil, or Hydrology			lain any answers	
SUMMARY OF FINDINGS – Attach si	te map showing sam	pling point locations	s, transects, i	important features, etc.
	No X No X	Is the Sampled Area within a Wetland?	Yes	No
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No X	If yes, optional Wetland Si		
Remarks: (Explain alternative procedures here		ii yee, optional wettand of		
HYDROLOGY				
Wetland Hydrology Indicators:		Se	econdary Indicato	rs (minimum of two required)
Primary Indicators (minimum of one is required;	check all that annly)		_ Surface Soil Cr	
Surface Water (A1)	Water-Stained Leave		_ Ourlace Son Cr _ Drainage Patte	
High Water Table (A2)	Aquatic Fauna (B13)		_ Drainage Falle _ Moss Trim Line	
Saturation (A3)	Marl Deposits (B15)	_	_ Moss Tilli Lille _ Dry-Season Wa	
			-	
Water Marks (B1)	Hydrogen Sulfide Odd		Crayfish Burrov	` '
Sediment Deposits (B2)	Oxidized Rhizosphere			ble on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced			essed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reductio	, , _	_ Geomorphic Po	, ,
Iron Deposits (B5)	Thin Muck Surface (C	•	_ Shallow Aquita	
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Ren	narks)	_ Microtopograph	
Sparsely Vegetated Concave Surface (B8) Field Observations:			_ FAC-Neutral Te	est (D5)
	X Depth (inches):			
	X Depth (inches):			
	X Depth (inches):	Wetland Hye	Irology Present?	Voc. No. V
(includes capillary fringe)	Depth (inches).	wetiand rive	irology Present?	Yes No X
Describe Recorded Data (stream gauge, monitor	ring well, aerial photos, pre	vious inspections), if availal	ble:	
Demontos				
Remarks:				

/EGETATION – Use scientific names of plants				Sampling Point: Upland LP-026,027		
Tree Stratum (Plot size:)	Absolute	Dominant Species?		Dominance Test worksheet:		
				Number of Dominant Species That Are OBL_FACW_or_FAC: 0 (A)		
1 2				(1)		
3				Total Number of Dominant Species Across All Strata: 2 (B)		
4						
5				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B)		
6						
7				Prevalence Index worksheet:		
		= Total Cov				
Sapling/Shrub Stratum (Plot size: 15)		- Total Gov	Ci	FACW species		
				FAC species 0 x 3 = 0		
1				FACU species90 x 4 =360		
2				UPL species10 x 5 =50		
3				Column Totals: (A) (B)		
4				Prevalence Index = B/A = 4.1		
5						
6				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation		
7				2 - Dominance Test is >50%		
		= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹		
Herb Stratum (Plot size: 5 1. Schedonorus arundinaceus	50	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
Dactylis glomerata			FACU	Problematic Hydrophytic Vegetation¹ (Explain)		
3. Agrostis perennans			FACU	¹ Indicators of hydric soil and wetland hydrology must		
4. Solidago canadensis			FACU	be present, unless disturbed or problematic.		
5. Daucus carota	10		UPL	Definitions of Vegetation Strata:		
6. Symphyotrichum pilosum	5	No	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter		
7. Rubus allegheniensis	15	Yes	FACU	at breast height (DBH), regardless of height.		
8				Sapling/shrub – Woody plants less than 3 in. DBH		
9.				and greater than or equal to 3.28 ft (1 m) tall.		
10				Herb – All herbaceous (non-woody) plants, regardless of		
11				size, and woody plants less than 3.28 ft tall.		
12.				Woody vines – All woody vines greater than 3.28 ft in		
12	100	= Total Cov		height.		
Woody Vine Stratum (Plot size:30)	100	- Total Cov	eı			
1				Hydrophytic		
2				Vegetation		
3				Tresent: Tes No		
4						
4		= Total Cov				

SOIL Sampling Point: Upland LP-026,027

Profile Desc	ription: (Describe to	o the dep	th needed to docun	ent the ind	icator c	r confirm	the absence	of indicators.)	
Depth	Matrix		Redox	<u>Features</u>	- 1	. 2	- .	D	
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc	Texture	Remarks	
0 - 2	10YR 3/2	100					Silty loam		
	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	=Masked Sa	and Gra	ins.		: PL=Pore Lining, M=Matrix.	
Hydric Soil I			Daharaha Dalam	· Courfees (C	0) / DD			for Problematic Hydric Soils ³ :	
Histosol	(AT) ipedon (A2)		Polyvalue Belov MLRA 149B)		8) (LKK	ĸ,		Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)	
Black His			Thin Dark Surfa		R R. ML	RA 149B)		flucky Peat or Peat (S3) (LRR K, L, R)	
	n Sulfide (A4)		Loamy Mucky M					urface (S7) (LRR K, L, M)	
	Layers (A5)		Loamy Gleyed I		,,	_,		lue Below Surface (S8) (LRR K, L)	
	Below Dark Surface	(A11)	Depleted Matrix					ark Surface (S9) (LRR K, L)	
	rk Surface (A12)	,	Redox Dark Sur					anganese Masses (F12) (LRR K, L, R)	
	ucky Mineral (S1)		Depleted Dark Surface (F7)					ont Floodplain Soils (F19) (MLRA 149B)	
	leyed Matrix (S4)		Redox Depressions (F8)					Spodic (TA6) (MLRA 144A, 145, 149B)	
	edox (S5)		Redux Depressions (Fo)				Red Parent Material (F21)		
-	Matrix (S6)							hallow Dark Surface (TF12)	
	face (S7) (LRR R, M	LRA 149E	3)					Explain in Remarks)	
³ Indicators of	hydrophytic vegetation	on and we	tland hydrology mus	t be present	, unless	disturbed	or problemation).	
	.ayer (if observed):	X							
Type: Roo	cky								
Depth (inc	thes): 2						Hydric Soil	Present? Yes No X	
Remarks:									





Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmis	ssion Line Projec City/County: Ge	auga County	Sampling Date: 09/29/2021
Applicant/Owner: FirstEnergy		State: OH	Sampling Point: Wetland LP-028
Investigator(s): BCR	ip, Range: N/A		
Landform (hillslope, terrace, etc.): Swale			Slope (%): ³
Subregion (LRR or MLRA): LRR R La			
Soil Map Unit Name: Ho: Holly silt loam, frequently fl		NWI classific	
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes X	No (If no, explain in R	Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sampling po	oint locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Wetland Hydrology Present? Yes X Remarks: (Explain alternative procedures here or in	No within a \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	mpled Area Wetland? Yes X ional Wetland Site ID: Wetland	
HYDROLOGY		- Constant India	stano (usinima una afficia a saucina di
Wetland Hydrology Indicators:			ators (minimum of two required)
Primary Indicators (minimum of one is required; che		Surface Soil	
	Water-Stained Leaves (B9)	Drainage Pa	
	_ Aquatic Fauna (B13) _ Marl Deposits (B15)	Moss Trim L	Water Table (C2)
	_ Hydrogen Sulfide Odor (C1)	Crayfish Bur	
	_ Oxidized Rhizospheres on Living	_ ′	isible on Aerial Imagery (C9)
	Presence of Reduced Iron (C4)		tressed Plants (D1)
	Recent Iron Reduction in Tilled S		
	_ Thin Muck Surface (C7)	Shallow Aqu	itard (D3)
Inundation Visible on Aerial Imagery (B7)	_ Other (Explain in Remarks)	Microtopogra	aphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutral	Test (D5)
Field Observations:			
Surface Water Present? Yes No _X	Depth (inches):		
Water Table Present? Yes No _X	Depth (inches):		
Saturation Present? Yes X No (includes capillary fringe)	Depth (inches): 10	Wetland Hydrology Preser	nt? Yes X No
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspe	ctions), if available:	
Remarks:			

30				Sampling Point: Wetland LP-02
Tiee Stratum (Flot size)	Absolute	Dominant Species?		Dominance Test worksheet:
1			Status	Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
2				Total Number of Dominant Species Across All Strata: 1 (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)
5				That Are OBL, FACW, or FAC: 1 (A/B)
6		-		Prevalence Index worksheet:
7		-		Total % Cover of: Multiply by:
		= Total Cov	er	OBL species x 1 = 100
Sapling/Shrub Stratum (Plot size: 15)				FACW species
1				FACULARIZATION
2				FACO species
3				UPL species 0 x 5 = 0
4				Column Totals:130 (A)160 (B)
·· 5 ,				Prevalence Index = B/A = 1.2307692307
6				Hydrophytic Vegetation Indicators:
				X 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
		= Total Cov	er	X 3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:5) 1 Leersia oryzoides	100	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Symphyotrichum lanceolatum	20	No	FACW	Problematic Hydrophytic Vegetation¹ (Explain)
3. Impatiens capensis	10		FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4 . -				Definitions of Vegetation Strata:
5 ₋		-		
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9		-		Herb – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in height.
		= Total Cov	er	neight.
Woody Vine Stratum (Plot size:)				
1				
2			_ _	Hydrophytic
3				Vegetation Present? Yes X No
		= Total Cov		
4			ei	

SOIL Sampling Point: Wetland LP-028

Profile Desc	ription: (Describe to	o the dep	th needed to docum	ent the i	ndicator	or confirm	the absence	of indicators.)		
Depth	Matrix		Redox	Features	<u>s</u> ,	2				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks		
0 - 8	10YR 3/2	100					Silty clay loam			
8 - 18	Gley 1 2.5/10Y	95	5YR 3/4	5	Concer	PL	Silty clay loam	With gravel		
										
-										
										
-										
							<u> </u>			
-										
¹Type: C=Co	ncentration. D=Deple	etion. RM=	Reduced Matrix, MS	=Masked	Sand Gra	ains.	² Location	: PL=Pore Lining, M=Matrix.		
Hydric Soil I			, , , , , , , , , , , , , , , , , , , ,					for Problematic Hydric Soils ³ :		
Histosol	(A1)		Polyvalue Below	Surface	(S8) (LRF	RR,	2 cm M	Muck (A10) (LRR K, L, MLRA 149B)		
	ipedon (A2)		MLRA 149B)					Prairie Redox (A16) (LRR K, L, R)		
Black His			Thin Dark Surface					Mucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4) Layers (A5)		Loamy Mucky M X Loamy Gleyed N			, L)		Surface (S7) (LRR K, L, M)		
	Below Dark Surface	(A11)	Depleted Matrix		,		-	Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)		
	rk Surface (A12)	(,	Redox Dark Sur					anganese Masses (F12) (LRR K, L, R)		
	ucky Mineral (S1)		Depleted Dark S	urface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)			
	leyed Matrix (S4)		Redox Depressi	ons (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)			
-	edox (S5)						Red Parent Material (F21) Very Shallow Dark Surface (TF12)			
	Matrix (S6) face (S7) (LRR R, M	I RA 149F	()				-	(Explain in Remarks)		
	(=,		-,					(
³ Indicators of	hydrophytic vegetati	on and we	tland hydrology must	be prese	ent, unless	disturbed	or problemation) .		
Restrictive L	ayer (if observed):									
Type:										
Depth (inc	:hes):						Hydric Soil	Present? Yes X No No		
Remarks:										





Soil W





S E



Project/Site: Leroy Center-Mayfield 138 kV Transmissio	n Line Projec City/County: Gea	uga County	Sampling Date: 09/29/2021
Applicant/Owner: FirstEnergy			Sampling Point: Wetland LP-029
Investigator(s): BCR	Section, Township	o, Range: N/A	
Landform (hillslope, terrace, etc.): Lowland			Slope (%): ²
Subregion (LRR or MLRA): LRR R Lat:			
Soil Map Unit Name: EhD: Ellsworth silt loam, 12 to 18	percent slopes	NWI classific	cation: N/A
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes X	No (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology	_ significantly disturbed?	Are "Normal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology	_ naturally problematic?	(If needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	ip showing sampling poi	int locations, transects	, important features, etc.
Hydrophytic Vegetation Present? YesX		pled Area /etland? YesX onal Wetland Site ID: Wetland	
HYDROLOGY Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)	Surface Soil	Cracks (B6)
Surface Water (A1) V	Vater-Stained Leaves (B9)	Drainage Pa	
	quatic Fauna (B13)	Moss Trim L	
	Marl Deposits (B15)		Water Table (C2)
	Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living	Crayfish Bur	` ,
	Presence of Reduced Iron (C4)	· / 	isible on Aerial Imagery (C9) tressed Plants (D1)
	Recent Iron Reduction in Tilled So		
	hin Muck Surface (C7)	Shallow Aqu	
_ , , , ,	Other (Explain in Remarks)	Microtopogra	, ,
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutral	Test (D5)
Field Observations:			
Surface Water Present? Yes No _X			
Water Table Present? Yes No _X			
Saturation Present? Yes X No (includes capillary fringe)	Depth (inches): 0	Wetland Hydrology Preser	nt? Yes X No
Describe Recorded Data (stream gauge, monitoring we	ell, aerial photos, previous inspec	tions), if available:	
		·	
Parada			
Remarks:			

/EGETATION – Use scientific names of plan	nts.			Sampling Point: Wetland LP-029
<u>Tree Stratum</u> (Plot size:) 1)		Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2 3				That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Species Across All Strata: 2 (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	er	OBL species 80 x 1 = 80
Sapling/Shrub Stratum (Plot size: 15	_)			FACW species x 2 = 40
<u> </u>				FAC species x 3 = 0
2				FACU species x 4 = 0
J				UPL species x 5 = 0
				Column Totals:(A)(B)
:				Prevalence Index = B/A = 1.2
5				Hydrophytic Vegetation Indicators:
S				X 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
		= Total Cov	er	$\frac{X}{X}$ 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5)	40	Vaa	OBL	4 - Morphological Adaptations ¹ (Provide supporting
Typha angustifolia	40	<u>Yes</u>		data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)
	30	Yes	OBL	Problematic Hydrophytic Vegetation (Explain)
3. Persicaria sagittata	10		OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
		No	FACW	
5. Impatiens capensis	5	No	FACW	Definitions of Vegetation Strata:
6. Onoclea sensibilis 7.	5	No No	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
3. 9.			<u> </u>	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
12				Woody vines – All woody vines greater than 3.28 ft in height.
	100	= Total Cov	er	
Noody Vine Stratum (Plot size:30)				
1				
2.				Hydrophytic
3				Vegetation
4				
Dansarka, (laskida abata ayrabara bara ayrab		= Total Cov	er	
Remarks: (Include photo numbers here or on a separ	ate sheet.)			

SOIL Sampling Point: Wetland LP-029

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the i	ndicator o	or confirm	n the absence	of indicators.)		
Depth	Matrix		Redo	x Feature	<u>s</u>					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 3	10YR 3/1	100					Silty clay loam			
3 - 14	Gley 1 3/_	70	Gley 1 6/10GY	10	Depleti	M	Silty clay loam			
			7.5YR 4/6	20	Concer	M				
						-				
-										
-							<u> </u>			
-						-				
-										
-										
-							·			
¹ Type: C=Co	oncentration, D=Depl	etion, RM	=Reduced Matrix, MS	S=Masked	I Sand Gra	ins.	² Location	: PL=Pore Lining, M=Matrix.		
Hydric Soil I	ndicators:						Indicators	for Problematic Hydric Soils ³ :		
Histosol	(A1) pipedon (A2)		Polyvalue Below		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)		
Black His			Thin Dark Surfa		RR R, ML	.RA 149B		Mucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4)		Loamy Mucky N			L)		Surface (S7) (LRR K, L, M)		
	l Layers (A5)		X Loamy Gleyed		2)			llue Below Surface (S8) (LRR K, L)		
	Below Dark Surface	e (A11)	Depleted Matrix				Thin Dark Surface (S9) (LRR K, L)			
	ark Surface (A12)		Redox Dark Su	, ,				anganese Masses (F12) (LRR K, L, R)		
	lucky Mineral (S1)		Depleted Dark		.7)			ont Floodplain Soils (F19) (MLRA 149B)		
	edox (S5)		Redox Depress	ions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21)		
-	Matrix (S6)							Shallow Dark Surface (TF12)		
	rface (S7) (LRR R, M	LRA 149	3)					(Explain in Remarks)		
³ Indicators of	f hydrophytic vegetati	on and we	etland hydrology mus	st be prese	ent, unless	disturbed	d or problemation	c .		
Restrictive L	ayer (if observed):	Χ					T			
Type: Ro	ck									
Depth (inc	ches): 14						Hydric Soil	Present? Yes X No No		
Remarks:										





E S





Soil N



W

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City	y/County: Geauga County	Sampling Date: 09/29/2021
Applicant/Owner: FirstEnergy		Sampling Point: Upland LP-028,029
Investigator(s): BCR Se		
Landform (hillslope, terrace, etc.): Shoulder slope Local		Slope (%): ⁴
Subregion (LRR or MLRA): LRR R Lat: 41.6201386666666 Soil Map Unit Name: EhD: Ellsworth silt loam, 12 to 18 percent slopes	NWI classifi	cation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology significantly dis	sturbed? Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally proble		
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes NoX Hydric Soil Present? Yes NoX	Is the Sampled Area within a Wetland? Yes	No
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID: Upland	
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil	Cracks (B6)
Surface Water (A1) Water-Stained Lea	aves (B9) Drainage Pa	atterns (B10)
High Water Table (A2) Aquatic Fauna (B1	13) Moss Trim L	ines (B16)
Saturation (A3) Marl Deposits (B15)		Water Table (C2)
Water Marks (B1) Hydrogen Sulfide (` ,
		/isible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Redu		Stressed Plants (D1)
<u> </u>	· , —	Position (D2)
Iron Deposits (B5) Thin Muck Surface		
Inundation Visible on Aerial Imagery (B7) Other (Explain in F Sparsely Vegetated Concave Surface (B8)	remarks) Microtopogr FAC-Neutra	raphic Relief (D4)
Field Observations:	FAC-Neutia	1 1681 (D3)
Surface Water Present? Yes No X Depth (inches):		
Water Table Present? Yes No X Depth (inches):		
Saturation Present? Yes No X Depth (inches): (includes capillary fringe)	Wetland Hydrology Prese	nt? Yes No _X_
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:	
Remarks:		
Remarks.		

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
2	·	-		Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		_ = Total Co	ver	OBL species $0 \times 1 = 0$ $EACW species 0 \times 2 = 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species x z =
1		-		1 AC species
2				FACU species x 4 = 560 UPL species 0
3				Column Totals: 145 (A) 575 (B)
4	-	-		(1)
5				Prevalence Index = B/A = 3.965517241;
6				Hydrophytic Vegetation Indicators:
7	·			1 - Rapid Test for Hydrophytic Vegetation
		= Total Co	vor	2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		10tai 00	VCI	3 - Prevalence Index is ≤3.0 ¹
1. Solidago canadensis	80	Yes	FACU	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2. Rubus allegheniensis	10	No	FACU	Problematic Hydrophytic Vegetation¹ (Explain)
Desmodium canadense			FAC	¹ Indicators of hydric soil and wetland hydrology must
4. Dactylis glomerata		Yes	FACU	be present, unless disturbed or problematic.
· ·				Definitions of Vegetation Strata:
5				_
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9		-		Herb – All herbaceous (non-woody) plants, regardless of
10				size, and woody plants less than 3.28 ft tall.
11	-	-		Woody vines – All woody vines greater than 3.28 ft in
12				height.
	145	_ = Total Co	ver	
Woody Vine Stratum (Plot size:)				
1				
2				Hydrophytic
3	·			Vegetation Present? Yes No X
4.				
		= Total Co	· · · · · · · · · · · · · · · · · · ·	
Remarks: (Include photo numbers here or on a separate	sheet)	_ = 10tal C0	vei	
remarks. (molude proto numbers here of on a separate	Silect.)			

Sampling Point: Upland LP-028,029

SOIL Sampling Point: Upland LP-028,029

Profile Desc	ription: (Describe t	o the dept				or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	x Features %	Type ¹	Loc ²	Texture	Remarks
0 - 18	10YR 3/2		Color (moist)	70	туре	LUC		Remarks
0 18	10113/2	100					Silty clay loam	
-								
-								
-								
-								
						-		
	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ins.		n: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							for Problematic Hydric Soils ³ :
Histosol		-	Polyvalue Belo		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B	,	DD D MI	DA 440D)		Prairie Redox (A16) (LRR K, L, R)
Black His	stic (A3) n Sulfide (A4)	-	Thin Dark Surfa Loamy Mucky I					Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L, M)
	Layers (A5)	-	Loamy Gleyed			_,		alue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	Depleted Matri				-	Park Surface (S9) (LRR K, L)
	rk Surface (A12)	_	Redox Dark Su	. ,				langanese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	-	Depleted Dark		7)			ont Floodplain Soils (F19) (MLRA 149B)
-	leyed Matrix (S4) edox (S5)	-	Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21)
-	Matrix (S6)							Shallow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149B)					(Explain in Remarks)
	, , ,							
	hydrophytic vegetati	on and wet	land hydrology mu	st be prese	nt, unless	disturbed	or problemation	0.
	ayer (if observed):							
Type:								Y.
	ches):	_					Hydric Soil	Present? Yes No _X
Remarks:								





SW Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission	Line Projec City/County: Geau	ga County	Sampling Date: 09/28/2021			
Applicant/Owner: FirstEnergy			Sampling Point: Wetland LP-030E			
Investigator(s): BCR	Section, Township,	Range: N/A				
Landform (hillslope, terrace, etc.): Swale			Slope (%): 1			
Subregion (LRR or MLRA): LRR R Lat: 41						
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 per	cent slopes	NWI classifi	cation: N/A			
Are climatic / hydrologic conditions on the site typical for the \ensuremath{Lim}	is time of year? Yes X N	lo (If no, explain in F	Remarks.)			
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes X No			
Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed, explain any answe	ers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map	showing sampling poi	nt locations, transects	s, important features, etc.			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative procedures here or in a second	No within a We No If yes, option	oled Area etland? Yes X nal Wetland Site ID: Wetland				
HYDROLOGY Wetland Hydrology Indicators:		Secondary Indic	ators (minimum of two required)			
Primary Indicators (minimum of one is required; check all	I that apply)	Surface Soi	Cracks (B6)			
Surface Water (A1) Wa	ater-Stained Leaves (B9)		atterns (B10)			
High Water Table (A2) Aq	uatic Fauna (B13)	Moss Trim Lines (B16)				
Saturation (A3) Ma	rl Deposits (B15)	Dry-Season Water Table (C2)				
	drogen Sulfide Odor (C1)	Crayfish Bu	rrows (C8)			
	idized Rhizospheres on Living F	· · —	isible on Aerial Imagery (C9)			
	esence of Reduced Iron (C4)		Stressed Plants (D1)			
	cent Iron Reduction in Tilled Sol		, ,			
	in Muck Surface (C7) her (Explain in Remarks)	Shallow Aqu	raphic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)	iei (Expiaiii iii Neiliaiks)	× FAC-Neutra				
Field Observations:						
Surface Water Present? Yes No _X _ Do	epth (inches):					
Water Table Present? Yes No X Do						
Saturation Present? Yes No _X _Do		Wetland Hydrology Prese	nt? Yes X No			
(includes capillary fringe)	acrial photos provious incocat	iona) if available:				
Describe Recorded Data (stream gauge, monitoring well,	aeriai photos, previous inspect	ions), if available:				
Remarks:						

				Sampling Point: Wetland LP-030			
Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:			
1				Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)			
2.							
3				Total Number of Dominant Species Across All Strata: 3 (B)			
I				Percent of Dominant Species			
5				That Are OBL, FACW, or FAC: 1 (A/B			
5							
·				Prevalence Index worksheet:			
		= Total Cov	er	OBL species x 1 = 50			
Sapling/Shrub Stratum (Plot size: 15)				FACW species55			
Frangula alnus	10	Yes	FAC	FAC species25			
		·		FACU species0 x 4 =0			
				UPL species			
i				Column Totals:130(A)235(B)			
·				Prevalence Index = B/A = 1.8076923076			
i <u>. </u>				Hydrophytic Vegetation Indicators:			
)				X 1 - Rapid Test for Hydrophytic Vegetation			
⁷ .				X 2 - Dominance Test is >50%			
5	10	= Total Cov	er	X 3 - Prevalence Index is ≤3.0 ¹			
Herb Stratum (Plot size: 5	20	V	OPI	4 - Morphological Adaptations ¹ (Provide supporting			
. Juncus effusus			OBL FAC	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)			
Solidago rugosa	10	No No					
Scirpus cyperinus			OBL FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
Apocynum cannabinum	5	No No		Definitions of Vegetation Strata:			
Symphyotrichum lanceolatum		No Vaa	FACW FACW				
Carex scoparia		Yes	· —	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
7							
3.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
) <u> </u>				Herb – All herbaceous (non-woody) plants, regardless of			
0				size, and woody plants less than 3.28 ft tall.			
1				Woody vines – All woody vines greater than 3.28 ft in			
2			· ——	height.			
	120	= Total Cov	er				
Voody Vine Stratum (Plot size:)							
·				Undrankysia			
			· ——	Hydrophytic Vegetation			
2				Present? Yes X No			
2. 3							

SOIL Sampling Point: Wetland LP-030E

Profile Desc	ription: (Describe t	o the dep	th needed to docur	ment the i	ndicator o	or confirm	n the absence	of indicators.)			
Depth	Matrix			x Feature	<u>s</u>	2					
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks			
0 - 10	10YR 3/2	90	5YR 3/4	10	Concer	PL	Silty clay loam				
10 - 18	10YR 5/2	80	5YR 5/8	20		PL,M	Silty clay				
-											
-											
-					<u> </u>						
-											
-											
											
1 _{Type:} C=C	oncentration, D=Depl		-Doduced Metrix M				21 apation	: PL=Pore Lining, M=Matrix.			
Hydric Soil I		ellon, Kivi-	-Reduced Matrix, Mi	3-IVIASKEC	i Sanu Gra	11115.		for Problematic Hydric Soils ³ :			
Histosol	(A1)		Polyvalue Belo	w Surface	(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)			
Histic Ep	oipedon (A2)		MLRA 149B Thin Dark Surfa	,	DD D MI	DA 140D		Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R)			
	n Sulfide (A4)		Loamy Mucky N					Surface (S7) (LRR K, L, M)			
	Layers (A5)		Loamy Gleyed			,	Polyva	alue Below Surface (S8) (LRR K, L)			
	Below Dark Surface	e (A11)	Depleted Matrix				Thin Dark Surface (S9) (LRR K, L)				
	ork Surface (A12)		X Redox Dark Su	, ,			Iron-Manganese Masses (F12) (LRR K, L, R)				
	lucky Mineral (S1) leyed Matrix (S4)		Depleted Dark Redox Depress		.7)		Piedmont Floodplain Soils (F19) (MLRA 149B)				
	edox (S5)		Redox Depress	sions (i o)				Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21)			
-	Matrix (S6)						Very Shallow Dark Surface (TF12)				
Dark Sui	face (S7) (LRR R, M	LRA 149E	3)				Other (Explain in Remarks)				
³ Indicators of	hydrophytic vegetati	on and we	etland hydrology mus	st be prese	ent, unless	disturbed	l or problemation	c .			
Restrictive L	ayer (if observed):										
Type:	-l \.	_					11-1-1-1-0-11	Processor V			
Depth (inc	cnes):						Hydric Soil	Present? Yes X No			
Remarks.											





1





E W



Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Project	ec City/County: Geauga Cour	nty	Sampling Date: 09/28/2021			
Applicant/Owner: FirstEnergy			Sampling Point: Wetland LP-030S			
Investigator(s): BCR						
Landform (hillslope, terrace, etc.): Footslope			Slope (%): 1			
Subregion (LRR or MLRA): LRR R Lat: 41.619429 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slop	es Eong	NWI classific	ation: N/A			
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes X No	(If no, explain in Re	emarks.)			
Are Vegetation, Soil, or Hydrology significa	ntly disturbed? Are "Non	mal Circumstances" p	resent? Yes X No			
Are Vegetation, Soil, or Hydrology naturally		d, explain any answei				
SUMMARY OF FINDINGS – Attach site map show	ng sampling point loca	tions, transects	, important features, etc.			
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Y No Y	within a Wetland?	Yes X				
Wetland Hydrology Present? Yes X No	If yes, optional Wetl	and Site ID: Wetland I	LP-030S			
HYDROLOGY						
		Socondary Indica	tors (minimum of two required)			
Wetland Hydrology Indicators:	l. A					
Primary Indicators (minimum of one is required; check all that app		Surface Soil				
	ed Leaves (B9)	Drainage Pat				
High Water Table (A2) Saturation (A3) Aquatic Fau Marl Depos		Moss Trim Lines (B16) Dry-Season Water Table (C2)				
	ulfide Odor (C1)	Crayfish Burr				
	nizospheres on Living Roots (C		sible on Aerial Imagery (C9)			
	Reduced Iron (C4)		ressed Plants (D1)			
	Reduction in Tilled Soils (C6)	X Geomorphic				
Iron Deposits (B5) Thin Muck S		Shallow Aqui	, ,			
Inundation Visible on Aerial Imagery (B7) Other (Expl		Microtopogra	phic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral	Test (D5)			
Field Observations:						
Surface Water Present? Yes No _X _ Depth (incl	nes):					
Water Table Present? Yes No _X _ Depth (incl	nes):					
Saturation Present? Yes No _X _ Depth (includes capillary fringe)	•	d Hydrology Presen	t? Yes X No			
Describe Recorded Data (stream gauge, monitoring well, aerial pl	notos, previous inspections), if	available:				
Remarks:						

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:			
1				Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)			
2		-		Total Number of Dominant			
3				Species Across All Strata: 6 (B)			
4				Percent of Dominant Species			
5				That Are OBL, FACW, or FAC: 0.666666666 (A/B)			
6				Prevalence Index worksheet:			
7				Total % Cover of: Multiply by:			
		= Total Co	ver	OBL species40 x 1 =40			
Sapling/Shrub Stratum (Plot size: 15)				FACW species5 x 2 =10			
1. Frangula alnus	50	Yes	FAC	FAC species80 x 3 =240			
Rubus allegheniensis			FACU	FACU species30 x 4 =120			
				UPL species x 5 = 0			
3				Column Totals:155			
4				Prevalence Index = B/A = 2.6451612900			
6.				Hydrophytic Vegetation Indicators:			
7	·			1 - Rapid Test for Hydrophytic Vegetation			
· · ·		= Total Co	vor	X 2 - Dominance Test is >50%			
Herb Stratum (Plot size:5)		_ = Total Co	VCI	X 3 - Prevalence Index is ≤3.0 ¹			
1. Juncus effusus	40	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
2. Solidago rugosa		Yes	FAC	Problematic Hydrophytic Vegetation¹ (Explain)			
3. Symphyotrichum lanceolatum			FACW	¹ Indicators of hydric soil and wetland hydrology must			
Colidore considersia	4.5		FACU	be present, unless disturbed or problematic. Definitions of Vegetation Strata:			
5. Frangula alnus			FAC				
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter			
7				at breast height (DBH), regardless of height.			
8				Sapling/shrub – Woody plants less than 3 in. DBH			
9				and greater than or equal to 3.28 ft (1 m) tall.			
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
11							
12				Woody vines – All woody vines greater than 3.28 ft in height.			
	90	= Total Co	ver				
Woody Vine Stratum (Plot size:)		_					
1							
2.		_		Hydrophytic			
3				Vegetation Present? Yes X No			
4							
7.		= Total Co	ver				
Remarks: (Include photo numbers here or on a separate	sheet.)		VC1				
Transmer (motate prote numbers note of an a coparate	J. 100 t /						

Sampling Point: Wetland LP-030S

SOIL Sampling Point: Wetland LP-030S

Profile Desc	ription: (Describe t	o the dep	th needed to docu	ment the i	indicator o	or confirm	n the absence	of indicators.)				
Depth	Matrix			x Feature	<u>s</u> _ 1	. 2						
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks				
0 - 6	10YR 3/2	95	5YR 3/4	5	Concer	PL	Silty Ioam					
6 - 18	2.5Y 6/4	70	5YR 5/8	30	Concer	М	Silty clay loam					
-												
_												
						-		·				
												
-												
		-				-		-				
						-						
-												
-												
1Typo: C=C	oncentration, D=Depl	otion DM:	- Poducod Matrix M	S=Maskor		ine	² Location	: PL=Pore Lining, M=Matrix.				
Hydric Soil I		ellori, Kivi-	-Reduced Matrix, Mi	3-IVIASKE	i Sanu Gra	11115.		for Problematic Hydric Soils ³ :				
Histosol			Polyvalue Belo	w Surface	(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)				
	pipedon (A2)		MLRA 149B				Coast	Prairie Redox (A16) (LRR K, L, R)				
Black Hi			Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)				
	n Sulfide (A4) I Layers (A5)		Loamy Mucky I Loamy Gleyed			L)	Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L)					
	l Below Dark Surface	(A11)	Depleted Matrix		-)		Thin Dark Surface (S9) (LRR K, L)					
	ark Surface (A12)	,	X Redox Dark Su					Iron-Manganese Masses (F12) (LRR K, L, R)				
	lucky Mineral (S1)		Depleted Dark		7)		Piedmont Floodplain Soils (F19) (MLRA 149B)					
	leyed Matrix (S4)		Redox Depress	sions (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)					
-	edox (S5) Matrix (S6)							Red Parent Material (F21) Very Shallow Dark Surface (TF12)				
	face (S7) (LRR R, M	LRA 149E	3)				Other (Explain in Remarks)					
	hydrophytic vegetati	on and we	tland hydrology mus	st be prese	ent, unless	disturbed	d or problemation	<u>. </u>				
	ayer (if observed):											
Type:	ahaa):						Usalvia Cail	Present? Yes X No No				
Depth (inc	nes)						nyaric Soil	Present? Yes X No No				
Remarks:												





Soil





E W



Project/Site: Leroy Center-Mayfield 138 kV Transmission	n Line Projec City/County: Geau	uga County	Sampling Date: 09/28/2021
Applicant/Owner: FirstEnergy			Sampling Point: Upland LP-030
Investigator(s): BCR			•
Landform (hillslope, terrace, etc.): Shoulder slope		-	Slope (%): ²
Subregion (LRR or MLRA): LRR R Lat: 4 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 pe	rcent slopes	NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes X	No (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology	_ significantly disturbed?	Are "Normal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology		(If needed, explain any answer	
SUMMARY OF FINDINGS – Attach site ma	p showing sampling poi	nt locations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes			_ No
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	NU	onal Wetland Site ID: Upland LI	
Remarks: (Explain alternative procedures here or in a s			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicat	tors (minimum of two required)
Primary Indicators (minimum of one is required; check a	all that apply)	Surface Soil (
Surface Water (A1) W	Vater-Stained Leaves (B9)	Drainage Pat	
	quatic Fauna (B13)	Moss Trim Lir	
Saturation (A3) M	larl Deposits (B15)	Dry-Season V	Vater Table (C2)
Water Marks (B1) H	ydrogen Sulfide Odor (C1)	Crayfish Burre	ows (C8)
Sediment Deposits (B2) O	xidized Rhizospheres on Living	Roots (C3) Saturation Vis	sible on Aerial Imagery (C9)
	resence of Reduced Iron (C4)		ressed Plants (D1)
	ecent Iron Reduction in Tilled So	· · — ·	
	hin Muck Surface (C7)	Shallow Aquit	
	ther (Explain in Remarks)	Microtopogra	
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral	Test (D5)
Field Observations:	7		
Surface Water Present? Yes No X I			
Water Table Present? Yes No _X _ [Wadan dibahalam Basan	10 V N- V
Saturation Present? Yes No X [(includes capillary fringe)	, , ,	Wetland Hydrology Present	t? Yes No <u>X</u>
Describe Recorded Data (stream gauge, monitoring we	II, aerial photos, previous inspec	tions), if available:	
Remarks:			

EGETATION – Use scientific names of plants					Sa	mpling Po	IIII. <u></u>	
Tree Stratum (Plot size:)		Species?	<u>Status</u>	Dominance Test Number of Domin That Are OBL, FA	ant Specie	es	0	(A)
				Total Number of D				(A)
				Species Across A	II Strata:		2	(B)
				Percent of Domina			0	
				That Are OBL, FA	CW, or FA	AC:	0	(A/B
				Prevalence Index	x workshe	et:		
				Total % Cove			Itiply by:	
		= Total Co	ver .	-	0			_
apling/Shrub Stratum (Plot size: 15)				FACW species _		_ x 2 = _		_
				FACIL anguing	-	_ x3=_ _x4=_	30 448	_
				FACU species UPL species	0	_ X4=_ _ X5=	0	
				Column Totals:	400	_	498	— (В
				Prevalence	Index = B	_ , , _	772727272	27
				Hydrophytic Veg	etation In	dicators:		
				1 - Rapid Tes				
				2 - Dominanc	-		90.00.	
5	-	= Total Co	/er	3 - Prevalence Index is ≤3.0 ¹				
erb Stratum (Plot size:5) Solidago canadensis	60	Yes	FACU	4 - Morpholog data in Re				
Frangula alnus	10		FAC	Problematic H	Hydrophyti	c Vegetati	on¹ (Expla	in)
Symphyotrichum lanceolatum			FACW	¹ Indicators of hydr	ric soil and	l wetland h	nvdrology	must
Cichorium intybus	2	No	FACU	be present, unless				
Schedonorus arundinaceus	40	Yes	FACU	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter				
Potentilla indica		No	FACU					
Melilotus officinalis	2	No	FACU	at breast height (DBH), regardless of height.				
Plantago major			FACU	Sapling/shrub – Woody plants less than 3 in. DBH				вн
Taraxacum officinale	1	No	FACU	and greater than o	or equal to	3.28 ft (1	m) tall.	
)Ambrosia artemisiifolia	1	No	FACU	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			ss of	
				Woody vines – All	woody vin	es greater f	han 3 28 ft	in
2			·	height.	woody viii	es greater t	nun 5.20 It	
	132	= Total Co	/er					
/oody Vine Stratum (Plot size:)								
		-		Hydrophytic				
				Vegetation			X	
				Present?	Yes	No	, ^	
		= Total Co	/er					

SOIL Sampling Point: Upland LP-030

Profile Desc	ription: (Describe t	o the depti	n needed to docu	ment the in	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix	0/		x Features	<u>.</u>	L = = ²	Taretresa	Damarka
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 3	10YR 3/2	100					Silty loam	
-								
-			_					
-								
-								
-								
¹Type: C=Co	oncentration, D=Depl	etion RM=I	Reduced Matrix M	S=Masked	Sand Gra	ins	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil I			toudou mann, m					for Problematic Hydric Soils ³ :
Histosol	(A1)	_	Polyvalue Belo	w Surface	(S8) (LRR	R,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B	•				Prairie Redox (A16) (LRR K, L, R)
Black His		_	Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	-	Loamy Mucky I			L)		Surface (S7) (LRR K, L, M)
	l Layers (A5) I Below Dark Surface	- (Δ11)	Loamy Gleyed Depleted Matri:)		-	alue Below Surface (S8) (LRR K, L) Park Surface (S9) (LRR K, L)
	rk Surface (A12)	(711)	Redox Dark Su					langanese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	_	Depleted Dark	, ,	7)			ont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)	_	Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
	Matrix (S6)	L D A 440D						Shallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	LRA 149B)				Other	(Explain in Remarks)
³ Indicators of	hydrophytic vegetati	on and wet	land hydrology mu	st be prese	nt, unless	disturbed	or problemation	C.
	ayer (if observed):		, 0,	•				
Type: Ro	cky							
Depth (inc	ches): <u>3</u>						Hydric Soil	Present? Yes No X
Remarks:								





Soil W

Project/Site: Leroy Center-Mayfield 138 kV Transmission I	Line Projec City/County: Geau	ga County	Sampling Date: 09/28/2021			
Applicant/Owner: FirstEnergy			Sampling Point: Wetland LP-031			
Investigator(s): BCR						
Landform (hillslope, terrace, etc.): Swale			Slope (%): ²			
Subregion (LRR or MLRA): LRR R Lat: 41 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percentage of the substitution of t	ent slopes	NWI classific	ation: N/A			
Are climatic / hydrologic conditions on the site typical for th	is time of year? Yes X N	lo (If no, explain in Re	emarks.)			
Are Vegetation, Soil, or Hydrology	significantly disturbed? A	Are "Normal Circumstances" p	resent? Yes X No			
Are Vegetation, Soil, or Hydrology		If needed, explain any answer				
SUMMARY OF FINDINGS – Attach site map	showing sampling poir	nt locations, transects	, important features, etc.			
Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes X Yes X	No within a We	etland? Yes X				
Wetland Hydrology Present? Yes X Remarks: (Explain alternative procedures here or in a se	1 -	nal Wetland Site ID: Wetland I	LP-031			
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)			
Primary Indicators (minimum of one is required; check all	that apply)					
	ter-Stained Leaves (B9)	Surface Soil(Drainage Pat				
	uatic Fauna (B13)					
	rl Deposits (B15)	Moss Trim Lines (B16) Dry-Season Water Table (C2)				
	drogen Sulfide Odor (C1)	Crayfish Burr				
	dized Rhizospheres on Living F	_ ,	sible on Aerial Imagery (C9)			
	sence of Reduced Iron (C4)		ressed Plants (D1)			
	cent Iron Reduction in Tilled Soi					
	n Muck Surface (C7)	Shallow Aqui				
Inundation Visible on Aerial Imagery (B7) Oth	er (Explain in Remarks)	Microtopogra	phic Relief (D4)			
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutral	Test (D5)			
Field Observations:						
Surface Water Present? Yes No _X _ De	epth (inches):					
Water Table Present? Yes No _X _ De	epth (inches):					
Saturation Present? Yes No X De (includes capillary fringe)	, ,	Wetland Hydrology Presen	t? Yes <u>X</u> No			
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspecti	ions), if available:				
Remarks:						

EGETATION – Use scientific names of plants				Sampling Point: Wetland LP-03			
<u>Free Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:			
			Otatao	Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)			
				(v)			
				Total Number of Dominant Species Across All Strata: 3 (B)			
				Percent of Dominant Species			
				That Are OBL, FACW, or FAC:1 (A/E			
				Prevalence Index worksheet: Total % Cover of: Multiply by:			
		= Total Cov	 er	OBL species5 x 1 =5			
apling/Shrub Stratum (Plot size: 15)				FACW species 120 x 2 = 240			
Frangula alnus	5	Yes	FAC	FAC species x 3 = 60			
ÿ				FACU species10 x 4 =40			
				UPL species0 x 5 =0			
				Column Totals:155 (A)345 (B			
				Prevalence Index = B/A = 2.2258064516			
				Hydrophytic Vegetation Indicators:			
				1 - Rapid Test for Hydrophytic Vegetation			
	_	= Total Cov		X 2 - Dominance Test is >50%			
erb Stratum (Plot size:5)		- Total Gov	Ci	X 3 - Prevalence Index is ≤3.0 ¹			
Phragmites australis	40	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supportir data in Remarks or on a separate sheet)			
Symphyotrichum lanceolatum	40		FACW	Problematic Hydrophytic Vegetation ¹ (Explain)			
Phalaris arundinacea			FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.			
Rosa multiflora	40	No	FACU				
Juncus effusus	5	No	OBL	Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diamete			
Frangula alnus	10	No	FAC				
Agrostis gigantea	20	No	FACW	at breast height (DBH), regardless of height.			
Onoclea sensibilis			FACW	Sapling/shrub – Woody plants less than 3 in. DBH			
Euthamia graminifolia	5	No	FAC	and greater than or equal to 3.28 ft (1 m) tall.			
). Verbena hastata		No	FACW	Herb – All herbaceous (non-woody) plants, regardless of			
				size, and woody plants less than 3.28 ft tall.			
<u>.</u>				Woody vines – All woody vines greater than 3.28 ft in			
		= Total Cov		height.			
		10101 001	C1				
oody Vine Stratum (Plot size: 30)							
				Hydrophytic			
				Hydrophytic			
				Hydrophytic Vegetation Present? Yes X No			
				Vegetation			
/oody Vine Stratum (Plot size:30)				Vegetation			

SOIL Sampling Point: Wetland LP-031

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the i	ndicator o	or confirn	n the absence	of indicators.)		
Depth	Matrix			x Feature	<u>s</u> _ 1	. 2	- .			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 3	10YR 4/2	100					Silty clay loam			
3 - 10	10YR 4/2	95	5YR 3/4	5	Concer	PL,M	Silty clay loam			
10 - 18	10YR 5/1	85	7.5YR 4/6	15	Concer	M	Silty clay loam			
-										
-						-				
-										
-										
-										
-										
							· 	·		
1							2			
'Type: C=Co	ncentration, D=Deple	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ins.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :		
Histosol			Polyvalue Belov	w Surface	(S8) (LRR	R.		fluck (A10) (LRR K, L, MLRA 149B)		
Histic Ep	ipedon (A2)		MLRA 149B)			Coast	Prairie Redox (A16) (LRR K, L, R)		
Black His			Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4) I Layers (A5)		Loamy Mucky N Loamy Gleyed			L)	Dark Surface (S7) (LRR K, L, M)			
	l Layers (AS) I Below Dark Surface	(A11)	Z Depleted Matrix		.)		Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)			
	rk Surface (A12)	(/ () /)	Redox Dark Su					Iron-Manganese Masses (F12) (LRR K, L, R)		
	lucky Mineral (S1)		Depleted Dark	, ,				ont Floodplain Soils (F19) (MLRA 149B)		
	leyed Matrix (S4)		Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)		
-	edox (S5)							arent Material (F21)		
	Matrix (S6)	I D A 440F	• `					hallow Dark Surface (TF12)		
Dark Sur	face (S7) (LRR R, M	LKA 1496	5)				Other ((Explain in Remarks)		
	hydrophytic vegetati	on and we	tland hydrology mus	st be prese	ent, unless	disturbed	or problemation).		
Type:	.ayer (if observed):									
Depth (inc	ches):						Hydric Soil	Present? Yes X No No		
Remarks:	,						*			





Soil Soil





N W



Ε

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec Ci	ity/County: Geauga County	_ Sampling Date: 09/28/2021
Applicant/Owner: FirstEnergy	State: OH	
Investigator(s): BCR S		
Landform (hillslope, terrace, etc.): Footslope Loca		Slope (%): 10
Subregion (LRR or MLRA): LRR R Lat: 41.61459883333 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classif	ication: N/A
Are climatic / hydrologic conditions on the site typical for this time of year	? Yes X No (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology significantly di	sturbed? Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problem.		
SUMMARY OF FINDINGS – Attach site map showing s	sampling point locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes	Is the Sampled Area within a Wetland? Yes	No
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID: Upland	
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indic	cators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface So	l Cracks (B6)
Surface Water (A1) Water-Stained Le		atterns (B10)
High Water Table (A2) Aquatic Fauna (B		
Saturation (A3) Marl Deposits (B ²		Water Table (C2)
Water Marks (B1) Hydrogen Sulfide		` '
		Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Redu		Stressed Plants (D1)
<u> </u>		c Position (D2)
Iron Deposits (B5) Thin Muck Surfac		
Inundation Visible on Aerial Imagery (B7) Other (Explain in		raphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutra	al Test (D5)
Field Observations:		
Surface Water Present? Yes No _X _ Depth (inches):		
Water Table Present? Yes No _X _ Depth (inches):	Watland Hudnala au Brasa	unto Van Na V
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe)	Wetland Hydrology Prese	ent? Yes NoX
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:	
Remarks:		
Tromano.		

Tree Stratum (Plot size: 30)	Absolute	Dominant Species?		Dominance Test worksheet:			
1			·	Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)			
2							
3				Total Number of Dominant Species Across All Strata: 6 (B)			
4							
				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.3333333333 (A/B)			
5							
6				Prevalence Index worksheet:			
7				Total % Cover of: Multiply by:			
		= Total Co	ver .	OBL species 0 x 1 = 0			
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 = 20			
1Cornus alba	5	Yes	FACW	FAC species 8 x 3 = 24 FACUspecies 120 x 4 = 480			
2. Rosa multiflora	5	Yes	FACU	X 4			
3 Viburnum dentatum	8	Yes	FAC	01 L species x 0			
4				Column Totals:148 (A)574 (B)			
5				Prevalence Index = B/A = 3.878378378.			
6				Hydrophytic Vegetation Indicators:			
7				1 - Rapid Test for Hydrophytic Vegetation			
		= Total Co		2 - Dominance Test is >50%			
Herb Stratum (Plot size:5)		. Total oo		3 - Prevalence Index is ≤3.0 ¹			
1. Schedonorus arundinaceus	60	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
2. Plantago lanceolata	4.5	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)			
Symphyotrichum pilosum			FACU	¹ Indicators of hydric soil and wetland hydrology must			
Detentille indice		Yes	FACU	be present, unless disturbed or problematic.			
		No	UPL	Definitions of Vegetation Strata:			
Outidana si sauta a	5	No No	FACW	-			
		-	TAOW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.			
7							
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
9				Herb – All herbaceous (non-woody) plants, regardless of			
10				size, and woody plants less than 3.28 ft tall.			
11		î <u>-</u>		Woody vines – All woody vines greater than 3.28 ft in			
12				height.			
	130	= Total Co	ver .				
Woody Vine Stratum (Plot size:)							
1							
2.				Hydrophytic			
3				Vegetation Present? Yes No X			
4							
T		= Total Co	· or				
Remarks: (Include photo numbers here or on a separate	sheet)	- 10tal C0	761				
remarks. (meduce photo humbers here of on a separate	Silect.)						

Sampling Point: Upland LP-031

SOIL Sampling Point: Upland LP-031

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator o	or confirn	n the absence	of indicators.)
Depth	Matrix	0/		x Features	<u>5</u>	12	T	Demode
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture	Remarks
0 - 14	10YR 3/2	100				-	Silty clay loam	
14 - 18	10YR 4/2	70	10YR 5/8	30	Concer	M	Silty clay loam	
-								
				-				
							· 	
-							·	
-								
-								
							 _	
-								
-						-	<u></u>	
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ins.		PL=Pore Lining, M=Matrix.
Hydric Soil I								for Problematic Hydric Soils ³ :
Histosol		-	Polyvalue Belov		(S8) (LRR	R,		uck (A10) (LRR K, L, MLRA 149B)
Black His	vipedon (A2)		MLRA 149B Thin Dark Surfa		RR R. MI	RA 149B		Prairie Redox (A16) (LRR K, L, R) lucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	-	Loamy Mucky N					urface (S7) (LRR K, L, M)
	Layers (A5)	-	Loamy Gleyed)		-	ue Below Surface (S8) (LRR K, L)
-	Below Dark Surface	(A11)	Depleted Matrix					ark Surface (S9) (LRR K, L)
	rk Surface (A12) lucky Mineral (S1)	-	Redox Dark Su Depleted Dark	, ,	7)			anganese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)	-	Redox Depress		')			Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy R	edox (S5)						Red Pa	rent Material (F21)
	Matrix (S6)							nallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	ILRA 149B)				Other (I	Explain in Remarks)
³ Indicators of	hydrophytic vegetati	ion and wet	land hydrology mus	st be prese	ent, unless	disturbed	l or problematic.	
	ayer (if observed):		, 0,		<u> </u>			
Type:								
Depth (inc	ches):						Hydric Soil I	Present? Yes No X
Remarks:								





Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/C	County: Geauga County Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-032
Investigator(s): MJA Section	
Landform (hillslope, terrace, etc.): Gulch or Gully Local rel	
Subregion (LRR or MLRA): LRR R Lat. 41.61346533333333	4 Long: -81.201756666666667 Datum: WGS 1984
Soil Map Unit Name: EhF: Ellsworth silt loam, 25 to 70 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Y	
Are Vegetation, Soil, or Hydrology significantly distur	
Are Vegetation, Soil, or Hydrology naturally problems	
	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Ves X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland LP-032
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leave	
High Water Table (A2) Aquatic Fauna (B13) Seturation (A2) Mad Deposits (B15)	
Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Od	
Sediment Deposits (B2) X Oxidized Rhizospher	
Drift Deposits (B3) Presence of Reduced	· · · · · ·
Algal Mat or Crust (B4) Recent Iron Reduction	· ,
Iron Deposits (B5) Thin Muck Surface (0	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rer	marks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No _X _ Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	

/EGETATION – Use scientific names of plants				Sampling Point: Wetland LP-03			
<u>Tree Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet: Number of Dominant Species			
1				That Are OBL, FACW, or FAC: 2 (A)			
2				Total Number of Dominant			
3				Species Across All Strata:3 (B)			
4		-		Percent of Dominant Species That Are OBL, FACW, or FAC: 0.666666666 (A/B)			
5		-		That Are OBL, FACW, or FAC: 0.666666666 (A/B)			
6				Prevalence Index worksheet:			
7				Total % Cover of: Multiply by:			
		= Total Cov	er	OBL species65 x 1 =65			
Sapling/Shrub Stratum (Plot size: 15)				FACW species $\frac{65}{2}$ x 2 = $\frac{130}{6}$			
1		-		1 AC species			
2		-		FACU species $\begin{array}{cccccccccccccccccccccccccccccccccccc$			
3				Column Totals: 162 (A) 321 (B)			
4				4.004.404.404			
5				Prevalence Index = B/A = 1.9814814814			
6				Hydrophytic Vegetation Indicators:			
7				1 - Rapid Test for Hydrophytic Vegetation			
Harb Charture (Dietains) 5		= Total Cov	er	$\frac{X}{X}$ 2 - Dominance Test is >50% $\frac{X}{X}$ 3 - Prevalence Index is ≤3.0 ¹			
Herb Stratum (Plot size:5) 1 Phalaris arundinacea	50	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)			
2. Solidago canadensis	30	Yes	FACU	Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must			
3. Lythrum salicaria	15	No	OBL				
4Typha angustifolia	10	No	OBL	be present, unless disturbed or problematic.			
5 Agrimonia parviflora	2	No	FAC	Definitions of Vegetation Strata:			
6 Juncus effusus	15	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter			
7Symphyotrichum lanceolatum	5	No	FACW	at breast height (DBH), regardless of height.			
8. Scirpus cyperinus	5	No	OBL	Sapling/shrub – Woody plants less than 3 in. DBH			
9. Carex Iurida	20	Yes	OBL	and greater than or equal to 3.28 ft (1 m) tall.			
10. Agrostis gigantea		No	FACW	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
11		-		Woody vines – All woody vines greater than 3.28 ft in			
12		= Total Cov	er	height.			
Woody Vine Stratum (Plot size:)							
1							
2				Hydrophytic Vegetation			
3				Present? Yes X No			
<u> </u>							
4		= Total Cov					

SOIL Sampling Point: Wetland LP-032

Profile Descr	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>s</u> _ 1	. 2		
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u></u> %	Type ¹	Loc ²	Texture	Remarks
0 - 10	10YR 4/1	90	5YR 3/4	10	Concer	PL,M	Silty clay	
-								
-								
-								
								
-								
-								
<u>-</u>								
¹ Type: C=Co	ncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ins.	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil II								for Problematic Hydric Soils ³ :
Histosol ((A1)	<u>.</u>	Polyvalue Belov	v Surface	(S8) (LRR	R,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)
Histic Epi	pedon (A2)		MLRA 149B)				Coast	Prairie Redox (A16) (LRR K, L, R)
Black His	tic (A3)	-	Thin Dark Surfa	ice (S9) (L	RR R, ML	.RA 149B)	5 cm N	Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	-	Loamy Mucky N			L)		Surface (S7) (LRR K, L, M)
	Layers (A5)	-	Loamy Gleyed I)			llue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	X Depleted Matrix					ark Surface (S9) (LRR K, L)
	rk Surface (A12)	-	Redox Dark Su	, ,				anganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)	-	Depleted Dark S		7)			ont Floodplain Soils (F19) (MLRA 149B)
	eyed Matrix (S4)	-	Redox Depress	ions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
	Matrix (S6)		,				-	Shallow Dark Surface (TF12)
Dark Sun	face (S7) (LRR R, M	LRA 149B)				Other	(Explain in Remarks)
³ Indicators of	hydrophytic vegetati	on and wet	land hydrology mus	t ha nrace	ant unlace	disturbed	or problematic	<u>, </u>
	ayer (if observed):		land flydrology fflus	it be prese	int, unicoo	uisturbeu	T problematic	
Type: Roc		^						
								5 (0 V V V
Depth (inc	nes): o						Hydric Soil	Present? Yes X No No
Remarks:								









W



S

Project/Site: Leroy Center-May	/field 13	8 kV Tra	nsmi	ssion Line Projec City/0	County: Gea	uga County		Sampling Date	e:_10/20/2021
Applicant/Owner: FirstEnergy				,	-				oint: Wetland LP-033
Investigator(s): MJA				Secti	on, Township	o, Range: N/A			
Landform (hillslope, terrace, etc							Flat	S	lope (%): 0
Subregion (LRR or MLRA): LR	R R		l a	at· 41.6129608333333	3	l ong: -81.202	54383333334		tum: WGS 1984
Soil Map Unit Name: MgB: Ma	honing	silt loam	2 to	6 percent slopes			_ NWI classifica	ation: N/A	
Are climatic / hydrologic conditi	ons on t	the site t	ypical	for this time of year? `	res X	No (If n	no, explain in Re	emarks.)	
Are Vegetation, Soil	, or	Hydrolo	ду	significantly distu	rbed?	Are "Normal Cir	rcumstances" pi	resent? Yes_	X No
Are Vegetation, Soil	, or	Hydrolo	ду	naturally problem	atic?	(If needed, expl	ain any answer	s in Remarks.))
SUMMARY OF FINDING	3S – A	lttach	site	map showing sar	npling poi	int locations	s, transects,	important	features, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present?		\/	V	No	within a W	npled Area /etland?			
Remarks: (Explain alternative		Yes		No	If yes, option	onal Wetland Sit	te ID: Welland L	-F-033	
HYDROLOGY									
Wetland Hydrology Indicato	re.					Se	condary Indicat	ors (minimum	of two required)
Primary Indicators (minimum		s require	d: che	eck all that annly)			_ Surface Soil (or two required)
Surface Water (A1)	JI OHO IC	3 TCQUITC		_ Water-Stained Leave	es (R9)		_ Ounace con c		
X High Water Table (A2)				_ Aquatic Fauna (B13)			_ Moss Trim Lir		
X Saturation (A3)				_ Marl Deposits (B15)				Vater Table (C	2)
Water Marks (B1)				_ Hydrogen Sulfide Oc	lor (C1)		Crayfish Burr		,
Sediment Deposits (B2)			_	_ Oxidized Rhizospher	es on Living	Roots (C3)	_ Saturation Vis	sible on Aerial	Imagery (C9)
Drift Deposits (B3)				_ Presence of Reduce	d Iron (C4)		_ Stunted or Str	ressed Plants	(D1)
Algal Mat or Crust (B4)			_	_ Recent Iron Reduction	on in Tilled So		_ Geomorphic I		
Iron Deposits (B5)				_ Thin Muck Surface (Shallow Aquit	. ,	
Inundation Visible on Aer	_			Other (Explain in Re	marks)		_ Microtopograp		.)
Sparsely Vegetated Cond	ave Su	rface (B	3)			<u>X</u>	_ FAC-Neutral	Test (D5)	
Field Observations:	V	N.	. v	Donth (inches)					
Surface Water Present?				Depth (inches):	5				
Water Table Present? Saturation Present?				Depth (inches): Depth (inches):	0	Wotland Hyd	rology Present	2 Vos V	No
(includes capillary fringe)							•	ir ies 🔨	No
Describe Recorded Data (stre	am gau	ge, mon	itoring	g well, aerial photos, pre	evious inspec	ctions), if availab	ole:		
Remarks:									

/EGETATION – Use scientific names of plant	s.			Sampling Point: Wetland LP-033		
Tree Stratum (Plot size:)	Absolute	Dominant		Dominance Test worksheet:		
1		Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)		
2				Total Number of Dominant		
3			· ———	Species Across All Strata: 1 (B)		
4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC:1 (A/B)		
6				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
		= Total Cov	er	OBL species25 x 1 =25		
Sapling/Shrub Stratum (Plot size: 15)				FACW species		
1				FACUL procises 2 x 4 = 8		
2				FACO species		
3				UPL species0 x 5 =0 Column Totals:117 (A)213 (B)		
4				Column Totals (A) (B)		
5				Prevalence Index = B/A = 1.8205128205		
6				Hydrophytic Vegetation Indicators:		
7				X 1 - Rapid Test for Hydrophytic Vegetation		
		= Total Cov		X 2 - Dominance Test is >50%		
Herb Stratum (Plot size:5)				X 3 - Prevalence Index is ≤3.0 ¹		
1. Phalaris arundinacea	90	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
2. Lythrum salicaria	15	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)		
3. Scirpus cyperinus	10	No	OBL	¹Indicators of hydric soil and wetland hydrology must		
4Rubus allegheniensis	2	No	FACU	be present, unless disturbed or problematic.		
5				Definitions of Vegetation Strata:		
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter		
7				at breast height (DBH), regardless of height.		
8				Sapling/shrub – Woody plants less than 3 in. DBH		
9				and greater than or equal to 3.28 ft (1 m) tall.		
10			·	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
11						
12		-		Woody vines – All woody vines greater than 3.28 ft in height.		
	117	= Total Cov	er			
Woody Vine Stratum (Plot size: 30)						
1						
2	_			Hydrophytic Vegetation		
3				Present? Yes X No		
4						
		= Total Cov	er			
Remarks: (Include photo numbers here or on a separat						

SOIL Sampling Point: Wetland LP-033

Profile Desc	ription: (Describe t	to the dept	h needed to docur	nent the i	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>S</u> 1	. 2		
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 3	10YR 2/2	100					Silty clay loam	
3 - 18	2.5Y 4/1	80	5YR 3/4	20	Concer	M	Clay loam	
-								
			_					
-								
			_					
			_					
-								
_								
						-		
			_					
	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ins.		: PL=Pore Lining, M=Matrix.
Hydric Soil I			5 5.	0 ((00) (1.00	_		for Problematic Hydric Soils ³ :
Histosol	(A1) pipedon (A2)		Polyvalue Below MLRA 149B		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa	•	RR R. MI	RA 149B		Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		Loamy Mucky N					Surface (S7) (LRR K, L, M)
	Layers (A5)		Loamy Gleyed			,		llue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	e (A11)	Depleted Matrix				Thin D	ark Surface (S9) (LRR K, L)
	rk Surface (A12)		X Redox Dark Su	rface (F6)				anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)		Depleted Dark		7)			ont Floodplain Soils (F19) (MLRA 149B)
-	leyed Matrix (S4)		Redox Depress	ions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
	Matrix (S6) face (S7) (LRR R, N	II D A 1/0B	\					hallow Dark Surface (TF12) (Explain in Remarks)
Daik Sui	lace (37) (LKK K, W	ILNA 1490)				Other ((Explain in Remarks)
³ Indicators of	hydrophytic vegetat	ion and we	tland hydrology mus	st be prese	ent, unless	disturbed	or problematio	c .
	ayer (if observed):			-				
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes X No No
Remarks:								





il N





W



Project/Site: Leroy Center-Mayfield 138 kV Transmission Line	Projec City/County: Geau	iga County	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy			Sampling Point: Upland LP-032,033
Investigator(s): MJA			
Landform (hillslope, terrace, etc.): Mound			Slope (%): ⁵
Subregion (LRR or MLRA): LRR R Lat: 41.613 Soil Map Unit Name: EhF: Ellsworth silt loam, 25 to 70 percer	nt slopes	NWI classific	cation: N/A
Are climatic / hydrologic conditions on the site typical for this ti	me of year? Yes X	No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology sign	nificantly disturbed?	Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology nati		If needed, explain any answe	
SUMMARY OF FINDINGS – Attach site map sh	owing sampling poin	nt locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes No _			No
Hydric Soil Present? Yes No No No		nal Wetland Site ID: Upland I	
Wetland Hydrology Present? Yes No No Remarks: (Explain alternative procedures here or in a separ		nal Wetland Site ID: Opinio	1 002,000
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that	t apply)	Surface Soil	Cracks (B6)
	Stained Leaves (B9)	Drainage Pa	atterns (B10)
	c Fauna (B13)	Moss Trim L	' '
	eposits (B15)		Water Table (C2)
	gen Sulfide Odor (C1)	Crayfish Bur	` '
	ed Rhizospheres on Living F		fisible on Aerial Imagery (C9)
	nce of Reduced Iron (C4)		Stressed Plants (D1)
	t Iron Reduction in Tilled So		Position (D2)
	luck Surface (C7) (Explain in Remarks)	Shallow Aqu Microtopogra	
Sparsely Vegetated Concave Surface (B8)	"Explain in Remarks)	FAC-Neutra	
Field Observations:		1710 11011111	1 1001 (50)
Surface Water Present? Yes No _X _ Depth	(inches):		
Water Table Present? Yes No _X Depth			
Saturation Present? Yes No X Depth (includes capillary fringe)		Wetland Hydrology Preser	nt? Yes No _X_
Describe Recorded Data (stream gauge, monitoring well, aer	ial photos, previous inspect	tions), if available:	
Remarks:			
Tremane.			

Trop Stratum (Blot airo: 30	Absolute			Dominance Test worksheet:		
Tree Stratum (Plot size:) 1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)		
2						
3				Total Number of Dominant Species Across All Strata: 2 (B)		
4				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B)		
5				(***)		
6				Prevalence Index worksheet:		
7				Total % Cover of:Multiply by:		
	-	= Total Co	ver	OBL species 2 x 1 = 2		
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 = 40		
1				FAC species x 3 = 0		
2				FACU species x 4 = 484		
3				UPL species $0 \times 5 = 0$ Column Totals: $143 \times 526 \times (B)$		
4				Column Totals:143 (A)526 (B)		
5				Prevalence Index = B/A = 3.678321678;		
6				Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation		
··-		= Total Co	· · · · · · · · · · · · · · · · · · ·	2 - Dominance Test is >50%		
Harb Charles (Blat sine) 5		_ 10tal C0	VCI	3 - Prevalence Index is ≤3.0 ¹		
Herb Stratum (Plot size: 5 1. Solidago canadensis	60	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
2. Schedonorus arundinaceus		Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)		
3. Phalaris arundinacea		<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must		
Dishanthalium alandastinum	_		FACW	be present, unless disturbed or problematic.		
	_		FACU	Definitions of Vegetation Strata:		
5. Rubus allegheniensis		No No		_		
6. Lythrum salicaria	2	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
7. Liriodendron tulipifera	1	No	FACU			
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.		
9				Herb – All herbaceous (non-woody) plants, regardless of		
10				size, and woody plants less than 3.28 ft tall.		
11				Woody vines – All woody vines greater than 3.28 ft in		
12				height.		
	143	= Total Co	ver			
Woody Vine Stratum (Plot size:)						
1						
2				Hydrophytic		
3				Vegetation Present? Yes No X		
		-				
4						
Remarks: (Include photo numbers here or on a separate	choot)	= Total Co	ver			
Remarks. (include prioto numbers here or on a separate	Sileet.)					

Sampling Point: Upland LP-032,033

SOIL Sampling Point: Upland LP-032,033

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the indic	ator or confirm	n the absence	of indicators.)
Depth	Matrix			x Features	1 2		
(inches)	Color (moist)	%	Color (moist)	<u>%</u> <u>T</u> y	/pe ¹ Loc ²	<u>Texture</u>	Remarks
0 - 18	10YR 3/2	100				Sandy clay loam	
-							
						-	
_							
¹ Type: C=Co	oncentration, D=Deple	etion RM=	Reduced Matrix MS	======================================	nd Grains	² l ocation	: PL=Pore Lining, M=Matrix.
Hydric Soil I		Cuon, run	reduced Waters, We	ividored odi	ia Graino.		for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Belov	v Surface (S8)	(LRR R,	2 cm N	luck (A10) (LRR K, L, MLRA 149B)
Histic Ep	ipedon (A2)		MLRA 149B)			Coast I	Prairie Redox (A16) (LRR K, L, R)
Black His	stic (A3)		Thin Dark Surfa			3) 5 cm M	lucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		Loamy Mucky N		RR K, L)		urface (S7) (LRR K, L, M)
	Layers (A5)		Loamy Gleyed I				lue Below Surface (S8) (LRR K, L)
Depleted	I Below Dark Surface	(A11)	Depleted Matrix	(F3)		Thin Da	ark Surface (S9) (LRR K, L)
Thick Da	rk Surface (A12)		Redox Dark Sui	face (F6)		Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy M	lucky Mineral (S1)		Depleted Dark S	Surface (F7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy G	leyed Matrix (S4)		Redox Depress	ions (F8)		Mesic S	Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy R	edox (S5)					Red Pa	arent Material (F21)
-	Matrix (S6)						hallow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149B)				Explain in Remarks)
	hydrophytic vegetati	on and we	tland hydrology mus	t be present, ı	unless disturbed	d or problematic	
Restrictive L	.ayer (if observed):						
Type:							
Depth (inc	ches):					Hydric Soil	Present? Yes No _X
Remarks:							





NE Soil

Project/Site: Leroy Center-May	/field 13	8 kV Tra	nsmis	ssion Line Projec City/0	County: Gea	uga County		Sampling Date	: 10/20/2021
Applicant/Owner: FirstEnergy					•				oint: Wetland LP-034
Investigator(s): MJA				Secti	on, Township	o, Range: N/A			
Landform (hillslope, terrace, etc							Flat	SI	lope (%): ⁰
Subregion (LRR or MLRA): LR									
Soil Map Unit Name: MgB: Ma									
Are climatic / hydrologic conditi	ons on t	he site t	ypical	for this time of year?	res X	No (If n	no, explain in Re	emarks.)	
Are Vegetation, Soil	, or	Hydrolo	ду	significantly distu	rbed?	Are "Normal Cir	rcumstances" pr	resent? Yes _	X No
Are Vegetation, Soil	, or	Hydrolo	ду	naturally problem	atic?	(If needed, expl	ain any answer	s in Remarks.)	
SUMMARY OF FINDING	3S – A	ttach	site	map showing sar	npling poi	int locations	s, transects,	important	features, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present?	nt?			No No No	within a W	npled Area /etland? onal Wetland Sit			
Remarks: (Explain alternative		Yes		NO	If yes, option	onal Wetland Sit	te ID: Wettand E		
PEM wetland in maintained po									
HYDROLOGY						<u> </u>	aandam, Indiaat	eara (minimum	of two required)
Wetland Hydrology Indicato			ماد ماد	(، باجمعه فحطهٔ الحماد					of two required)
Primary Indicators (minimum	or one is	<u>s require</u>			no (DO)		_ Surface Soil (
Surface Water (A1)				Water-Stained Leave			Drainage PattMoss Trim Lir		
X High Water Table (A2)X Saturation (A3)				Aquatic Fauna (B13)Marl Deposits (B15)				Vater Table (C2	2)
Water Marks (B1)				_ Hydrogen Sulfide Oc			Crayfish Burro		-)
Sediment Deposits (B2)				_ Oxidized Rhizospher		Roots (C3)	- ,	sible on Aerial I	magery (C9)
Occument Deposits (B2)				Presence of Reduce	•	110013 (00)		ressed Plants (
Algal Mat or Crust (B4)				Recent Iron Reduction		 nils (C6)	_ Geomorphic F	,	51)
Iron Deposits (B5)				Thin Muck Surface (Shallow Aquit		
Inundation Visible on Aer	ial Imag	erv (B7)		_ Other (Explain in Re			_ Microtopograp)
Sparsely Vegetated Cond	_	• , ,					FAC-Neutral		,
Field Observations:		1000 (100	′/				_ 1710 1104141	1001 (20)	
Surface Water Present?	Yes	No	, X	Depth (inches):					
Water Table Present?				Depth (inches):	14				
Saturation Present?				Depth (inches):	8	Wetland Hyd	rology Present	t? Yes <u>X</u>	No
(includes capillary fringe) Describe Recorded Data (stre	am gau	ge, mon	toring	well, aerial photos, pre	evious inspec	l ctions), if availab	ole:		
, ,	J	0 /		, , , , , , , , , , , , , , , , , , , ,	•	,,			
Remarks:									
Standing water near pit									

/EGETATION – Use scientific names of pla	nts.			Sampling Point: Wetland LP-034
Tree Stratum (Plot size:30) 1	Absolute % Cover			Dominance Test worksheet: Number of Dominant Species That Are OBL_FACW_or_FAC: 4 (A)
2.				Total Number of Dominant
3 4				Species Across All Strata: 4 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)
5				That Ale Obl., FACW, OF FAC (A/b)
5				Prevalence Index worksheet:
<u> </u>				Total % Cover of: Multiply by: OBL species 52 x 1 = 52
2 1 (2) 1 (2) 1 (2) 1 (3)		= Total Cov	/er	OBL species52
Sapling/Shrub Stratum (Plot size: 15	_)	Vaa	F40	FAC species 5 x 3 = 15
Frangula alnus		Yes	FAC	FACU species 0 x 4 = 0
2. Cornus alba		Yes	FACW	UPL species 0 x 5 = 0
3				Column Totals:181 (A)315 (B)
i				Prevalence Index = B/A = 1.7403314917
3				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	_	= Total Cov		X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)				X 3 - Prevalence Index is ≤3.0 ¹
Phragmites australis	50	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Phalaris arundinacea	70	Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Carex Iurida	30	No	OBL	¹ Indicators of hydric soil and wetland hydrology must
4 Juncus effusus	20	No	OBL	be present, unless disturbed or problematic.
Eutrochium maculatum	2	No	OBL	Definitions of Vegetation Strata:
Eupatorium perfoliatum	2	No	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.
3				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
)		-	· ——	Herb – All herbaceous (non-woody) plants, regardless of
0				size, and woody plants less than 3.28 ft tall.
1,			- ——	Woody vines – All woody vines greater than 3.28 ft in
2		= Total Cov	 /er	height.
Noody Vine Stratum (Plot size:30)				
<u> </u>				
2.				Hydrophytic
3			·	Vegetation Present? Yes X No
4.				
1		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separ		10141 00		<u> </u>

SOIL Sampling Point: Wetland LP-034

Profile Description: (Describe to the	•		dicator o	or confirm	the absence	of indicators.)
Depth Matrix	Redo	x Features	T 1	Loc ²	Tandona	Damarka
(inches) Color (moist) %		%	Type ¹		<u>Texture</u>	Remarks
0 - 18 2.5Y 4/1 9	2 10YR 4/6	8	Concer	M	Clay loam	
-						
-		<u> </u>				
						
-						
-						
- -						
-						
¹ Type: C=Concentration, D=Depletion	RM=Reduced Matrix M	S=Masked S	Sand Gra	ins	² I ocation	: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:	, run rioddodd maun, m					for Problematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Belov	w Surface (88) (LRR	R,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 149B	•				Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3)	Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)	Loamy Mucky N		(LRR K,	L)		Surface (S7) (LRR K, L, M)
Stratified Layers (A5)Depleted Below Dark Surface (A1	Loamy Gleyed Note: Loamy Loam					llue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	Redox Dark Su					anganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1)	Depleted Dark	, ,)			ont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4)	Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5)						arent Material (F21)
Stripped Matrix (S6)	440B)					Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA	1496)				Other	(Explain in Remarks)
³ Indicators of hydrophytic vegetation a	nd wetland hydrology mus	st be presen	t, unless	disturbed	or problemation	Σ.
Restrictive Layer (if observed):		·				
Type:						
Depth (inches):					Hydric Soil	Present? Yes X No No
Remarks:						





lic N





S E



W

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec Cit	y/County: Geauga County	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy		Sampling Point: Upland LP-034
Investigator(s): MJA Se		
Landform (hillslope, terrace, etc.): Terrace Local		Slope (%): ⁰
Subregion (I RR or MI RA): LRR R Lat: 41.612027166660	667 Long: -81.20360483333334	Datum: WGS 1984
Subregion (LRR or MLRA): LRR R Lat: 41.612027166666 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes		
Are climatic / hydrologic conditions on the site typical for this time of year?		
Are Vegetation, Soil, or Hydrology significantly dis	sturbed? Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally proble		
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes	Is the Sampled Area within a Wetland? Yes	No
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID: Upland L	
Remarks: (Explain alternative procedures here or in a separate report.)	II yes, optional wetland one ib.	
HYDROLOGY	Coordon India	(() () () () () () () () () (
Wetland Hydrology Indicators:		ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil	
Surface Water (A1) Water-Stained Lea		
High Water Table (A2) Aquatic Fauna (B1		, ,
Saturation (A3) Marl Deposits (B1:		Water Table (C2)
Water Marks (B1)Sediment Deposits (B2)Hydrogen SulfideOxidized Rhizosph		fisible on Aerial Imagery (C9)
Oxidized Ritizospii Drift Deposits (B3) Presence of Redu		Stressed Plants (D1)
		Position (D2)
Iron Deposits (B5) Thin Muck Surface		, ,
Inundation Visible on Aerial Imagery (B7) Other (Explain in F	· ·	
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral	Test (D5)
Field Observations:		
Surface Water Present? Yes NoX _ Depth (inches):		
Water Table Present? Yes No _X _ Depth (inches):		
Saturation Present? Yes No _X _ Depth (inches): (includes capillary fringe)	Wetland Hydrology Presei	nt? Yes No _X
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	previous inspections), if available:	
Remarks:		

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:		
1			<u> </u>	Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)		
2				Total Number of Dominant		
3				Species Across All Strata: 4 (B)		
4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC:0 (A/B)		
6				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
		= Total Cov		OBL species0 x 1 =0		
Sapling/Shrub Stratum (Plot size: 15)	-	10101 001		FACW species15 x 2 =30		
1				FAC species 0 x 3 = 0		
				FACU species155 x 4 =620		
2				UPL species10 x 5 =50		
3				Column Totals:180 (A)700 (B)		
4. 5.				Prevalence Index = B/A = 3.8888888888		
6.				Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation		
·		= Total Cov	/er	2 - Dominance Test is >50%		
Herb Stratum (Plot size:5	-	Total Gov		3 - Prevalence Index is ≤3.0 ¹		
1. Schedonorus arundinaceus	35	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
Dactylis glomerata			FACU	Problematic Hydrophytic Vegetation ¹ (Explain)		
3. Phleum pratense			FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
4. Poa pratensis		Yes	FACU			
5. Phalaris arundinacea	15	No	FACW	Definitions of Vegetation Strata:		
6. Achillea millefolium	15	No	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter		
7. Daucus carota	10	No	UPL	at breast height (DBH), regardless of height.		
8. Solidago canadensis			FACU	Sapling/shrub – Woody plants less than 3 in. DBH		
9				and greater than or equal to 3.28 ft (1 m) tall.		
10.				Herb – All herbaceous (non-woody) plants, regardless of		
11.				size, and woody plants less than 3.28 ft tall.		
12.				Woody vines – All woody vines greater than 3.28 ft in height.		
		= Total Cov	ver	neight.		
Woody Vine Stratum (Plot size:)						
1						
2.				Hydrophytic		
3				Vegetation Present? Yes No X		
4						
		= Total Cov	ver			
Remarks: (Include photo numbers here or on a separate	sheet.)			1		

Sampling Point: Upland LP-034

SOIL Sampling Point: Upland LP-034

Profile Desc	ription: (Describe t	o the dept				or confirm	the absence	of indicators.)
Depth	Matrix	0/		x Features	T 1	L = = 2	Tauduma	Damarka
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 5	10YR 3/2	100					Silty clay loam	
-								
	-							
-								
			_					
	-							
	-							
-								
-								
-								
1- 0.0							2, ,,	BL B. J. L. L. M. M. L.
Hydric Soil I	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	iins.		r: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belo	w Surface	(S8) (I DD	D		Muck (A10) (LRR K, L, MLRA 149B)
	oipedon (A2)	-	MLRA 149B		(30) (LIXIX	. 11,		Prairie Redox (A16) (LRR K, L, R)
Black Hi			Thin Dark Surfa	,	RR R, ML	.RA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	-	Loamy Mucky I					Surface (S7) (LRR K, L, M)
	l Layers (A5)	-	Loamy Gleyed	Matrix (F2))		Polyva	alue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	Depleted Matri					Park Surface (S9) (LRR K, L)
	ork Surface (A12)	-	Redox Dark Su	, ,	7 \			langanese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1) leyed Matrix (S4)	-	Depleted Dark Redox Depress		7)			ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)	-	Redux Depress	sions (1 o)				arent Material (F21)
-	Matrix (S6)							Shallow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149B)					(Explain in Remarks)
	hydrophytic vegetati		land hydrology mu	st be prese	nt, unless	disturbed	or problemation	0.
	ayer (if observed):	Χ						
Type: Ro								
Depth (inc	ches): <u>5</u>						Hydric Soil	Present? Yes No _X
Remarks:								





Soil W

Project/Site: Leroy Center-Mag	yfield 138 kV	Transmi	ssion Line Projec City/C	County: Geaug	ga County	§	Sampling Date: 10	0/20/2021
Applicant/Owner: FirstEnergy			-	-			Sampling Point:	
Investigator(s): MJA			Secti					
Landform (hillslope, terrace, etc					-	Concave	Slope	e (%): 3
Subregion (LRR or MLRA): LR								
Soil Map Unit Name: EhF: Ells	worth silt loa	m, 25 to	70 percent slopes			NWI classificat	tion: N/A	
Are climatic / hydrologic conditi	ons on the si	te typica	I for this time of year?	res X No	o (If no	o, explain in Rer	marks.)	
Are Vegetation, Soil	, or Hydr	ology	significantly distur	rbed? Aı	re "Normal Circ	cumstances" pre	esent? Yes X	No
Are Vegetation, Soil					f needed, expla	in any answers	in Remarks.)	
SUMMARY OF FINDING	GS – Attac	h site	map showing san	npling poin	t locations,	transects,	important fea	tures, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present?	١	res X	No No		tland?	Yes X	_	
Remarks: (Explain alternative				ii yes, optioni	ai welland Sile	: ID		
PEM wetland in maintained potential the southwest portion of the w								
HYDROLOGY								
Wetland Hydrology Indicato	ors:				Sec	condary Indicate	ors (minimum of tw	vo required)
Primary Indicators (minimum	of one is requ	uired; ch	eck all that apply)			Surface Soil C		
Surface Water (A1)		_	Water-Stained Leave		_	Drainage Patte		
X High Water Table (A2)			Aquatic Fauna (B13)			Moss Trim Line		
X Saturation (A3)			Marl Deposits (B15)			-	ater Table (C2)	
Water Marks (B1)			Hydrogen Sulfide Od		<u>-</u>	Crayfish Burro	` '	
Sediment Deposits (B2)			Oxidized Rhizospher		oots (C3)		ble on Aerial Imag	
Drift Deposits (B3)			_ Presence of Reduce				essed Plants (D1)	
Algal Mat or Crust (B4)			_ Recent Iron Reduction			Geomorphic P		
Iron Deposits (B5)	: - I I / I		Thin Muck Surface (0			Shallow Aquita	, ,	
Inundation Visible on Aer			_ Other (Explain in Rei	marks)		Microtopograp		
Sparsely Vegetated Cond	cave Surface	(B8)			<u> </u>	FAC-Neutral T	est (D5)	
Field Observations: Surface Water Present?	Voc	No. X	Donth (inches):					
Water Table Present?			Depth (inches): Depth (inches):	16				
Saturation Present?			Depth (inches):		Watland Hudr	ology Procent	? Yes X	No
(includes capillary fringe)	res	NO	Depth (inches).		wetiand nyur	blogy Present	r res <u> </u>	No
Describe Recorded Data (stre	eam gauge, m	nonitorin	g well, aerial photos, pre	evious inspection	ons), if available	e:		
Demonto								
Remarks:								

'EGETATION – Use scientific names of plants				Sampling Point: Wetland LP-03
Tree Stratum (Plot size:) 1		Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL FACW or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata:3 (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.6666666666 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	ver .	OBL species x 1 = 95
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 = 20
1. Fagus grandifolia	5	Yes	FACU	FAC species $\frac{5}{}$ x 3 = $\frac{15}{}$
2. Frangula alnus	5	Yes	FAC	FACU species
3				01 L species x 0 =
4				Column Totals:115
5				
6			· ——	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
_	10	= Total Cov	er	$\frac{X}{X}$ 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5 1. Leersia oryzoides	80	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Scirpus cyperinus	10	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Onoclea sensibilis	5	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Typha angustifolia			OBL	be present, unless disturbed or problematic.
5. Eupatorium perfoliatum	5	No	FACW	Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
_			·	at breast height (DBH), regardless of height.
/ 8				Sapling/shrub – Woody plants less than 3 in. DBH
8 9.				and greater than or equal to 3.28 ft (1 m) tall.
			·	Herb – All herbaceous (non-woody) plants, regardless of
10			·	size, and woody plants less than 3.28 ft tall.
11		-	·	Woody vines – All woody vines greater than 3.28 ft in
12		= Total Cov	er	height.
Woody Vine Stratum (Plot size:30)				
1				
2				Hydrophytic
				Vegetation Present? Yes X No
3				
		= Total Cov		

SOIL Sampling Point: Wetland LP-035

Profile Desc	ription: (Describe to	the dep	h needed to docun	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Redox Color (moist)	K Features	<u>S</u> Type ¹	Loc ²	Texture	Remarks
0 - 18	2.5Y 4/1	90	7.5YR 3/4	10	Concer	PL,M	Sandy clay	
-								
-								
-								
1- 0.0			D				21 (1	
Hydric Soil I	ncentration, D=Deple ndicators:	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Belov	v Surface	(S8) (LRF	RR,	2 cm N	fluck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B)					Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa					flucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		Loamy Mucky M			, L)		urface (S7) (LRR K, L, M)
	Layers (A5)		Loamy Gleyed I)			lue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	X Depleted Matrix					ark Surface (S9) (LRR K, L)
	rk Surface (A12)		Redox Dark Sur					anganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)		Depleted Dark S		7)			ont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)		Redox Depress	ions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
Stripped	Matrix (S6)							hallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	LRA 149E	3)				Other	Explain in Remarks)
	hydrophytic vegetation	on and we	tland hydrology mus	t be prese	ent, unless	disturbed	or problemation	s
	ayer (if observed):							
Type:								
Depth (inc	:hes):						Hydric Soil	Present? Yes X No No
Remarks:								





.





E W



Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line	Projec City/County: Geau	iga County	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy			Sampling Point: Upland LP-035
Investigator(s): MJA			
Landform (hillslope, terrace, etc.): Toeslope			Slope (%): 1
Subregion (LRR or MLRA): LRR R Lat: 41.61	144233333333	Long81.20528366666667	No. 7 Datum: WGS 1984
Subregion (LRR or MLRA): LRR R Lat: 41.617 Soil Map Unit Name: EhF: Ellsworth silt loam, 25 to 70 percent	it slopes	NWI classific	ration:_N/A
Are climatic / hydrologic conditions on the site typical for this til	me of year? Yes X	lo (If no, explain in R	emarks.)
Are Vegetation X, Soil , or Hydrology sign	nificantly disturbed?	Are "Normal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology natu	•	If needed, explain any answe	
SUMMARY OF FINDINGS – Attach site map sh	owing sampling poir	nt locations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No _ Hydric Soil Present? Yes No _			No
Wetland Hydrology Present? Yes No	X If yes ontion	nal Wetland Site ID: Upland L	P-035
Upland data form for W-MJA-102021-04. Data point situated	ວn mowed shoulder of atv a	access path.	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is required; check all that	t apply)	Surface Soil	Cracks (B6)
Surface Water (A1) Water-	Stained Leaves (B9)	Drainage Pa	tterns (B10)
	Fauna (B13)	Moss Trim Li	ines (B16)
	eposits (B15)	Dry-Season	Water Table (C2)
	gen Sulfide Odor (C1)	Crayfish Bur	` ,
	ed Rhizospheres on Living F		sible on Aerial Imagery (C9)
	ice of Reduced Iron (C4)		tressed Plants (D1)
	t Iron Reduction in Tilled So		Position (D2)
<u> </u>	uck Surface (C7)	Shallow Aqui	
Sparsely Vegetated Concave Surface (B8)	Explain in Remarks)	Microtopogra FAC-Neutral	
Field Observations:		I AC-Neutral	1681 (03)
Surface Water Present? Yes No _X _ Depth	(inches):		
Water Table Present? Yes No _X _ Depth			
Saturation Present? Yes No X Depth (includes capillary fringe)		Wetland Hydrology Preser	nt? Yes NoX
Describe Recorded Data (stream gauge, monitoring well, aer	ial photos, previous inspect	ions), if available:	
Remarks:			

EGETATION – Use scientific names of plants).			Sampling Point: Upland LP-03
Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
				Number of Dominant Species That Are OBL, FACW, or FAC: (A)
·				Total Number of Dominant Species Across All Strata: 1 (B)
l <u> </u>				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
3				Prevalence Index worksheet:
				Total % Cover of: Multiply by:
		= Total Cov	er	OBL species0 x 1 =0
Sapling/Shrub Stratum (Plot size: 15)				FACW species0 x 2 =0
				FAC species
				FACU species80
s				Column Totals: 90 (A) 370 (B)
l				
5				Trevalence index - B/A -
S				Hydrophytic Vegetation Indicators:
7	-	-		1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%
_		= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5)	00	V	FACU	4 - Morphological Adaptations ¹ (Provide supporting
Schedonorus arundinaceus Securigera varia	80 10		UPL	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)
2. Securigera varia 3.				
4				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
5				Tree – Woody plants 3 in. (7.6 cm) or more in diamete
7				at breast height (DBH), regardless of height.
3				Sapling/shrub – Woody plants less than 3 in. DBH
).				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				
2				Woody vines – All woody vines greater than 3.28 ft in height.
	90	= Total Cov	er	
Woody Vine Stratum (Plot size:)				
2				Hydrophytic Vegetation
3				Present? Yes No X
4				
		= Total Cov	er	

SOIL Sampling Point: Upland LP-035

Profile Desc	ription: (Describe t	o the dept	h needed to docu	ment the in	ndicator o	or confirm	the absence	of indicators.)
Depth (in the ca)	Matrix	0/		x Features	T 1	L = = ²	Tauduma	Damarka
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 12	10YR 3/2	100					Sandy loam	
-								
-			_					
								
-								
-								
-								
¹Type: C=Co	oncentration, D=Depl	etion RM=	Reduced Matrix M	S=Masked	Sand Gra	ins	² I ocation	: PL=Pore Lining, M=Matrix.
Hydric Soil I					<u> </u>			for Problematic Hydric Soils ³ :
Histosol	(A1)	_	Polyvalue Belo	w Surface	(S8) (LRR	R,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)
-	ipedon (A2)		MLRA 149B	,				Prairie Redox (A16) (LRR K, L, R)
Black His		-	Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	-	Loamy Mucky I			L)		Surface (S7) (LRR K, L, M)
	l Layers (A5) I Below Dark Surface	(Δ11)	Loamy GleyedDepleted Matrix)		-	alue Below Surface (S8) (LRR K, L) Park Surface (S9) (LRR K, L)
-	rk Surface (A12)	(7,11)	Redox Dark Su					langanese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	=	Depleted Dark	, ,	7)			ont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)	_	Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
	Matrix (S6)	L D A 440D						Shallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	LRA 149B)				Other	(Explain in Remarks)
³ Indicators of	hydrophytic vegetati	on and wet	land hydrology mu	st be prese	nt, unless	disturbed	or problemation	C.
	ayer (if observed):		, 0,	•				
Type: Ro	cky							
Depth (inc	ches): 12						Hydric Soil	Present? Yes No X
Remarks:							_	





Soil E

Project/Site: Leroy Center-Mayfield 138 kV Trans	mission Line Projec City/C	ounty: Geauga County	§	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy	-	-		Sampling Point: Wetland LP-036
Investigator(s): MJA				
Landform (hillslope, terrace, etc.): Floodplain			Undulating	Slope (%): 10
Subregion (LRR or MLRA): LRR R				
Soil Map Unit Name: Tg: Tioga loam, frequently f	looded	Long	NWI classificat	ion:_N/A
Are climatic / hydrologic conditions on the site typi	cal for this time of year? Ye	es X No (If n	o, explain in Rer	marks.)
Are Vegetation, Soil, or Hydrology	significantly disturb	ped? Are "Normal Cir	cumstances" pre	esent? Yes X No
Are Vegetation, Soil, or Hydrology				
SUMMARY OF FINDINGS – Attach sit	te map showing sam	pling point locations	, transects,	important features, etc.
	X No X No X No	Is the Sampled Area within a Wetland? If yes, optional Wetland Sit	·	
PEM wetland adjacent to perennial stream.				
HYDROLOGY				
Wetland Hydrology Indicators:		<u>Se</u>	condary Indicato	ors (minimum of two required)
Primary Indicators (minimum of one is required;	check all that apply)		Surface Soil C	racks (B6)
Surface Water (A1)	Water-Stained Leaves	s (B9)	Drainage Patte	
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Line	
X Saturation (A3)	Marl Deposits (B15)		-	ater Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odd		Crayfish Burro	` '
Sediment Deposits (B2)	Oxidized Rhizosphere			ble on Aerial Imagery (C9)
Drift Deposits (B3)	Presence of Reduced		=	essed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction		Geomorphic Po	
Iron Deposits (B5)	Thin Muck Surface (C	•	Shallow Aquita	` '
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Rem		Microtopograp	
Sparsely Vegetated Concave Surface (B8)		<u>X</u>	FAC-Neutral T	est (D5)
Field Observations:	V.			
	X Depth (inches):			
	X Depth (inches):			
(includes capillary fringe)	Depth (inches):			? Yes X No
Describe Recorded Data (stream gauge, monitor	ring well, aerial photos, pre	vious inspections), ir availab	ie:	
Remarks:				

/EGETATION – Use scientific names of plant	ts.			Sampling Point: Wetland LP-036
<u>Tree Stratum</u> (Plot size:30) 1		Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2 3				Total Number of Dominant Species Across All Strata: 2 (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	er	OBL species x 1 = 70
Sapling/Shrub Stratum (Plot size: 15)				FACW species $\frac{45}{0}$ $\times 2 = \frac{90}{0}$
l				rac species x 3 =
2	_			FACU species
3				01 L 3pccic3 X 0 =
k <u> </u>				Column Totals:115 (A)160 (B)
5				Prevalence Index = B/A = 1.391304347{
5				Hydrophytic Vegetation Indicators:
				X 1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
		= Total Cov	er	X 3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size:5) 1Carex tribuloides	25	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Phalaris arundinacea	20	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Scirpus atrovirens 4.		Yes	OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_				Definitions of Vegetation Strata:
5				
5				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
3 9				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12.				Woody vines – All woody vines greater than 3.28 ft in
		= Total Cov		height.
Manda Vina Charles (Diet sine)		- Total Cov	5 1	
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation
3				Present? Yes X No
4				
		= Total Cov	er	
Remarks: (Include photo numbers here or on a separat	te sheet.)			

SOIL Sampling Point: Wetland LP-036

Profile Desc	ription: (Describe to	the dep	th needed to docun	nent the i	ndicator c	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>S</u> _ 1	. 2		
(inches) 0 - 4	Color (moist) 10YR 3/2	<u>%</u> 98	<u>Color (moist)</u> 7.5YR 4/4	<u>%</u> 2	Type ¹ Concer	Loc ²	<u>Texture</u> Silt	Remarks Mucky and sandy
	Gley 1 10Y 2.5/1		7.511 4/4		Conce	IVI		Widoky and Sandy
4 - 18	Gley 1 101 2.5/1	100					Sandy loam	
-								
-								
-								
-			_					
-								
1Type: C=Ce			-Dadward Matrix MS				21 coation	DI - Doro Lining M-Motriy
Hydric Soil I	ncentration, D=Deple	elion, Rivi-	Reduced Matrix, MS	=iviasked	i Sanu Gra	IIIS.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Belov	v Surface	(S8) (LRR	R,	2 cm M	luck (A10) (LRR K, L, MLRA 149B)
	nipedon (A2)		MLRA 149B)		DD D MI	DA 440D		Prairie Redox (A16) (LRR K, L, R)
Black His	n Sulfide (A4)		Thin Dark Surfa Loamy Mucky M					flucky Peat or Peat (S3) (LRR K, L, R) urface (S7) (LRR K, L, M)
	Layers (A5)		X Loamy Gleyed			,	Polyva	lue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	Depleted Matrix					ark Surface (S9) (LRR K, L)
	rk Surface (A12) lucky Mineral (S1)		Redox Dark Sur Depleted Dark S	. ,	7)			anganese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)		Redox Depress		.,			Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
	Matrix (S6) face (S7) (LRR R, M	I D A 140E	2\				-	hallow Dark Surface (TF12) Explain in Remarks)
Dark Sui	lace (37) (LKK K, W	LNA 1496	•)				Other (Explain in Nemarks)
	hydrophytic vegetati	on and we	tland hydrology mus	t be prese	ent, unless	disturbed	or problemation	.
	_ayer (if observed):							
Type: Depth (inc	ches):						Hydric Soil	Present? Yes X No
Remarks:							11,4	





Soil





N E



W

Project/Site: Leroy Center-Mayfield 138 kV Transmission	n Line Projec City/County: Gea	uga County	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy			Sampling Point: Upland LP-036
Investigator(s): MJA			
Landform (hillslope, terrace, etc.): Hillside			Slope (%): ²⁰
Subregion (LRR or MLRA): LRR R Lat: Lat: Lat:	cent slopes	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes X	No (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology	_ significantly disturbed?	Are "Normal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology		(If needed, explain any answe	
SUMMARY OF FINDINGS – Attach site ma	p showing sampling poi	int locations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes			No
Wetland Hydrology Present? Yes	No X If yes optic	onal Wetland Site ID: Upland L	P-036
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is required; check a	all that apply)	Surface Soil	Cracks (B6)
	Vater-Stained Leaves (B9)	Drainage Pa	
	quatic Fauna (B13)	Moss Trim Li	
	Marl Deposits (B15)		Water Table (C2)
	lydrogen Sulfide Odor (C1)	Crayfish Buri	,
	Oxidized Rhizospheres on Living		sible on Aerial Imagery (C9)
	Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled So		tressed Plants (D1)
<u> </u>	hin Muck Surface (C7)	Shallow Aqui	, ,
	Other (Explain in Remarks)	Microtopogra	
Sparsely Vegetated Concave Surface (B8)	Aller (Explain in Remarko)	FAC-Neutral	
Field Observations:			1001 (20)
Surface Water Present? Yes No _X	Depth (inches):		
Water Table Present? Yes No _X			
Saturation Present? Yes No X (includes capillary fringe)		Wetland Hydrology Presen	t? Yes No_X_
Describe Recorded Data (stream gauge, monitoring we	II, aerial photos, previous inspec	tions), if available:	
Remarks:			

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6				Bassalana Indonesia da
7				Prevalence Index worksheet:
		= Total Cov		Total % Cover of: OBL species Multiply by: x 1 = 0
Operation of Objects of Chaptering (Distraction) 15	-	_ = 10tal C0V	/ei	FACW species 0 x 2 = 0
Sapling/Shrub Stratum (Plot size: 15)				FAC species 10 x 3 = 30
1				FACU species 95 x 4 = 380
2				UPL species 10 x 5 = 50
3				Column Totals: 115 (A) 460 (B)
4				
5				Prevalence Index = B/A = 4
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size:)		-		3 - Prevalence Index is ≤3.0 ¹
1. Schedonorus arundinaceus	20	Yes	FACU	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
2. Tussilago farfara	20	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3Poa pratensis	55	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
4. Frangula alnus	40	No	FAC	be present, unless disturbed or problematic.
5. Daucus carota		No	UPL	Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
				at breast height (DBH), regardless of height.
7				Sapling/shrub – Woody plants less than 3 in. DBH
8				and greater than or equal to 3.28 ft (1 m) tall.
9				Herb – All herbaceous (non-woody) plants, regardless of
10		-	· ——	size, and woody plants less than 3.28 ft tall.
11			<u> </u>	Woody vines – All woody vines greater than 3.28 ft in
12				height.
	115	= Total Cov	/er	
Woody Vine Stratum (Plot size:)				
1				
2				Hydrophytic Vegetation
3				Present? Yes No X
4.				
		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate	sheet.)	-		
` '	,			

Sampling Point: Upland LP-036

SOIL Sampling Point: Upland LP-036

Depth Matrix Redox Features Color (molst) S Type Loc2 Texture Remarks	Profile Description: (Describe to the de	pth needed to docu	ment the indica	tor or confirm	the absence	of indicators.)
10			ox Features	_12	Tauduma	Domonto
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1)		Color (moist)		e Loc		Remarks
Hydric Soil Indicators: Histosol (A1)	0 - 14 10YR 3/3 100				Sandy loam	
Hydric Soil Indicators: Histosol (A1)	-					
Hydric Soil Indicators: Histosol (A1)	-					
Hydric Soil Indicators: Histosol (A1)		<u> </u>				<u> </u>
Hydric Soil Indicators: Histosol (A1)	- <u>- </u>					
Hydric Soil Indicators: Histosol (A1)	-					
Hydric Soil Indicators: Histosol (A1)	-					
Hydric Soil Indicators: Histosol (A1)		<u> </u>				<u> </u>
Hydric Soil Indicators: Histosol (A1)		- <u></u>				
Hydric Soil Indicators: Histosol (A1)	-					
Hydric Soil Indicators: Histosol (A1)	-			<u> </u>		
Hydric Soil Indicators: Histosol (A1)						
Hydric Soil Indicators: Histosol (A1)		- 				
Hydric Soil Indicators: Histosol (A1)	-					
Hydric Soil Indicators: Histosol (A1)	-					
Hydric Soil Indicators: Histosol (A1)	17 00 1 1 5 5 1 1 5 5				21 (1	BL B. III MAN
Histosol (A1)		M=Reduced Matrix, M	S=Masked Sand	Grains.		
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Depleted Below Dark Surface (A11) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S6) Dark Surface (S7) (LRR K, L, M) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Restrictive Layer (if observed): X Type: Gravel Depth (inches): 14 Hydric Soil Present? Yes No _X	•	Polyvalue Relo	w Surface (S8)	I DD D		_
Black Histic (A3)				LIKIK IK,		
Stratified Layers (A5)			•	, MLRA 149B		
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Other Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Type: Gravel Depth (inches): 14 Hydric Soil Present? Yes No X						
Thick Dark Surface (A12)					-	
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): X Type: Gravel Depth (inches): 14 Hydric Soil Present? Yes No _X						
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): X Type: Gravel Depth (inches): 14 Hydric Soil Present? Yes No _X	· · · · · · · · · · · · · · · · · · ·		, ,			
Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): χ						
Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): \chi_ Type: Gravel Depth (inches): 14		Nedox Depress	510115 (1 0)			
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if observed): \chi_ Type: Gravel Depth (inches): 14 Hydric Soil Present? Yes No _X						
Restrictive Layer (if observed): X Type: Gravel Depth (inches): 14 Hydric Soil Present? Yes No _X		9B)				
Restrictive Layer (if observed): X Type: Gravel Depth (inches): 14 Hydric Soil Present? Yes No _X						
Type: Gravel Depth (inches): 14 Hydric Soil Present? Yes No _X		vetland hydrology mu	st be present, ur	nless disturbed	or problemation	D
Depth (inches): 14 Hydric Soil Present? Yes No _X						
		_				
Remarks:		=			Hydric Soil	Present? Yes No X
	Remarks:					





Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec C	ity/County: Geauga County	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy		Sampling Point: Wetland LP-037
Investigator(s): MJA S		
Landform (hillslope, terrace, etc.): Terrace Loca		Slope (%): ²
Subregion (LRR or MLRA): LRR R Lat: 41.60892533333 Soil Map Unit Name: EhD2: Ellsworth silt loam, 12 to 18 percent slopes,	eroded NWI classific	cation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year	? Yes X No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology significantly di	isturbed? Are "Normal Circumstances"	oresent? Yes X No
Are Vegetation, Soil, or Hydrology naturally prob	lematic? (If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing s	sampling point locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? YesX No Hydric Soil Present? YesX No Wetland Hydrology Present? YesX No	Is the Sampled Area within a Wetland? If yes, optional Wetland Site ID: Wetland	
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil	
Surface Water (A1) Water-Stained Le		
High Water Table (A2) Aquatic Fauna (B		
Saturation (A3) Marl Deposits (B		Water Table (C2)
Water Marks (B1) Hydrogen Sulfide		` ,
		isible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Red		tressed Plants (D1)
<u> </u>	uction in Tilled Soils (C6) X Geomorphic	
Iron Deposits (B5) Thin Muck Surface		· '
Inundation Visible on Aerial Imagery (B7) Other (Explain in		
Sparsely Vegetated Concave Surface (B8) Field Observations:	X FAC-Neutral	T lest (D5)
Surface Water Present? Yes No _X Depth (inches):		
Water Table Present? Yes No _X Depth (inches):		
Saturation Present? Yes No _X Depth (inches):	Wetland Hydrology Presei	at2 Vac V No
(includes capillary fringe)	Wetland nydrology Fresei	nt? Yes <u>X</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos,	, previous inspections), if available:	
Remarks:		
Remarks.		

/EGETATION – Use scientific names of plants	-			Sampling Point: Wetland LP-03		
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:		
1				Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)		
2				Total Number of Dominant Species Across All Strata:3 (B)		
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.666666666 (A/B)		
5						
6				Prevalence Index worksheet:		
7		·		Total % Cover of: Multiply by: OBL species 30 x 1 = 30		
0 1: (0) 1 0: (7) 1 : 15		= Total Cov	er	OBL species 30 $x 1 = 30$ FACW species 60 $x 2 = 120$		
Sapling/Shrub Stratum (Plot size: 15)				FAC species 5 x 3 = 15		
1				FACU species 30 x 4 = 120		
2				UPL species 0 x 5 = 0		
3				Column Totals: 125 (A) 285 (B)		
4				Prevalence Index = B/A = 2.28		
5				Hydronbytic Vegetation Indicators		
6				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation		
7				X 2 - Dominance Test is >50%		
		= Total Cov	er	X 3 - Prevalence Index is ≤3.0¹		
Herb Stratum (Plot size: 5 1. Carex bromoides	40	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
2. Juncus effusus		Yes	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)		
3. Dichanthelium clandestinum	20		FACW	¹Indicators of hydric soil and wetland hydrology must		
Coirrous atravirana		No	OBL	be present, unless disturbed or problematic.		
5. Frangula alnus	3		FAC	Definitions of Vegetation Strata:		
0-11-1		No	FAC	_		
6 7.	30	Yes	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.		
9				Herb – All herbaceous (non-woody) plants, regardless of		
10				size, and woody plants less than 3.28 ft tall.		
11 12.				Woody vines – All woody vines greater than 3.28 ft in		
		= Total Cov	er	height.		
Woody Vine Stratum (Plot size:)						
1						
2				Hydrophytic Vegetation		
3				Present? Yes X No		
4			er			

SOIL Sampling Point: Wetland LP-037

Profile Description: (Describe to	the dept	h needed to docui	ment the i	ndicator c	or confirm	n the absence of	indicators.)
Depth Matrix			x Features	<u>s</u> _ 1	. 2		
(inches) Color (moist) 0 - 6 10YR 4/1	<u>%</u> 95	Color (moist) 5YR 3/4	<u>%</u> 5	Type ¹ Concer	Loc ² PL,M	Texture Silty clay loam	Remarks
		311(3/4		0011001			With gravel
6 - 18 10YR 5/3	100				-	Silty clay loam	With gravel
<u> </u>							
-							
-						·	
					-		
-							
-							
	 -						
						·	
<u> </u>							
-							
¹ Type: C=Concentration, D=Deple	tion. RM=	Reduced Matrix. M	S=Masked	Sand Gra	ins.	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:	,	,					r Problematic Hydric Soils ³ :
Histosol (A1)	-	Polyvalue Belo	w Surface	(S8) (LRR	R,	2 cm Muc	ck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)		MLRA 149B	•				airie Redox (A16) (LRR K, L, R)
Black Histic (A3)	-	Thin Dark Surfa					cky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4) Stratified Layers (A5)	-	Loamy Mucky I Loamy Gleyed			L)		face (S7) (LRR K, L, M) e Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface	(A11)	X Depleted Matrix		,		-	Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	-	Redox Dark Su	rface (F6)			Iron-Man	ganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1)	-	Depleted Dark		7)			t Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4)	-	Redox Depress	sions (F8)				odic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5) Stripped Matrix (S6)							ent Material (F21) Ilow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MI	RA 149B)					xplain in Remarks)
, , , ,							,
³ Indicators of hydrophytic vegetation Restrictive Layer (if observed):	n and wet	land hydrology mus	st be prese	ent, unless	disturbed	l or problematic.	
Type:							
Depth (inches):						Hydric Soil Pr	resent? Yes X No No
Remarks:						Tiyane don't i	
Remarks.							
ĺ							





Soil





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Project/Site: Leroy Center-Mayfield 138 kV Tran	smission Line Projec City/C	ounty: Geauga County	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy	-	Sta	te: OH Sampling Point: Wetland LP-038
Investigator(s): MJA	Section	on, Township, Range: N/A	
Landform (hillslope, terrace, etc.): Depression			oncave Slope (%): 1
Subregion (LRR or MLRA): LRR R	Lat: 41.60789616666666	Long: -81.20963	366666666 Datum: WGS 1984
Soil Map Unit Name: MgB: Mahoning silt loam, 2	2 to 6 percent slopes		JWI classification: N/A
Are climatic / hydrologic conditions on the site type	pical for this time of year? Y	es X No (If no,	explain in Remarks.)
Are Vegetation, Soil, or Hydrolog	y significantly disturb	bed? Are "Normal Circu	mstances" present? Yes X No
Are Vegetation, Soil, or Hydrolog	y naturally problema	atic? (If needed, explain	any answers in Remarks.)
SUMMARY OF FINDINGS – Attach s	ite map showing sam	pling point locations,	ransects, important features, etc.
Hydrophytic Vegetation Present? Yes _ Hydric Soil Present? Yes _ Wetland Hydrology Present? Yes _	X No X No X No	Is the Sampled Area within a Wetland? If yes, optional Wetland Site	
Remarks: (Explain alternative procedures here	NO	If yes, optional Wetland Site	D: Wetland El 000
PEM wetland in maintained powerline easemen			
HYDROLOGY			
Wetland Hydrology Indicators:			ndary Indicators (minimum of two required)
Primary Indicators (minimum of one is required:			Surface Soil Cracks (B6)
Surface Water (A1)	Water-Stained Leaves		Orainage Patterns (B10)
X High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lines (B16)
X Saturation (A3)	Marl Deposits (B15)		Ory-Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odd		Crayfish Burrows (C8)
Sediment Deposits (B2)	X Oxidized RhizospherePresence of Reduced	· · · · —	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)
Drift Deposits (B3) Algal Mat or Crust (B4)	Recent Iron Reduction	· ·	Geomorphic Position (D2)
Algal Mat of Crust (B4) Iron Deposits (B5)	Thin Muck Surface (C		Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Ren	· —	Aicrotopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral Test (D5)
Field Observations:		<u>~</u> '	AC-Neutral Test (D3)
	X Depth (inches):		
	Depth (inches):	16	
	Depth (inches):		ogy Present? Yes X No
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitor	oring well, aerial photos, pre	vious inspections), if available:	
Remarks:			
remarks.			

EGETATION – Use scientific names of plants				Sampling Point: Wetland LP-03		
<u>Tree Stratum</u> (Plot size:) 1)		Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL FACW or FAC: 1 (A)		
2				That Are OBL, FACW, or FAC: 1 (A) Total Number of Dominant Species Across All Strata: 1 (B)		
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)		
6				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
		= Total Cov	er	OBL species5 x 1 =5		
Sapling/Shrub Stratum (Plot size: 15)				FACW species110 x 2 =220		
1				FAC species0 x 3 =0		
2				FACU species 10 x 4 = 40		
3				UPL species 0 x 5 = 0 Column Totals: 125 (A) 265 (B)		
1.				Column Totals:125 (A)265 (B)		
5				Prevalence Index = B/A = 2.12		
3				Hydrophytic Vegetation Indicators:		
7				\underline{X} 1 - Rapid Test for Hydrophytic Vegetation		
		= Total Cov		X 2 - Dominance Test is >50%		
Herb Stratum (Plot size: 5				X 3 - Prevalence Index is ≤3.0¹		
1. Phragmites australis	100	Yes	FACW	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)		
2. Rubus allegheniensis	5	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)		
3. Onoclea sensibilis	10	No	FACW	¹ Indicators of hydric soil and wetland hydrology must		
4. Persicaria sagittata	5	No	OBL	be present, unless disturbed or problematic.		
5Solidago canadensis	5	No	FACU	Definitions of Vegetation Strata:		
6				Tree – Woody plants 3 in. (7.6 cm) or more in diamete		
7				at breast height (DBH), regardless of height.		
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.		
9 10				Herb – All herbaceous (non-woody) plants, regardless of		
11				size, and woody plants less than 3.28 ft tall.		
12.				Woody vines – All woody vines greater than 3.28 ft in height.		
		= Total Cov	er	neight.		
Woody Vine Stratum (Plot size:30)						
1						
				Hydrophytic		
9				Vegetation Present? Yes X No		
				- 1000		
3						
2		= Total Cov				

SOIL Sampling Point: Wetland LP-038

inchesi	Matrix	%		x Features	Type ¹	Loc ²	Toyturo	Domarka
inches) 0 - 6	Color (moist) 10YR 3/2	95	Color (moist) 5YR 4/4	_ <u>%</u>	Concer	PL	Texture Silty clay loam	Remarks
6 - 18	2.5Y 5/2	80	5YR 5/6	20	Concer	PL,M	Clay loam	
-								
-								
-								
-								
-								
	ncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ins.		: PL=Pore Lining, M=Matrix.
dric Soil Ir			Dalasaksa Dala	Of /	00) // DE	. 5		for Problematic Hydric Soils ³ :
_ Histosol (Histic Epi	ipedon (A2)		Polyvalue Belo MLRA 149B		58) (LRR	ί Κ,		Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa		RR R, ML	RA 149B		flucky Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		Loamy Mucky I		(LRR K	L)		urface (S7) (LRR K, L, M)
	Layers (A5) Below Dark Surface	. (Δ11)	Loamy GleyedX Depleted Matri:					lue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L)
	rk Surface (A12)	(7(1)	Redox Dark Su					anganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)		Depleted Dark		')			ont Floodplain Soils (F19) (MLRA 149E
	eyed Matrix (S4)		Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B
_ Sandy Re								arent Material (F21) hallow Dark Surface (TF12)
Strinned I	face (S7) (LRR R, N	ILRA 149E	3)					Explain in Remarks)
_ Stripped I _ Dark Surf	() (tland hydrology mu	st be preser	nt unless	disturbed	or problematic	:
_ Dark Surf		ion and we		o. 50 p. 000.	,	<u> </u>	- Problemate	·
_ Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	tiana nyarology mu					
_ Dark Surf	hydrophytic vegetat	ion and we	eland flydrology mu					
_ Dark Surf	hydrophytic vegetat ayer (if observed):	ion and we	tiand Hydrology mu				Hydric Soil	Present? Yes X No
_ Dark Surf ndicators of estrictive La Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	uano nyulology mu				Hydric Soil	Present? Yes X No
_ Dark Surf ndicators of estrictive La Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	uanu nyulology mu				Hydric Soil	Present? Yes X No
_ Dark Surf ndicators of estrictive La Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	uanu nyulology mu				Hydric Soil	Present? Yes X No
_ Dark Surf ndicators of estrictive La Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	uano nyulology mu				Hydric Soil	Present? Yes X No
_ Dark Surf ndicators of estrictive La Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	tiano nyulology mu				Hydric Soil	Present? Yes X No
_ Dark Surf ndicators of estrictive La Type: 	hydrophytic vegetat ayer (if observed):	ion and we	tiano nyulology ma				Hydric Soil	Present? Yes X No
Dark Surfactors of estrictive Last Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	uanu nyulology mu				Hydric Soil	Present? Yes X No
Dark Surfactors of estrictive Last Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	tiano nyulology ma				Hydric Soil	Present? Yes X No
_ Dark Surf ndicators of estrictive La Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	tiani nyulology ma				Hydric Soil	Present? Yes X No
_ Dark Surf ndicators of estrictive La Type:	hydrophytic vegetat ayer (if observed):	ion and we	uanu nyulology mu				Hydric Soil	Present? Yes X No
Dark Surf ndicators of estrictive Lo Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	tiano nyulology ma				Hydric Soil	Present? Yes X No
_ Dark Surf ndicators of estrictive La Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	uanu nyulology mu				Hydric Soil	Present? Yes X No
_ Dark Surf ndicators of estrictive La Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	uanu nyurorogy mu				Hydric Soil	Present? Yes X No
_ Dark Surf ndicators of estrictive La Type: Depth (incl	hydrophytic vegetat ayer (if observed):	ion and we	tranti nyurorogy mu				Hydric Soil	Present? Yes X No





Soil E





S W



Ν

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Project	City/County: Geauga County	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy		OH Sampling Point: Upland LP-037,038
Investigator(s): MJA		
Landform (hillslope, terrace, etc.): Mound Lo		nvex Slope (%): ³
Subregion (LRR or MLRA): LRR R Lat: 41.608837810	6666664 Long: -81.2085630	03333333 Datum: WGS 1984
Soil Map Unit Name: EhD2: Ellsworth silt loam, 12 to 18 percent slop	es, eroded NV	VI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X No (If no, ex	xplain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	/ disturbed? Are "Normal Circum	stances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr		any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, tr	ansects, important features, etc.
Hydrophytic Vegetation Present? Yes NoX		'es No
Hydric Soil Present? Yes NoX Wetland Hydrology Present? Yes NoX		
Wetland Hydrology Present? Yes NoX Remarks: (Explain alternative procedures here or in a separate repo	1 3 1	- Opiana Er 007,000
HYDROLOGY		
Wetland Hydrology Indicators:	Second	dary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Su	rface Soil Cracks (B6)
Surface Water (A1) Water-Stained		ainage Patterns (B10)
High Water Table (A2) Aquatic Fauna		oss Trim Lines (B16)
Saturation (A3) Marl Deposits		y-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulf		ayfish Burrows (C8)
		turation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of R		unted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Re Iron Deposits (B5) Thin Muck Sur		eomorphic Position (D2) allow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain		crotopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)		C-Neutral Test (D5)
Field Observations:	<u> </u>	o reduct rest (Bo)
Surface Water Present? Yes No _X Depth (inches	3):	
Water Table Present? Yes No _X _ Depth (inches		
Saturation Present? Yes No X Depth (inches (includes capillary fringe)		gy Present? Yes No _ X
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if available:	
Remarks:		
Tromano.		

Tree Stratum (Plot size: 30)	Absolute	Dominant Species?		Dominance Test worksheet:
1			·	Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
2				(1)
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B)
5				
6				Prevalence Index worksheet:
7		-		Total % Cover of: Multiply by:
		= Total Cov	ver	OBL species 3 x 1 = 3 10
Sapling/Shrub Stratum (Plot size: 15)				1 ACW species X Z =
1				FAC species0 x 3 =0
2				FACU species
3				01 L species x 5 =
4				Column Totals:153 (A)593 (B)
5				Prevalence Index = B/A = 3.8758169934
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size:)				3 - Prevalence Index is ≤3.0 ¹
1. Schedonorus arundinaceus	30	No	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Poa pratensis	60	Yes	FACU	Problematic Hydrophytic Vegetation¹ (Explain)
3. Solidago canadensis	40	Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must
4. Potentilla simplex			FACU	be present, unless disturbed or problematic.
5. Juncus effusus	3	No	OBL	Definitions of Vegetation Strata:
6. Dichanthelium clandestinum	5	No	FACW	_
		-		Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7				Sapling/shrub – Woody plants less than 3 in. DBH
8				and greater than or equal to 3.28 ft (1 m) tall.
9				Herb – All herbaceous (non-woody) plants, regardless of
10		-		size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	153	= Total Cov	ver	
Woody Vine Stratum (Plot size:)				
1		-		Hadran bada
2				Hydrophytic Vegetation
3				Present? Yes No X
4				
		= Total Cov	ver	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Sampling Point: Upland LP-037,038

SOIL Sampling Point: Upland LP-037,038

Profile Description: (Describe to the de	pth needed to docu	ment the indi	icator or	confirm	the absence	of indicators.)
Depth Matrix		x Features	1	1 2	Taretrea	Domonto
(inches) Color (moist) %	Color (moist)	%T	ype ¹	Loc ²	<u>Texture</u>	Remarks
0 - 14 10YR 4/3 100					Sandy clay loam	
-						
-						
-						
-						
-						
-						
-						
-						
17 00 1 1 5 5 1 1 5					21 (1	B. B. III.
¹ Type: C=Concentration, D=Depletion, RN Hydric Soil Indicators:	/I=Reduced Matrix, M	S=Masked Sa	and Grain	18.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Belo	w Surface (SS	R) /I DD I	ь		Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 149B) (L IXIX I	ι,		Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3)	Thin Dark Surfa	•	R, MLF	RA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)	Loamy Mucky I		LRR K, I	_)	Dark S	Surface (S7) (LRR K, L, M)
Stratified Layers (A5)	Loamy Gleyed				-	lue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11)	Depleted Matri					ark Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	Redox Dark Su	, ,				anganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Depleted Dark Redox Depress					ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5)	Nedox Depress	510113 (1 0)				arent Material (F21)
Stripped Matrix (S6)						hallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 149	9B)					(Explain in Remarks)
³ Indicators of hydrophytic vegetation and v	vetland hydrology mu	st be present,	unless o	disturbed	or problemation	5 .
Restrictive Layer (if observed): X						
Type:_Gravel	=					
Depth (inches): 14	=				Hydric Soil	Present? Yes NoX
Remarks:						





N Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City	y/County: Geauga County Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-039
Investigator(s): MJA Se	ction, Township, Range: N/A
Landform (hillslope, terrace, etc.): Floodplain Local	
	666 Long: _81.21175475 Datum:WGS 1984
Soil Map Unit Name: EhF: Ellsworth silt loam, 25 to 70 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly dis	sturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally proble	
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No No Hydric Soil Present? Yes X No No Wetland Hydrology Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID: Wetland LP-039
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Lea	
High Water Table (A2) Aquatic Fauna (B1	
Saturation (A3) Marl Deposits (B15)	5) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide (Odor (C1) Crayfish Burrows (C8)
	neres on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduc	· , ,
	ction in Tilled Soils (C6) X Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surface	
Inundation Visible on Aerial Imagery (B7) Other (Explain in F	
Sparsely Vegetated Concave Surface (B8) Field Observations:	X FAC-Neutral Test (D5)
Surface Water Present? Yes No _X _ Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:
Remarks:	

			Sampling Point: Wetland LP-03		
	Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)		
			That Are OBL, FACW, or FAC:3 (A) Total Number of Dominant Species Across All Strata: 3 (B)		
			Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B		
			Prevalence Index worksheet:		
			Total % Cover of: Multiply by:		
	= Total Cove	er	OBL species75 x 1 =75		
			FACW species55 x 2 =110		
5	Yes	FAC	FACT species $\frac{5}{3}$ x 3 = $\frac{15}{12}$		
			1 ACO species		
			UPL species 0 x 5 = 0 Column Totals: 138 (A) 212 (B)		
			Column Totals:138		
			Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation		
			X 2 - Dominance Test is >50%		
5	= Total Cove	er	X 3 - Prevalence Index is ≤3.0 ¹		
20	No	OBL	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
			Problematic Hydrophytic Vegetation ¹ (Explain)		
			¹Indicators of hydric soil and wetland hydrology must		
			be present, unless disturbed or problematic.		
			Definitions of Vegetation Strata:		
			_		
			Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.		
			Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.		
			Herb – All herbaceous (non-woody) plants, regardless of		
			size, and woody plants less than 3.28 ft tall.		
			Woody vines – All woody vines greater than 3.28 ft in		
	- Total Cov		height.		
100	- Total Cove	21			
			Hydrophytic		
			Vegetation		
			Present? Yes X No		
	= Total Cove				
	5 20 55 30 15 10 3 133	## Cover Species? = Total Cover	% Cover Species? Status		

SOIL Sampling Point: Wetland LP-039

Depth (inches) Matrix (color (moist)) Redox Features (moist) Type¹ Loc² Texture Remarks 0 - 18 10YR 3/2 95 2.5YR 4/6 5 Concer PL Silty clay loam -
0 - 18
<u>-</u>
_ -
l -
<u> </u>
-
-
-
_ -
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M)
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L)
Thick Dark Surface (A12) X Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5) Red Parent Material (F21)
Stripped Matrix (S6) Very Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if observed):
Type:
Depth (inches): Hydric Soil Present? Yes X No
Remarks:





N E





S W



Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line	e Projec City/County: Geau	iga County	Sampling Date: 10/20/2021
Applicant/Owner: FirstEnergy			Sampling Point: Upland LP-039
Investigator(s): MJA			
Landform (hillslope, terrace, etc.): Terrace			Slope (%): 8
Subregion (LRR or MLRA): LRR R Lat: 41.60	685811666667	Long: -81.21173206666667	
Subregion (LRR or MLRA): LRR R Lat: 41.60 Soil Map Unit Name: EhF: Ellsworth silt loam, 25 to 70 percent	nt slopes	NWI classific	cation: R4SBC
Are climatic / hydrologic conditions on the site typical for this t	ime of year? Yes X	No (If no, explain in R	Remarks.)
Are Vegetation, Soil, or Hydrology sig	nificantly disturbed?	Are "Normal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology nat		(If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sl	nowing sampling poi	nt locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No			No
Wetland Hydrology Present? Yes No		nal Wetland Site ID: Upland L	
Remarks: (Explain alternative procedures here or in a separ	rate report \	nai Welianu Sile iD	
HADBOLOCA	_		
HYDROLOGY Western Hydrology Indicators		Cacandan India	store (minimum of two required)
Wetland Hydrology Indicators:			ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that		Surface Soil	
	-Stained Leaves (B9)	Drainage Pa	
	c Fauna (B13)	Moss Trim L	, ,
	Deposits (B15)		Water Table (C2)
	gen Sulfide Odor (C1) ed Rhizospheres on Living F	Crayfish Bur	isible on Aerial Imagery (C9)
	nce of Reduced Iron (C4)		tressed Plants (D1)
	it Iron Reduction in Tilled So		Position (D2)
	luck Surface (C7)	Shallow Aqu	
<u> </u>	(Explain in Remarks)	Microtopogra	
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral	
Field Observations:			
Surface Water Present? Yes No _X _ Depth	ı (inches):		
Water Table Present? Yes No _X _ Depth	ı (inches):		
Saturation Present? Yes No _X _ Depth (includes capillary fringe)	,	Wetland Hydrology Preser	nt? Yes No _X
Describe Recorded Data (stream gauge, monitoring well, ae	rial photos, previous inspect	tions), if available:	
Remarks:			

Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Indicator Species? Status	Dominance Test worksneet:
1			Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
2			Total Number of Dominant
3			Species Across All Strata:2 (B)
4			Percent of Dominant Species
5			That Are OBL, FACW, or FAC: 0 (A/B)
6			Prevalence Index worksheet:
7			
		= Total Cover	OBL species0 x 1 =0
Sapling/Shrub Stratum (Plot size: 15)			FACW species10 x 2 =20
1			FAC species 0 x 3 = 0
2			FACU species120 x 4 =480
3			UPL species 0 x 5 = 0
			Column Totals:130(A)500(B)
4			Prevalence Index = B/A = 3.846153846
6			Hydrophytic Vegetation Indicators:
7			1 - Rapid Test for Hydrophytic Vegetation
		= Total Cover	2 - Dominance Test is >50%
Herb Stratum (Plot size:5			3 - Prevalence Index is ≤3.0 ¹
1. Schedonorus arundinaceus	80	Yes FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Solidago canadensis	40	Yes FACU	Problematic Hydrophytic Vegetation¹ (Explain)
3. Phalaris arundinacea	10	No FACW	Indicators of hydric soil and wetland hydrology must
4			be present, unless disturbed or problematic.
5			Definitions of Vegetation Strata:
6			Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7			at breast height (DBH), regardless of height.
8			Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9			_
10			Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11			_
12			Woody vines – All woody vines greater than 3.28 ft in height.
	130	= Total Cover	
Woody Vine Stratum (Plot size:)			
1			
2			Hydrophytic
3			Vegetation Present? Yes No X
4.			
		= Total Cover	
Remarks: (Include photo numbers here or on a separate	sheet.)		

Sampling Point: Upland LP-039

SOIL Sampling Point: Upland LP-039

Profile Desc	ription: (Describe t	o the dept	h needed to docu	ment the in	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>i</u> _ 1	. 2	- .	B
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 4	10YR 3/2	100					Silty loam	
-								
-								
			_					
-								
-								
			_					
-								
1							2	
	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ins.		n: PL=Pore Lining, M=Matrix.
Hydric Soil I						_		for Problematic Hydric Soils ³ :
Histosol		-	Polyvalue Belo		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)
-	oipedon (A2)		MLRA 149B	•	DD D MI	D A 440B)		Prairie Redox (A16) (LRR K, L, R)
Black His	n Sulfide (A4)	-	Thin Dark Surfa Loamy Mucky I					Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L, M)
	l Layers (A5)	-	Loamy Gleyed			L)		alue Below Surface (S8) (LRR K, L)
	d Below Dark Surface	· (Δ11)	Depleted Matri:		'		-	Park Surface (S9) (LRR K, L)
	ark Surface (A12)	. (八11)	Redox Dark Su					langanese Masses (F12) (LRR K, L, R)
l ——	lucky Mineral (S1)	-	Depleted Dark	, ,	7)			ont Floodplain Soils (F19) (MLRA 149B)
	sleyed Matrix (S4)	-	Redox Depress		. ,			Spodic (TA6) (MLRA 144A, 145, 149B)
	ledox (S5)	•		(. ,				arent Material (F21)
-	Matrix (S6)							Shallow Dark Surface (TF12)
	rface (S7) (LRR R, M	LRA 149B)				-	(Explain in Remarks)
	f hydrophytic vegetati		land hydrology mu	st be prese	nt, unless	disturbed	or problemation	C.
	ayer (if observed):	Χ						
Type: Gra	avel							
Depth (inc	ches): 4						Hydric Soil	Present? Yes No X
Remarks:								
l								





W Soil

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/C	county Sampling Date: 10/21/2021
	State: OH Sampling Point: Wetland LP-040
Investigator(s): MJA Section	
•	
Landform (hillslope, terrace, etc.): Floodplain Local reli	
Subregion (LRR or MLRA): LRR R Lat: 41.605755	
Soil Map Unit Name: Ho: Holly silt loam, frequently flooded	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Y	es X No (If no, explain in Remarks.)
Are Vegetation X, Soil , or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problems	
SUMMARY OF FINDINGS – Attach site map showing sam	
Hardwork of a Vandation December 2	Is the Sampled Area
Hydrophytic Vegetation Present? Yes X No	within a Wetland? Yes X No
Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland LP-040
Remarks: (Explain alternative procedures here or in a separate report.)	ir yes, optional Wetland Site ID:
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leave	s (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Od	
Sediment Deposits (B2) X Oxidized Rhizosphere	
Drift Deposits (B3) Presence of Reduced	
Algal Mat or Crust (B4) Recent Iron Reductio	
Iron Deposits (B5) Thin Muck Surface (C Inundation Visible on Aerial Imagery (B7) Other (Explain in Rer	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	AC-Neutral Test (D3)
Surface Water Present? Yes No _X _ Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	
Tromano.	

EGETATION – Use scientific names of plants	3 .			Sampling Point: Wetland LP-04
Tree Stratum (Plot size:)	Absolute	Dominant Species?		Dominance Test worksheet:
1			Status	Number of Dominant Species That Are OBL FACW or FAC: 4 (A)
2				(*,
3				Total Number of Dominant Species Across All Strata: 5 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.8 (A/B)
6				
7				Prevalence Index worksheet: Total % Cover of: Multiply by:
		= Total Cov	er	OBL species 80 x 1 = 80
Sapling/Shrub Stratum (Plot size: 15)				FACW species 80 x 2 = 160
1				FAC species0 x 3 =0
2.				FACU species25 x 4 =100
3				UPL species x 5 = 0
				Column Totals:185 (A)340 (B)
4 5				Prevalence Index = B/A = 1.8378378378
5				Hydrophytic Vegetation Indicators:
_				1 - Rapid Test for Hydrophytic Vegetation
7				X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)	-	= Total Cov	ei	X 3 - Prevalence Index is $\leq 3.0^1$
1. Typha latifolia	40	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Scirpus cyperinus	25	Yes	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Juncus effusus	15	No	OBL	¹ Indicators of hydric soil and wetland hydrology must
4. Onoclea sensibilis	15	No	FACW	be present, unless disturbed or problematic.
5Eupatorium perfoliatum	10	No	FACW	Definitions of Vegetation Strata:
Symphyotrichum lanceolatum	30	Yes	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7. Agrostis gigantea	25	Yes	FACW	at breast height (DBH), regardless of height.
Schedonorus arundinaceus	25	Yes	FACU	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				Herb – All herbaceous (non-woody) plants, regardless of
10				size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
20	185	= Total Cov	er	
Noody Vine Stratum (Plot size:30)				
1				Hydrophytic
			· 	Vegetation
2				Present? Yes^ No
2				
		= Total Cov	· ——	

SOIL Sampling Point: Wetland LP-040

Profile Description: (Describe to the de	pth needed to docur	ment the indica	tor or confiri	m the absence o	of indicators.)
Depth Matrix		x Features	1 . 2		
(inches) Color (moist) %	Color (moist)	% Typ	e ¹ Loc ²	<u>Texture</u>	Remarks
0 - 18 10YR 3/2 95	2.5YR 3/4	5	cer PL	Silty clay loam	
-					
	-				
-					
	-				
				_	
-					
			_		
-					
	-				
<u> </u>					
-					
	-			-	
¹ Type: C=Concentration, D=Depletion, RI	M=Reduced Matrix, MS	S=Masked Sand	Grains.	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:					for Problematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Belov	w Surface (S8) (LRR R,	2 cm M	uck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 149B)		Coast F	Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3)	Thin Dark Surfa	ace (S9) (LRR R	, MLRA 149E	3) 5 cm M	ucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)		Mineral (F1) (LR	R K, L)		urface (S7) (LRR K, L, M)
Stratified Layers (A5)	Loamy Gleyed				ue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11)	Depleted Matrix				ark Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	X Redox Dark Su				inganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1)	Depleted Dark			·	ent Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4)	Redox Depress	sions (F8)			Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5)					rent Material (F21)
Stripped Matrix (S6)					nallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 14	9B)			Other (E	Explain in Remarks)
³ Indicators of hydrophytic vegetation and v	votland hydrology mus	et ha procent ur	loce dieturbo	d or problematic	
Restrictive Layer (if observed):	veliand hydrology mus	st be present, ur	iless disturbed		
, , ,					
Type:	=				- v
Depth (inches):	_			Hydric Soil I	Present? Yes X No No
Remarks:					
İ					





Soil E





N S



W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Ma	yfield 138 kV Trans	smission Line Projec City/C	county: Geauga County		Sampling Date: 10/21/2021
Applicant/Owner: FirstEnergy			,		Sampling Point: Wetland LP-041
		Section	on Township Range		<u></u>
Landform (hillslope, terrace, et					Slone (%): 0
					Datum: WGS 1984
Soil Map Unit Name: MgB: Ma					
Are climatic / hydrologic condit	ions on the site typ	ical for this time of year? Y	es X No	(If no, explain in Re	emarks.)
Are Vegetation X, Soil	, or Hydrology	/ significantly distur	bed? Are "Norma	l Circumstances" p	resent? Yes X No
Are Vegetation, Soil	, or Hydrology	/ naturally problema	atic? (If needed,	explain any answer	rs in Remarks.)
SUMMARY OF FINDING	GS – Attach si	te map showing san	npling point location	ons, transects,	important features, etc.
Hydrophytic Vegetation Prese	ent? Yes	X No	Is the Sampled Area		
Hydric Soil Present?		X No	within a Wetland?	Yes X	No
Wetland Hydrology Present?		X No	If yes, optional Wetland	d Site ID: Wetland I	_P-041
Remarks: (Explain alternative			, , . ,		
HYDROLOGY					
Wetland Hydrology Indicate	ors:			Secondary Indicat	tors (minimum of two required)
Primary Indicators (minimum	of one is required;	check all that apply)		Surface Soil (Cracks (B6)
Surface Water (A1)		Water-Stained Leave	s (B9)	Drainage Pat	terns (B10)
High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Li	
Saturation (A3)		Marl Deposits (B15)			Vater Table (C2)
Water Marks (B1)		Hydrogen Sulfide Od		Crayfish Burn	
Sediment Deposits (B2)		X Oxidized Rhizospher	-		sible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Reduced			ressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reductio		Geomorphic I	
Iron Deposits (B5) Inundation Visible on Aei	rial Imagany (P7)	Thin Muck Surface (C		Shallow Aquit	
Sparsely Vegetated Con-	• • • •	Other (Explain in Rer	ilaiks)	X FAC-Neutral	phic Relief (D4)
Field Observations:	Jave Surface (Bo)		1	A TAC-Neutral	Test (D3)
Surface Water Present?	Ves No	X Depth (inches):			
Water Table Present?		X Depth (inches):			
Saturation Present?		X Depth (inches):	Wetland	Hydrology Presen	t? Yes X No
(includes capillary fringe)				-	165 <u>X</u> 116
Describe Recorded Data (stre	am gauge, monito	ring well, aerial photos, pre	vious inspections), if ava	ailable:	
Remarks:					
remarks.					

Tree Stratum (Plot size: 3 % Cover Species? Status 1. 2. T 3. 4. 9 P 5. 1.	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant Expecies Across All Strata: 2 (B) Percent of Dominant Species
2	Total Number of Dominant Species Across All Strata: 2 (B) Percent of Dominant Species
5	Percent of Dominant Species
6	That Are OBL, FACW, or FAC: 1 (A/B)
— <u> </u>	Prevalence Index worksheet:
7	Total % Cover of: Multiply by:
= Total Cover C	DBL species75 x 1 =75
Sapling/Shrub Stratum (Plot size: 15)	FACW species x 2 = 50
· <u> </u>	FAC species $0 \times 3 = 0$
2. F	FACU species 0 x 4 = 0
,	JPL species 0 x 5 = 0
	Column Totals:100 (A)125 (B)
4·	Prevalence Index = B/A = 1.25
5	hydrophytic Vocatation Indicators
	Hydrophytic Vegetation Indicators: X_ 1 - Rapid Test for Hydrophytic Vegetation
·	X 2 - Dominance Test is >50%
= Total Cover	$\frac{X}{2}$ 3 - Prevalence Index is $\leq 3.0^{1}$
Herh Stratum (Plot size: 5)	4 - Morphological Adaptations ¹ (Provide supporting
1 Phalaris arundinacea 20 YesFACW	data in Remarks or on a separate sheet)
2. Lythrum salicaria 5 No OBL _	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Juncus effusus 15 No OBL 1	Indicators of hydric soil and wetland hydrology must
4 Persicaria sagittata 5 No OBL b	pe present, unless disturbed or problematic.
5. Onoclea sensibilis 5 No FACW D	Definitions of Vegetation Strata:
On an artifaction of the Control of	Free – Woody plants 3 in. (7.6 cm) or more in diamete
7 a	at breast height (DBH), regardless of height.
8 S	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9 H	Herb – All herbaceous (non-woody) plants, regardless of
iu si	ize, and woody plants less than 3.28 ft tall.
11	Woody vines – All woody vines greater than 3.28 ft in
12 h	eight.
= Total Cover	
Woody Vine Stratum (Plot size:)	
1	
	lydrophytic /egetation
	Present? Yes X No
4.	
= Total Cover	
Remarks: (Include photo numbers here or on a separate sheet.)	

SOIL Sampling Point: Wetland LP-041

0 - 16 16 - 18 	Color (moist) 10YR 4/2 2.5Y 5/3	%	Calar (maint)	x Features	Type ¹	Loc ²	Toyturo	Domorko
		90	Color (moist) 2.5YR 3/4	<u>%</u>	Concer	PL	Texture Silty clay loam	Remarks
- - - -	2.5Y 5/3		-					
<u> </u>	2.0.1 0/0	90	5YR 4/6	10	Concer	M	Clay loam	
<u>-</u> -								
-								
-	_							
							-	
		etion, RM	=Reduced Matrix, M	S=Masked	Sand Gra	ains.		PL=Pore Lining, M=Matrix.
lydric Soil In			Delivielus Dele	··· Curfoss /	CO) / DE			for Problematic Hydric Soils ³ :
Histosol (/ Histic Epi	pedon (A2)		Polyvalue Belo		58) (LRF	к к,		uck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)
_ Black Hist	tic (A3)		Thin Dark Surfa	ace (S9) (Lf				ucky Peat or Peat (S3) (LRR K, L, R)
	Sulfide (A4)		Loamy Mucky I		(LRR K	, L)		urface (S7) (LRR K, L, M)
	Layers (A5) Below Dark Surface	- (Δ11)	Loamy GleyedX Depleted Matrix				-	ue Below Surface (S8) (LRR K, L) irk Surface (S9) (LRR K, L)
	k Surface (A12)	, (, (, , ,)	Redox Dark Su					nganese Masses (F12) (LRR K, L, R)
Sandy Mu	icky Mineral (S1)		Depleted Dark		')		Piedmo	nt Floodplain Soils (F19) (MLRA 149B
	eyed Matrix (S4)		Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	dox (S5) Matrix (S6)							rent Material (F21) nallow Dark Surface (TF12)
	ace (S7) (LRR R, M	ILRA 149	B)				-	Explain in Remarks)
indicators of I	nydrophytic vegetati	ion and w	etland hydrology mus	st he preser	nt unless	disturbed	or problematic	
	yer (if observed):	ion and w	onaria riyarorogy max	31 DO P10001	11, 0111000	- diotar 500		
Туре:			-					
Depth (inch	nes):		-				Hydric Soil F	Present? Yes X No No
temarks:								





Soil W





N S



Ε

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City	//County: Geauga County	Sampling Date: 10/21/2021
Applicant/Owner: FirstEnergy		Sampling Point: Upland LP-040,041
Investigator(s): MJA Sec		
Landform (hillslope, terrace, etc.): Flat Local r		Slope (%): ⁰
Subregion (LRR or MLRA): LRR R Lat: 41.605397166666 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classific	cation:
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in F	Remarks.)
Are Vegetation X, Soil , or Hydrology significantly dist	curbed? Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problem		
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? YesX No Hydric Soil Present? YesX No	Is the Sampled Area within a Wetland? Yes	No
Wetland Hydrology Present? Yes NoX	If yes, optional Wetland Site ID: Upland I	_P-040,041
HYDROLOGY		
Wetland Hydrology Indicators:		ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil	
Surface Water (A1) Water-Stained Lea		
High Water Table (A2) Aquatic Fauna (B1:		, ,
Saturation (A3) Marl Deposits (B15		Water Table (C2)
Water Marks (B1) Hydrogen Sulfide C		` '
		fisible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduction Algal Mat or Crust (B4) Recent Iron Reduction		Stressed Plants (D1) Position (D2)
Iron Deposits (B5) Thin Muck Surface		
Inundation Visible on Aerial Imagery (B7) Other (Explain in R		
Sparsely Vegetated Concave Surface (B8)	FAC-Neutra	
Field Observations:		(,
Surface Water Present? Yes No _X _ Depth (inches):		
Water Table Present? Yes No _X _ Depth (inches):		
Saturation Present? Yes No _X _ Depth (inches): (includes capillary fringe)	Wetland Hydrology Preser	nt? Yes NoX
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:	
Remarks:		

/EGETATION – Use scientific names of plants	5.			Sampling Point: Upland LP-040,04
Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				, , ,
3				Total Number of Dominant Species Across All Strata:3 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0.6666666666 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	/er	OBL species30 x 1 =30
Sapling/Shrub Stratum (Plot size: 15)				FACW species5 x 2 =10
1				FACUL species 65 x 3 = 195
2				X 4
3				UPL species $\frac{3}{163}$ x 5 = $\frac{15}{163}$ Column Totals: $\frac{163}{163}$ (A) $\frac{490}{163}$ (B)
4				(A)(B)
5				Prevalence Index = B/A = 3.006134969;
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov	/er	$\frac{X}{2}$ 2 - Dominance Test is >50% $\frac{X}{2}$ 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size:5				3 - Prevalence index is \$3.0 4 - Morphological Adaptations ¹ (Provide supporting
1Oxalis dillenii	10	No	FACU	data in Remarks or on a separate sheet)
2 Fragaria virginiana	15	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3Onoclea sensibilis	5	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
4 Juncus effusus	10	No	OBL	be present, unless disturbed or problematic.
5 Daucus carota	3	No	UPL	Definitions of Vegetation Strata:
6Frangula alnus	15	No	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7Solidago canadensis	10	No	FACU	at breast height (DBH), regardless of height.
8Schedonorus arundinaceus	25	Yes	FACU	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9. Carex vulpinoidea	20	Yes	OBL	
10Panicum capillare	50	Yes	FAC	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12			·	height.
	163	= Total Cov	/er	
Woody Vine Stratum (Plot size:)				
1				Hydrophytic
2				Vegetation
				Present? Yes X No
3 4		-	· 	

SOIL Sampling Point: Upland LP-040,041

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the i	ndicator	or confirn	n the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	x Feature: %	<u>S</u> Type ¹	_Loc ²	Texture	Remarks
0 - 16	10YR 4/2	98	5YR 4/6	2	Concer	M	Silty clay loam	remano
16 - 18	10YR 5/3	85	10YR 5/8	15	Concer	M	Clay loam	
_							·	
						-		
Type: C=Co	ncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belov	v Surface	(S8) (LRF	RR,		Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B)			D.4.40D		Prairie Redox (A16) (LRR K, L, R)
	Layers (A5)		Loamy Gleyed			, –,		llue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	X Depleted Matrix					ark Surface (S9) (LRR K, L)
					7)		· · · · · · · · · · · · · · · · · · ·	
			Redox Depress	10113 (1 0)				
-	Matrix (S6)							shallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	LRA 149E	3)				Other	(Explain in Remarks)
³ Indicators of	hydrophytic vegetati	on and we	tland hydrology mus	t be prese	ent, unless	disturbed	d or problemation	2.
	ayer (if observed):							
	hoo):						Hudria Cail	Propert? Vec X No
	iles)						nyuric 30ii	Fresent: Tes // NO
Remarks.								
Black His Hydrogei Stratified Depleted Thick Da Sandy M Sandy G Sandy R Stripped Dark Sur	stic (A3) In Sulfide (A4) Layers (A5) Below Dark Surface rk Surface (A12) ucky Mineral (S1) leyed Matrix (S4) edox (S5) Matrix (S6) face (S7) (LRR R, M hydrophytic vegetati ayer (if observed):	LRA 149E	Thin Dark Surfa Loamy Mucky M Loamy Gleyed X Depleted Matrix Redox Dark Su Depleted Dark S Redox Depress	ice (S9) (I Mineral (F ² Matrix (F2 (F3) rface (F6) Surface (F6) ions (F8)	i) (LRR K) 77)	, L)	Dark S Dark S Polyva Thin D Iron-M Piedm Mesic Red P Very S Other	Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L, M) Illue Below Surface (S8) (LRR K, L) Iark Surface (S9) (LRR K, L) Ianganese Masses (F12) (LRR K, L, R) Intervention on Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) Intervention of the surface (TF12) Interve





Soil NE

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/C	County Geauga County Sampling Date: 10/19/2021
	State: OH Sampling Point: Wetland LP-042
Investigator(s): MJA Section	· · ·
-	
Landform (hillslope, terrace, etc.): Toeslope Local reli	ef (concave, convex, none): Concave Slope (%): Conc
Subregion (LRR or MLRA): <u>LRR R</u> Lat: <u>41.60356400000001</u>	
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Y	es X No (If no, explain in Remarks.)
Are Vegetation, Soil, or HydrologyX _ significantly disturb	bed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problems	
SUMMARY OF FINDINGS – Attach site map showing sam	
Hardwark of a Vanadation Brancato	Is the Sampled Area
Hydrophytic Vegetation Present? Yes X No	within a Wetland? Yes X No
Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland LP-042
Remarks: (Explain alternative procedures here or in a separate report.)	ir yes, optional wetland Site ID:
PEM wetland in maintained powerline easement. Gravel access road crosse	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leave	s (B9) Drainage Patterns (B10)
X High Water Table (A2) Aquatic Fauna (B13)	Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Ode	
Sediment Deposits (B2) Oxidized Rhizosphere	
Drift Deposits (B3) Presence of Reduced	
Algal Mat or Crust (B4) Recent Iron Reductio	
Iron Deposits (B5) Thin Muck Surface (C Inundation Visible on Aerial Imagery (B7) Other (Explain in Ren	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	A Pro-Neutral Pest (DO)
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes X No Depth (inches):	10
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	

= Total Cov Yes Yes No	Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A) Total Number of Dominant Species Across All Strata: 4 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B) Prevalence Index worksheet:
= Total Cov	ver	Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B) Prevalence Index worksheet: Total % Cover of: Multiply by:
= Total Cov	ver	That Are OBL, FACW, or FAC: 1 (A/B) Prevalence Index worksheet:
= Total Cov		Total % Cover of: Multiply by:
= Total Cov Yes Yes		
Yes Yes		OBL species 30 x 1 = 30
Yes	FAC	
Yes	FAC	FACW species x 2 = 150
		FACULADORIOS
No	FACW	** *** *** *** *** *** *** *** *** ***
- 110	FACW	UPL species0 x 5 =0 Column Totals:113 (A)204 (B)
		Prevalence Index = B/A = 1.805309734
		Hydrophytic Vegetation Indicators:
		1 - Rapid Test for Hydrophytic Vegetation
		X 2 - Dominance Test is >50%
rotal oo	VCI	$X = 3$ - Prevalence Index is $\le 3.0^1$
No	OBL	4 - Morphological Adaptations ¹ (Provide supportin data in Remarks or on a separate sheet)
Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
No	OBL	¹ Indicators of hydric soil and wetland hydrology must
No	OBL	be present, unless disturbed or problematic.
No	FACW	Definitions of Vegetation Strata:
Yes	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diamete
No	FACW	at breast height (DBH), regardless of height.
		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
		Woody vines – All woody vines greater than 3.28 ft in
		height.
= Total Cov	ver	
		Hydrophytic Vegetation
		Present? Yes X No
= Total Cov	ver	
		1
	= Total Cov No Yes No No No Yes No Total Cov Total Cov	No OBL Yes FACW No OBL No FACW Yes FACW No FACW

SOIL Sampling Point: Wetland LP-042

Depth (inches) Matrix (color (moist)) Redox Features (moist) Type¹ Loc² Texture Remarks 0 - 18 10YR 3/2 92 5YR 3/4 8 Concer M Silty clay loam - - - - - - - - -
0 - 18
- - - - -
_ -
<u> </u>
•
-
-
-
<u>-</u>
_ -
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, 2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2) MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M)
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11) X Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L)
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Redox (S5) Red Parent Material (F21)
Stripped Matrix (S6) Very Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks)
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
Restrictive Layer (if observed):
Type:
Depth (inches): Hydric Soil Present? Yes X No
Remarks:





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WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Ma	yfield 138 kV Trans	smission Line Projec City/C	County: Geauga County		Sampling Date: 10/19/2021		
Applicant/Owner: FirstEnergy					Sampling Point: Wetland LP-043		
		Section	on Township Range ^{. N}		<u></u>		
					Slone (%): 1		
C. L: (LDD ALLDA) I F	9.). RR R	41 60349299994121	1 -81	21671249996679	Slope (%): 1 Datum: WGS 1984		
Subregion (LRR or MLRA): LI	honing oilt loom 2	to 6 percent clopes	Long:	.2107124000070	Datum:		
Soil Map Unit Name: MgB: Ma							
Are climatic / hydrologic condit	ions on the site typ	ical for this time of year? Y	/es X No	(If no, explain in Re	emarks.)		
Are Vegetation, Soil	, or Hydrology	significantly distur	bed? Are "Norma	al Circumstances" p	resent? Yes X No		
Are Vegetation, Soil	, or Hydrology	naturally problemate	atic? (If needed,	explain any answer	rs in Remarks.)		
SUMMARY OF FINDING	GS – Attach si	te map showing san	npling point location	ons, transects	, important features, etc.		
Hydrophytic Vegetation Prese	ent? Yes	X No	Is the Sampled Area				
Hydric Soil Present?		X No	within a Wetland?	Yes X	No		
Wetland Hydrology Present?		X No	If yes, optional Wetlan	d Site ID: Wetland I	LP-043		
Remarks: (Explain alternative			,,				
HYDROLOGY							
Wetland Hydrology Indicate	ors:			Secondary Indica	tors (minimum of two required)		
Primary Indicators (minimum	of one is required;	check all that apply)		Surface Soil (Cracks (B6)		
Surface Water (A1)		Water-Stained Leave	es (B9)	Drainage Pat	terns (B10)		
High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Li	nes (B16)		
Saturation (A3)		Marl Deposits (B15)		Dry-Season \	Water Table (C2)		
Water Marks (B1)		Hydrogen Sulfide Od		Crayfish Burr			
Sediment Deposits (B2)		X Oxidized Rhizospher	=				
Drift Deposits (B3)		Presence of Reduced	, ,		ressed Plants (D1)		
Algal Mat or Crust (B4)		Recent Iron Reduction					
Iron Deposits (B5)	(D7)	Thin Muck Surface (0	•	Shallow Aquitard (D3)Microtopographic Relief (D4)			
Inundation Visible on Aer Sparsely Vegetated Con-		Other (Explain in Rer	narks)	Microtopogra			
Field Observations:	zave Surface (Bo)			FAC-Neutral	Test (D5)		
Surface Water Present?	Voc. No.	Y Donth (inches):					
		X Depth (inches): X Depth (inches):					
Water Table Present? Saturation Present?		X Depth (inches):	Wetland	Hydrology Procen	t2 Vac V Na		
(includes capillary fringe)	Tes NO _	Deptil (iliches).	vvetianu	Hydrology Presen	t? Yes <u>X</u> No		
Describe Recorded Data (stre	am gauge, monito	ring well, aerial photos, pre	evious inspections), if av	ailable:			
Remarks:							
Nemarks.							

EGETATION – Use scientific names of plants.				Sampling Point: Wetland LP-04
Tree Stratum (Plot size:)		Dominant Species?		Dominance Test worksheet: Number of Dominant Species
1 2				That Are OBL, FACW, or FAC: 2 (A) Total Number of Dominant
3				Species Across All Strata:3 (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.6666666666 (A/B
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by: OBL species 60 x 1 = 60
0 11 10 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1	•	= Total Cove	er	OBE species X 1 = X
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 = 40 FAC species 10 x 3 = 30
1. Frangula alnus		Yes	FAC	FACU species 30 x 4 = 120
2				UPL species 0 x 5 = 0
3				Column Totals: 120 (A) 250 (B)
i				Prevalence Index = B/A = 2.0833333333
3				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cove		X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		10101 0011		X 3 - Prevalence Index is ≤3.0 ¹
Solidago canadensis	30	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Carex vulpinoidea	50	Yes	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
Onoclea sensibilis	20	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
Persicaria sagittata	5	No	OBL	be present, unless disturbed or problematic.
Lythrum salicaria	5	No	OBL	Definitions of Vegetation Strata:
S				Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.
3				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
0				Herb – All herbaceous (non-woody) plants, regardless of
1				size, and woody plants less than 3.28 ft tall.
2.				Woody vines – All woody vines greater than 3.28 ft in
		= Total Cove	er	height.
Noody Vine Stratum (Plot size:)				
				Hydrophytic
				Vegetation
1				Vegetation Present? Yes X No
2				Vegetation Present? Yes X No

SOIL Sampling Point: Wetland LP-043

Profile Desc	ription: (Describe t	o the depth	n needed to docur	ment the i	ndicator c	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>3</u>	L = = ²	Tauduma	Damarka
(inches)	Color (moist)		Color (moist)	<u> </u>	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 18	10YR 3/2	95	7.5YR 4/4	5	Concer	PL,M	Silty loam	
-								
-								
-			-					
-								
-								
-								
-								
	-							
-								
¹Type: C=Co	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ins.	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil I			·					for Problematic Hydric Soils ³ :
Histosol		_	Polyvalue Belov	w Surface	(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)		MLRA 149B					Prairie Redox (A16) (LRR K, L, R)
Black His		-	Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4) I Layers (A5)	_	Loamy Mucky N Loamy Gleyed			L)		Surface (S7) (LRR K, L, M) slue Below Surface (S8) (LRR K, L)
	l Below Dark Surface	(A11)	Loanly Gleyed Depleted Matrix		,			eark Surface (S9) (LRR K, L)
	ark Surface (A12)		 X_ Redox Dark Su					anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	_	Depleted Dark		7)			ont Floodplain Soils (F19) (MLRA 149B)
-	leyed Matrix (S4)	_	Redox Depress	ions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
	Matrix (S6) face (S7) (LRR R, M	Ι RΔ 149R)						Shallow Dark Surface (TF12) (Explain in Remarks)
Bun Gun	(a) (a) (a) (a)	,					001	(Explain in Femalite)
³ Indicators of	hydrophytic vegetati	on and wet	and hydrology mus	st be prese	nt, unless	disturbed	or problemation	c .
Restrictive L	ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes X No No
Remarks:							•	





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WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City	/County: Geauga County	Sampling Date: 10/19/2021
	State: OH	
Investigator(s): MJA Sec		
Landform (hillslope, terrace, etc.): Shoulder slope Local r	· • • • • • • • • • • • • • • • • • • •	Slope (%): ⁵
Subregion (LRR or MLRA): LRR R Lat: 41.603568166666 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classific	cation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology significantly dist	urbed? Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problem		
SUMMARY OF FINDINGS – Attach site map showing sa	impling point locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes NoX	Is the Sampled Area	
Hydric Soil Present? Yes X No	within a Wetland? Yes	
Wetland Hydrology Present? Yes X No Remarks: (Explain alternative procedures here or in a separate report.)	If yes, optional Wetland Site ID: Upland L	_P-042,043
Upland data form for W-MJA-101921-10 and W-MJA-101921-11. Data po		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil	Cracks (B6)
Surface Water (A1) Water-Stained Lear	ves (B9) Drainage Pa	tterns (B10)
High Water Table (A2) Aquatic Fauna (B13)		
Saturation (A3) Marl Deposits (B15	Dry-Season	Water Table (C2)
Water Marks (B1) Hydrogen Sulfide C	Odor (C1) Crayfish Bur	rows (C8)
		isible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduc		tressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduct	· , ·	Position (D2)
Iron Deposits (B5) Thin Muck Surface		
Inundation Visible on Aerial Imagery (B7) Other (Explain in R	· -	
Sparsely Vegetated Concave Surface (B8) Field Observations:	FAC-Neutral	Test (D5)
Surface Water Present? Yes No _X _ Depth (inches):		
Water Table Present? Yes No _X Depth (inches):		
Saturation Present? Yes No _X Depth (inches):	Wetland Hydrology Presei	nt? Yes X No
(includes capillary fringe)		11: 103 <u>X</u> 110
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	revious inspections), if available:	
Remarks:		

/EGETATION – Use scientific names of plant	S.			Sampling Point:		
Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:		
1				Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)		
2.						
3				Total Number of Dominant Species Across All Strata: 1 (B)		
<u>, </u>				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC:0 (A/B		
3				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
		= Total Co	ver	OBL species2 x 1 =2		
Sapling/Shrub Stratum (Plot size: 15)				FACW species 20 $\times 2 = 40$		
				FAC species X 3 = 0		
2				FACU species 90		
3				Column Totals: 112 (A) 402 (B)		
l	<u> </u>					
5			 	Trevalence much - B/A -		
S				Hydrophytic Vegetation Indicators:		
7			·	1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%		
_		= Total Co	/er	3 - Prevalence Index is ≤3.0 ¹		
Herb Stratum (Plot size: 5)				4 - Morphological Adaptations ¹ (Provide supporting		
Schedonorus arundinaceus			FACU	data in Remarks or on a separate sheet)		
2. Carex Iurida	2		OBL	Problematic Hydrophytic Vegetation ¹ (Explain)		
3. Solidago canadensis			FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
4. Symphyotrichum novae-angliae		No No	FACU	Definitions of Vegetation Strata:		
5. Symphyotrichum pilosum		No No	FACU FACU			
Agrostis perennans 7.	10			Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
3				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.		
9						
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
11			·	Woody vines – All woody vines greater than 3.28 ft in		
12			·	height.		
	112	= Total Co	/er			
Noody Vine Stratum (Plot size:)						
l				Hydrophytic		
2				Vegetation Present? Yes No X		
3				riesent: iesNO		
4						
		= Total Co	/er			

SOIL Sampling Point: Upland LP-042,043

Profile Desc	ription: (Describe to	o the dep	th needed to docun	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth (inches)	Matrix Color (moist)	%	Redo:	K Features	<u>S</u> Type ¹	Loc ²	Texture	Remarks	
0 - 10	10YR 4/1	90	5YR 3/4	10	Concer	PL,M	Silty clay loam		
-									
¹Type: C=Co	oncentration, D=Deple	etion RM:	Reduced Matrix MS	=Masked	Sand Gr		2l ocation	: PL=Pore Lining, M=Matrix.	
Hydric Soil I		<u> </u>	Troduced Matrix, Mc	Macroa	Curia Cit			for Problematic Hydric Soils ³ :	
Histosol			Polyvalue Belov	v Surface	(S8) (LRF	R.		Muck (A10) (LRR K, L, MLRA 149B)	
_	ipedon (A2)		MLRA 149B)		(/(,		Prairie Redox (A16) (LRR K, L, R)	
Black His			Thin Dark Surfa		RR R, MI	RA 149B		Mucky Peat or Peat (S3) (LRR K, L, R)	
	n Sulfide (A4)		Loamy Mucky N					Surface (S7) (LRR K, L, M)	
	Layers (A5)		Loamy Gleyed I			, –,		llue Below Surface (S8) (LRR K, L)	
	Below Dark Surface	(Δ11)	X Depleted Matrix		,			ark Surface (S9) (LRR K, L)	
	rk Surface (A12)	(/ ())	Redox Dark Sui					anganese Masses (F12) (LRR K, L, R)	
	ucky Mineral (S1)		Depleted Dark S						
					7)		Piedmont Floodplain Soils (F19) (MLRA 149B)		
	leyed Matrix (S4)		Redox Depress	ons (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
-	edox (S5)							arent Material (F21)	
Stripped	Matrix (S6)						Very S	hallow Dark Surface (TF12)	
Dark Sur	face (S7) (LRR R, M	LRA 149E	3)				Other	(Explain in Remarks)	
	hydrophytic vegetati		tland hydrology mus	t be prese	ent, unless	disturbed	or problemation).	
	ayer (if observed):	X							
Type: Roo Depth (inc							Usalvia Cail	Present? Yes X No	
	nes). 10						Hydric Soil	Present? Yes X No No	
Remarks:									





WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line	e Projec City/County: Geaug	a County	Sampling Date: 10/19/2021		
Applicant/Owner: FirstEnergy			_ Sampling Point: Wetland LP-044		
Investigator(s): MJA	Section, Township, F				
Landform (hillslope, terrace, etc.): Hillside			Slope (%): 1		
Subregion (LRR or MLRA): LRR R Lat: 41.60 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent	slopes	NWI classifica	ation: N/A		
Are climatic / hydrologic conditions on the site typical for this t	ime of year? Yes X No	(If no, explain in Re	emarks.)		
Are Vegetation, Soil, or Hydrology sig	nificantly disturbed? Ar	e "Normal Circumstances" p	resent? Yes X No		
Are Vegetation, Soil, or Hydrology nat	-	needed, explain any answer			
SUMMARY OF FINDINGS – Attach site map sl	nowing sampling point	locations, transects,	important features, etc.		
Hydrophytic Vegetation Present? YesX No Hydric Soil Present? YesX No Wetland Hydrology Present? YesX No	within a Wet	land? Yes X			
Wetland Hydrology Present? Yes X No Remarks: (Explain alternative procedures here or in a separative procedures)	•	al Wetland Site ID: Wetland L	F-044		
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indicat	ors (minimum of two required)		
	at apply)				
Primary Indicators (minimum of one is required; check all the		Surface Soil (
	-Stained Leaves (B9) c Fauna (B13)	Drainage Pat			
	Deposits (B15)	Moss Trim Lines (B16) Dry-Season Water Table (C2)			
	gen Sulfide Odor (C1)	Crayfish Burn			
	ed Rhizospheres on Living Ro	_ ,	sible on Aerial Imagery (C9)		
	nce of Reduced Iron (C4)		ressed Plants (D1)		
	it Iron Reduction in Tilled Soils		, ,		
	luck Surface (C7)	Shallow Aquit			
	(Explain in Remarks)	Microtopogra	phic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutral	Test (D5)		
Field Observations:					
Surface Water Present? Yes No _X _ Depth	ı (inches):				
Water Table Present? Yes No _X _ Depth	ı (inches):				
Saturation Present? Yes No X Depth (includes capillary fringe)	,	Netland Hydrology Present	? Yes <u>X</u> No		
Describe Recorded Data (stream gauge, monitoring well, ae	rial photos, previous inspectio	ns), if available:			
Remarks:					

bsolute 6 Cover	Dominant		
	Species?	Indicator <u>Status</u>	Dominance Test worksheet: Number of Dominant Species
			That Are OBL, FACW, or FAC:4 (A) Total Number of Dominant
			Species Across All Strata: 4 (B)
			Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/E
			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
	= Total Cove	er	OBL species 67 x 1 = 67
			FACW species $\begin{array}{c} 50 \\ 0 \\ 0 \\ 0 \end{array}$ $\begin{array}{c} x = 100 \\ 0 \\ 0 \\ 0 \end{array}$
10	Yes	FACW	FAC species $0 \times 3 = 0$ FACU species $3 \times 4 = 12$
			UPL species 0 x 5 = 0
			Column Totals: 120 (A) 179 (B
			Prevalence Index = B/A = 1.4916666666
			Hydrophytic Vegetation Indicators:
			X 1 - Rapid Test for Hydrophytic Vegetation
		er	X 2 - Dominance Test is >50%
			X 3 - Prevalence Index is ≤3.0 ¹
40	Yes	OBL	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
20	Yes	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
5	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
3	No	FACU	be present, unless disturbed or problematic.
20	Yes	FACW	Definitions of Vegetation Strata:
2	No	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diamet
10	No	FACW	at breast height (DBH), regardless of height.
5	No	OBL	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
5	No	FACW	
			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
110	= Total Cove		height.
	- Total Cove	5 1	
			Hydrophytic
			Vegetation Present? Yes X No
			resent: res No
eet.)	= Total Cove	er	
	10 10 40 20 5 3 20 2 10 5 5	= Total Covered to the second	= Total Cover 10

SOIL Sampling Point: Wetland LP-044

Profile Desc	ription: (Describe t	o the depth	n needed to docum	nent the i	ndicator c	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>3</u>	Loc ²	Tauduma	Damarka
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹		<u>Texture</u>	Remarks
0 - 18	2.5Y 4/1	96	5YR 4/6	4	Concer	M	Silty clay loam	
-								
-								
-	-							
-								
-								
-								
_								
-								
¹ Type: C=Co	oncentration, D=Deple	etion RM=F	Reduced Matrix MS	S=Masked	Sand Gra	ins	² I ocation	: PL=Pore Lining, M=Matrix.
Hydric Soil I			toddood maan, m		<u> </u>			for Problematic Hydric Soils ³ :
Histosol	(A1)	_	Polyvalue Belov	v Surface	(S8) (LRR	R,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B)					Prairie Redox (A16) (LRR K, L, R)
Black His		_	Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	_	Loamy Mucky N			L)		Surface (S7) (LRR K, L, M)
	Layers (A5) Below Dark Surface	_ (Δ11)	 Loamy Gleyed I Depleted Matrix)		-	llue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L)
	rk Surface (A12)		Redox Dark Su					anganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)	_	Depleted Dark S	. ,	7)			ont Floodplain Soils (F19) (MLRA 149B)
-	leyed Matrix (S4)	_	Redox Depress	ions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
	Matrix (S6) face (S7) (LRR R, M	L D A 440D)						Shallow Dark Surface (TF12)
Dark Sur	lace (57) (LRK K, IVI	LKA 149D)					Other	(Explain in Remarks)
³ Indicators of	hydrophytic vegetati	on and wet	and hydrology mus	t be prese	ent, unless	disturbed	or problemation	Σ.
	ayer (if observed):							
Type:								
Depth (inc	:hes):						Hydric Soil	Present? Yes X No No
Remarks:							1	





Soil



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S



W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmis	ssion Line Projec City/County: Geau	iga County	Sampling Date: 10/19/2021		
Applicant/Owner: FirstEnergy			Sampling Point: Wetland LP-045		
Investigator(s): MJA					
Landform (hillslope, terrace, etc.): Depression			Slope (%): 1		
Subregion (LRR or MLRA): LRR R La Soil Map Unit Name: MgB: Mahoning silt loam, 2 to	6 percent slopes	NWI classific	ation: N/A		
Are climatic / hydrologic conditions on the site typical	I for this time of year? Yes X	No (If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" p	resent? Yes X No		
Are Vegetation, Soil, or Hydrology		(If needed, explain any answe			
SUMMARY OF FINDINGS – Attach site	map showing sampling poi	nt locations, transects	, important features, etc.		
Hydric Soil Present? Yes X	INU	etland? Yes X			
Wetland Hydrology Present? Yes X Remarks: (Explain alternative procedures here or in	·	nal Wetland Site ID: Wetland	LP-045		
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)		
Primary Indicators (minimum of one is required; che	eck all that apply)	Surface Soil			
Surface Water (A1)	_ Water-Stained Leaves (B9)	Ounded Con-			
	Aquatic Fauna (B13)	Moss Trim Li			
	Marl Deposits (B15)	Dry-Season Water Table (C2)			
	Hydrogen Sulfide Odor (C1)	Crayfish Burr			
	 Oxidized Rhizospheres on Living I 		sible on Aerial Imagery (C9)		
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Stunted or St	tressed Plants (D1)		
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Sc	ils (C6) X Geomorphic	Position (D2)		
	_ Thin Muck Surface (C7)	Shallow Aqui	tard (D3)		
	_ Other (Explain in Remarks)	Microtopogra	phic Relief (D4)		
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutral	Test (D5)		
Field Observations:					
Surface Water Present? Yes No _X					
Water Table Present? Yes No _X					
Saturation Present? Yes No X (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring		Wetland Hydrology Presen	t? Yes <u>X</u> No		
Describe Recorded Data (Stream gauge, monitoring	g well, aeriai priotos, previous irispec	lions), ii avaliable.			
Remarks:					

			Sampling Point: Wetland LP-04
Absolute % Cover	Dominant Species?		Dominance Test worksheet: Number of Dominant Species
			That Are OBL, FACW, or FAC: 2 (A)
			Total Number of Dominant Species Across All Strata: 2 (B)
			Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B
			Prevalence Index worksheet:
			Total % Cover of: Multiply by: OBL species 45 x 1 = 45
	- Total Covi	5 1	FACW species 85 x 2 = 170
			FAC species0 x 3 =0
			FACU species 20 x 4 = 80
			UPL species0 x 5 =0
			Column Totals:150 (A)295 (B)
			Prevalence Index = B/A = 1.9666666666
			Hydrophytic Vegetation Indicators:
			X 1 - Rapid Test for Hydrophytic Vegetation
			$\frac{X}{X}$ 2 - Dominance Test is >50% $\frac{X}{X}$ 3 - Prevalence Index is ≤3.0 ¹
		=	4 - Morphological Adaptations ¹ (Provide supportin
-			data in Remarks or on a separate sheet)
15	No		Problematic Hydrophytic Vegetation ¹ (Explain)
10	<u>No</u>	FACU	¹ Indicators of hydric soil and wetland hydrology must
20	No	OBL	be present, unless disturbed or problematic.
10	No	OBL	Definitions of Vegetation Strata:
30	Yes	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
10	No	FACU	at breast height (DBH), regardless of height.
5	<u>No</u>	FACW	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
			Herb – All herbaceous (non-woody) plants, regardless of
			size, and woody plants less than 3.28 ft tall.
			Woody vines – All woody vines greater than 3.28 ft in
	= Total Cov		height.
	- Total Covi	5 1	
			Hydrophytic
			Vegetation Present? Yes X No
			Tresent: Tes No
	= Total Cove	⊇r	
	50 15 10 20 10 30 10 5	= Total Covers = Total Covers = Total Covers No No No No No No Total Covers = Total Cover = Total Cover = Total Cover 50	

SOIL Sampling Point: Wetland LP-045

Profile Desc	ription: (Describe t	o the dep	th needed to docu	ment the i	indicator o	or confirn	n the absence	of indicators.)		
Depth	Matrix			x Feature	<u>s</u> _ 1	. 2				
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks		
0 - 3	10YR 3/2	98	5YR 4/4	2	Concer	M	Silty loam			
3 - 18	2.5Y 4/1	90	5YR 4/6	10	Concer	PL,M	Silty clay loam			
-										
							·			
-										
-										
_										
-										
1Typo: C=C	oncentration, D=Depl	otion DM:	- Poducod Matrix M	S-Maskor	4 Sand Gra		² Location	: PL=Pore Lining, M=Matrix.		
Hydric Soil I		ellori, Kivi-	-Reduced Matrix, M	3-IVIASKE	ı Sanu Gra	11115.		for Problematic Hydric Soils ³ :		
Histosol			Polyvalue Belo	w Surface	(S8) (LRR	2 R,		Muck (A10) (LRR K, L, MLRA 149B)		
	pipedon (A2)		MLRA 149B		, , ,		Coast	Prairie Redox (A16) (LRR K, L, R)		
Black Hi			Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)		
	n Sulfide (A4) I Layers (A5)		Loamy Mucky I Loamy Gleyed			L)		Surface (S7) (LRR K, L, M) slue Below Surface (S8) (LRR K, L)		
	d Below Dark Surface	(A11)	X Depleted Matrix		-)			eark Surface (S9) (LRR K, L)		
	ark Surface (A12)	,	Redox Dark Su				Iron-Manganese Masses (F12) (LRR K, L, R)			
	lucky Mineral (S1)		Depleted Dark		7)			ont Floodplain Soils (F19) (MLRA 149B)		
	Sleyed Matrix (S4)		Redox Depress	sions (F8)				Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
-	ledox (S5) Matrix (S6)							Red Parent Material (F21) Very Shallow Dark Surface (TF12)		
	rface (S7) (LRR R, M	LRA 149E	3)					(Explain in Remarks)		
	hydrophytic vegetati	on and we	tland hydrology mus	st be prese	ent, unless	disturbed	l or problemation	<u> </u>		
	_ayer (if observed):									
Type:	ahaa):						Usalvia Cail	Present? Yes X No No		
Depth (inc	nes)						nyaric Soil	Present? Yes X No		
Remarks:										





Soil



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S



W

Project/Site: Leroy Center-Ma	yfield 138 kV Trans	smission Line Projec City/0	County: Geauga County		Sampling Date: 10/19/2021
Applicant/Owner: FirstEnergy			,		Sampling Point: Upland LP-044,045
		Secti	on Township Range ^{. N}		<u></u>
					Slone (%): 3
candioini (illisiope, terrace, et	C.). RR R	Local le	-81	21754250000001	Slope (%): 3 Datum: WGS 1984
Soil Map Unit Name: MgB: Mg					
Are climatic / hydrologic condit	ions on the site typ	pical for this time of year?	/es X No	(If no, explain in Re	emarks.)
Are Vegetation, Soil	, or Hydrology	y significantly distu	rbed? Are "Norma	al Circumstances" p	resent? Yes X No
Are Vegetation, Soil	, or Hydrology	y naturally problem	atic? (If needed,	explain any answer	s in Remarks.)
SUMMARY OF FINDIN	GS – Attach si	ite map showing san	npling point location	ons, transects,	important features, etc.
Hydrophytic Vegetation Prese	ent? Ves	NoX	Is the Sampled Area		
		X No	within a Wetland?	Yes	No
Wetland Hydrology Present?		X No	If yes, optional Wetlan	d Site ID. Upland LI	P-044,045
Remarks: (Explain alternativ			ii yes, optional vvetian	d Oite 15	
Upland data form for W-MJA-			nt in maintained powerling	e easement.	
opiana data form for W Mort	101021 00 and W	1007 101021 00. Data poil	it in maintainea poweriin	o casomoni.	
HYDROLOGY					
Wetland Hydrology Indicate	ors:			Secondary Indicat	tors (minimum of two required)
Primary Indicators (minimum	of one is required;	; check all that apply)		Surface Soil (Cracks (B6)
Surface Water (A1)		Water-Stained Leave	es (B9)	Drainage Pat	terns (B10)
High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Li	
Saturation (A3)		Marl Deposits (B15)			Vater Table (C2)
Water Marks (B1)		Hydrogen Sulfide Oc	lor (C1)	Crayfish Burn	
Sediment Deposits (B2)		X Oxidized Rhizospher	res on Living Roots (C3)	Saturation Vis	sible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Reduce	d Iron (C4)	Stunted or St	ressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduction	on in Tilled Soils (C6)	Geomorphic I	Position (D2)
Iron Deposits (B5)		Thin Muck Surface (C7)	Shallow Aquit	tard (D3)
Inundation Visible on Ae	rial Imagery (B7)	Other (Explain in Re	marks)	Microtopogra	phic Relief (D4)
Sparsely Vegetated Con	cave Surface (B8)			FAC-Neutral	Test (D5)
Field Observations:					
Surface Water Present?	Yes No	X Depth (inches):			
Water Table Present?	Yes No_	X Depth (inches):			
Saturation Present?	Yes No _	X Depth (inches):	Wetland	Hydrology Presen	t? Yes X No
(includes capillary fringe)				-:labla.	
Describe Recorded Data (stre	eam gauge, monito	oring well, aerial priotos, pre	evious inspections), if av	allable:	
Remarks:					
T. Community					

/EGETATION – Use scientific names of plant	S.			Sampling Point:		
Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:		
1				Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)		
2.				(*,		
				Total Number of Dominant Species Across All Strata:2 (B)		
l <u>, </u>				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC:0 (A/B)		
3				Prevalence Index worksheet:		
				Total % Cover of: Multiply by:		
		= Total Cov	ver .	OBL species 0 x 1 = 0		
Sapling/Shrub Stratum (Plot size: 15)				FACW species0 x 2 =0		
				X 3 = 10		
. <u> </u>		-	·	FACU species x 4 = 540 UPL species 0 x 5 = 0		
l		-		Column Totals: 150 (A) 585 (B)		
l				Prevalence Index = R/A = 3.9		
i				Trevalence index - B/A -		
S			·	Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50%		
e e		= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹		
Herb Stratum (Plot size: 5		.,	E4011	4 - Morphological Adaptations¹ (Provide supporting		
Schedonorus arundinaceus		Yes	FACU	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)		
Poa pratensis	30	Yes	FACU FACU	¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
Solidago canadensis Euthamia graminifolia	<u>20</u> 15	No No	FAC			
			FACU	Definitions of Vegetation Strata:		
5. Fragaria virginiana 6. Lotus corniculatus	10	No	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter		
7				at breast height (DBH), regardless of height.		
3				Sapling/shrub – Woody plants less than 3 in. DBH		
).				and greater than or equal to 3.28 ft (1 m) tall.		
10				Herb – All herbaceous (non-woody) plants, regardless of		
11				size, and woody plants less than 3.28 ft tall.		
12				Woody vines – All woody vines greater than 3.28 ft in height.		
	150	= Total Cov	er er			
Voody Vine Stratum (Plot size: 30)						
2				Hydrophytic Vegetation		
3				Present? Yes No X		
4		= Total Cov				

SOIL Sampling Point: Upland LP-044,045

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	x Feature:	<u>s</u> _Type ¹	Loc ²	Texture	Remarks	
0 - 8	10YR 4/2	95	7.5YR 4/4	5	Concer	M	Silty loam	remano	
8 - 18	5Y 5/1	90	7.5YR 5/6	10	Concer	PL,M	Clay		
-									
_									
Type: C=Co	ncentration, D=Deple	etion, RM=	Reduced Matrix, MS	3=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :	
Histosol			Polyvalue Belov	w Surface	(S8) (LRF	RR,		Muck (A10) (LRR K, L, MLRA 149B)	
	ipedon (A2)		MLRA 149B)			D. 4.40D		Prairie Redox (A16) (LRR K, L, R)	
Black His	stic (A3) n Sulfide (A4)		Thin Dark Surfa Loamy Mucky N					Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L, M)	
Stratified	Layers (A5)		Loamy Gleyed I	Matrix (F2		, –,	Polyva	llue Below Surface (S8) (LRR K, L)	
	Below Dark Surface	(A11)	X Depleted Matrix					ark Surface (S9) (LRR K, L)	
	rk Surface (A12) ucky Mineral (S1)		Redox Dark Su Depleted Dark S					anganese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B)	
	leyed Matrix (S4)		Redox Depress		.,			Spodic (TA6) (MLRA 144A, 145, 149B)	
Sandy R	edox (S5)							arent Material (F21)	
	Matrix (S6) face (S7) (LRR R, M	LRA 149E	3)				Very Shallow Dark Surface (TF12)Other (Explain in Remarks)		
³ Indicators of	hydrophytic vegetati	on and we	tland hydrology mus	t be prese	ent, unless	disturbed	or problemation	2.	
	.ayer (if observed):								
Type:	shoo):						Hudria Cail	Present? Yes X No	
Depth (inc							Hydric 30ii	Present? Yes X No No	
Nomano.									





Soil W

Project/Site: Leroy Center-Mayfield 138 kV Transmiss	sion Line Projec City/County: Geau	uga County	Sampling Date: 10/19/2021
Applicant/Owner: FirstEnergy		State: OH	Sampling Point: Wetland LP-046
Investigator(s): MJA	Section, Township	, Range:_N/A	
Landform (hillslope, terrace, etc.): Swale			Slope (%): 1
Subregion (LRR or MLRA): LRR R Lat			
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6	percent slopes	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical f	for this time of year? Yes X 1	No (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" p	oresent? Yes X No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site n	nap showing sampling poi	nt locations, transects	, important features, etc.
	No Is the Sam within a W	• •	
Remarks: (Explain alternative procedures here or in	a separate report.)	inal Welland Site ID	
PEM wetland adjacent to atv access road in maintain	led powerline easement.		
HYDROLOGY			
Wetland Hydrology Indicators:			tors (minimum of two required)
Primary Indicators (minimum of one is required; chec		Surface Soil	
	Water-Stained Leaves (B9)	Drainage Pa	
	Aquatic Fauna (B13)	Moss Trim Li	
· ·	Marl Deposits (B15)		Water Table (C2)
	Hydrogen Sulfide Odor (C1)	Crayfish Bur	, ,
	Oxidized Rhizospheres on Living		sible on Aerial Imagery (C9)
	Presence of Reduced Iron (C4)		tressed Plants (D1)
	Recent Iron Reduction in Tilled So		, ,
_	Thin Muck Surface (C7)	Shallow Aqu	
	Other (Explain in Remarks)	Microtopogra	
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutral	Test (D5)
Field Observations:			
Surface Water Present? Yes No _X			
Water Table Present? Yes No _X			
Saturation Present? Yes X No (includes capillary fringe)	_ Depth (inches): 12	Wetland Hydrology Preser	t? Yes <u>X</u> No
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspec	tions), if available:	
Remarks:			

EGETATION – Use scientific names of plants				Sampling Point: Wetland LP-04		
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:		
1				Number of Dominant Species That Are OBL, FACW, or FAC:5 (A)		
2 3				Total Number of Dominant Species Across All Strata: 5 (B)		
5 4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC:1 (A/B)		
6				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
		= Total Cov	er	OBL species x 1 = 70		
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 = 124		
1Salix amygdaloides	10	Yes	FACW	FACUL species 5 x 3 = 15 60		
2. Populus deltoides	5	Yes	FAC	FACU species 15 x 4 = 60 UPL species 0 x 5 = 0		
3				Column Totals: 152 (A) 269 (B)		
4				4.7007000404		
5				Trevalence muck - B/A -		
6				Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%		
_	15 = Total Cover			X 3 - Prevalence Index is ≤3.0¹		
Herb Stratum (Plot size: 5 1. Pycnanthemum virginianum	5	No	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
2. Juncus effusus			OBL	Problematic Hydrophytic Vegetation ¹ (Explain)		
3. Lythrum salicaria		•	OBL	¹ Indicators of hydric soil and wetland hydrology must		
4. Rosa palustris			OBL	be present, unless disturbed or problematic.		
5. Verbena hastata	2		FACW	Definitions of Vegetation Strata:		
6. Eupatorium perfoliatum	_	No	FACW	Tree – Woody plants 3 in. (7.6 cm) or more in diameter		
7. Carex vulpinoidea	30	Yes	OBL	at breast height (DBH), regardless of height.		
8. Agrostis gigantea	30	Yes	FACW	Sapling/shrub – Woody plants less than 3 in. DBH		
9. Phalaris arundinacea	10	No	FACW	and greater than or equal to 3.28 ft (1 m) tall.		
10Solidago canadensis	10	No	FACU	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
11. Schedonorus arundinaceus	5	No	FACU			
12				Woody vines – All woody vines greater than 3.28 ft in height.		
	137	= Total Cov	er			
Noody Vine Stratum (Plot size:)						
1						
2				Hydrophytic Vegetation		
				Present? Yes X No		
3						

SOIL Sampling Point: Wetland LP-046

Profile Desc	ription: (Describe t	o the depti	n needed to docu	ment the i	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Feature	<u>s</u> _ 1	. 2		
(inches) 0 - 14	Color (moist) 10YR 4/1	<u>%</u> 95	Color (moist) 10YR 4/4	<u>%</u> 5	Type ¹ Concer	Loc ²	Texture Clay loam	Remarks
	-							·
14 - 18	2.5Y 5/2		7.5YR 5/8	30	Concer	M	Clay loam	
-								
-								
-								
-								
Type: C=Co	ncentration, D=Depl	etion, RM=I	Reduced Matrix, M	S=Masked	d Sand Gra	ins.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belo	w Surface	(S8) (LRR	R		Muck (A10) (LRR K, L, MLRA 149B)
	pipedon (A2)	=	MLRA 149B		(OO) (EIKI	. 11,		Prairie Redox (A16) (LRR K, L, R)
Black His	stic (A3)	_	Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	_	Loamy Mucky I			L)		Surface (S7) (LRR K, L, M)
	l Layers (A5) I Below Dark Surface	- e (A11)	 Loamy Gleyed Depleted Matrix 		.)			llue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L)
-	rk Surface (A12)		Redox Dark Su					anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	=	Depleted Dark		7)			ont Floodplain Soils (F19) (MLRA 149B)
-	leyed Matrix (S4)	-	Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5) Matrix (S6)							arent Material (F21) Shallow Dark Surface (TF12)
	face (S7) (LRR R, M	ILRA 149B))					(Explain in Remarks)
3, ,, ,								
	hydrophytic vegetati	on and wet	and hydrology mus	st be prese	ent, uniess	disturbed	or problemation	D
Type:	ayer (ii observed).							
	ches):						Hydric Soil	Present? Yes X No No
Remarks:	,						1 1	





W





E N



Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Proje	C City/County: Geauga County	Sampling Date: 10/19/2021
Applicant/Owner: FirstEnergy		Sampling Point: Wetland LP-047
Investigator(s): MJA		
Landform (hillslope, terrace, etc.): Toeslope L		ve Slope (%): ¹
Subregion (LRR or MLRA): LRR R Lat: 41.60200060 Soil Map Unit Name: EhC: Ellsworth silt loam, 6 to 12 percent slope	s NWI cl	assification: N/A
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes X No (If no, explai	in in Remarks.)
Are Vegetation, Soil, or Hydrology significant	tly disturbed? Are "Normal Circumstan	nces" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally p		
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point locations, trans	sects, important features, etc.
Hydrophytic Vegetation Present? YesX No Hydric Soil Present? YesX No Wetland Hydrology Present? YesX No	within a Wetland? Yes _	
Remarks: (Explain alternative procedures here or in a separate rep	_ · ·	Stianu LF-047
HYDROLOGY		
	Sacandany	Indicators (minimum of two required)
Wetland Hydrology Indicators:		Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply		e Soil Cracks (B6)
		ge Patterns (B10)
High Water Table (A2) Aquatic Faun Saturation (A3) Marl Deposits		Гrim Lines (В16) eason Water Table (С2)
Saturation (A3) Marl Deposits Water Marks (B1) Hydrogen Su		sh Burrows (C8)
		tion Visible on Aerial Imagery (C9)
		d or Stressed Plants (D1)
		orphic Position (D2)
Iron Deposits (B5) Thin Muck Su		w Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain		opographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	X FAC-N	leutral Test (D5)
Field Observations:		
Surface Water Present? Yes No _X _ Depth (inche	es):	
Water Table Present? Yes No _X _ Depth (inches	es):	
Saturation Present? Yes No _X _ Depth (inche (includes capillary fringe)	,	Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspections), if available:	
Remarks:		

EGETATION – Use scientific names of plants	i.			Sampling Point: Wetland LP-04
<u>Free Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
			<u> </u>	Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
				Total Number of Dominant Species Across All Strata: 2 (B)
				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B
				Prevalence Index worksheet:
apling/Shrub Stratum (Plot size: 15)		= Total Cov	5 1	FACW species 105 x 2 = 210
, interest (in the contract of	E	Yes	FAC	FAC species 5 x 3 = 15
Frangula alnus	· ·	-		FACU species 5 x 4 = 20
				UPL species0 x 5 =0
		-		Column Totals:135 (A)265 (B)
				Prevalence Index = B/A = 1.9629629629
				Trevalence index - B/A -
		-		Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50%
_	5	= Total Cov	er	X 3 - Prevalence Index is ≤3.0¹
erb Stratum (Plot size:5)				4 - Morphological Adaptations ¹ (Provide supporting
Phalaris arundinacea	90	Yes	FACW	data in Remarks or on a separate sheet)
Thelypteris palustris	5	No	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
Onoclea sensibilis	5	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
Juncus effusus	10	No	OBL	be present, unless disturbed or problematic.
Scirpus cyperinus	5	No	OBL	Definitions of Vegetation Strata:
Solidago canadensis	5	No	FACU	Tree – Woody plants 3 in. (7.6 cm) or more in diameter
Lythrum salicaria	5	No	OBL	at breast height (DBH), regardless of height.
Impatiens capensis	5	No	FACW	Sapling/shrub – Woody plants less than 3 in. DBH
				and greater than or equal to 3.28 ft (1 m) tall.
)				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
1				
2				Woody vines – All woody vines greater than 3.28 ft in height.
	130	= Total Cov	er	
oody Vine Stratum (Plot size:30)		•		
,				
				Hydrophytic
				Vegetation
		-		
		= Total Cov	or	

SOIL Sampling Point: Wetland LP-047

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the	indicator o	or confirn	n the absence	of indicators.)		
Depth	Matrix			x Feature	<u>s</u> .					
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
0 - 8	10YR 3/1	98	5YR 4/4	2	Concer	M,PL	Silty loam			
8 - 12	10YR 4/1	98	7.5YR 5/4	2	Concer	M	Silty clay loam			
-										
-										
-										
-										
-										
-										
¹ Type: C=Co	oncentration, D=Depl	etion. RM=	=Reduced Matrix. MS	S=Masked	d Sand Gra	ins.	² Location	: PL=Pore Lining, M=Matrix.		
Hydric Soil I		,	,			-		for Problematic Hydric Soils ³ :		
Histosol			Polyvalue Belov		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)		
Black Hi	oipedon (A2) stic (A3)		MLRA 149B) Thin Dark Surfa		LRR R, ML	.RA 149B		Prairie Redox (A16) (LRR K, L, R) Mucky Peat or Peat (S3) (LRR K, L, R)		
Hydroge	n Sulfide (A4)		Loamy Mucky N	/lineral (F	1) (LRR K ,		Dark S	Surface (S7) (LRR K, L, M)		
	Layers (A5)	(444)	Loamy Gleyed		2)			llue Below Surface (S8) (LRR K, L)		
	l Below Dark Surface ork Surface (A12)	(A11)	X Depleted MatrixRedox Dark Su					ark Surface (S9) (LRR K, L) anganese Masses (F12) (LRR K, L, R)		
	lucky Mineral (S1)		Depleted Dark	. ,				ont Floodplain Soils (F19) (MLRA 149B)		
	leyed Matrix (S4)		Redox Depress	ions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)		
-	edox (S5)							arent Material (F21)		
	Matrix (S6) face (S7) (LRR R, M	LRA 149E	3)				Very Shallow Dark Surface (TF12) Other (Explain in Remarks)			
31	: h		Alexand level and leave and a	4 1		all a fee and a seal		-		
	hydrophytic vegetati		tiand nydrology mus	st be pres	ent, uniess	disturbed	or problemation	.		
Type: Ro	• •									
Depth (inc							Hydric Soil	Present? Yes X No No		
Remarks:							1			





Soil W





N E



Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City	//County: Geauga County	Sampling Date: 10/19/2021
Applicant/Owner: FirstEnergy	State: OH	
Investigator(s): MJA Sec		
Landform (hillslope, terrace, etc.): Mound Local r		Slope (%): ²⁰
Subregion (LRR or MLRA): LRR R Lat: 41.601913650000	01 Long: -81.21862870000001	Natum: WGS 1984
Subregion (LRR or MLRA): LRR R Lat: 41.601913650000 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classifi	cation: N/A
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in I	Remarks.)
Are Vegetation, SoilX, or Hydrology significantly dist	curbed? Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problem		
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes NoX	Is the Sampled Area within a Wetland?	No
Hydric Soil Present? Yes		
Wetland Hydrology Present? Yes NoX Remarks: (Explain alternative procedures here or in a separate report.)	If yes, optional Wetland Site ID: Upland	LI -040,047
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soi	Cracks (B6)
Surface Water (A1) Water-Stained Lea	ves (B9) Drainage Pa	atterns (B10)
High Water Table (A2) Aquatic Fauna (B1)		•
Saturation (A3) Marl Deposits (B15		Water Table (C2)
Water Marks (B1) Hydrogen Sulfide C		,
		/isible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduc		Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Reduc	• • • • • • • • • • • • • • • • • • • •	Position (D2)
Iron Deposits (B5) Thin Muck Surface Inundation Visible on Aerial Imagery (B7) Other (Explain in R		aphic Relief (D4)
Inundation Visible on Aerial Imagery (B7) Other (Explain in R Sparsely Vegetated Concave Surface (B8)	Ernarks) Microtopogr	
Field Observations:	1 AC-Neutra	i rest (D3)
Surface Water Present? Yes No _X _ Depth (inches):		
Water Table Present? Yes No _X _ Depth (inches):		
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Prese	nt? Yes No _X
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:	
Remarks:		

EGETATION – Use scientific names of plants				Sampling Point:
Tree Stratum (Plot size:) 1		Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2 3				Total Number of Dominant Species Across All Strata: 1 (B)
4 5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)
5				Providence Indexeduale
7				Prevalence Index worksheet: Total % Cover of: Multiply by:
		= Total Cov	/er	OBL species $0 \times 1 = 0$
Sapling/Shrub Stratum (Plot size: 15)				FACW species $\frac{3}{}$ x 2 = $\frac{6}{}$
				FAC species 0 x 3 = 0
l				FACU species105
2				UPL species0 x 5 =0
3		-		Column Totals:108 (A)426 (B)
1				Prevalence Index = B/A = 3.94444444444
5				
5				Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation
7				2 - Dominance Test is >50%
_		= Total Cov	/er	3 - Prevalence Index is ≤3.0 ¹
Herb Stratum (Plot size: 5 Schedonorus arundinaceus	70	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
<u>Dipsacus fullonum</u>	15	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Potentilla simplex			FACU	¹ Indicators of hydric soil and wetland hydrology must
Symphyotrichum novae-angliae			FACW	be present, unless disturbed or problematic.
5. Solidago canadensis		No	FACU	Definitions of Vegetation Strata:
3. 7.				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
3				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9 10			·	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	108	= Total Cov	/er	
Noody Vine Stratum (Plot size:)				
1				
2.		-		Hydrophytic Vegetation
3				Present? Yes No X
1				
		= Total Cov	/er	

SOIL Sampling Point: Upland LP-046,047

Profile Desc	ription: (Describe to	the dep	th needed to docun	nent the indi	cator or	confirm	the absence	of indicators.)
Depth	Matrix		Redox	K Features	_ 1	. 2		
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u> % T</u>	ype ¹	Loc	<u>Texture</u>	Remarks
0 - 18	10YR 4/2	100					Silty clay loam	
-								
-								
-								
-								
-								
-								
	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked Sa	and Grain	ıs.		: PL=Pore Lining, M=Matrix.
Hydric Soil I				0 ((0)		_		for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belov MLRA 149B)		B) (LRR R	₹,		Muck (A10) (LRR K, L, MLRA 149B) Prairie Redox (A16) (LRR K, L, R)
Black His	ipedon (A2)		Thin Dark Surfa		P MIR	Δ 149R)		Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		Loamy Mucky M					Surface (S7) (LRR K, L, M)
	Layers (A5)		Loamy Gleyed I			• /		lue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	Depleted Matrix					ark Surface (S9) (LRR K, L)
	rk Surface (A12)	()	Redox Dark Sur					anganese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)		Depleted Dark S					ont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)		Redox Depress					Spodic (TA6) (MLRA 144A, 145, 149B)
	edox (S5)		Rodox Boproco	0110 (1 0)				arent Material (F21)
-	Matrix (S6)							hallow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149E	3)					(Explain in Remarks)
³ Indicators of	hydrophytic vegetation	on and we	tland hydrology mus	t be present,	unless di	isturbed	or problematic) .
Restrictive L	ayer (if observed):			-				
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes No _X
Remarks:								





E Soil

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Pro	ojec City/County: Geauga C	County	Sampling Date: 10/19/2021		
Applicant/Owner: FirstEnergy			Sampling Point: Wetland LP-048		
Investigator(s): MJA	Section, Township, Ra				
Landform (hillslope, terrace, etc.): Toeslope			Slope (%): ²		
Subregion (LRR or MLRA): LRR R Lat: 41.601102 Soil Map Unit Name: EhC: Ellsworth silt loam, 6 to 12 percent slo	pes	NWI classific	ation: N/A		
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes X No _	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrology signification	antly disturbed? Are "	'Normal Circumstances" p	resent? Yes X No		
Are Vegetation, Soil, or Hydrology naturall		eeded, explain any answe			
SUMMARY OF FINDINGS – Attach site map show	ring sampling point l	ocations, transects	, important features, etc.		
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No Remarks: (Explain alternative procedures here or in a separate	within a Wetlar If yes, optional \	V			
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)		
Primary Indicators (minimum of one is required; check all that ap	ply)	Surface Soil	Cracks (B6)		
	ned Leaves (B9)	Drainage Pat	tterns (B10)		
High Water Table (A2) Aquatic Fa		Moss Trim Lines (B16)			
Saturation (A3) Marl Depo	sits (B15)	Dry-Season \	Water Table (C2)		
	Sulfide Odor (C1)	Crayfish Burr	rows (C8)		
	hizospheres on Living Root	s (C3) Saturation Vi	sible on Aerial Imagery (C9)		
	of Reduced Iron (C4)		tressed Plants (D1)		
<u> </u>	n Reduction in Tilled Soils (0	· —	` '		
Iron Deposits (B5) Thin Muck		Shallow Aqui	, ,		
	lain in Remarks)	Microtopogra			
Sparsely Vegetated Concave Surface (B8)		X FAC-Neutral	Test (D5)		
Field Observations:	de e e V				
Surface Water Present? Yes No X Depth (inc					
Water Table Present? Yes No _X Depth (inc					
Saturation Present? Yes No _X _ Depth (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial p	ŕ	etland Hydrology Presen	t? Yes X No		
Describe Necorded Data (Stream gauge, monitoring wen, aeriai p	motos, previous mapections	n, ii avaliabie.			
Remarks:					

EGETATION – Use scientific names of plants	S.			Sampling Point: Wetland LP-04
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
. <u> </u>				Total Number of Dominant
1.				Species Across All Strata: 2 (B)
l <u>. </u>				Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B
<u>. </u>				Prevalence Index worksheet:
		= Total Cov	er	Total % Cover of: Multiply by: OBL species 55 x 1 = 55
sapling/Shrub Stratum (Plot size: 15)		rotal Gov	0.	FACW species64
Salix interior	2	No	FACW	FAC species0 x 3 =0
				FACU species x 4 = 0
				UPL species $0 \times 5 = 0$ Column Totals: 119 (A) 183 (B)
				Column Totals:119 (A)183 (B)
				Prevalence Index = B/A = 1.537815126(
				Hydrophytic Vegetation Indicators:
				X 1 - Rapid Test for Hydrophytic Vegetation
	_	= Total Cov		X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5				X 3 - Prevalence Index is ≤3.0¹
Phalaris arundinacea	50	Yes	FACW	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Lythrum salicaria	10	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
Eupatorium perfoliatum	10	No	FACW	¹ Indicators of hydric soil and wetland hydrology must
. Scirpus cyperinus	5	No	OBL	be present, unless disturbed or problematic.
Cyperus esculentus	2	No	FACW	Definitions of Vegetation Strata:
Carex vulpinoidea	40	Yes	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.
				Sapling/shrub – Woody plants less than 3 in. DBH
). <u> </u>				and greater than or equal to 3.28 ft (1 m) tall.
0				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
1				Woody vines – All woody vines greater than 3.28 ft in
2	·			height.
	117	= Total Cov	er	
Voody Vine Stratum (Plot size:)				
•				Hydrophytic
				Vegetation
				Present? Yes X No
2		= Total Cov		

SOIL Sampling Point: Wetland LP-048

Depth Matrix (inches) Color (moist) %			x Features	Tuno ¹	- 1 , 2	Toytura	Domorko	
(inches) 0 - 10	Color (moist) 10YR 4/1	90	Color (moist) 5YR 4/6	<u>%</u> 10	Type ¹ Concer	Loc ²	Clay loam	Remarks
							Clay loam	AACH .
10 - 18	2.5Y 5/2	60	7.5YR 5/6	40	Concer	M	Clay loam	With gravel
-								
-		·						
-								
-								
-								
_								
								
							21	
Type: C=Co Hydric Soil II		etion, RIV	1=Reduced Matrix, M	S=Masked	Sand Gr	ains.		r: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol (Polyvalue Belo	w Surface ((S8) (LR F	RR,		Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B	,				Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4) Layers (A5)		Loamy Mucky I Loamy Gleyed			, L)		Surface (S7) (LRR K, L, M) alue Below Surface (S8) (LRR K, L)
	Below Dark Surface	e (A11)	X Depleted Matrix				-	Park Surface (S9) (LRR K, L)
	rk Surface (A12)	` ,	Redox Dark Su					langanese Masses (F12) (LRR K, L, R)
	ucky Mineral (S1)		Depleted Dark		7)			ont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)		Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
	edox (S5) Matrix (S6)							arent Material (F21) Shallow Dark Surface (TF12)
	face (S7) (LRR R, N	ILRA 149	B)					(Explain in Remarks)
Indicators of	hydrophytic vegetat	ion and w	vetland hydrology mus	et he nrese	nt unles	: disturbed	d or problematic	•
	ayer (if observed):		Chana Hydrology Hids	st be presen	int, unicoc	GISTUIDE	J or problematic	<u>, </u>
Type:			_					
Depth (inc	hes):		-				Hydric Soil	Present? Yes X No No
Remarks:								





Soil





N W



Ε

Project/Site: Leroy Center-Mayfield 138 kV Transm	ission Line Projec City/Co	unty: Geauga County	;	Sampling Date: 10/19/2021
Applicant/Owner: FirstEnergy				_ Sampling Point: Upland LP-048
Investigator(s): MJA	Section			
Landform (hillslope, terrace, etc.): Shoulder slope			Convex	Slope (%): ⁵
Subregion (LRR or MLRA): LRR R Louis Map Unit Name: EhC: Ellsworth silt loam, 6 to	12 percent slopes		_ NWI classifica	tion: N/A
Are climatic / hydrologic conditions on the site typical	al for this time of year? Ye	s X No (If	no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrology _	significantly disturb	ed? Are "Normal C	rcumstances" pr	esent? Yes X No
Are Vegetation, Soil, or Hydrology _	naturally problemat	ic? (If needed, exp	lain any answers	s in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing samp	pling point location	s, transects,	important features, etc.
		Is the Sampled Area within a Wetland?	Yes	_ No
	INU	If yes, optional Wetland S		
Remarks: (Explain alternative procedures here or	in a concrete report)	ii yes, opiionai vveiianu s	ite iD. '	
HYDROLOGY		0	1 1 2 1	
Wetland Hydrology Indicators:				ors (minimum of two required)
Primary Indicators (minimum of one is required; ch			_ Surface Soil C	
Surface Water (A1)	Water-Stained Leaves	(B9) <u> </u>	_ Drainage Patte	
	Aquatic Fauna (B13)		_ Moss Trim Lin	
	Marl Deposits (B15)		-	/ater Table (C2)
	Hydrogen Sulfide Odor		_ Crayfish Burro	` '
	Oxidized RhizospheresPresence of Reduced			ible on Aerial Imagery (C9)
	Recent Iron Reduction		_ Geomorphic P	essed Plants (D1)
	Thin Muck Surface (C7		Shallow Aquita	
	Other (Explain in Rema		_ Microtopograp	
Sparsely Vegetated Concave Surface (B8)	<u> </u>		_ FAC-Neutral T	
Field Observations:			_	, ,
Surface Water Present? Yes No	Depth (inches):			
Water Table Present? Yes No	C Depth (inches):			
(includes capillary fringe)	C Depth (inches):			? Yes No _X
Describe Recorded Data (stream gauge, monitoring	ng well, aerial photos, previ	ious inspections), if availa	ble:	
Remarks:				

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				
				Prevalence Index worksheet:
7				Total % Cover of: Multiply by: OBL species 0 x 1 = 0
45		= Total Co	ver	OBL species X 1 =
Sapling/Shrub Stratum (Plot size: 15)				FACW species0 x 2 =0 FAC species0 x 3 =0
1		-		FACU species 95 x 4 = 380
2				UPL species
3				Column Totals: 130 (A) 555 (B)
4				
5				Prevalence Index = B/A = 4.27
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
		= Total Co	ver	2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		Total Co	vei	3 - Prevalence Index is ≤3.0 ¹
1. Securigera varia	30	Yes	UPL	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Schedonorus arundinaceus		Yes	FACU	Problematic Hydrophytic Vegetation¹ (Explain)
3. Daucus carota			UPL	¹ Indicators of hydric soil and wetland hydrology must
Cumphyotrishum nilogum	20		FACU	be present, unless disturbed or problematic.
	20		FACU	Definitions of Vegetation Strata:
<u> </u>		No	TACO	_
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
7		-		
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9				
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				Woody vines All woody vines areaton than 2.20 ft in
12				Woody vines – All woody vines greater than 3.28 ft in height.
	130	= Total Co	ver	
Woody Vine Stratum (Plot size:)				
1				
2.				Hydrophytic
3				Vegetation Present? Yes No X
4.				
7		= Total Co	· · · · · ·	
Remarks: (Include photo numbers here or on a separate	sheet)	- 10tal C0	vei	
Tremains. (include proto numbers here of on a separate	Silect.)			

Sampling Point: Upland LP-048

SOIL Sampling Point: Upland LP-048

Profile Desc	ription: (Describe t	o the dept	h needed to docu	ment the in	ndicator o	or confirm	the absence	of indicators.)
Depth (in the ca)	Matrix	0/		x Features	T 1	1 2	Tauduma	Domonles
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 3	10YR 3/2	100					Loam	
-								
			_					
						 -		
-								
-								
-								
_								
								
-								
¹Type: C=Co	oncentration, D=Depl	etion RM=	Reduced Matrix M	S=Masked	Sand Gra	ins	² I ocation	: PL=Pore Lining, M=Matrix.
Hydric Soil I					<u> </u>			for Problematic Hydric Soils ³ :
Histosol	(A1)	_	Polyvalue Belo	w Surface	(S8) (LRR	R,	2 cm M	Muck (A10) (LRR K, L, MLRA 149B)
-	ipedon (A2)		MLRA 149B	•				Prairie Redox (A16) (LRR K, L, R)
Black Hi		-	Thin Dark Surfa					flucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	-	Loamy Mucky I			L)		surface (S7) (LRR K, L, M)
	l Layers (A5) I Below Dark Surface	(Δ11)	Loamy GleyedDepleted Matrix		1		-	lue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L)
	ark Surface (A12)	(7,11)	Redox Dark Su					anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	=	Depleted Dark	. ,	7)			ont Floodplain Soils (F19) (MLRA 149B)
	leyed Matrix (S4)	_	Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
	Matrix (S6)	L D A 440D					-	hallow Dark Surface (TF12)
Dark Sui	face (S7) (LRR R, M	LRA 149B)				Other ((Explain in Remarks)
³ Indicators of	hydrophytic vegetati	on and wet	land hydrology mu	st be prese	nt, unless	disturbed of	or problemation	<u>).</u>
	ayer (if observed):		, 0,	•				
Type: Gra	avel							
Depth (inc	ches): <u>3</u>						Hydric Soil	Present? Yes No _X
Remarks:								





SE Soil

Project/Site: Leroy Center-Ma	yfield 13	38 kV	Transi	mission Line Projec City/C	County: Gea	uga County		Sampling Date	10/19/2021
Applicant/Owner: FirstEnergy				•	-				oint: Wetland LP-049
Investigator(s): MJA				Section	on, Township	o, Range: N/A			
Landform (hillslope, terrace, et	c.): De						Concave	SI	ope (%): ²
Subregion (LRR or MLRA): LF	≀R R			Lat: 41.5998071666666	7	Long81.2216	64450000001	 Dati	_{Im} . WGS 1984
Soil Map Unit Name: MgB: Ma	honing	silt lo	am, 2	to 6 percent slopes			NWI classifica	ation: N/A	
Are climatic / hydrologic condit	ions on	the si	te typi	cal for this time of year? \	′es _X	No (If n	o, explain in Re	emarks.)	
Are Vegetation, Soil	, o	r Hyd	rology	significantly distur	bed?	Are "Normal Cir	cumstances" pr	resent? Yes _	X No
Are Vegetation, Soil	, o	r Hyd	rology	naturally problem	atic?	(If needed, expla	ain any answer	s in Remarks.)	
SUMMARY OF FINDING	GS – 1	Atta	ch sit	e map showing san	npling poi	int locations	, transects,	important f	eatures, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present?		,		X No X No		etland?		_	
Remarks: (Explain alternative			res	NO	If yes, option	onal Wetland Sit	e ID: Welland E		
LIVEROLOGY									
HYDROLOGY						0-			- f t
Wetland Hydrology Indicate			otal de la	-llll 4l4l- A					of two required)
Primary Indicators (minimum	or one i	s requ	<u>urea; c</u>		- (DO)	· · · · · · · · · · · · · · · · · · ·	Surface Soil (
X Surface Water (A1)				Water-Stained Leave			Drainage Patt		
X High Water Table (A2) X Saturation (A3)				Aquatic Fauna (B13)Marl Deposits (B15)			Moss Trim Lir	vater Table (C2) \
Water Marks (B1)				Hydrogen Sulfide Od	or (C1)	·	Crayfish Burro		.)
Sediment Deposits (B2)				Oxidized Rhizospher		Roots (C3)	-	sible on Aerial I	magery (C9)
Drift Deposits (B3)				Presence of Reduce	_			ressed Plants (I	
Algal Mat or Crust (B4)				Recent Iron Reduction		oils (C6) X	Geomorphic F		,
Iron Deposits (B5)				Thin Muck Surface (0			Shallow Aquit	, ,	
Inundation Visible on Aer	rial Imaç	gery (B7)	Other (Explain in Rei			Microtopograp		
Sparsely Vegetated Con-	cave Su	ırface	(B8)				FAC-Neutral		
Field Observations:									
Surface Water Present?	Yes	X	No _	Depth (inches):	4				
Water Table Present?	Yes	X	No _	Depth (inches):	4				
Saturation Present? (includes capillary fringe)				Depth (inches):	0	1	rology Present	? Yes <u>X</u>	No
Describe Recorded Data (stre	am gai	uge, n	nonitor	ing well, aerial photos, pre	evious inspec	tions), if availab	le:		
Remarks:									

Species? Status	Dominance Test worksheet:
	Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
	Total Number of Dominant Species Across All Strata: 1 (B)
	Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B
	Prevalence Index worksheet:
	Total % Cover of: Multiply by:
= Total Cover	OBL species95 x 1 =95
	FACW species 0 x 2 = 0
	FAC species x 3 = 0
	FACU species0 x 4 =0
	UPL species 0 x 5 = 0
	Column Totals:95 (A)95 (B)
	Prevalence Index = B/A =
	- Hydrophytic Vocatation Indicators
	Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation
	X 2 - Dominance Test is >50%
= Total Cover	$\frac{X}{X}$ 3 - Prevalence Index is $\leq 3.0^{\circ}$
	4 - Morphological Adaptations ¹ (Provide supporting
80 Yes OBL	data in Remarks or on a separate sheet)
15 No OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
	¹Indicators of hydric soil and wetland hydrology must
	be present, unless disturbed or problematic.
	Definitions of Vegetation Strata:
	Tree – Woody plants 3 in. (7.6 cm) or more in diamete
	at breast height (DBH), regardless of height.
	Sapling/shrub – Woody plants less than 3 in. DBH
	and greater than or equal to 3.28 ft (1 m) tall.
	Herb – All herbaceous (non-woody) plants, regardless of
	size, and woody plants less than 3.28 ft tall.
	Woody vines – All woody vines greater than 3.28 ft in
	height.
= Total Cover	
	- Hydrophytic
	- Vegetation
	Present? Yes X No
= Total Cover	
	= Total Cover = Total Cover = Total Cover 80

SOIL Sampling Point: Wetland LP-049

- 2 10YR 4/2 97 7.5YR 5/8 3 Concer M Silty loam - 10 2.5Y 5/2 90 7.5YR 5/8 10 Concer M Clay	Depth inches)	Matrix Color (moist)	%	Redo	ox Features %	Type ¹	Loc ²	Texture	Remarks				
. 10 2.5Y 5/2 90 7.5YR 5/8 10 Concer M Clay									Remarks				
pe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. dric Soil Indicators: Histosol (A1) Histosol (A1) Histosol (A2) Black Histic (A3) Histor (A3) Straiffed Layers (A5) Depleted Below Dark Surface (A11) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thic Dark Surface (A12) Redox Dark Surface (F3) Sandy Redox (A12) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Dark Surface (S7) (LRR R, LRR K, L) Dark Surface (A12) Sandy Redox Dark Surface (F6) Sandy Redox (S5) Stripped Matrix (S4) Dark Surface (S7) (LRR R, LRR L) Dark Surf			-					· ·					
rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rictic Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R,		2.51 3/2		7.511(5/6		Conce		Olay					
rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rictic Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R,							-						
rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rictic Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R,								<u> </u>					
rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rictic Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R,								. <u></u>					
rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rictic Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R,	-												
rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rictic Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R,	-												
rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rpe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. rictic Soil Indicators: Histosol (A1) Polyvalue Below Surface (S8) (LRR R,	-												
dric Soil Indicators: Histosol (A1)	_								-				
dric Soil Indicators: Histosol (A1)				-			-						
dric Soil Indicators: Histosol (A1)								- 					
dric Soil Indicators: Histosol (A1)													
dric Soil Indicators: Histosol (A1)	-												
Histosol (A1)			letion, RM	1=Reduced Matrix, M	S=Masked	Sand Gra	ains.						
Histic Epipedon (A2) Black Histic (A3) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sardy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, K) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L) Thick Dark Surface (A12) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L) Thick Dark Surface (A12) Sandy Gleyed Matrix (S6) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (if observed): X Type: Clay and gravel Depth (inches): 10 MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Sch Mucky Mineral (S9) (LRR K, L, R) Dark Surface (S9) (LRR K, L, M) Dark Surface (S7) (LRR K, L, M) I park Surface (S7) (LRR K, L) I park Surface (F6) I park Surface (S7) (LRR K, L) I park Surface (S7) (0.6	(00) // D			·				
Black Histic (A3)	 '	` '		-		S8) (LRF	RR,						
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11)X Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, F12) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 144) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. strictive Layer (if observed): X Type: Clay and gravel Depth (inches): 10 Hydric Soil Present? YesX No					,	RR R, MI	LRA 149B						
Depleted Below Dark Surface (A11)	_ Hydroge	n Sulfide (A4)		Loamy Mucky	Mineral (F1)	(LRR K		Dark S	Surface (S7) (LRR K, L, M)				
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, F Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 145								-					
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 148, 149, 149, 149, 149, 149, 149, 149, 149			e (A11)										
Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149 Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Other (Explain in Remar						7)							
Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other	_					,							
Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)					(* **)								
dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Strictive Layer (if observed): X Type: Clay and gravel Depth (inches): 10 Hydric Soil Present? Yes X No	-												
Strictive Layer (if observed): X Type: Clay and gravel Depth (inches): 10 Hydric Soil Present? Yes X No	_ Dark Sur	face (S7) (LRR R, N	ILRA 149	B)				Other	(Explain in Remarks)				
Type: Clay and gravel Depth (inches): 10 Hydric Soil Present? Yes X No	ndicators of	hydrophytic vegetat	ion and w	etland hydrology mu	st be presei	nt, unless	disturbed	d or problemation	c .				
Depth (inches): 10 Hydric Soil Present? Yes X No	estrictive L	.ayer (if observed):			· · · · · · · · · · · · · · · · · · ·								
	, <u> </u>			-									
marks:	Depth (inc	thes): 10		-				Hydric Soil	Present? Yes <u>X</u> No				
	emarks:												





il





E S



W

Project/Site: Leroy Center-Ma	yfield 13	8 kV Tra	nsmis	sion Line Projec City/	County: Gea	uga County		Sampling Da	te: 10/19/2021
Applicant/Owner: FirstEnergy						S	State: OH	Sampling F	Point: Wetland LP-050
Investigator(s): MJA				Sect	ion, Township	o, Range: N/A			
Landform (hillslope, terrace, et							Undulating	;	Slope (%): 1
Subregion (LRR or MLRA): LF									
Soil Map Unit Name: Or: Orrvi									
Are climatic / hydrologic conditi	ions on t	he site ty	pical 1	for this time of year?	Yes X	No (If n	no, explain in R	emarks.)	
Are Vegetation, Soil	, or	Hydrolog	ΊV	significantly distu	ırbed?	Are "Normal Cir	rcumstances" p	resent? Yes	X No
Are Vegetation, Soil						(If needed, expl			
SUMMARY OF FINDING						int locations	s, transects	, importan	t features, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present? Remarks: (Explain alternative		Yes Yes	X	No _ No _ No a separate report.)	within a W	npled Area /etland? onal Wetland Sit	Yes X		
PEM wetland consisting of mu	пиріе ро	iygons ii	a low	-iying area along an i	mermillent sti	eam.			
HYDROLOGY									
Wetland Hydrology Indicato	ors:					Se	condary Indica	tors (minimum	of two required)
Primary Indicators (minimum	of one is	required	l; che	ck all that apply)			Surface Soil	Cracks (B6)	
Surface Water (A1)				Water-Stained Leav			_ Drainage Pat		
X High Water Table (A2)				Aquatic Fauna (B13			_ Moss Trim Li		
X Saturation (A3)				Marl Deposits (B15)				Water Table (0	C2)
Water Marks (B1)				Hydrogen Sulfide O			Crayfish Burr		(00)
Sediment Deposits (B2)				Oxidized Rhizosphe	_	Roots (C3)			Imagery (C9)
Drift Deposits (B3) Algal Mat or Crust (B4)				Presence of Reduce Recent Iron Reducti		oile (C6)	_ Stunted or St _ Geomorphic	ressed Plants	(11)
=							-	, ,	
Iron Deposits (B5) Inundation Visible on Aer	ial Imag	ory (P7)		Thin Muck Surface (Other (Explain in Re			Shallow AquiMicrotopogra		4)
Sparsely Vegetated Cond	-	•		Other (Explain in Re	illaiks)		_ Microtopogra _ FAC-Neutral		4)
Field Observations:	Jave Sui	iace (Do	,			<u> </u>	_ I AC-Neuliai	Test (D3)	
Surface Water Present?	Yes	No	Х	_ Depth (inches):					
Water Table Present?				_ Depth (inches):	12				
Saturation Present?				_ Depth (inches):	0	Wetland Hyd	rology Presen	t? Yes X	No
(includes capillary fringe) Describe Recorded Data (stre	am dau	ae moni	foring	well aerial nhotos nr	evious inspec	tions) if availah	nle:		
Describe Necorded Data (Stre	am gau	gc, mom	oning	well, aeriai priotos, pi	CVIOUS ITISPEC	ziioris), ii avaiiat	no.		
Remarks:									

EGETATION – Use scientific names of plants				Sampling Point: Wetland LP-05			
<u>Free Stratum</u> (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:			
			<u> </u>	Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)			
				(v)			
				Total Number of Dominant Species Across All Strata: 4 (B)			
				Percent of Dominant Species			
				That Are OBL, FACW, or FAC: 0.75 (A/E			
				Prevalence Index worksheet:			
				Total % Cover of: Multiply by:			
		= Total Cov	er	OBL species55 x 1 =55			
apling/Shrub Stratum (Plot size: 15)				FACW species55 x 2 =110			
				FAC species 15 x 3 = 45			
				FACU species x 4 = 80			
				UPL species $0 \times 5 = 0$ Column Totals: $145 \times 6 \times 145 \times 14$			
				Column Totals:145 (A)290 (B			
				Prevalence Index = B/A = 2			
				Hydrophytic Vegetation Indicators:			
				1 - Rapid Test for Hydrophytic Vegetation			
		= Total Cov		X 2 - Dominance Test is >50%			
erb Stratum (Plot size:5)				X 3 - Prevalence Index is ≤3.0¹			
Phalaris arundinacea	40	Yes	FACW	 4 - Morphological Adaptations¹ (Provide supportir data in Remarks or on a separate sheet) 			
Juncus effusus	10	No	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)			
Scirpus atrovirens	20	Yes	OBL	¹ Indicators of hydric soil and wetland hydrology must			
Carex crinita	5	No	OBL	be present, unless disturbed or problematic.			
Onoclea sensibilis	15	No	FACW	Definitions of Vegetation Strata:			
Carex vulpinoidea	20	Yes	OBL	Tree – Woody plants 3 in. (7.6 cm) or more in diameter			
Solidago canadensis	20	Yes	FACU	at breast height (DBH), regardless of height.			
Frangula alnus	5	<u>No</u>	FAC	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.			
Solidago rugosa	10	<u>No</u>	FAC				
0				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.			
1				Woody vines – All woody vines greater than 3.28 ft in			
2		-		height.			
	145	= Total Cov	er				
/oody Vine Stratum (Plot size:)							
-				Hydrophytic			
				Vegetation			
				Vegetation			

SOIL Sampling Point: Wetland LP-050

Depth Mark Golor (most) % Color (most) % Type Loc Toxture Remarks	Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the i	ndicator o	or confirm	n the absence	of indicators.)		
10						<u>S</u> _ 1	. 2				
10 * 18	(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc	<u>Texture</u>	Remarks		
	0 - 10	10YR 2/1	100					Silty clay loam			
- Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. - Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. - Hydric Soil Indicators: - Histosoil (A1) - Histic Epipedon (A2) - Hydrogen Sulfide (A3) - Thin Dark Surface (S9) (LRR R, MLRA 149B) - Stratified Layers (A5) - Loamy Mucky Mineral (F1) (LRR K, L) - Depleted Below Dark Surface (A11) - Depleted Matrix (F2) - Depleted Below Dark Surface (A11) - Sandy Mucky Mineral (S1) - Sandy Matrix (S6) - Sandy Matrix (S6) - Dark Surface (S7) (LRR R, L, R) - Mesic Spodic (TA6) (MLRA 144A, 145, 149B) - Sandy Redox (S5) - Red Parent Material (F2) - Very Shallow Dark Surface (TF12) - Other (Explain in Remarks) - Type: - Depth (inches): - Hydric Soil Present? Yes X No	10 - 18	10YR 4/2	80	10YR 5/6	20	Concer	М	Silty clay loam	With gravel		
								-			
Hydric Soil Indicators: Histosol (A1) Histosol (A2) Histo Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Mucky Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Hydrogen Sulfide (A4) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M) Dark Surface (S7) (LRR K, L, M) Dark Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) **Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. **Restrictive Layer (if observed): Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes X No									-		
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Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L, M) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) X Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.** **Restrictive Layer (if observed):** Type: Depth (inches): Hydric Soil Present? YesX No	-										
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Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	Dark Sur	tace (S7) (LRR R, M	ILRA 1491	3)				Other	(Explain in Remarks)		
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes X No	³ Indicators of	hydrophytic vegetati	ion and we	etland hydrology mus	t he prese	ent unless	disturbed	d or problematic	3		
Type:			on and we	chana riyarology mac	n be prese	, ariicoo	distarbet	T problematic	<i>.</i>		
Depth (inches): Hydric Soil Present? Yes X No		, (0.000. 100.).									
- · · · · · · · · · · · · · · · · · · ·		hes).						Hydric Soil	Present? Yes X No		
								Tiyano con	1105cm: 105 140		
	Remarks.										





Soil E





S W





V

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Ma	yfield 138 kV Tran	smission Line	Projec City/0	County: Geau	ıga County		Sampling Date: 10/19/2021
Applicant/Owner: FirstEnergy				, <u></u>			Sampling Point: Upland LP-049,0
			Secti	ion Township	Range: N		<u></u>
							Slone (%): 0
Landform (hillslope, terrace, et	SR R	41 599	LOCALTE	3	-81	22170666666665	Slope (70)
Subregion (LRR or MLRA): LI	haning oilt laam (_ Lat:	alanaa		Long:	2217000000000	Datum: WGS 19
Soil Map Unit Name: MgB: Ma							
Are climatic / hydrologic condit	ions on the site typ	oical for this tin	ne of year? `	Yes X N	No	(If no, explain in Re	emarks.)
Are Vegetation, Soil	, or Hydrolog	y sign	ificantly distu	rbed?	Are "Norma	l Circumstances" p	resent? Yes X No
Are Vegetation, Soil	, or Hydrolog	y natu	rally problem	natic? ((If needed,	explain any answei	rs in Remarks.)
SUMMARY OF FINDING	GS – Attach s	ite map sh	owing sar	npling poi	nt locatio	ons, transects	, important features, etc
Hydrophytic Vegetation Prese	ent? Yes	No _	Х	Is the Sam	pled Area		
Hydric Soil Present?		No _		within a We		Yes	No
Wetland Hydrology Present?		No _		If yes option	nal Wetland	d Site ID: Upland L	P-049,050
Remarks: (Explain alternative				ii yee, optio	TIAI WCIIAIT	d Oile ID.	
HYDROLOGY							
Wetland Hydrology Indicate	ors:					Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum	of one is required:	check all that	apply)			Surface Soil	Cracks (B6)
Surface Water (A1)		Water-S	Stained Leave	es (B9)		Drainage Pat	terns (B10)
High Water Table (A2)		Aquatic	quatic Fauna (B13) Mo			Moss Trim Li	nes (B16)
Saturation (A3)		Marl De	posits (B15)				
Water Marks (B1)		Hydroge	gen Sulfide Odor (C1) Crayfish Burrows (C8)				
Sediment Deposits (B2)			Oxidized Rhizospheres on Living Roots (C3)				sible on Aerial Imagery (C9)
Drift Deposits (B3)			ce of Reduce				ressed Plants (D1)
Algal Mat or Crust (B4)			Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7)				Position (D2)
Iron Deposits (B5)	(D.7)					Shallow Aqui	
Inundation Visible on Aer			Explain in Re	marks)			phic Relief (D4)
Sparsely Vegetated Con-	cave Surface (B8)					FAC-Neutral	Test (D5)
	Van Na	Y Danth	(in als a a).				
Surface Water Present?	Yes No						
Water Table Present? Saturation Present?	Yes No Yes No				Watland I	Judralagu Brasan	t2 Voc. No. V
(includes capillary fringe)	res No	Deptil	(IIICHES).		wetianu i	Hydrology Presen	t? Yes No _X
Describe Recorded Data (stre	eam gauge, monito	oring well, aeri	al photos, pre	evious inspect	tions), if ava	ailable:	
Remarks:							
remarks.							

/EGETATION – Use scientific names of plant	S.			Sampling Point:
Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: (A)
2				(*,)
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
5				Durandamas In day weeks head.
·				Prevalence Index worksheet: Total % Cover of: Multiply by:
		= Total Cov	er	OBL species 0 x 1 = 0
Sapling/Shrub Stratum (Plot size: 15)				FACW species0 x 2 =0
				FAC species x 3 = 30
				FACU species $\frac{130}{2}$ x 4 = $\frac{520}{2}$
l				UPL species $0 \times 5 = 0$ Column Totals: $140 \times (A) \times 550 \times (B)$
·				Column Totals:140 (A)550 (B)
i				Prevalence Index = B/A = 3.928571428
3				Hydrophytic Vegetation Indicators:
· <u> </u>				1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov	er	2 - Dominance Test is >50%
Herb Stratum (Plot size:5)				3 - Prevalence Index is ≤3.0 ¹
Schedonorus arundinaceus	70	Yes	FACU	4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
Solidago canadensis	35	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Plantago lanceolata	10	No	FACU	¹ Indicators of hydric soil and wetland hydrology must
1. Symphyotrichum pilosum	15	No	FACU	be present, unless disturbed or problematic.
5Solidago rugosa	10	No	FAC	Definitions of Vegetation Strata:
5				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
3				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
)				
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
l1				Woody vines – All woody vines greater than 3.28 ft in
12				height.
	140	= Total Cov	er	
Voody Vine Stratum (Plot size:)				
2				Hydrophytic Vegetation
3				Present? Yes No X
4				
		= Total Cov	er	

SOIL Sampling Point: Upland LP-049,050

10	inches) 0 - 5	Matrix		Redox Fea	tures _ 1	. 2		
Silly clay loam Silly clay loam	0 - 5	•		Color (moist) %	<u>lype</u>	Loc		Remarks
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.		10YR 4/2	100				Silty clay loam	
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ype: C=Concentration, D=Depletatix, M=Matrix. Indicators for Problematic Hydric Soils ³ : Indicators for Problematic Hydric Soils ⁴ : Indicators for Problematic Hydric Soils Fesons PL=Port Lining, M=Matrix. Indicators for Problematic Hydric Soils Fesons PL=Port Lining, M=Matrix. Indicators for Problematic Hydric Soil Present? Yes NoX	5 - 18	10YR 5/3	100				Silty clay loam	
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ype: C=Concentration, D=Depletatix, M=Matrix. Indicators for Problematic Hydric Soils ³ : Indicators for Problematic Hydric Soils ⁴ : Indicators for Problematic Hydric Soils Fesons PL=Port Lining, M=Matrix. Indicators for Problematic Hydric Soils Fesons PL=Port Lining, M=Matrix. Indicators for Problematic Hydric Soil Present? Yes NoX								
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Histic Epipedon (A2) MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Stratified Layers (A5) Loamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, R) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149 Mesic Sor (S7) (LRR R, MLRA 149B) Mesic Spodic (TF12) Other (Explain in Remarks) Mestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X				Daharahar Dahara Orat	(00) (I D F	. 5		•
Black Histic (A3)	_ ,				race (S8) (LRF	КΚ,		
Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, F Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 145, 149 Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149 Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Other (Explain in Remarks) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No X				,	9) (LRR R, M I	RA 149B		
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Thick Dark Surface (A12)			~ (411)		(F2)		-	
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 148, 145, 149 Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 144A, 145, 149 Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Depth (inches): Hydric Soil Present? Yes NoX			; (A11)		(F6)			
Sandy Redox (S5) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Ot								
Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)				Redox Depressions (F8)			
Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks) Other (Explain in Remarks)								
Depth (inches): NoX X X X X X X X X X			ILRA 149	B)				
Depth (inches): NoX X X X X X X X X X								
Type:				etland hydrology must be p	resent, unless	disturbed	or problematic	•
Depth (inches):	estrictive La	ayer (ii observeu).						
	Type:	nes):					Hydric Soil	Present? Yes No X
emarks:							,	
	Depth (inch							
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Soil S

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/C	County: Geauga County Sampling Date: 10/18/2021
Applicant/Owner: FirstEnergy	State: OH Sampling Point: Wetland LP-051
Investigator(s): MJA Section	
Landform (hillslope, terrace, etc.): Hillside Local reli	
Subregion (LRR or MLRA): LRR R Lat: 41.59862516666667	
	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? $^{}$ Y	'es X No (If no, explain in Remarks.)
Are Vegetation, Soil, or HydrologyX _ significantly distur	bed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problems	atic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sam	npling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland LP-051
Remarks: (Explain alternative procedures here or in a separate report.)	Il yes, optional wetiand site ib.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leave	
High Water Table (A2) Aquatic Fauna (B13)	
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Od	
Sediment Deposits (B2) X Oxidized Rhizosphere	*
Drift Deposits (B3) Presence of Reduced Algal Mat or Crust (B4) Recent Iron Reduction	
Algal Mat 01 Crost (64) Recent from Reduction Iron Deposits (B5) Thin Muck Surface (0	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rer	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No _X _ Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
Remarks:	

te Domina er Species		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B) Prevalence Index worksheet:
		Total Number of Dominant Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)
		That Are OBL, FACW, or FAC:1 (A/B)
		Prevalence Index worksheet:
= Total C	over	Total % Cover of: Multiply by:
	over	OBL species10 x 1 =10
		FACW species135 x 2 =270
		FAC species5 x 3 =15
		FACU species 10 x 4 = 40
		UPL species 0 x 5 = 0
		Column Totals:160(A)335(B)
		Prevalence Index = B/A = 2.09375
		Hydrophysic Vocatation Indicators
		Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation
		X 2 - Dominance Test is >50%
= Total C	over	X 3 - Prevalence Index is ≤3.0¹
		4 - Morphological Adaptations ¹ (Provide supporting
Yes		data in Remarks or on a separate sheet)
Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
No	FACU_	¹ Indicators of hydric soil and wetland hydrology must
No	OBL	be present, unless disturbed or problematic.
No	FACW	Definitions of Vegetation Strata:
No	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.
		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
		Herb – All herbaceous (non-woody) plants, regardless of
		size, and woody plants less than 3.28 ft tall.
_		Woody vines – All woody vines greater than 3.28 ft in
= Total C	OVER	height.
= 10tal C	Ovei	
		Hydrophytic
		Vegetation
		Present? Yes X No
= Total C	over	
	= Total C Yes Yes No No No Total C	= Total Cover Yes

SOIL Sampling Point: Wetland LP-051

Profile Desc	ription: (Describe t	o the dep	th needed to docun	nent the i	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>3</u> .			
(inches)	Color (moist)	%	Color (moist)	<u></u> %	Type ¹	Loc ²	Texture	Remarks
0 - 4	10YR 3/2	100					Silty clay loam	
4 - 18	10YR 4/2	60	10YR 5/8	2	Concer	PL	Silty clay	
4 - 18	5Y 5/1	38						
-								
-								
-								
-								
					-			
¹ Type: C=Co	oncentration, D=Depl	etion, RM:	Reduced Matrix, MS	S=Masked	Sand Gra	nins.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol			Polyvalue Below	v Surface	(S8) (I RR	· R		Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B)		(00) (21111	,		Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4) I Layers (A5)		Loamy Mucky N Loamy Gleyed I			L)		Surface (S7) (LRR K, L, M) Ilue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	X Depleted Matrix		,			ark Surface (S9) (LRR K, L)
	rk Surface (A12)		Redox Dark Sui					anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1) leyed Matrix (S4)		Depleted Dark S Redox Depress		7)			ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
	edox (S5)		Redox Depress	10113 (1 0)				arent Material (F21)
Stripped	Matrix (S6)						Very S	shallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	LRA 149E	3)				Other	(Explain in Remarks)
³ Indicators of	hydrophytic vegetati	on and we	tland hydrology mus	t be prese	ent, unless	disturbed	or problemation	c .
	.ayer (if observed):							
Type:								- · · · · · · · · · · · · · · · · · · ·
Depth (inc	ches):						Hydric Soil	Present? Yes X No No
Remarks:								



Soil



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W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Pro	ijec City/County: Geaug	ga County	Sampling Date: 10/18/2021	
Applicant/Owner: FirstEnergy			Sampling Point: Upland LP-051	
Investigator(s): MJA	Section, Township,			
Landform (hillslope, terrace, etc.): Hillside			Slope (%): ⁸	
Subregion (LRR or MLRA): LRR R Lat: 41.598681				
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slop	es	NWI classifica	ation: N/A	
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes X No	o (If no, explain in Re	emarks.)	
Are Vegetation, Soil, or Hydrology significa	intly disturbed? A	re "Normal Circumstances" pi	resent? Yes X No	
Are Vegetation, Soil, or Hydrology naturally		f needed, explain any answer		
SUMMARY OF FINDINGS – Attach site map show	ing sampling poin	t locations, transects,	important features, etc.	
Hydrophytic Vegetation Present? Yes NoX Hydric Soil Present? Yes No _X			_ No	
Wetland Hydrology Present? Yes No X	<u> </u>	al Wetland Site ID: Upland LF		
Remarks: (Explain alternative procedures here or in a separate r	in yes, option	ai weliand Site id.		
HYDROLOGY				
Wetland Hydrology Indicators:		Secondary Indicat	ors (minimum of two required)	
Primary Indicators (minimum of one is required; check all that app	oly)	Surface Soil (
	ned Leaves (B9)	Drainage Pati		
High Water Table (A2) Aquatic Fat		Moss Trim Lines (B16)		
Saturation (A3) Marl Depos		· ·	Vater Table (C2)	
	Sulfide Odor (C1)	Crayfish Burro	` '	
	hizospheres on Living R		sible on Aerial Imagery (C9)	
	of Reduced Iron (C4) In Reduction in Tilled Soil		ressed Plants (D1)	
Iron Deposits (B5) Thin Muck :		Shallow Aquit	, ,	
	lain in Remarks)	Microtopograp		
Sparsely Vegetated Concave Surface (B8)	an in recinancy	FAC-Neutral		
Field Observations:		<u> </u>		
Surface Water Present? Yes No _X _ Depth (inc	hes):			
Water Table Present? Yes No _X Depth (inc				
Saturation Present? Yes No X Depth (inc (includes capillary fringe)		Wetland Hydrology Present	t? Yes No _ X	
Describe Recorded Data (stream gauge, monitoring well, aerial p	hotos, previous inspection	ons), if available:		
Remarks:				
Tromano.				

That Are OBL, FACW, or FAC: 1 (A) 2. Total Number of Dominant Species Across All Strata: 5 (B) 4. Percent of Dominant Species That Are OBL, FACW, or FAC: 0.2 (A/B) 6. Percent of Dominant Species That Are OBL, FACW, or FAC: 0.2 (A/B) 6. Prevalence Index worksheet: Total % Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 2 = 0 FACW species 0 x 3 = 105 FACW species 0 x 5 = 0 FACW species 0 x 5 =	Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
Species Across All Strata:					Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)	
Species Across All Strate: 5 (B)	2				Total Number of Dominant	
That Are OBL, FACW, or FAC: 0.2 (A/B)	3					
That Are OBL, FACW, or FAC:	4				Percent of Dominant Species	
Total Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FACW species 35 x 3 = 105 FACW species 36 x 4 = 620 WPL species 30 x 5 = 0	5				That Are OBL, FACW, or FAC: 0.2 (A/B)	
Total Cover of: Multiply by: OBL species 0 x 1 = 0 FACW species 0 x 2 = 0 FACW species 35 x 3 = 105 FACW species 36 x 4 = 620 WPL species 30 x 5 = 0	6				Provalence Index worksheet:	
Sapling/Shrub Stratum (Plot size:15)						
Sapling/Shrub Stratum (Plot size:		-				
	Sanling/Shrub Stratum (Plot size: 15)		-			
Françula alnus		10	Yes	FACU	1 AC species X 3 =	
Second Second						
Prevalence Index = B/A = 3.815789473 Prevalence Index = B/A = 3.815789473 Prevalence Index = B/A = 3.815789473 Hydrophytic Vegetation Indicators: 1						
Prevalence Index = B/A = 3.815789473 Prevalence Index = Solve 5.50% Prevalence Index = B/A					Column Totals:(A)(B)	
Hydrophytic Vegetation Indicators: 15 = Total Cover 15 = Total Cover 15 = Total Cover 15 = Total Cover 15 Yes FACU 16 Yes FACU 17 Yes FACU 18 Solidago canadensis 40 Yes FACU 20 Poa pratensis 40 Yes FACU 31 Solidago rugosa 15 No FAC 32 Euthamia graminifolia 15 No FAC 33 Solidago canadensis 45 Yes FACU 44 Solidago rugosa 15 No FAC 55 Euthamia graminifolia 15 No FAC 56 Solidago canadensis 40 Yes FACU 45 Yes FACU 46 Yes FACU 47 Problematic Hydrophytic Vegetation (Explain) 48 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 48 Definitions of Vegetation Stratas: 49 Tree Woody plants 3 in, (7,6 cm) or more in diameter at breast height (DBH), regardless of height. 40 Sapling/shrub Woody plants less than 3 in, DBH and greater than or equal to 3.28 ft (1 m) tall. 41 Herb All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height. 41 Woody vines All woody vines greater than 3.28 ft in height. 42 Woody Vines All woody vines greater than 3.28 ft in height. 45 Yes No X	F				Prevalence Index = B/A = 3.8157894736	
1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is \$ 3.0	•				Hydrophytic Vegetation Indicators:	
15 = Total Cover 15 = Total Cover 2 - Dominance Test is >50% 3 - Prevalence Index is \$3.0° 4 - Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet) 40 Yes FACU 2 Poa pratensis 40 Yes FACU 4 Morphological Adaptations 1 (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation 1 (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Problematic Hydrophytic Vegetation 1 (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Problematic Hydrophytic Vegetation 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Problematic Hydrophytic Vegetation 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Problematic Hydrophytic Vegetation 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Problematic Hydrophytic Vegetation 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Problematic Hydrophytic Vegetation 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Problematic Hydrophytic Vegetation 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Problematic Hydrophytic Vegetation 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Problematic Hydrophytic Vegetation 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Problematic Hydrophytic Vegetation 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Problematic Hydrophytic Vegetation 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or hydric soil and					1 - Rapid Test for Hydrophytic Vegetation	
Herb Stratum (Plot size:				ver	2 - Dominance Test is >50%	
Schedonorus arundinaceus 45 Yes FACU Poa pratensis 40 Yes FACU Problematic Hydrophytic Vegetation (Explain) Solidago canadensis 60 Yes FACU Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Euthamia graminifolia 15 No FAC Definitions of Vegetation Strata: Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft in height. Woody Vine Stratum (Plot size: 30) 1	Herb Stratum (Plot size: 5)		_ rotar oo	VOI	3 - Prevalence Index is ≤3.0 ¹	
Solidago canadensis Solidago rugosa Solidago r		45	Yes	FACU		
be present, unless disturbed or problematic. Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Bablian at present part of the part of the present part of the present part of the present part of the part of the part of the present part of the present part of the part of the part of the present part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the p	2. Poa pratensis	40	Yes	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)	
be present, unless disturbed or problematic. Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Bablian at present part of the part of the present part of the present part of the present part of the part of the part of the present part of the present part of the part of the part of the present part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the part of the p			Yes	FACU	¹ Indicators of hydric soil and wetland hydrology must	
Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.	Colidoro rugoso	· ·		FAC		
Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Woody vines – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation Present? Yes No X				FAC	Definitions of Vegetation Strata:	
at breast height (DBH), regardless of height. Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. 175 = Total Cover Woody Vine Stratum (Plot size: 30) 1.					Tree – Woody plants 3 in (7.6 cm) or more in diameter	
Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. 175 = Total Cover Woody Vine Stratum (Plot size: 30) 1						
and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vines – All woody vines greater than 3.28 ft in height. 175 = Total Cover Woody Vine Stratum (Plot size: 30) 1					Sapling/shrub – Woody plants less than 3 in. DBH	
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. Moody Vine Stratum (Plot size:					and greater than or equal to 3.28 ft (1 m) tall.	
11						
175					size, and woody plants less than 3.28 ft tall.	
175				-		
Woody Vine Stratum (Plot size:30)	12		- Total Co		neight.	
1	Manda Vine Otestone (Blateine 30		_ = 10tal C0	vei		
2						
3					Hydrophytic	
4 = Total Cover						
	3		-		Present? res No	
	4	·				
Remarks: (Include photo numbers here or on a separate sheet.)			= Total Co	ver		
	Remarks: (Include photo numbers here or on a separate	sneet.)				

Sampling Point: Upland LP-051

SOIL Sampling Point: Upland LP-051

Profile Desc	ription: (Describe t	o the dept				or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	x Features %	Type ¹	Loc ²	Texture	Remarks
			Color (moist)		rype	LOC		Remarks
0 - 18	10YR 4/2	100					Silty clay loam	
-								
-								
-								
-								
-								
1- 0.0							2, ,,	BL B. J. L. L. M. M. L.
Hydric Soil I	ncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ins.		r: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belo	w Surface	(S8) (I DD	D		Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)	-	MLRA 149B		(30) (LKK	. г.,		Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa	,	RR R, ML	RA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	=	Loamy Mucky I					Surface (S7) (LRR K, L, M)
	Layers (A5)	-	Loamy Gleyed	Matrix (F2))		Polyva	alue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11) _	Depleted Matrix					Park Surface (S9) (LRR K, L)
	rk Surface (A12)	-	Redox Dark Su	. ,	- 7\			langanese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1) leyed Matrix (S4)	-	Depleted DarkRedox Depress		7)			ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)	-	Redux Depress	SIONS (FO)				arent Material (F21)
-	Matrix (S6)							Shallow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149B)					(Explain in Remarks)
	hydrophytic vegetati	on and wet	land hydrology mus	st be prese	nt, unless	disturbed	or problemation	C.
	.ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes No _X
Remarks:								





NE Soil

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/C	County: Geauga County Sampling Date: 10/18/2021
	State: OH Sampling Point: Wetland LP-052
Investigator(s): MJA Section	· -
-	
Landform (hillslope, terrace, etc.): Footslope Local reli	ef (concave, convex, none): Concave Slope (%): 3
Subregion (LRR or MLRA): <u>LRR R</u> Lat: <u>41.598462000000000</u>	
Soil Map Unit Name: Or: Orrville silt loam, frequently flooded	NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of year? Y	es X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly distur	bed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problems	
SUMMARY OF FINDINGS – Attach site map showing sam	ppling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: Wetland LP-052
Remarks: (Explain alternative procedures here or in a separate report.)	
PEM wetland in maintained powerline easement.	
,	
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Leave	s (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B13)	
Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide Ode	
Sediment Deposits (B2) X Oxidized Rhizosphere	
Drift Deposits (B3) Presence of Reduced	
Algal Mat or Crust (B4) Recent Iron Reductio	
Iron Deposits (B5) Thin Muck Surface (C	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Ren	
Sparsely Vegetated Concave Surface (B8)	X FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes NoX _ Depth (inches):	
Saturation Present? Yes No _X Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes X No No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pre	vious inspections), if available:
	,
Remarks:	

/EGETATION – Use scientific names of plan	ts.	Sampling Point: Wetland LP-05
<u>Tree Stratum</u> (Plot size:) 1)	Absolute Dominant Indicate % Cover Species? Status	I Dominance Test Worksheet.
2		Total Number of Dominant Species Across All Strata: (A) (B)
4 5		Percent of Dominant Species That Are OBL, FACW, or FAC: 1 (A/B)
6		Prevalence Index worksheet:
7		Total % Cover of: Multiply by:
	= Total Cover	OBL species3 x 1 =3
Sapling/Shrub Stratum (Plot size: 15)		FACW species x 2 = 200
1		FAC species x 3 = 0
2		FACU species5 x 4 =20
_		UPL species 0 x 5 = 0
		— Column Totals:108 (A)223 (B)
4		Prevalence Index = B/A = 2.0648148148
5		_
6		Hydrophytic Vegetation Indicators: X 1 - Rapid Test for Hydrophytic Vegetation
7		X 2 - Dominance Test is >50%
	= Total Cover	$\frac{X}{X}$ 3 - Prevalence Index is $\leq 3.0^{1}$
Herb Stratum (Plot size: 5 1. Phalaris arundinacea	100 Yes FACV	4 - Morphological Adaptations ¹ (Provide supporting
2. Mimulus ringens		
3. Solidago canadensis	EA 01	- .
· · · · · · · · · · · · · · · · · · ·		Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4		Definitions of Vegetation Strata:
5 -		_
6		Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
8		Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10		Herb – All herbaceous (non-woody) plants, regardless of
		size, and woody plants less than 3.28 ft tall.
11		Woody vines – All woody vines greater than 3.28 ft in
12		height.
	108 = Total Cover	
Woody Vine Stratum (Plot size:)		
1		_
2		Hydrophytic Vegetation
3		Present? Yes X No
4.		
	= Total Cover	
Remarks: (Include photo numbers here or on a separat		
Remarks: (include photo numbers here or on a separar	te sneet.)	

SOIL Sampling Point: Wetland LP-052

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			x Feature:	<u>s</u>				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0 - 18	2.5Y 3/1	90	5YR 3/4	10	Concer	M,PL	Silty clay loam		
-									
-									
-									
-									
	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	Sand Gra	ains.		n: PL=Pore Lining, M=Matrix.	
Hydric Soil I								s for Problematic Hydric Soils ³ :	
Histosol			Polyvalue Belov		(S8) (LRR	RR,		Muck (A10) (LRR K, L, MLRA 149B)	
	pipedon (A2)		MLRA 149B		DD D 141	D 4 4 40 D		Prairie Redox (A16) (LRR K, L, R)	
Black His			Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)	
	n Sulfide (A4) I Layers (A5)		Loamy Mucky Mocky Moc			, ∟)		Surface (S7) (LRR K, L, M) alue Below Surface (S8) (LRR K, L)	
	d Below Dark Surface	(Δ11)	X Depleted Matrix						
	ark Surface (A12)	(/(1)	Redox Dark Su					Manganese Masses (F12) (LRR K, L, R)	
	lucky Mineral (S1)		Depleted Dark		7)			nont Floodplain Soils (F19) (MLRA 149B)	
	Sleyed Matrix (S4)		Redox Depress		.,			Spodic (TA6) (MLRA 144A, 145, 149B)	
	ledox (S5)						Red Parent Material (F21)		
-	Matrix (S6)						Very Shallow Dark Surface (TF12)		
	rface (S7) (LRR R, M	LRA 149E	3)				Other (Explain in Remarks)		
	,		,					(F	
³ Indicators of	hydrophytic vegetati	on and we	tland hydrology mus	st be prese	ent, unless	disturbed	or problemati	C.	
Restrictive L	ayer (if observed):								
Type:									
Depth (inc	ches):						Hydric Soi	I Present? Yes X No	
Remarks:	, ,						1 -		
remarks.									





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WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City/	County Geauga County Sampling Date: 10/18/2021					
	State: OH Sampling Point: Wetland LP-053					
Investigator(s): MJA Sec						
• ,,						
Landform (hillslope, terrace, etc.): Lowland Local re	elief (concave, convex, none): Concave Slope (%): Slope					
	57 Long: -81.22519883333334 Datum: WGS 1984					
Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classification: N/A					
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly distu	urbed? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problem						
	mpling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No					
Hydric Soil Present? Yes X No						
Wetland Hydrology Present? Yes X No Remarks: (Explain alternative procedures here or in a separate report.)	If yes, optional Wetland Site ID: Wetland LP-053					
Large PEM wetland in maintained powerline easement. Wetland drains int						
HYDROLOGY						
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1) Water-Stained Leav	res (B9) Drainage Patterns (B10)					
X High Water Table (A2) Aquatic Fauna (B13	Moss Trim Lines (B16)					
X Saturation (A3) Marl Deposits (B15)	Dry-Season Water Table (C2)					
Water Marks (B1) Hydrogen Sulfide O						
	res on Living Roots (C3) Saturation Visible on Aerial Imagery (C9)					
Drift Deposits (B3) Presence of Reduce						
	eduction in Tilled Soils (C6) X Geomorphic Position (D2)					
Iron Deposits (B5) Thin Muck Surface						
Inundation Visible on Aerial Imagery (B7) Other (Explain in Re						
Sparsely Vegetated Concave Surface (B8) Field Observations:	X FAC-Neutral Test (D5)					
Surface Water Present? Yes No _X _ Depth (inches): Water Table Present? Yes _X _No Depth (inches):	6					
Water Table Present? Yes X No Depth (inches): Saturation Present? Yes X No Depth (inches):						
(includes capillary fringe)	0 Wetland Hydrology Present? Yes X No No					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, pr	evious inspections), if available:					
Remarks:						
Remarks.						

EGETATION – Use scientific names of plants	i.		Sampling Point: Wetland LP-05
Tree Stratum (Plot size:) 1)		Dominant Indica Species? Stat	Number of Dominant Species
2. 3.			Total Number of Dominant
4 5.			Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B)
6			Prevalence Index worksheet:
7			Total % Cover of: Multiply by:
		= Total Cover	OBL species0 x 1 =0
Sapling/Shrub Stratum (Plot size: 15)			FACW species x 2 = 202
1			FAC species 0 x 3 = 0
2			FACU species
3			UPL species 0 x 5 = 0 Column Totals: 106 (A) 222 (B)
4			Column Totals:106
5			Prevalence Index = B/A = 2.0943396226
6			Hydrophytic Vegetation Indicators:
7			X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cover	X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)			X 3 - Prevalence Index is ≤3.0 ¹
1Phalaris arundinacea	100	Yes FAC	<u>ata in Remarks or on a separate sheet)</u>
2. Solidago canadensis	5	No FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
3. Impatiens capensis			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4			Definitions of Vegetation Strata:
5			
ö 7			Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.
8			Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
9			Herb – All herbaceous (non-woody) plants, regardless of
10			size, and woody plants less than 3.28 ft tall.
11 12.			Woody vines – All woody vines greater than 3.28 ft in
12		= Total Cover	height.
Woody Vine Stratum (Plot size:30)		_ Total Gover	
1			Hydrophytic
2			Vegetation
2			Present? Yes X No
3			Present? Yes X No
			Present? Yes X No

SOIL Sampling Point: Wetland LP-053

Profile Desc	ription: (Describe t	o the depth	n needed to docur	nent the i	ndicator c	or confirm	the absence	of indicators.)
Depth	Matrix			x Features	<u>3</u>	L = = 2	Tanduna	Damarka
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	<u>Texture</u>	Remarks
0 - 18	2.5Y 3/1	90	5YR 3/4	10	Concer	PL	Silty clay loam	
-								
-								
-			-					
-								
-								
-								
_								
-								
¹Type: C=Co	oncentration, D=Depl	etion RM=F	Reduced Matrix MS	S=Masked	Sand Gra	ins	² I ocation	: PL=Pore Lining, M=Matrix.
Hydric Soil I			toddood maan, m		<u> </u>			for Problematic Hydric Soils ³ :
Histosol	(A1)	_	Polyvalue Belov	w Surface	(S8) (LRR	R,	2 cm N	Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B					Prairie Redox (A16) (LRR K, L, R)
Black His		_	Thin Dark Surfa					Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	_	Loamy Mucky N			L)		Surface (S7) (LRR K, L, M)
	l Layers (A5) I Below Dark Surface	-(Δ11)	 Loamy Gleyed Depleted Matrix)		-	llue Below Surface (S8) (LRR K, L) ark Surface (S9) (LRR K, L)
	ark Surface (A12)		Redox Dark Su					anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	_	Depleted Dark	. ,	7)			ont Floodplain Soils (F19) (MLRA 149B)
-	leyed Matrix (S4)	_	Redox Depress	ions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B)
-	edox (S5)							arent Material (F21)
	Matrix (S6) face (S7) (LRR R, M	L D A 440D)						Shallow Dark Surface (TF12)
Dark Sur	Tace (57) (LRK K, IVI	LKA 149D)	1				Other	(Explain in Remarks)
³ Indicators of	hydrophytic vegetati	on and wet	and hydrology mus	t be prese	ent, unless	disturbed	or problemation	Σ.
	ayer (if observed):			· · · · · · · · · · · · · · · · · · ·				
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes X No No
Remarks:								



Ε



Soil





N W



WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmission Line Projec City	//County: Geauga County	Sampling Date: 10/18/2021			
Applicant/Owner: FirstEnergy	-	Sampling Point: Upland LP-052,053			
Investigator(s): MJA Sec					
Landform (hillslope, terrace, etc.): Shoulder slope Local	• • •	Slope (%): ⁵			
Subregion (LRR or MLRA): LRR R Lat: 41.598247516666 Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 6 percent slopes	NWI classific	cation: N/A			
Are climatic / hydrologic conditions on the site typical for this time of year?	Yes X No (If no, explain in F	Remarks.)			
Are Vegetation, Soil, or Hydrology significantly dis	turbed? Are "Normal Circumstances"	oresent? Yes X No			
Are Vegetation, Soil, or Hydrology naturally proble					
SUMMARY OF FINDINGS – Attach site map showing sa	ampling point locations, transects	s, important features, etc.			
Hydrophytic Vegetation Present? Yes NoX	Is the Sampled Area				
Hydric Soil Present? Yes NoX	within a Wetland? Yes				
Wetland Hydrology Present? Yes NoX Remarks: (Explain alternative procedures here or in a separate report.)	If yes, optional Wetland Site ID: Upland I	_P-052,053			
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indica	ators (minimum of two required)			
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil	Cracks (B6)			
Surface Water (A1) Water-Stained Lea	ves (B9) Drainage Pa	tterns (B10)			
High Water Table (A2) Aquatic Fauna (B1		Moss Trim Lines (B16)			
Saturation (A3) Marl Deposits (B15		Dry-Season Water Table (C2)			
Water Marks (B1) Hydrogen Sulfide (Crayfish Burrows (C8)			
		isible on Aerial Imagery (C9)			
Drift Deposits (B3) Presence of Reduc		tressed Plants (D1)			
	, ,	Position (D2)			
Iron Deposits (B5) Thin Muck Surface Inundation Visible on Aerial Imagery (B7) Other (Explain in F					
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral				
Field Observations:	I AC-Neutral	Test (D3)			
Surface Water Present? Yes No _X _ Depth (inches):					
Water Table Present? Yes No X Depth (inches):					
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Presei	nt? Yes No _X_			
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, p	previous inspections), if available:				
Remarks:					

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
1				Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2				Total Number of Dominant
3				Species Across All Strata:3 (B)
4				Percent of Dominant Species That Are OBL, FACW, or FAC: 0.3333333333 (A/B)
5				That Are OBL, FACW, or FAC: 0.333333333333333333333333333333333333
6		-	·	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	/er	OBL species0 x 1 =0
Sapling/Shrub Stratum (Plot size: 15)				FACW species 40 x 2 = 80
1Rubus allegheniensis	25	Yes	FACU	FAC species 0 x 3 = 0
2				FACU species x 4 = 340
3				UPL species 0 x 5 = 0 Column Totals: 125 (A) 420 (B)
4				Column Totals:125 (A)420 (B)
5				Prevalence Index = B/A = 3.36
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
	25	= Total Cov	/er	2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		_		3 - Prevalence Index is ≤3.0 ¹
1. Solidago canadensis	60	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
2. Phalaris arundinacea		Yes	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
3	·	·		¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
5				Definitions of Vegetation Strata:
6				Tree – Woody plants 3 in. (7.6 cm) or more in diameter
7				at breast height (DBH), regardless of height.
8				Sapling/shrub – Woody plants less than 3 in. DBH
9				and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
11				size, and woody plants less than 3.26 it tall.
12.		'		Woody vines – All woody vines greater than 3.28 ft in height.
		= Total Cov	/er	neight.
Woody Vine Stratum (Plot size:)		_		
1				
2				Hydrophytic
3				Vegetation Present? Yes No X
4.				
		= Total Cov	/er	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Sampling Point: Upland LP-052,053

SOIL Sampling Point: Upland LP-052,053

Profile Desc	ription: (Describe t	o the depti				or confirm	the absence	of indicators.)
Depth (in the ca)	Matrix	0/		x Features	T 1	12	Taveture	Damarka
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 - 18	10YR 4/3	100					Silty loam	
-								
-								
-								<u> </u>
-								
-								
1- 0.0							2, ,,	BL B. J. L. M. M. C.
Hydric Soil I	ncentration, D=Depl	etion, RIVI=I	Reduced Matrix, M	S=Masked	Sand Gra	ins.		r: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belo	w Surface	(S8) (I DD	D		Muck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)	-	MLRA 149B		(30) (LIXIX	. т.,		Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa	•	RR R, ML	RA 149B)		Mucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)	<u>-</u>	Loamy Mucky I					Surface (S7) (LRR K, L, M)
	Layers (A5)	-	Loamy Gleyed	Matrix (F2))		Polyva	alue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11) _	Depleted Matri					eark Surface (S9) (LRR K, L)
	rk Surface (A12)	=	Redox Dark Su	. ,	7 \			langanese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1) leyed Matrix (S4)	-	Depleted Dark Redox Depress		7)			ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
	edox (S5)	=	Redux Depress	sions (1 o)				arent Material (F21)
-	Matrix (S6)							Shallow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149B)					(Explain in Remarks)
	hydrophytic vegetati	on and wet	land hydrology mu	st be prese	nt, unless	disturbed	or problemation	C.
	.ayer (if observed):							
Type:								
Depth (inc	ches):						Hydric Soil	Present? Yes No _X
Remarks:								





SE Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transmis	ssion Line Projec City/County: Geau	ıga County	Sampling Date: 10/18/2021		
Applicant/Owner: FirstEnergy			Sampling Point: Wetland LP-054		
Investigator(s): MJA					
Landform (hillslope, terrace, etc.): Swale			Slope (%): ²		
Subregion (LRR or MLRA): LRR R La Soil Map Unit Name: MgB: Mahoning silt loam, 2 to 0	6 percent slopes	NWI classific	cation: N/A		
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes X	No (If no, explain in F	Remarks.)		
Are Vegetation, Soil, or Hydrology	X significantly disturbed?	Are "Normal Circumstances"	present? Yes X No		
Are Vegetation, Soil, or Hydrology		(If needed, explain any answe			
SUMMARY OF FINDINGS – Attach site	map showing sampling poi	nt locations, transects	s, important features, etc.		
	No If yes, optio	pled Area etland? Yes X nal Wetland Site ID: Wetland			
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indicate	ators (minimum of two required)		
Primary Indicators (minimum of one is required; che	eck all that apply)	Surface Soil			
Surface Water (A1)	_ Water-Stained Leaves (B9)	Drainage Pa			
	_ Aquatic Fauna (B13)	Moss Trim Lines (B16)			
	_ Marl Deposits (B15)	Dry-Season Water Table (C2)			
	_ Hydrogen Sulfide Odor (C1)	Crayfish Bui	` '		
	_ Oxidized Rhizospheres on Living I		isible on Aerial Imagery (C9)		
	Presence of Reduced Iron (C4)		Stressed Plants (D1)		
	_ Recent Iron Reduction in Tilled So				
	_ Thin Muck Surface (C7)	Shallow Aqu	` '		
	_ Other (Explain in Remarks)	· -	aphic Relief (D4)		
Sparsely Vegetated Concave Surface (B8) Field Observations:	ı	X FAC-Neutra	T Test (D5)		
	Donth (inches):				
Surface Water Present? Yes No X					
Water Table Present? Yes No _X		Wadan I Hadada an Basan			
Saturation Present? Yes No _X (includes capillary fringe)	Depth (inches):	Wetland Hydrology Prese	nt? Yes X No		
Describe Recorded Data (stream gauge, monitoring	g well, aerial photos, previous inspec	tions), if available:			
Remarks:					
Tomano.					

EGETATION – Use scientific names of plants				Sampling Point: Wetland LP-05
Tree Stratum (Plot size:)		Dominant Species?		Dominance Test worksheet: Number of Dominant Species
1 2				That Are OBL, FACW, or FAC:1 (A) Total Number of Dominant Species Across All Strata: 1 (B)
3 4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:1 (A/B
5 7				Prevalence Index worksheet:
	·	= Total Cov		
Sapling/Shrub Stratum (Plot size: 15)		Total Cov	o.	FACW species 100 x 2 = 200
				FAC species5 x 3 =15
1				FACU species15 x 4 =60
2				UPL species0 x 5 =0
3				Column Totals:120(A)275(B)
4 5				Prevalence Index = B/A = 2.29166666666
5				Hydrophytic Vegetation Indicators:
7				X 1 - Rapid Test for Hydrophytic Vegetation
		= Total Cov		X 2 - Dominance Test is >50%
Herb Stratum (Plot size:5)		Total Cov	o.	X 3 - Prevalence Index is ≤3.0 ¹
1. Phalaris arundinacea	100	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
Solidago canadensis	10	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
Symphyotrichum pilosum			FACU	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Euthamia graminifolia	5		<u>FAC</u>	<u>'</u>
5				Definitions of Vegetation Strata:
5 7				Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.
3 9.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				Herb – All herbaceous (non-woody) plants, regardless of
11				size, and woody plants less than 3.28 ft tall.
12				Woody vines – All woody vines greater than 3.28 ft in height.
	120	= Total Cov	er	
Noody Vine Stratum (Plot size:)				
1				
				Hydrophytic Vegetation
<u>.</u>				Present? Yes X No
2 3.				
3				
		= Total Cov	 er	

SOIL Sampling Point: Wetland LP-054

Depth	ription: (Describe t Matrix	-	Redo	ox Features	S				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0 - 8	10YR 3/2	95	2.5YR 4/8	5	Concer	PL	Silty loam		
8 - 18	10YR 4/2	95	5YR 4/4	5	Concer	PL,M	Silty clay loam		
							·		
-									
-									
							·		
-							·		
-									
							-		
						-			
1 0.0							2, ,,	<u> </u>	
		etion, RM:	=Reduced Matrix, M	IS=Masked	Sand Gra	iins.			
-			Polyvalue Belo	w Surface	(S8) (LRR	R,		•	
Histic Epi	pedon (A2)		MLRA 149B	3)			Coast	Prairie Redox (A16) (LRR K, L, R)	
						L)			
	Below Dark Surface	e (A11)	Depleted Matri		,		-	Park Surface (S9) (LRR K, L)	
	rk Surface (A12)		X Redox Dark Su		\			langanese Masses (F12) (LRR K, L, R)	
					7)				
			Redox Depres	310113 (1 0)					
Stripped	Matrix (S6)						Very Shallow Dark Surface (TF12)		
Dark Surf	face (S7) (LRR R, M	ILRA 1491	3)				Other	(Explain in Remarks)	
³ Indicators of	hydrophytic vegetati	ion and we	etland hydrology mu	st be prese	ent, unless	disturbed	d or problemation	3 .	
Restrictive L	ayer (if observed):								
Type:								V	
	hes):	_					Hydric Soil	Present? Yes X No No	
Remarks:									
Hydric Soil Ir Histosol (Histic Epi Black His Hydroger Stratified Depleted Thick Dan Sandy Mo Sandy Gl Sandy Re Stripped Dark Surf	ippedon (A2) itic (A3) in Sulfide (A4) Layers (A5) Below Dark Surface rk Surface (A12) ucky Mineral (S1) eyed Matrix (S4) edox (S5) Matrix (S6) face (S7) (LRR R, M hydrophytic vegetati ayer (if observed):	e (A11) ILRA 1491	Polyvalue Belo MLRA 149B Thin Dark Surf Loamy Mucky Loamy Gleyed Depleted Matri X Redox Dark Su Depleted Dark Redox Depress	ow Surface Acce (S9) (L Mineral (F1 Matrix (F2 x (F3) urface (F6) Surface (F8)	(S8) (LRR LRR R, ML I) (LRR K,)	R, RA 149B L)	Indicators 2 cm N Coast 5 cm N Dark S Polyva Thin D Iron-M Piedm Mesic Red P Very S Other	Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L, M) salue Below Surface (S8) (LRR K, L) bark Surface (S9) (LRR K, L) langanese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21) Shallow Dark Surface (TF12) (Explain in Remarks)	





Soil NW





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WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfie	eld 138 kV Trans	mission Line Projec City/	County: Geau	iga County	Sampling Date: 10/18/2021
Applicant/Owner: FirstEnergy					Sampling Point: Wetland LP-055
Investigator(s): MJA		Sect	ion, Township		
Landform (hillslope, terrace, etc.):					Slope (%): ²
					5 Datum: WGS 1984
Soil Map Unit Name: MgB: Mahor	ning silt loam, 2	to 6 percent slopes		NWI classi	fication: N/A
Are climatic / hydrologic conditions					
Are Vegetation, Soil		-			" present? Yes X No
Are Vegetation, Soil				If needed, explain any answ	
					ts, important features, etc.
			Is the Sam	·	,, portain router oo, otor
Hydrophytic Vegetation Present? Hydric Soil Present?		X No X No	within a W	·	(No
Wetland Hydrology Present?			If yes ontion	nal Wetland Site ID: Wetlan	d LP-055
Remarks: (Explain alternative pr			ii yes, optio	nai vvetiana olie ib	
HYDROLOGY					
Wetland Hydrology Indicators:	:			Secondary Indi	cators (minimum of two required)
Primary Indicators (minimum of o	one is required;	check all that apply)		Surface So	oil Cracks (B6)
Surface Water (A1)		Water-Stained Leav		Drainage F	
X High Water Table (A2)		Aquatic Fauna (B13		Moss Trim	
X Saturation (A3)		Marl Deposits (B15)			n Water Table (C2)
Water Marks (B1) Sediment Deposits (B2)		Hydrogen Sulfide Oo Oxidized Rhizosphe		Crayfish Bu	urrows (C8) Visible on Aerial Imagery (C9)
Orift Deposits (B3)		Presence of Reduce	_		Stressed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reducti			` '
Iron Deposits (B5)		Thin Muck Surface (Shallow Ac	
Inundation Visible on Aerial	Imagery (B7)	Other (Explain in Re	emarks)	Microtopog	graphic Relief (D4)
Sparsely Vegetated Concav	e Surface (B8)			X FAC-Neutr	al Test (D5)
Field Observations:					
		X Depth (inches):	40		
		Depth (inches):	10 0	Matley d Hudgele ou Duce	anto Van V
Saturation Present? Yaturation Present?	res No _	Depth (inches):	U	Wetland Hydrology Prese	ent? Yes <u>X</u> No
Describe Recorded Data (stream	n gauge, monitor	ring well, aerial photos, pr	evious inspec	tions), if available:	
Remarks:					
1					

			Sampling Point: Wetland LP-05
	Dominant Species?		Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
			Total Number of Dominant Species Across All Strata: 1 (B)
			Percent of Dominant Species That Are OBL, FACW, or FAC:1 (A/B
			Prevalence Index worksheet:
			Total % Cover of: Multiply by:
	= Total Cove	er	OBL species10 x 1 =10
			FACW species100 x 2 =200
			FAC species5 x 3 =15
			FACU species 10 x 4 = 40
			UPL species x 5 = 0
			Column Totals:125(A)265(B)
			Prevalence Index = B/A = 2.12
			Hydrophytic Vegetation Indicators:
			X 1 - Rapid Test for Hydrophytic Vegetation
			X 2 - Dominance Test is >50%
	= Total Cove	er	X 3 - Prevalence Index is ≤3.0¹
100	Yes	FACW	4 - Morphological Adaptations ¹ (Provide supportine data in Remarks or on a separate sheet)
10	No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
			¹Indicators of hydric soil and wetland hydrology must
			be present, unless disturbed or problematic.
			Definitions of Vegetation Strata:
		170	
			Tree – Woody plants 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.
			Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
			Herb – All herbaceous (non-woody) plants, regardless of
			size, and woody plants less than 3.28 ft tall.
			Woody vines – All woody vines greater than 3.28 ft in
	- Tatal Caus		height.
123	= Total Cove	er.	
			Hydrophytic
			Vegetation
			Present? Yes X No
	= Total Cove	er	
	100 10 5 5 5	= Total Cove = Total Cove 100	= Total Cover = Total Cover = Total Cover 100

SOIL Sampling Point: Wetland LP-055

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator o	or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	<u></u> %	Redo Color (moist)	x Features %	Type ¹	Loc ²	Texture	Remarks
								Remarks
0 - 18	10YR 4/2	98	10YR 4/6	2	Concer	M	Clay loam	
-								
-								
					· <u> </u>			
				-				<u> </u>
-								
	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ins.		: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indicators	for Problematic Hydric Soils ³ :
Histosol		_	Polyvalue Belov		(S8) (LRR	R,		Muck (A10) (LRR K, L, MLRA 149B)
	oipedon (A2)		MLRA 149B)		DD D MI	D A 440D)		Prairie Redox (A16) (LRR K, L, R)
Black His	stic (A3) n Sulfide (A4)	_	Thin Dark Surfa Loamy Mucky N					Mucky Peat or Peat (S3) (LRR K, L, R) Surface (S7) (LRR K, L, M)
	Layers (A5)	-	Loamy Gleyed			_)		alue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	X Depleted Matrix		,			eark Surface (S9) (LRR K, L)
	rk Surface (A12)	_	Redox Dark Su	, ,				anganese Masses (F12) (LRR K, L, R)
	lucky Mineral (S1)	_	Depleted Dark		7)			ont Floodplain Soils (F19) (MLRA 149B)
-	leyed Matrix (S4) edox (S5)	-	Redox Depress	sions (F8)				Spodic (TA6) (MLRA 144A, 145, 149B) arent Material (F21)
-	Matrix (S6)							Shallow Dark Surface (TF12)
	face (S7) (LRR R, M	LRA 149B)						(Explain in Remarks)
	hydrophytic vegetati	on and wetl	and hydrology mus	st be prese	nt, unless	disturbed	or problemation	Э.
	ayer (if observed):							
Type:								
	ches):						Hydric Soil	Present? Yes X No No
Remarks:								





Soil





W



Ε

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Ma	yfield 138 kV Trans	smission Line Projec City/0	County: Geauga County	,	Sampling Date: 10/18/2021
Applicant/Owner: FirstEnergy			,		Sampling Point: Upland LP-054,055
		Secti	on Township Range ^{. N}	· · · · · · · · · · · · · · · · · · ·	
Landform (hillslope, terrace, et					Slone (%). 8
candioini (illisiope, terrace, et	C.)	Local Te	6 -81	2268956	Slope (70) Datum: WGS 1984
Subregion (LRR or MLRA): L	shoping silt loom. 2	Lat: 41.000444000000	Long: 01	.2200000	Datum:
Soil Map Unit Name: MgB: Mg					
Are climatic / hydrologic condit	ions on the site typ	oical for this time of year? `	res X No	(If no, explain in Re	marks.)
Are Vegetation, Soil	, or Hydrology	y significantly distu	rbed? Are "Norma	al Circumstances" pr	esent? Yes X No
Are Vegetation, Soil	, or Hydrology	y naturally problem	atic? (If needed,	explain any answers	s in Remarks.)
SUMMARY OF FINDIN	GS – Attach si	ite map showing sar	npling point locati	ons, transects,	important features, etc.
Hydrophytic Vegetation Prese	ent? Yes	NoX	Is the Sampled Area		
		X No	within a Wetland?	Yes	_ No
Wetland Hydrology Present?		No X	If yes, optional Wetlan	d Site ID: Upland LP	-054,055
Remarks: (Explain alternativ	e procedures here	or in a separate report.)			
HYDROLOGY					
Wetland Hydrology Indicate	ors:			Secondary Indicate	ors (minimum of two required)
Primary Indicators (minimum	of one is required;	check all that apply)		Surface Soil C	racks (B6)
Surface Water (A1)		Water-Stained Leave	es (B9)	Drainage Patte	erns (B10)
High Water Table (A2)		Aquatic Fauna (B13)	1	Moss Trim Lin	es (B16)
Saturation (A3)		Marl Deposits (B15)		Dry-Season W	ater Table (C2)
Water Marks (B1)		Hydrogen Sulfide Oc	lor (C1)	Crayfish Burro	ws (C8)
Sediment Deposits (B2)		Oxidized Rhizospher			ible on Aerial Imagery (C9)
Drift Deposits (B3)		Presence of Reduce	, ,		essed Plants (D1)
Algal Mat or Crust (B4)		Recent Iron Reduction		Geomorphic P	
Iron Deposits (B5)		Thin Muck Surface (Shallow Aquita	
Inundation Visible on Ae		Other (Explain in Re	marks)	Microtopograp	
Sparsely Vegetated Con Field Observations:	cave Surface (B8)		T	FAC-Neutral T	est (D5)
	V N-	V Double (to the co)			
Surface Water Present?		X Depth (inches):			
Water Table Present?		X Depth (inches): X Depth (inches):	Watland	Ularda al a sua Dua a a sati	O Voc No V
Saturation Present? (includes capillary fringe)	res No_	Depth (inches):	vvetiand	Hydrology Present	? Yes No <u>X</u>
Describe Recorded Data (stre	eam gauge, monito	oring well, aerial photos, pre	evious inspections), if av	ailable:	
Remarks:					
Remarks.					

/EGETATION – Use scientific names of plant	S.			Sampling Point:		
Tree Stratum (Plot size:30)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:		
1				Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)		
2				(*,)		
3				Total Number of Dominant Species Across All Strata: 2 (B)		
<u> </u>				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC:0 (A/B)		
)				Prevalence Index worksheet:		
·				Total % Cover of: Multiply by:		
		= Total Cov	/er	OBL species0 x 1 =0		
Sapling/Shrub Stratum (Plot size: 15)				FACW species0 x 2 =0		
				FAC species45		
<u>.</u>				FACU species		
l				01 L species x 0 =		
k <u> </u>				Column Totals (A)		
5				Prevalence Index = B/A = 3.7		
i				Hydrophytic Vegetation Indicators:		
·				1 - Rapid Test for Hydrophytic Vegetation		
		= Total Cov	/er	2 - Dominance Test is >50%		
Herb Stratum (Plot size:5)				3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supporting		
Schizachyrium scoparium	50	Yes	FACU	data in Remarks or on a separate sheet)		
Solidago canadensis	15	No	FACU	Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must		
3. Euthamia graminifolia	15	No	FAC			
4. Rubus allegheniensis	40	Yes	FACU	be present, unless disturbed or problematic.		
5Solidago rugosa	10	No	FAC	Definitions of Vegetation Strata:		
5Juncus tenuis	20	No	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameter		
7				at breast height (DBH), regardless of height.		
3			· ——	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.		
)						
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
l1			·	Woody vines – All woody vines greater than 3.28 ft in		
12				height.		
	150	= Total Cov	/er			
Noody Vine Stratum (Plot size: 30)						
				Hydrophytic		
2				Hydrophytic Vegetation		
3				Present? Yes No X		
4. <u> </u>		-	. ———			
		= Total Cov	/er			

SOIL Sampling Point: Upland LP-054,055

Profile Desc	ription: (Describe t	o the deptl	n needed to docur	nent the i	ndicator o	or confirm	the absence	of indicators.)
Depth	Matrix	0/		x Features	<u>3</u>	Loc ²	Tavetura	Demodus
(inches) 0 - 4	Color (moist) 10YR 4/3	<u>%</u> _	Color (moist)	%	Type ¹	LOC	Texture Silty loam	<u>Remarks</u>
			7. EVD. 6/6					
4 - 18	10YR 6/1	80	7.5YR 6/6	20	Concer	M	Silty clay loam	
-								
-								
						·		
-								
-								
¹ Type: C=Co	oncentration, D=Deple	etion RM=I	Reduced Matrix MS	S=Masked	Sand Gra	ins	² l ocation	: PL=Pore Lining, M=Matrix.
Hydric Soil I		<i>-</i>		<u></u>	<u> </u>			for Problematic Hydric Soils ³ :
Histosol		_	Polyvalue Belov		(S8) (LRR	R,		luck (A10) (LRR K, L, MLRA 149B)
Histic Ep	oipedon (A2)		MLRA 149B Thin Dark Surfa		DD D MI	DA 140D		Prairie Redox (A16) (LRR K, L, R)
	n Sulfide (A4)	_	Loamy Mucky N					flucky Peat or Peat (S3) (LRR K, L, R) urface (S7) (LRR K, L, M)
Stratified	Layers (A5)	- -	Loamy Gleyed			,		lue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11) _	X Depleted Matrix					ark Surface (S9) (LRR K, L)
	ark Surface (A12) lucky Mineral (S1)	=	Redox Dark Su Depleted Dark \$1		7)			anganese Masses (F12) (LRR K, L, R) ont Floodplain Soils (F19) (MLRA 149B)
	sleyed Matrix (S4)	- -	Redox Depress		,			Spodic (TA6) (MLRA 144A, 145, 149B)
-	ledox (S5)							arent Material (F21)
	Matrix (S6) rface (S7) (LRR R, M	Ι ΡΔ 14 9Β	1					hallow Dark Surface (TF12) Explain in Remarks)
Bank Gan	nace (c/) (Little it, iii	LIVA 1400,	'				Other (Explain in Comarko,
	hydrophytic vegetati	on and wet	and hydrology mus	t be prese	nt, unless	disturbed	or problematic	s
	_ayer (if observed):							
Type:	ches):						Hydric Soil	Present? Yes X No
Remarks:							,	
r tomanto.								





E Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Ma	yfield 138 kV Trans	smission Line Projec City/C	county: Geauga County		Sampling Date: 08/09/2021		
Applicant/Owner: FirstEnergy			,		Sampling Point: Wetland LP-056		
		Section	on Township Range ^{. N}				
					Slone (%): 2		
C. L: (LDD ALLDA) LF	C.). RR R		er (concave, convex, no	22834215	Slope (%): 2 Datum: WGS 1984		
Soil Map Unit Name: EhC: Ell							
Are climatic / hydrologic condit	ions on the site type	ical for this time of year? Y	es X No	(If no, explain in Re	marks.)		
Are Vegetation, Soil	, or Hydrology	y significantly distur	bed? Are "Norma	Il Circumstances" pr	esent? Yes X No		
Are Vegetation, Soil	, or Hydrology	y naturally problema	atic? (If needed,	explain any answers	s in Remarks.)		
SUMMARY OF FINDIN	GS – Attach si	ite map showing sam	npling point location	ons, transects,	important features, etc.		
Hydrophytic Vegetation Prese	ent? Yes	X No	Is the Sampled Area				
Hydric Soil Present?		X No	within a Wetland?	Yes X	_ No		
Wetland Hydrology Present?		X No	If yes, optional Wetlan	d Site ID. Wetland L	P-056		
Remarks: (Explain alternative			ii yee, optional wettan	u one ib			
between polygons.	owerline easement	t, disected by atv access roa	ad. Occasional flooding	over access road cr	eates hydrological connection		
HYDROLOGY							
Wetland Hydrology Indicate	ors:			Secondary Indicat	ors (minimum of two required)		
Primary Indicators (minimum	of one is required;	check all that apply)		Surface Soil C	Cracks (B6)		
Surface Water (A1)		Water-Stained Leave	s (B9)	Drainage Patt	erns (B10)		
High Water Table (A2)		Aquatic Fauna (B13)		Moss Trim Lines (B16)			
Saturation (A3)		Marl Deposits (B15)		Dry-Season V	/ater Table (C2)		
Water Marks (B1)		Hydrogen Sulfide Od	or (C1)	Crayfish Burro			
Sediment Deposits (B2)		X Oxidized Rhizosphere	-		ible on Aerial Imagery (C9)		
Drift Deposits (B3)		Presence of Reduced	, ,		essed Plants (D1)		
Algal Mat or Crust (B4)		Recent Iron Reductio	, ,	Geomorphic F			
Iron Deposits (B5)		Thin Muck Surface (C	•	Shallow Aquit			
Inundation Visible on Ae		Other (Explain in Rer	narks)	Microtopograp			
Sparsely Vegetated Con	cave Surface (B8)			X FAC-Neutral	est (D5)		
Field Observations:	.,	V 5 " " \ \					
Surface Water Present?		X Depth (inches):					
Water Table Present?		X Depth (inches):					
Saturation Present? (includes capillary fringe)		X Depth (inches):		Hydrology Present	? Yes <u>X</u> No		
Describe Recorded Data (stre	eam gauge, monito	oring well, aerial photos, pre	vious inspections), if av	ailable:			
Remarks:							
Nemana.							
1							

EGETATION – Use scientific names of plants	S .			Sampling Point: Wetland LP-0		
ree Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:		
(Flot size		No No	Status	Number of Dominant Species That Are OBL, FACW, or FAC:3(A)		
				Total Number of Dominant Species Across All Strata:3 (B)		
				Percent of Dominant Species		
				That Are OBL, FACW, or FAC:1 (A/E		
				Prevelence Index weather set		
				Prevalence Index worksheet: Total % Cover of: Multiply by:		
		= Total Cov	er	OBL species51 x 1 =51		
apling/Shrub Stratum (Plot size: 15)				FACW species 80 x 2 = 160		
		No		FAC species 20 x 3 = 60		
				FACU species 10 x 4 = 40		
				UPL species 0 x 5 = 0		
				Column Totals:161 (A)311 (B		
				Prevalence Index = B/A = 1.9316770186		
				Hydrophytic Vegetation Indicators:		
				X 1 - Rapid Test for Hydrophytic Vegetation		
		= Total Cov		X 2 - Dominance Test is >50%		
erb Stratum (Plot size:5)		- Total Cov	CI	X 3 - Prevalence Index is ≤3.0 ¹		
Juncus torreyi	10	No	FACW	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
Agrostis gigantea		Yes	FACW	Problematic Hydrophytic Vegetation¹ (Explain)		
Juncus effusus	30		OBL	¹ Indicators of hydric soil and wetland hydrology must		
Schedonorus arundinaceus	40	No	FACU	be present, unless disturbed or problematic.		
Carex vulpinoidea	15	No	OBL	Definitions of Vegetation Strata:		
Euthamia graminifolia	20	No	FAC	Tree – Woody plants 3 in. (7.6 cm) or more in diameted		
Phalaris arundinacea	40	Yes	FACW	at breast height (DBH), regardless of height.		
Scirpus atrovirens	5	No	OBL	Sapling/shrub – Woody plants less than 3 in. DBH		
Lythrum salicaria	1	No	OBL	and greater than or equal to 3.28 ft (1 m) tall.		
)				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
2.				Woody vines – All woody vines greater than 3.28 ft in height.		
	161	= Total Cov	er			
oody Vine Stratum (Plot size:)						
		No				
				Hydrophytic Vegetation		
				Present? Yes X No		
				Present? Yes X No		
		= Total Cov	er	Present? Yes X No		

SOIL Sampling Point: Wetland LP-056

Profile Desc	ription: (Describe to	o the dep	h needed to docun	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth (inches)	Matrix Color (moist)	%	Redox Color (moist)	K Features	S Type ¹	Loc ²	Texture	Remarks
0 - 18	10YR 4/2	92	5YR 4/6	8	Concer	PL	Silty loam	
-								
-								
-								
-								
_								
¹ Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol			Polyvalue Belov	y Surface	(S9) (I DE) D		fuck (A10) (LRR K, L, MLRA 149B)
	ipedon (A2)		MLRA 149B)		(30) (LK r	х κ,		Prairie Redox (A16) (LRR K, L, R)
Black His			Thin Dark Surfa		.RR R, MI	RA 149B		flucky Peat or Peat (S3) (LRR K, L, R)
	n Sulfide (A4)		Loamy Mucky M					urface (S7) (LRR K, L, M)
	Layers (A5)		Loamy Gleyed I			,		lue Below Surface (S8) (LRR K, L)
	Below Dark Surface	(A11)	X Depleted Matrix					ark Surface (S9) (LRR K, L)
Thick Da	rk Surface (A12)		Redox Dark Sur	face (F6)			Iron-Ma	anganese Masses (F12) (LRR K, L, R)
Sandy M	lucky Mineral (S1)		Depleted Dark S	Surface (F	7)		Piedmo	ont Floodplain Soils (F19) (MLRA 149B)
Sandy G	leyed Matrix (S4)		Redox Depress	ions (F8)			Mesic	Spodic (TA6) (MLRA 144A, 145, 149B)
	edox (S5)						Red Pa	arent Material (F21)
Stripped	Matrix (S6)						Very S	hallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, M	LRA 149E	3)				Other (Explain in Remarks)
	hydrophytic vegetati	on and we	tland hydrology mus	t be prese	ent, unless	disturbed	or problematic	i.
	ayer (if observed):							
Type:								5 10 Y Y
Depth (inc	enes):						Hydric Soil	Present? Yes X No No
Remarks:								





E N





W



Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Leroy Center-Mayfield 138 kV Transm	nission Line Projec City/County: Ge	eauga County	Sampling Date: 08/09/2021
Applicant/Owner: FirstEnergy			Sampling Point: Upland LP-056
Investigator(s): MJA			
Landform (hillslope, terrace, etc.): Hillside			Slope (%): ³
Subregion (LRR or MLRA): LRR R			
Soil Map Unit Name: EhC: Ellsworth silt loam, 6 to	12 percent slopes	NWI classific	cation: N/A
Are climatic / hydrologic conditions on the site typical	al for this time of year? Yes X	No (If no, explain in R	Remarks.)
Are Vegetation, Soil, or Hydrology _	significantly disturbed?	Are "Normal Circumstances"	oresent? Yes X No
Are Vegetation, Soil, or Hydrology _			
SUMMARY OF FINDINGS – Attach site	e map showing sampling p	oint locations, transects	s, important features, etc.
		mpled Area	
	NO	Wetland? Yes	
Wetland Hydrology Present? Yes Remarks: (Explain alternative procedures here or		tional Wetland Site ID: Upland L	_P-056
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; ch	neck all that apply)	Surface Soil	Cracks (B6)
Surface Water (A1)	Water-Stained Leaves (B9)	Drainage Pa	tterns (B10)
	Aquatic Fauna (B13)	Moss Trim L	
	Marl Deposits (B15)	Dry-Season	Water Table (C2)
	Hydrogen Sulfide Odor (C1)	Crayfish Bur	` '
	Oxidized Rhizospheres on Livin		isible on Aerial Imagery (C9)
	Presence of Reduced Iron (C4)		tressed Plants (D1)
· · ·	Recent Iron Reduction in Tilled	· · · —	, ,
	Thin Muck Surface (C7) Other (Explain in Remarks)	Shallow Aqu Microtopogra	· ·
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)	Microtopogra	
Field Observations:		I AC-Neutral	Test (D3)
	X Depth (inches):		
	X Depth (inches):		
	X Depth (inches):	Wetland Hydrology Preser	nt? Yes No _X_
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring	ng well, aerial photos, previous insp	ections), if available:	
Remarks:			

Tree Stratum (Plot size: 30)	Absolute	Dominant Species?	Indicator	Dominance Test worksheet:		
Tree Stratum (Flot size)			Status	Number of Dominant Species		
1				That Are OBL, FACW, or FAC:0 (A)		
2				Total Number of Dominant		
3				Species Across All Strata:1 (B)		
4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC:0 (A/B)		
6				Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
		= Total Co		OBL species 0 x 1 = 0		
Sapling/Shrub Stratum (Plot size: 15)				FACW species0		
1		No		FAC species 0 x 3 = 0		
				FACU species 90 x 4 = 360		
2				UPL species3 x 5 =15		
3				Column Totals: 93 (A) 372 (B)		
4				Provalence Index = R/A = 4		
5		-		Prevalence Index = B/A = 4		
6				Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation		
		= Total Co	ver	2 - Dominance Test is >50%		
Herb Stratum (Plot size:5)				3 - Prevalence Index is ≤3.0 ¹		
1. Schedonorus arundinaceus	60	Yes	FACU	4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)		
2. Agrostis perennans		No	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)		
3. Daucus carota			UPL	¹ Indicators of hydric soil and wetland hydrology must		
			FACU	be present, unless disturbed or problematic.		
			FACU	Definitions of Vegetation Strata:		
			FACU	_		
6. Phleum pratense	5	No		Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.		
7						
8				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.		
9						
10				Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
11						
12				Woody vines – All woody vines greater than 3.28 ft in height.		
	93	= Total Co	ver			
Woody Vine Stratum (Plot size:)		•				
1		No				
				Hydrophytic		
2		-		Vegetation Present? Yes No X		
3				Tesent: TesNO		
4						
		= Total Co	ver			
Remarks: (Include photo numbers here or on a separate	sheet.)					

Sampling Point: Upland LP-056

SOIL Sampling Point: Upland LP-056

Profile Description: (Describe to the de	pth needed to docu	ment the indica	tor or confirm	n the absence	of indicators.)
Depth Matrix		ox Features	-1 12	Tauduma	Damarka
(inches) Color (moist) %	Color (moist)	% Typ	e ¹ Loc ²	<u>Texture</u>	Remarks
0 - 3 10YR 5/4 100				Silty loam	
-					
-					
-					
-					
	-			-	
-					
-					
-					
-					
17 00 10 10 10 10 10				21	<u> </u>
¹ Type: C=Concentration, D=Depletion, RM Hydric Soil Indicators :	I=Reduced Matrix, M	S=Masked Sand	Grains.		: PL=Pore Lining, M=Matrix. for Problematic Hydric Soils ³ :
Histosol (A1)	Polyvalue Relo	w Surface (S8) (I DD D		fuck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2)	MLRA 149B		LIXIX IX,		Prairie Redox (A16) (LRR K, L, R)
Black Histic (A3)		, ace (S9) (LRR R	, MLRA 149B		Mucky Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)		Mineral (F1) (LR			surface (S7) (LRR K, L, M)
Stratified Layers (A5)	Loamy Gleyed	Matrix (F2)		Polyva	lue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface (A11)	Depleted Matri				ark Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	Redox Dark Su	, ,			anganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Sandy Gleyed Matrix (S4)	Depleted Dark Redox Depress				ont Floodplain Soils (F19) (MLRA 149B) Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Gleyed Matrix (34)	Redux Depress	sions (Fo)			arent Material (F21)
Stripped Matrix (S6)					hallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLRA 149	B)				(Explain in Remarks)
³ Indicators of hydrophytic vegetation and w	etland hydrology mu	st be present, ur	less disturbed	or problemation	b.
Restrictive Layer (if observed): X					
Type:_Rocky	-				
Depth (inches): 3	_			Hydric Soil	Present? Yes No _X
Remarks:					
•					





Site: V	Vetlan	d LP-(001	Rater(s): BAO		Date: 2021-11-11
4	4] Metr	ic 1. Wetland A	rea (size).		
max 6 pts.	subtotal	4	ne size class and assign scor >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20 10 to <25 acres (4 to <10.11 3 to <10 acres (1.2 to <4ha) 0.3 to <3 acres (0.12 to <1.3 0.1 to <0.3 acres (0.04 to <0 <0.1 acres (0.04ha) (0 pts)	e. 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
9	13	Metr	ic 2. Upland bu	ffers and surroun	nding land use.	
max 14 pts.	subtotal	2a. Cald	culate average buffer width. S WIDE. Buffers average 50r MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers average very very sample of surrounding land use. VERY LOW. 2nd growth or LOW. Old field (>10 years)	Select only one and assign score m (164ft) or more around wetland 25m to <50m (82 to <164ft) arou- e 10m to <25m (32ft to <82ft) arou- average <10m (<32ft) around we Select one or double check ard older forest, prairie, savannah, , shrubland, young second grow sidential, fenced pasture, park, co	e. Do not double check. d perimeter (7) und wetland perimeter (4) round wetland perimeter (1) etland perimeter (0) nd average. wildlife area, etc. (7) th forest. (5)	
		,		pen pasture, row cropping, mining		W Hold: (0)
10	23		ic 3. Hydrology			
max 30 pts.	subtotal	Х	rices of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surface Perennial surface water (lakkimum water depth. Select on >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in)	ce water (3) se or stream) (5) sly one and assign score.	X Part of wetland/up Part of riparian or Bd. Duration inundation/satu Semi- to permane X Regularly inundat Seasonally inundat	in (1) lake and other human use (1) cland (e.g. forest), complex (1) cupland corridor (1) curation. Score one or dbl check ently inundated/saturated (4) ded/saturated (3) lated (2)
		3e. Mod	_	c regime. Score one or double of	check and average.	ated in upper 30cm (12in) (1)
		X	None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)	Check all disturbances obser X ditch tile dike weir stormwater input	point source (non x filling/grading x road bed/RR tracl dredging other	, and the second
7	30	Metr	ric 4. Habitat Alf	teration and Deve	elopment.	
max 20 pts.	subtotal	Х	None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) Ditat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4)	e or double check and average.		
		^	Fair (3) Poor to fair (2) Poor (1)			
S	30	X	ipitat alteration. Score one or control None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observing grazing X clearcutting selective cutting X woody debris removal toxic pollutants	x shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: W	etlan'	d LP-001	Rater(s): BAO		Date: 2021-11-11
subi	30 total first pa	nge			
0	30	Metric 5. Special \	Wetlands.		
max 10 pts.	subtotal	Check all that apply and score as in			
		Lake Erie coastal/tributan Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state/ Significant migratory son	y wetland-unrestricted hydro y wetland-restricted hydro	angered species (10) usage (10)	
3	33	Metric 6. Plant co	mmunities. int	erspersion, microto	opography.
max 20 pts.	subtotal	6a. Wetland Vegetation Communi	•	Community Cover Scale	, p = 9. s.py.
·		Score all present using 0 to 3 scale		Absent or comprises <0.1ha (0.24	
		0 Aquatic bed	1	Present and either comprises sm	
		2 Emergent 0 Shrub		vegetation and is of moderate of	
		0 Shrub 1 Forest	2	significant part but is of low qua Present and either comprises sign	·
		0 Mudflats	_	vegetation and is of moderate of	
		Open water		part and is of high quality	
		Other	3	Present and comprises significan	
		6b. horizontal (plan view) Intersper Select only one.	sion.	vegetation and is of high quality	1
		High (5)	Narrative D	escription of Vegetation Quality	
		Moderately high(4)	low	Low spp diversity and/or predomi	nance of nonnative or
		Moderate (3)		disturbance tolerant native spec	
		Moderately low (2)	mod	Native spp are dominant compon	•
		Low (1) X None (0)		although nonnative and/or distuction can also be present, and species	• • • • • • • • • • • • • • • • • • • •
		6c. Coverage of invasive plants. F	Refer	moderately high, but generally	•
		to Table 1 ORAM long form for list.		threatened or endangered spp	
		or deduct points for coverage	high	A predominance of native species	
		Extensive >75% cover (- x Moderate 25-75% cover	•	and/or disturbance tolerant nati absent, and high spp diversity a	
		X Moderate 25-75% cover Sparse 5-25% cover (-1)	(-3)	the presence of rare, threatened	
		Nearly absent <5% cove	r (0)	, p	
		Absent (1)		Open Water Class Quality	
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale 1 Vegetated hummucks/tu		Low 0.1 to <1ha (0.247 to 2.47 ac Moderate 1 to <4ha (2.47 to 9.88	
		1 Coarse woody debris >1		High 4ha (9.88 acres) or more	4 401 607
		0 Standing dead >25cm (1	` '	· · · · · ·	
		1 Amphibian breeding poo		raphy Cover Scale	
			0	Absent Present very small amounts or if	more common
			1	of marginal quality	more common
			2	Present in moderate amounts, but	t not of highest
				quality or in small amounts of h	_
			3	Present in moderate or greater ar	mounts
22		ID TOTAL /		and of highest quality	
	GKAN	ID TOTAL (max 100 pts)		

Site: \	Vetlan	id Ll	P-002	Rater(s): BAO		Date: 2021-11-11
3	3] Me	etric 1. Wetland A	Area (size).		
max 6 pts.	subtotal		ct one size class and assign sco >50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to < 10 to <25 acres (4 to <10. x 3 to <10 acres (1.2 to <4h 0.3 to <3 acres (0.12 to <1 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pts	ore. s) 20.2ha) (5 pts) 1ha) (4 pts) a) (3 pts) I.2ha) (2pts) <0.12ha) (1 pt)		
10	13	Me	etric 2. Upland bu	uffers and surround	ding land use.	
max 14 pts.	subtotal	2a.	Calculate average buffer width. WIDE. Buffers average 5 X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers average VERY NARROW. Buffers Intensity of surrounding land use X VERY LOW. 2nd growth of the surrounding land use X USEN LOW. Old field (>10 years MODERATELY HIGH. Re	Select only one and assign score. 0m (164ft) or more around wetland e 25m to <50m (82 to <164ft) arounge 10m to <25m (32ft to <82ft) arounge 10m to <25m (32ft to <82ft) around wetlage. Select one or double check and or older forest, prairie, savannah, wis), shrubland, young second growth esidential, fenced pasture, park, compen pasture, row cropping, mining,	Do not double check. perimeter (7) d wetland perimeter (4) und wetland perimeter (1) and perimeter (0) average. ildlife area, etc. (7) forest. (5) aservation tillage, new fallo	
16	29	$\mathbb{I}_{M\epsilon}$	etric 3. Hydrolog	٧.		
max 30 pts.	subtotal	3a.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surf. X Perennial surface water (la Maximum water depth. Select of	at apply. 3b ace water (3) ake or stream) (5) 3d	X Part of wetland/up Part of riparian or Duration inundation/sate X Semi- to permane	in (1) ake and other human use (1) bland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl check ently inundated/saturated (4)
		3e.	>0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6ir) 0.4m (<15.7in) (1) Modifications to natural hydrology None or none apparent (1: X Recovered (7) Recovering (3) X Recent or no recovery (1)	gic regime. Score one or double ch	eck and average.	ated (2) ated in upper 30cm (12in) (1) stormwater)
9	38] _M ,	otrio 1 Hobitat A	<u> </u>		
max 20 pts.	subtotal			Iteration and Develone or double check and average.	оршеш.	
			Habitat development. Select or Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) Habitat alteration. Score one or			
	38	age	None or none apparent (9) X Recovered (6) Recovering (3) X Recent or no recovery (1)	Check all disturbances observed X	shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-002		Rater(s): BAO		Date: 2021-11-11	
sul	38 btotal first pa	nge			
0	38	Metric 5. Special V	Vetlands.		
max 10 pts.	subtotal	Check all that apply and score as inc Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (1) Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (10) Known occurrence state/fc Significant migratory song Category 1 Wetland. See	dicated. 5) y wetland-unrestricted hydro y wetland-restricted hydro (Oak Openings) (10) ederal threatened or enda bird/water fowl habitat or	angered species (10) usage (10)	
4	42	Metric 6. Plant con	nmunities, int	erspersion, microto	opography.
max 20 pts.	subtotal	6a. Wetland Vegetation Communitie	es. <u>Vegetation</u>	Community Cover Scale	
		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	471 acres) contiguous area
		O Aquatic bed	1	Present and either comprises sm	
		1 Emergent		vegetation and is of moderate of	
		0 Shrub		significant part but is of low qua	
		1 Forest	2	Present and either comprises sig	
		0 Mudflats		vegetation and is of moderate of	quality or comprises a small
		Open water		part and is of high quality	
		O Other	. 3	Present and comprises significan	
		6b. horizontal (plan view) Interspers	sion.	vegetation and is of high quality	/
		Select only one.			
		High (5)		escription of Vegetation Quality	
		Moderately high(4)	low	Low spp diversity and/or predomi	
		Moderate (3)		disturbance tolerant native spec	
		Moderately low (2)	mod	Native spp are dominant compon	
		X Low (1)		although nonnative and/or distu	• • • • • • • • • • • • • • • • • • • •
		None (0)	ofor	can also be present, and specie	-
		6c. Coverage of invasive plants. Reto Table 1 ORAM long form for list.		moderately high, but generally threatened or endangered spp	
		or deduct points for coverage	high	A predominance of native species	
		Extensive >75% cover (-5	-	and/or disturbance tolerant nati	
		x Moderate 25-75% cover (-	,	absent, and high spp diversity a	
		Sparse 5-25% cover (-1)	0)	the presence of rare, threatene	
		Nearly absent <5% cover	(0)	the presence of fare, threatenes	a, or criddingered opp
		Absent (1)		Open Water Class Quality	
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale.		Low 0.1 to <1ha (0.247 to 2.47 ac	cres)
		1 Vegetated hummucks/tus		Moderate 1 to <4ha (2.47 to 9.88	
		1 Coarse woody debris >15		High 4ha (9.88 acres) or more	
		1 Standing dead >25cm (10		· · · · · · · · · · · · · · · · · · ·	
		1 Amphibian breeding pools		raphy Cover Scale	
			0	Absent	
			1	Present very small amounts or if	more common
				of marginal quality	
			2	Present in moderate amounts, bu	t not of highest
				quality or in small amounts of h	_
			3	Present in moderate or greater ar	
40				and of highest quality	
42	GRAN	ID TOTAL (max 100 pts)			

Site: Wetland LP-003			.P-003	Rater(s): BAO		Date: 2021-11-10
2 max 6 pts.	2	4	etric 1. Wetland A ect one size class and assign sco	•		
тах о ртв.	SUDTOTAL	Sei	>50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha x 0.3 to <3 acres (0.12 to <1. 0.1 to <0.3 acres (0.04 to < <0.1 acres (0.04ha) (0 pts)	0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
9	11	М	etric 2. Upland bu	ffers and surround	ling land use.	
max 14 pts.	subtotal	2a.	Calculate average buffer width. WIDE. Buffers average 50 X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers Intensity of surrounding land use X VERY LOW. 2nd growth o LOW. Old field (>10 years X MODERATELY HIGH. Res	Select only one and assign score. I m (164ft) or more around wetland p 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetland. Select one or double check and a rolder forest, prairie, savannah, will b, shrubland, young second growth sidential, fenced pasture, park, conspen pasture, row cropping, mining, or	Do not double check. berimeter (7) d wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) average. dlife area, etc. (7) forest. (5) servation tillage, new fallo	
10	21	М	etric 3. Hydrology	'.		
max 30 pts.	subtotal	За.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in)	apply. 3b. ce water (3) ke or stream) (5) 3d. nly one and assign score.	× Part of wetland/up Part of riparian or Duration inundation/satu	in (1) lake and other human use (1) lake and other human use (1) land (e.g. forest), complex (1) lupland corridor (1) luration. Score one or dbl check ently inundated/saturated (4) led/saturated (3)
		3e.	× <0.4m (<15.7in) (1)	c regime. Score one or double che	 X Seasonally saturates eck and average. 	stormwater)
5.5	26.5	Ιм	etric 4 Habitat Al	teration and Develo	onment	
max 20 pts.	subtotal	4a.	None or none apparent (4) Recovered (3) Recovering (2)	e or double check and average.	opinionii.	
			Recent or no recovery (1) Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) Habitat alteration. Score one or	· •		
SI	26.5	age	None or none apparent (9) Recovered (6) X Recovering (3) X Recent or no recovery (1)	Check all disturbances observed X	shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-003	Rater(s): BAO	Date: 2021-11-10
26.5		
0 26.5 Metric 5. Special V	Vetlands.	
max 10 pts. subtotal Check all that apply and score as in Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (Lake Erie coastal/tributar Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state/t	dicated. (5) y wetland-unrestricted hydrology (10) y wetland-restricted hydrology (5)	
-2 23.5 Metric 6. Plant cor	nmunities, interspersion, m	nicrotopography.
max 20 pts. subtotal 6a. Wetland Vegetation Communit	- · · · · · · · · · · · · · · · · · · ·	
Score all present using 0 to 3 scale		0.1ha (0.2471 acres) contiguous area
0 Aquatic bed		nprises small part of wetland's
1 Emergent 0 Shrub	vegetation and is of r significant part but is	noderate quality, or comprises a
0 Shrub 0 Forest		nprises significant part of wetland's
0 Mudflats		noderate quality or comprises a small
0 Open water	part and is of high qu	<u> </u>
0 Other		s significant part, or more, of wetland's
6b. horizontal (plan view) Intersper Select only one.	sion. vegetation and is of h	ligh quality
High (5)	Narrative Description of Vegetation	Quality
Moderately high(4)		or predominance of nonnative or
Moderate (3)	disturbance tolerant	•
Moderately low (2)		nt component of the vegetation,
X Low (1) None (0)	g .	nd/or disturbance tolerant native spp and species diversity moderate to
6c. Coverage of invasive plants. R	·	generally w/o presence of rare
to Table 1 ORAM long form for list.	Add threatened or endang	gered spp
or deduct points for coverage	- · · · · · · · · · · · · · · · · · · ·	ive species, with nonnative spp
X Extensive >75% cover (-5 Moderate 25-75% cover (,	plerant native spp absent or virtually diversity and often, but not always,
Sparse 5-25% cover (-1)		threatened, or endangered spp
Nearly absent <5% cover		, , , , , , , , , , , , , , , , , , , ,
Absent (1)	Mudflat and Open Water Class Qua	
6d. Microtopography.	0 Absent <0.1ha (0.247 1 Low 0.1 to <1ha (0.247	<u>, </u>
Score all present using 0 to 3 scale 1 Vegetated hummucks/tus	,	<u>'</u>
0 Coarse woody debris >15	`	-
0 Standing dead >25cm (10	Din) dbh	
0 Amphibian breeding pool		
	0 Absent 1 Present very small am	ounts or if more common
	of marginal quality	ounts of it more common
		mounts, but not of highest
	quality or in small am	nounts of highest quality
	3 Present in moderate or	_
23.5 GRAND TOTAL (max 100 pts	and of highest quality	

Site: V	Vetlan	d LP-004	Rater(s): BAO		Date: 2021-11-10
1	1	Metric 1 Wetland	Area (size)		
max 6 pts.	subtotal	Metric 1. Wetland Select one size class and assign so >50 acres (>20.2ha) (6 p 25 to <50 acres (10.1 to - 10 to <25 acres (4 to <10 3 to <10 acres (1.2 to <4 0.3 to <3 acres (0.12 to < x 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pt	core. ts) <20.2ha) (5 pts) 0.1ha) (4 pts) ha) (3 pts) c1.2ha) (2pts) o <0.12ha) (1 pt)		
8	9	Metric 2. Upland b	uffers and surround	ding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width WIDE. Buffers average : X MEDIUM. Buffers average : NARROW. Buffers average : VERY NARROW. Buffers average : VERY LOW. Buffers average : VERY LOW. 2nd growth : X LOW. Old field (>10 year : X MODERATELY HIGH. First	Select only one and assign score. 50m (164ft) or more around wetland ge 25m to <50m (82 to <164ft) around age 10m to <25m (32ft to <82ft) around see. Select one or double check and or older forest, prairie, savannah, wirs), shrubland, young second growth desidential, fenced pasture, park, coropen pasture, row cropping, mining,	Do not double check. perimeter (7) Id wetland perimeter (4) und wetland perimeter (1) and perimeter (0) average. Idlife area, etc. (7) forest. (5) nservation tillage, new fallo	
7	16	Metric 3. Hydrolog	ıy.		
max 30 pts.	subtotal	3a. Sources of Water. Score all the High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent sure Perennial surface water (3c. Maximum water depth. Select >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (4) < 0.4m (<15.7in) (1) 	face water (3) lake or stream) (5) only one and assign score.	Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundat X Seasonally inundat Seasonally satura	in (1) lake and other human use (1) pland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl checl ently inundated/saturated (4) ted/saturated (3)
7	23	None or none apparent (Recovered (7) X Recovering (3) Recent or no recovery (1	ditch tile dike weir stormwater input	point source (non x filling/grading x road bed/RR trace dredging other	ŕ
max 20 pts.	subtotal	4a. Substrate disturbance. Score	•	opment.	
		None or none apparent (Recovered (3) X Recovering (2) Recent or no recovery (1 4b. Habitat development. Select of Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2))		
		Poor (1) 4c. Habitat alteration. Score one of			 1
SI	23	None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)	x mowing grazing	shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-004			Rater(s): BAO		Date: 2021-11-10	
- 1	23 btotal first pa	age				
0	23	Metric 5. Special V	Votlands			
max 10 pts.	subtotal	Check all that apply and score as in Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (Lake Erie coastal/tributary Lake Plain Sand Prairies (Relict Wet Prairies (10) Known occurrence state/fi Significant migratory song	5) y wetland-unrestricted hyd y wetland-restricted hydrol (Oak Openings) (10) ederal threatened or enda bird/water fowl habitat or	ogy (5) ingered species (10) usage (10)		
		Category 1 Wetland. See	Question 1 Qualitative R	ating (-10)		
0	23	Metric 6. Plant con	nmunities, int	erspersion, microto	opography.	
max 20 pts.	subtotal	6a. Wetland Vegetation Communiti	es. <u>Vegetation</u>	Community Cover Scale		
		Score all present using 0 to 3 scale.	<u>0</u>	Absent or comprises <0.1ha (0.24		
		0 Aquatic bed1 Emergent	1	Present and either comprises sm vegetation and is of moderate of		
		0 Shrub		significant part but is of low qua	· · ·	
		0 Forest	2	Present and either comprises sign	·	
		0 Mudflats		vegetation and is of moderate of	juality or comprises a small	
		Open water	3	part and is of high quality	t nort or more of watland's	
		Other6b. horizontal (plan view) Interspers		Present and comprises significan vegetation and is of high quality		
		Select only one.				
		High (5)	Narrative De	escription of Vegetation Quality		
		Moderately high(4)	low	Low spp diversity and/or predomi		
		Moderate (3) Moderately low (2)	mod	Native spp are dominant compon		
		Low (1)	mou	although nonnative and/or distu	_	
		X None (0)		can also be present, and specie	• • • • • • • • • • • • • • • • • • • •	
		6c. Coverage of invasive plants. Re		moderately high, but generally	w/o presence of rare	
		to Table 1 ORAM long form for list.		threatened or endangered spp	ith mannative and	
		or deduct points for coverage Extensive >75% cover (-5	high \	A predominance of native species and/or disturbance tolerant native		
		X Moderate 25-75% cover (-	,	absent, and high spp diversity a		
		Sparse 5-25% cover (-1)	,	the presence of rare, threatened		
		Nearly absent <5% cover				
		Absent (1)		Open Water Class Quality		
		6d. Microtopography.Score all present using 0 to 3 scale.	<u> </u>	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)	eres)	
		1 Vegetated hummucks/tus		Moderate 1 to <4ha (2.47 to 9.88		
		0 Coarse woody debris >15	cm (6in) 3	High 4ha (9.88 acres) or more		
		0 Standing dead >25cm (10				
		1 Amphibian breeding pools		raphy Cover Scale		
			<u> </u>	Absent Present very small amounts or if	more common	
			į	of marginal quality		
			2	Present in moderate amounts, bu	t not of highest	
				quality or in small amounts of h		
			3	Present in moderate or greater ar	nounts	
123 l	GRAN	ID TOTAL (max 100 pts		and of highest quality		

Site: Wet	tland L	.P-005	Rater(s): BAO		Date: 2021-11-10
3 3	Пм	etric 1. Wetland A	rea (size).		
		ect one size class and assign score >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20 10 to <25 acres (4 to <10.1b x 3 to <10 acres (1.2 to <4ha) 0.3 to <3 acres (0.12 to <1.2 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pts)	e. 0.2ha) (5 pts) na) (4 pts) I (3 pts) 2ha) (2pts)		
8 1	$1 \mid_{\mathbf{M}}$	etric 2. Upland bu	ffers and surround	ing land use.	
max 14 pts. sut	btotal 2a.	Calculate average buffer width. S WIDE. Buffers average 50r X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers a Intensity of surrounding land use. VERY LOW. 2nd growth or X LOW. Old field (>10 years) MODERATELY HIGH. Res	Select only one and assign score. In (164ft) or more around wetland posterior of the control of	Do not double check. erimeter (7) I wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) average. dlife area, etc. (7) forest. (5) servation tillage, new fallo	ow field. (3)
15 5 26	3.5		1 7 11 07 07	onstruction. (1)	
max 30 pts. sut	btotal 3a.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfac Perennial surface water (lak Maximum water depth. Select on >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in)	apply. 3b. ce water (3) te or stream) (5) 3d. ly one and assign score.	Part of wetland/up Part of riparian or Duration inundation/satu	in (1) ake and other human use (1) bland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl check ently inundated/saturated (4) ed/saturated (3)
	3e.	× <0.4m (<15.7in) (1)	regime. Score one or double che	Seasonally satura ck and average.	stormwater)
8 34	4.5 м	etric 4. Habitat Alf	teration and Develo	onment.	
		Substrate disturbance. Score one None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)		,pmont.	
		Habitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1) Habitat alteration. Score one or d		1	
	4.5	Recovered (6) X Recovering (3) Recent or no recovery (1)	x mowing grazing x clearcutting x selective cutting woody debris removal toxic pollutants	x shrub/sapling rem herbaceous/aquat sedimentation dredging farming nutrient enrichmet	tic bed removal

Site: Wetland LP-005	Rater(s): BAO	Date: 2021-11-10
34.5 subtotal first page		
0 34.5 Metric 5. Special V	Vetlands.	
max 10 pts. subtotal Check all that apply and score as in Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (dicated.	
Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies Relict Wet Prairies (10)	/ wetland-unrestricted hydrology (10) / wetland-restricted hydrology (5)	
Significant migratory song	pbird/water fowl habitat or usage (10) Question 1 Qualitative Rating (-10)	
2 22.5	nmunities, interspersion,	microtopography.
max 20 pts. subtotal 6a. Wetland Vegetation Communiti		
Score all present using 0 to 3 scale.		s <0.1ha (0.2471 acres) contiguous area
O Aquatic bed		comprises small part of wetland's of moderate quality, or comprises a
1 Emergent 0 Shrub	significant part but	
0 Forest		comprises significant part of wetland's
0 Mudflats		of moderate quality or comprises a small
0 Open water	part and is of high	· · · · · · · · · · · · · · · · · · ·
0 Other		ses significant part, or more, of wetland's
6b. horizontal (plan view) Interspers		
Select only one.		* · · ·
High (5)	Narrative Description of Vegetat	ion Quality
Moderately high(4)	low Low spp diversity ar	nd/or predominance of nonnative or
Moderate (3)	disturbance tolera	nt native species
Moderately low (2)	mod Native spp are domi	nant component of the vegetation,
X Low (1)	although nonnative	e and/or disturbance tolerant native spp
None (0)	· · · · · · · · · · · · · · · · · · ·	nt, and species diversity moderate to
6c. Coverage of invasive plants. R		out generally w/o presence of rare
to Table 1 ORAM long form for list.		
or deduct points for coverage X Extensive >75% cover (-5	-	native species, with nonnative spp e tolerant native spp absent or virtually
Moderate 25-75% cover (-3	, and a second s	spp diversity and often, but not always,
Sparse 5-25% cover (-1)	•	re, threatened, or endangered spp
Nearly absent <5% cover		of the date near of the date of p
Absent (1)	Mudflat and Open Water Class C	Quality
6d. Microtopography.	0 Absent <0.1ha (0.24	47 acres)
Score all present using 0 to 3 scale.	1 Low 0.1 to <1ha (0.2	247 to 2.47 acres)
0 Vegetated hummucks/tus	sucks 2 Moderate 1 to <4ha	(2.47 to 9.88 acres)
O Coarse woody debris >15		s) or more
0 Standing dead >25cm (10		
1 Amphibian breeding pools		
	0 Absent	amounto or if many and a
	•	amounts or if more common
	of marginal quality Present in moderate	amounts, but not of highest
		_
	3 Present in moderate	amounts of highest quality
	and of highest aus	=
32.5 GRAND TOTAL (max 100 pts	and or nightest que	,

Site: Wetland	LP-006	Rater(s): BAO		Date: 2022-11-10
2 2	Metric 1. Wetland A	rea (size).		
	Select one size class and assign sco >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha × 0.3 to <3 acres (0.12 to <1. 0.1 to <0.3 acres (0.04 to < <1.10 cres (0.04 to <1.	re.) 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
8 10	Metric 2. Upland bu	ffers and surround	ling land use.	
max 14 pts. subtotal 2	a. Calculate average buffer width. S WIDE. Buffers average 50 X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers b. Intensity of surrounding land use VERY LOW. 2nd growth o X MODERATELY HIGH. Res	Select only one and assign score. Im (164ft) or more around wetland publish to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetla	Do not double check. perimeter (7) d wetland perimeter (4) and wetland perimeter (1) and perimeter (0) average. Idlife area, etc. (7) forest. (5) servation tillage, new fallo	
13 23	Metric 3. Hydrology	'.		
max 30 pts. subtotal 3	As. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surfa Perennial surface water (late) Co. Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) X <0.4m (<15.7in) (1) De. Modifications to natural hydrological	apply. 3b. ce water (3) ke or stream) (5) 3d. nly one and assign score.	Part of wetland/up X Part of riparian or Duration inundation/satu X Semi- to permane Regularly inundat Seasonally inundat Seasonally satura	in (1) lake and other human use (1) pland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl checl ently inundated/saturated (4) ted/saturated (3)
	None or none apparent (12 Recovered (7) X Recovering (3) Recent or no recovery (1)	Check all disturbances observed X	d point source (non	
max 20 pts. subtotal 4	Metric 4. Habitat Al	teration and Develo	opment.	
	None or none apparent (4) X Recovered (3) X Recovering (2) Recent or no recovery (1) B. Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2)	Ç		
4	Poor (1) 4c. Habitat alteration. Score one or or	double check and average.		
31.5	None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)	Check all disturbances observed x mowing grazing Clearcutting selective cutting woody debris removal toxic pollutants	d X shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland	d LP-006	Rater(s): BAO		Date: 2022-11-10
31.5 subtotal first pag	ре			
0 31.5	Metric 5. Special W	letlands.		
	Check all that apply and score as inc Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (9) Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (10) Known occurrence state/fe Significant migratory song Category 1 Wetland. See	dicated. 5) wetland-unrestricted hyd wetland-restricted hydrol Oak Openings) (10) ederal threatened or enda bird/water fowl habitat or	ngered species (10) usage (10)	
-2 28.5	Metric 6. Plant con	nmunities, into	erspersion, microto	pography.
max 20 pts. subtotal	6a. Wetland Vegetation Communitie	es. <u>Vegetation (</u>	Community Cover Scale	
	Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	71 acres) contiguous area
	O Aquatic bed	1	Present and either comprises small	all part of wetland's
	1 Emergent		vegetation and is of moderate q	uality, or comprises a
	0 Shrub		significant part but is of low qua	· ·
	0 Forest	2	Present and either comprises sign	
	0 Mudflats		vegetation and is of moderate q	uality or comprises a small
	Others		part and is of high quality	
	Other	3	Present and comprises significant	
	6b. horizontal (plan view) Interspers	ion.	vegetation and is of high quality	
	Select only one.	Normative De	acceptation of Variation Ovality	
	High (5) Moderately high(4)	low	escription of Vegetation Quality Low spp diversity and/or predomin	canco of poppative or
	Moderate (3)	IOW	disturbance tolerant native spec	
	Moderately low (2)	mod	Native spp are dominant compone	
	x Low (1)	11100	although nonnative and/or distu	-
	None (0)		can also be present, and specie	• • • • • • • • • • • • • • • • • • • •
	6c. Coverage of invasive plants. Re	efer	moderately high, but generally v	•
	to Table 1 ORAM long form for list.		threatened or endangered spp	
1	or deduct points for coverage	high	A predominance of native species	s, with nonnative spp
	X 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	d, or endangered spp
	Nearly absent <5% cover			
	Absent (1)		Open Water Class Quality	
	6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
	Score all present using 0 to 3 scale.	sucks 1	Low 0.1 to <1ha (0.247 to 2.47 ac	
	Vegetated hummucks/tussCoarse woody debris >150		Moderate 1 to <4ha (2.47 to 9.88 High 4ha (9.88 acres) or more	acres)
	0 Standing dead >25cm (10	` ′	Trigit 4tta (9.00 acres) of triore	
	1 Amphibian breeding pools		raphy Cover Scale	
		0	Absent	
		1	Present very small amounts or if	more common
			of marginal quality	-
		2	Present in moderate amounts, bu	t not of highest
			quality or in small amounts of hi	_
		3	Present in moderate or greater ar	
			and of highest quality	
28.5 GRAN	D TOTAL (max 100 pts)			

Site: Wetland LP-007			.P-007	Rater(s): BAO	Date: 2021-11-09	
2	2	M	etric 1. Wetland A	rea (size).		
max 6 pts.	subtotal	Sele	ect one size class and assign sco) 20.2ha) (5 pts) ha) (4 pts) ı) (3 pts) .2ha) (2pts)		
8	10	M	etric 2. Upland bu	iffers and surround	ling land use.	
max 14 pts.	subtotal	2a.	Calculate average buffer width. WIDE. Buffers average 50 X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers Intensity of surrounding land use VERY LOW. 2nd growth o X LOW. Old field (>10 years X MODERATELY HIGH. Res	Select only one and assign score. Im (164ft) or more around wetland processing to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetland. Select one or double check and a rolder forest, prairie, savannah, will), shrubland, young second growth sidential, fenced pasture, park, conspen pasture, row cropping, mining, or	Do not double check. berimeter (7) d wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) average. dlife area, etc. (7) forest. (5) servation tillage, new fallo	
12	22	M	etric 3. Hydrology	<i>'</i> .		
max 30 pts.	subtotal	3a. 3c.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) X <0.4m (<15.7in) (1)	apply. 3b. sce water (3) ke or stream) (5) 3d. nly one and assign score. (2) ic regime. Score one or double che	Part of wetland/up X Part of riparian or Duration inundation/sate X Semi- to permane Regularly inundat Seasonally inundat Seasonally satura eck and average.	in (1) lake and other human use (1) pland (e.g. forest), complex (1) rupland corridor (1) uration. Score one or dbl check ently inundated/saturated (4) ted/saturated (3) ated (2) ated in upper 30cm (12in) (1)
		_		weir stormwater input	x dredging other	
7 max 20 pts.	29 subtotal	4		teration and Develo	opment.	
шах 20 pts.	Subtotal		Substrate disturbance. Score on None or none apparent (4) Recovered (3) X Recovering (2) Recent or no recovery (1) Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2)	•		
		4c.	Poor (1) Habitat alteration. Score one or		4	
	29]	None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observed x	shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	itic bed removal

Site: Wetland LP-007		Rater(s): BAO		Date: 2021-11-09	
subto	29 otal first pa	ge			
0 2	29	Metric 5. Special V	Vetlands.		
	subtotal	Check all that apply and score as in Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (1) Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (10) Known occurrence state/fit Significant migratory song Category 1 Wetland. See	dicated. y wetland-unrestricted hydro y wetland-restricted hydro (Oak Openings) (10) ederal threatened or enda bird/water fowl habitat or	angered species (10) usage (10)	
-2 2	27	Metric 6. Plant con	nmunities, int	erspersion, microto	pography.
max 20 pts.	subtotal	l 6a. Wetland Vegetation Communiti	•	Community Cover Scale	
•		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	171 acres) contiguous area
		O Aquatic bed Emergent	1	Present and either comprises sm vegetation and is of moderate q	uality, or comprises a
		O Shrub Forest Mudflats	2	significant part but is of low qua Present and either comprises sign vegetation and is of moderate quality.	nificant part of wetland's
		Open water		part and is of high quality	daily or comprises a small
		O Other 6b. horizontal (plan view) Interspers	sion.	Present and comprises significan vegetation and is of high quality	
		Select only one.			
		High (5)		escription of Vegetation Quality	
		Moderately high(4) Moderate (3)	low	Low spp diversity and/or predomin disturbance tolerant native spec	cies
		Moderately low (2) X Low (1) None (0)	mod	Native spp are dominant compon- although nonnative and/or distu- can also be present, and specie	rbance tolerant native spp
		6c. Coverage of invasive plants. Ro	efer	moderately high, but generally v	•
		to Table 1 ORAM long form for list.		threatened or endangered spp	
		or deduct points for coverage X Extensive > 75% cover (-5)	high	A predominance of native species and/or disturbance tolerant native	
		Moderate 25-75% cover (-	,	absent, and high spp diversity a	
		Sparse 5-25% cover (-1)		the presence of rare, threatened	
		Nearly absent <5% cover Absent (1)	` '	I 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	eres)
		0 Vegetated hummucks/tus	sucks 2	Moderate 1 to <4ha (2.47 to 9.88	acres)
		0 Coarse woody debris >15	. ,	High 4ha (9.88 acres) or more	
		0 Standing dead >25cm (10	·		
		1 Amphibian breeding pools		raphy Cover Scale	
			0	Absent	
			1	Present very small amounts or if of marginal quality	more common
			2	Present in moderate amounts, bu quality or in small amounts of h	_
			3	Present in moderate or greater ar	
27	_			and of highest quality	
27 g	BRAN	D TOTAL (max 100 pts)			

Site: V	Vetlan	d LP-008	Rater(s): BAO		Date: 2022-11-09
1	1	Metric 1. Wetland	Area (size).		
max 6 pts.	subtotal	Select one size class and assign >50 acres (>20.2ha) (6 25 to <50 acres (10.1 t 10 to <25 acres (4 to < 3 to <10 acres (1.2 to < 0.3 to <3 acres (0.12 to < 0.1 to <0.3 acres (0.04 <0.1 acres (0.04ha) (0	score. pts) o <20.2ha) (5 pts) 10.1ha) (4 pts) 4ha) (3 pts) <1.2ha) (2pts) to <0.12ha) (1 pt)		
5	6	Metric 2. Upland	buffers and surround	ding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer wid WIDE. Buffers average MEDIUM. Buffers average X NARROW. Buffers average VERY NARROW. Buffers average VERY LOW. Old field (>10 years) X MODERATELY HIGH.	th. Select only one and assign score. a 50m (164ft) or more around wetland age 25m to <50m (82 to <164ft) around erage 10m to <25m (32ft to <82ft) around ers average <10m (<32ft) around wetlause. Select one or double check and thor older forest, prairie, savannah, with ars), shrubland, young second growth Residential, fenced pasture, park, coril, open pasture, row cropping, mining,	Do not double check. perimeter (7) Id wetland perimeter (4) und wetland perimeter (1) and perimeter (0) average. Idlife area, etc. (7) forest. (5) nservation tillage, new fallow	field. (3)
10	16	Metric 3. Hydrolo	qv.		
max 30 pts.	subtotal	3a. Sources of Water. Score all High pH groundwater (a) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent s Perennial surface wate 3c. Maximum water depth. Sele >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27 X <0.4m (<15.7in) (1)	that apply. 3b urface water (3) r (lake or stream) (5) 3d ct only one and assign score. 6in) (2)	Part of wetland/upla Part of riparian or up Duration inundation/satura Semi- to permanenti X Regularly inundated Seasonally inundate Seasonally saturated	(1) e and other human use (1) nd (e.g. forest), complex (1) pland corridor (1) tion. Score one or dbl check ly inundated/saturated (4) /saturated (3)
		None or none apparent X Recovered (7) X Recovering (3) Recent or no recovery	X ditch tile dike weir stormwater input	point source (nonston x filling/grading x road bed/RR track dredging other_	ormwater)
4.5	20.5	Metric 4. Habitat	Alteration and Devel	opment.	
max 20 pts.	subtotal	4a. Substrate disturbance. Scor None or none apparent Recovered (3) X Recovering (2) X Recent or no recovery 4b. Habitat development. Select Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1)	(4) (1) only one and assign score.		
a)	20.5	1	(9) Check all disturbances observed mowing grazing	x shrub/sapling remove herbaceous/aquatic sedimentation dredging farming nutrient enrichment	

Site: Wetland LP-008	ater(s): BAO		Date: 2022-11-09
20.5 subtotal first page			
0 20.5 Metric 5. Special We	tlands.		
max 10 pts. subtotal Check all that apply and score as indica			
Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary we 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	tland-unrestricted hydro tland-restricted hydro (Openings) (10) ral threatened or enda /water fowl habitat or	angered species (10) usage (10)	
-4 15.5 Metric 6. Plant comn	nunities int	erspersion microto	onography
max 20 pts. subtotal 6a. Wetland Vegetation Communities.	•	Community Cover Scale	opograpity.
Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	
0 Aquatic bed 1 Emergent	1	Present and either comprises sm vegetation and is of moderate of	
0 Shrub		significant part but is of low qua	· · ·
0 Forest	2	Present and either comprises sign	
0 Mudflats		vegetation and is of moderate of	juality or comprises a small
0 Open water 0 Other	3	part and is of high quality Present and comprises significan	t nart or more of wetland's
6b. horizontal (plan view) Interspersion.		vegetation and is of high quality	
Select only one.			
High (5)		escription of Vegetation Quality	nance of nannative or
Moderately high(4) Moderate (3)	low	Low spp diversity and/or predomi disturbance tolerant native spec	
Moderately low (2)	mod	Native spp are dominant compon	ent of the vegetation,
Low (1)		although nonnative and/or distu	• • • • • • • • • • • • • • • • • • • •
x None (0) 6c. Coverage of invasive plants. Refer		can also be present, and species moderately high, but generally was	•
to Table 1 ORAM long form for list. Add	I	threatened or endangered spp	
or deduct points for coverage	high	A predominance of native species	
X Extensive >75% cover (-5) Moderate 25-75% cover (-3)		and/or disturbance tolerant nati absent, and high spp diversity a	
Sparse 5-25% cover (-1)		the presence of rare, threatened	
Nearly absent <5% cover (0)			
Absent (1)		Open Water Class Quality	
6d. Microtopography. Score all present using 0 to 3 scale.	<u> </u>	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)	eres)
0 Vegetated hummucks/tussuck		Moderate 1 to <4ha (2.47 to 9.88	
O Coarse woody debris >15cm		High 4ha (9.88 acres) or more	
O Standing dead >25cm (10in) o		ranhy Cayar Saala	
a Amphibian breeding pools	0	Absent	
	1	Present very small amounts or if	more common
		of marginal quality	t not of high out
	2	Present in moderate amounts, bu quality or in small amounts of h	=
	3	Present in moderate or greater ar	
45.5		and of highest quality	
15.5 GRAND TOTAL (max 100 pts)			

Site: V	Vetlan	d LP-009	Rater(s): BAO		Date: 2022-11-09
2	2	Metric 1. Wetland A	Area (size).		
max 6 pts.	subtotal	Select one size class and assign so: >50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to < 10 to <25 acres (4 to <10. 3 to <10 acres (1.2 to <4h x 0.3 to <3 acres (0.12 to < 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pts	ore. (s) (20.2ha) (5 pts) (1ha) (4 pts) (a) (3 pts) (.2ha) (2pts) (-0.12ha) (1 pt)		
8	10	Metric 2. Upland bu	uffers and surroun	ding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width. WIDE. Buffers average 5 X MEDIUM. Buffers averag NARROW. Buffers avera	Select only one and assign score Om (164ft) or more around wetland a 25m to <50m (82 to <164ft) arou ge 10m to <25m (32ft to <82ft) arou average <10m (<32ft) around wet	Do not double check. d perimeter (7) und wetland perimeter (4) ound wetland perimeter (1) tland perimeter (0)	
		VERY LOW. 2nd growth of the control	or older forest, prairie, savannah, v s), shrubland, young second growt ssidential, fenced pasture, park, co pen pasture, row cropping, mining	wildlife area, etc. (7) th forest. (5) onservation tillage, new fallo	ow field. (3)
7.5	17.5	monio or riyarolog			
max 30 pts.	subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surf Perennial surface water (la 3c. Maximum water depth. Select of	ace water (3) ake or stream) (5)	X Part of wetland/up Part of riparian or d. Duration inundation/sate Semi- to permane	in (1) lake and other human use (1) pland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl checl ently inundated/saturated (4)
		>0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in x <0.4m (<15.7in) (1) 3e. Modifications to natural hydrolog			
		None or none apparent (1 Recovered (7) X Recovering (3) X Recent or no recovery (1)			ŕ
7.5	25	Metric 4. Habitat A	Iteration and Deve	lopment.	
max 20 pts.	subtotal	4a. Substrate disturbance. Score of None or none apparent (4 X Recovered (3) Recovering (2) X Recent or no recovery (1) Habitat development. Select or			
		Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1)	double about and overess		
sı	25	4c. Habitat alteration. Score one or None or none apparent (9 Recovered (6) Recovering (3) Recent or no recovery (1)		x shrub/sapling rem herbaceous/aqua x sedimentation x dredging farming nutrient enrichme	tic bed removal

Site: V	Vetlan	d LP-009	Rater(s): BAO		Date: 2022-11-09
su	25 ubtotal first pa	ige			
0	25	Metric 5. Special	Wetlands.		
max 10 pts.	subtotal	Check all that apply and score as			
		Bog (10) Fen (10) Old growth forest (10) Mature forested wetlan Lake Erie coastal/tribut Lake Erie coastal/tribut Lake Plain Sand Prairie Relict Wet Prairies (10) Known occurrence stat Significant migratory so	d (5) ary wetland-unrestricted hy ary wetland-restricted hydr es (Oak Openings) (10)	langered species (10) r usage (10)	
-1	24	Metric 6. Plant co	ommunities. in	terspersion, microto	opography.
max 20 pts.	subtotal	6a. Wetland Vegetation Commu	•	Community Cover Scale	- p - g. apy.
		Score all present using 0 to 3 sca		Absent or comprises <0.1ha (0.2	471 acres) contiguous area
		0 Aquatic bed	1	Present and either comprises sm	
		1 Emergent 0 Shrub		vegetation and is of moderate of significant part but is of low qua	
		0 Shrub 0 Forest	2	Present and either comprises sig	•
		0 Mudflats		vegetation and is of moderate of	
		0 Open water		part and is of high quality	
		Other6b. horizontal (plan view) Intersp	3 ersion	Present and comprises significar vegetation and is of high quality	
		Select only one.		regetation and to or mgm quant	
		High (5)	Narrative I	Description of Vegetation Quality	
		Moderately high(4)	low	Low spp diversity and/or predom	
		Moderate (3) Moderately low (2)	mod	disturbance tolerant native spe Native spp are dominant compor	
		x Low (1)	mod	although nonnative and/or distu	
		None (0)		can also be present, and speci-	•
		6c. Coverage of invasive plants.		moderately high, but generally	
		to Table 1 ORAM long form for lis or deduct points for coverage	st. Add high	threatened or endangered spp A predominance of native specie	
		x Extensive >75% cover		and/or disturbance tolerant nati	
		Moderate 25-75% cove	er (-3)	absent, and high spp diversity	and often, but not always,
		Sparse 5-25% cover (-		the presence of rare, threatene	d, or endangered spp
		Nearly absent <5% cov Absent (1)		d Open Water Class Quality	
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 sca		Low 0.1 to <1ha (0.247 to 2.47 a	
		1 Vegetated hummucks/i		Moderate 1 to <4ha (2.47 to 9.88	3 acres)
		Coarse woody debris >Standing dead >25cm		High 4ha (9.88 acres) or more	
		1 Amphibian breeding po		graphy Cover Scale	
			0	Absent	
			1	Present very small amounts or if	more common
			2	of marginal quality Present in moderate amounts, but	ut not of highest
			-	quality or in small amounts of h	_
	_		3	Present in moderate or greater a	
24		ID TOTAL / 100		and of highest quality	
24	GKAN	ID TOTAL (max 100 pt	ts)		

Site: V	Vetlan	d LP-010	Rater(s): BAO		Date: 2022-11-09
1	1	Metric 1. Wetland	Δrea (size)		
max 6 pts.	subtotal	Select one size class and assign s >50 acres (>20.2ha) (6 p 25 to <50 acres (10.1 to 10 to <25 acres (4 to <10 3 to <10 acres (1.2 to <4 0.3 to <3 acres (0.12 to <x (0="" (0.04="" (0.04ha)="" 0.1="" <0.1="" <0.3="" acres="" p)<="" th="" to=""><th>core. tts) <20.2ha) (5 pts) 0.1ha) (4 pts) ha) (3 pts) <1.2ha) (2pts) 0 <0.12ha) (1 pt)</th><th></th><th></th></x>	core. tts) <20.2ha) (5 pts) 0.1ha) (4 pts) ha) (3 pts) <1.2ha) (2pts) 0 <0.12ha) (1 pt)		
8	9	Metric 2. Upland b	ouffers and surroun	nding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width WIDE. Buffers average X MEDIUM. Buffers avera NARROW. Buffers avera VERY NARROW. Buffers 2b. Intensity of surrounding land u VERY LOW. 2nd growth X LOW. Old field (>10 yea X MODERATELY HIGH. F	Select only one and assign score 50m (164ft) or more around wetland ge 25m to <50m (82 to <164ft) around age 10m to <25m (32ft to <82ft) around we saverage <10m (<32ft) around we se. Select one or double check around or older forest, prairie, savannah, ars), shrubland, young second grow Residential, fenced pasture, park, copen pasture, row cropping, mining	e. Do not double check. d perimeter (7) und wetland perimeter (4) round wetland perimeter (1) etland perimeter (0) nd average. wildlife area, etc. (7) th forest. (5) conservation tillage, new fallo	
9.5	18.5	Metric 3. Hydrolog		o, , ,	
max 30 pts.	subtotal	3a. Sources of Water. Score all the High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent su	nat apply. 3	Part of wetland/up Part of riparian or	in (1) lake and other human use (1) pland (e.g. forest), complex (1) upland corridor (1)
		3c. Maximum water depth. Select >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6 × <0.4m (<15.7in) (1) 3e. Modifications to natural hydrol	only one and assign score.	Semi- to permane X Regularly inundat X Seasonally inundat Seasonally satura	
		None or none apparent (X Recovered (7) X Recovering (3) Recent or no recovery (1	12) Check all disturbances obser X		ŕ
6	24.5	Metric 4. Habitat A	Alteration and Deve	elopment.	
max 20 pts.	subtotal	4a. Substrate disturbance. Score None or none apparent (Recovered (3) Recovering (2) Recent or no recovery (1	one or double check and average. 4)	·	
		4b. Habitat development. Select of Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one of			
c)	24.5	None or none apparent (Recovered (6) X Recovering (3) X Recent or no recovery (1	9) Check all disturbances obser x mowing grazing	x shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-010	Rater(s): BAO	Date: 2022-11-09
24.5 subtotal first page		
0 24.5 Metric 5. Special V	Vetlands.	
max 10 pts. subtotal Check all that apply and score as in Bog (10) Fen (10) Old growth forest (10) Mature forested wetland Lake Erie coastal/tributar Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state/ Significant migratory song	dicated. (5) y wetland-unrestricted hydrology (10) y wetland-restricted hydrology (5)	0)
-2 20.5 Metric 6. Plant cor	nmunities, interspersio	n, microtopography.
max 20 pts. subtotal 6a. Wetland Vegetation Communit	•	
Score all present using 0 to 3 scale	. 0 Absent or comp	rises <0.1ha (0.2471 acres) contiguous area
0 Aquatic bed		ner comprises small part of wetland's
1 Emergent 0 Shrub	•	d is of moderate quality, or comprises a tout is of low quality
0 Forest		ner comprises significant part of wetland's
0 Mudflats		d is of moderate quality or comprises a small
Open water	part and is of h	
0 Other6b. horizontal (plan view) Intersper		nprises significant part, or more, of wetland's d is of high quality
Select only one.	vegetation and	a to or riight quality
High (5)	Narrative Description of Vege	etation Quality
Moderately high(4)		y and/or predominance of nonnative or
Moderate (3) Moderately low (2)		lerant native species Iominant component of the vegetation,
X Low (1)		ative and/or disturbance tolerant native spp
None (0)		esent, and species diversity moderate to
6c. Coverage of invasive plants. R		gh, but generally w/o presence of rare
to Table 1 ORAM long form for list. or deduct points for coverage		endangered spp e of native species, with nonnative spp
X Extensive >75% cover (-5	-	ance tolerant native spp absent or virtually
Moderate 25-75% cover	,	gh spp diversity and often, but not always,
Sparse 5-25% cover (-1)		of rare, threatened, or endangered spp
Nearly absent <5% cover Absent (1)	(0) Mudflat and Open Water Clas	se Quality
6d. Microtopography.	0 Absent <0.1ha	
Score all present using 0 to 3 scale		(0.247 to 2.47 acres)
0 Vegetated hummucks/tus		4ha (2.47 to 9.88 acres)
0 Coarse woody debris >15 0 Standing dead >25cm (10		acres) or more
1 Amphibian breeding pool		е
	0 Absent	
		all amounts or if more common
	of marginal qu Present in mode	ality erate amounts, but not of highest
		nall amounts of highest quality
		erate or greater amounts
20.5	and of highest	quality
20.5 GRAND TOTAL (max 100 pts)	

Site: V	Vetlan	d LP-011	Rater(s): BAO		Date: 2021-11-09
2	2	Metric 1. Wetland	Area (size).		
max 6 pts.	subtotal	Select one size class and assign s >50 acres (>20.2ha) (6 p 25 to <50 acres (10.1 to 10 to <25 acres (4 to <10 3 to <10 acres (1.2 to <4 × 0.3 to <3 acres (0.12 to < 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pt)	core. ts) <20.2ha) (5 pts) 0.1ha) (4 pts) ha) (3 pts) <1.2ha) (2pts) o <0.12ha) (1 pt)		
8	10	Metric 2. Upland b	uffers and surrou	nding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width WIDE. Buffers average X MEDIUM. Buffers avera NARROW. Buffers aver	. Select only one and assign scor 50m (164ft) or more around wetla ge 25m to <50m (82 to <164ft) ard age 10m to <25m (32ft to <82ft) ars average <10m (<32ft) around w	re. Do not double check. Ind perimeter (7) Ind wetland perimeter (4) Indicate the control of the character (1) Indicate the character (1) Indicate the character (2) Indicate the character (3) Indicate the character (4) Indicate the character (4) Indicate the character (5) Indicate the character (6) Indicate the character (7) Indicate the character (4) Indicate the character (7) Indicate the chara	
		VERY LOW. 2nd growth X LOW. Old field (>10 yea X MODERATELY HIGH. F HIGH. Urban, industrial,	n or older forest, prairie, savannah urs), shrubland, young second gro Residential, fenced pasture, park, open pasture, row cropping, mini	i, wildlife area, etc. (7) wth forest. (5) conservation tillage, new fallo	ow field. (3)
15.5	25.5	Metric 3. Hydrolog	Ι y .		
max 30 pts.	subtotal	3a. Sources of Water. Score all the High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surplemental surface water acc. Maximum water depth. Select	nat apply. rface water (3) (lake or stream) (5)	Part of wetland/up X Part of riparian or 3d. Duration inundation/satu	
		>0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6 × <0.4m (<15.7in) (1) 3e. Modifications to natural hydrol	ogic regime. Score one or double	check and average.	
		None or none apparent (X Recovered (7) X Recovering (3) Recent or no recovery (1	x ditch x tile	point source (non x filling/grading x road bed/RR trace dredging other_	ŕ
10	35.5	Metric 4. Habitat A	Alteration and Dev	elopment.	
max 20 pts.	subtotal	4a. Substrate disturbance. Score None or none apparent (Recovered (3) Recovering (2) Recent or no recovery (1	one or double check and average 4))	=	
		4b. Habitat development. Select of Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1)	only one and assign score.		
SI	35.5	l	9) Check all disturbances observed mowing grazing	x shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-011	Rater(s): BAO	Date: 2021-11-09
35.5 subtotal first page		
0 35.5 Metric 5. Special V	Vetlands.	
Lake Erie coastal/tributary Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state/f Significant migratory song	5) / wetland-unrestricted hydrology (10) / wetland-restricted hydrology (5)	
0 35.5 Metric 6. Plant cor	nmunities, interspersion, m	nicrotopography.
max 20 pts. subtotal 6a. Wetland Vegetation Communiti	•	
Score all present using 0 to 3 scale.		0.1ha (0.2471 acres) contiguous area
0 Aquatic bed		nprises small part of wetland's
1 Emergent 0 Shrub	vegetation and is of r significant part but is	noderate quality, or comprises a
0 Forest		prises significant part of wetland's
0 Mudflats		moderate quality or comprises a small
0 Open water	part and is of high qu	•
0 Other6b. horizontal (plan view) Interspers		s significant part, or more, of wetland's
Select only one.	vegetation and is or i	iigii quality
High (5)	Narrative Description of Vegetation	Quality
Moderately high(4)		or predominance of nonnative or
Moderate (3)	disturbance tolerant r	•
Moderately low (2) X Low (1)		nt component of the vegetation, nd/or disturbance tolerant native spp
None (0)	_	and species diversity moderate to
6c. Coverage of invasive plants. R		generally w/o presence of rare
to Table 1 ORAM long form for list.		
or deduct points for coverage X Extensive >75% cover (-5		ive species, with nonnative spp elerant native spp absent or virtually
Moderate 25-75% cover (·	diversity and often, but not always,
Sparse 5-25% cover (-1)	the presence of rare,	threatened, or endangered spp
Nearly absent <5% cover		
Absent (1) 6d. Microtopography.	Mudflat and Open Water Class Qua 0 Absent <0.1ha (0.247	
Score all present using 0 to 3 scale.	<u> </u>	,
1 Vegetated hummucks/tus		
0 Coarse woody debris >15		or more
O Standing dead >25cm (10		
2 Amphibian breeding pools	Microtopography Cover Scale 0 Absent	
		ounts or if more common
	of marginal quality	
		mounts, but not of highest
	quality or in small am 3 Present in moderate or	ounts of highest quality
	and of highest quality	=
35.5 GRAND TOTAL (max 100 pts)	

Site: V	√etlan	d LP-	-012	Rater(s): BAO		Date: 2021-11-10
3	3	Metr	ric 1. Wetland A	rea (size).		
max 6 pts.	subtotal		one size class and assign sco >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1. 0.1 to <0.3 acres (0.04 to < <0.1 acres (0.04ha) (0 pts)	re.) 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
8	11	Metr	ric 2. Upland bu	ffers and surround	ling land use.	
max 14 pts.	subtotal	2a. Cal	MICUIATE AVERAGE BURFER WIGHT. STATES AVERAGE BURFERS AVERAGE BURFERS AVERAGE BURFERS AVERY NARROW. BurFERS AVERY NARROW. BurFERS AVERY LOW. 2nd growth out LOW. Old field (>10 years)	Select only one and assign score. m (164ft) or more around wetland p 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetla. Select one or double check and r older forest, prairie, savannah, wi), shrubland, young second growth	Do not double check. perimeter (7) d wetland perimeter (4) and wetland perimeter (1) and perimeter (0) average. Idlife area, etc. (7) forest. (5)	
		, E		sidential, fenced pasture, park, con pen pasture, row cropping, mining,		w field. (3)
16.5	27.5	Metr	ric 3. Hydrology	'.		
max 30 pts.	subtotal	3a. Sou	ources of Water. Score all that High pH groundwater (5) Other groundwater (3)	ce water (3) ke or stream) (5) 3b.	Part of wetland/up X Part of riparian or Duration inundation/satu	
		Х	>0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) <0.4m (<15.7in) (1) odifications to natural hydrologi None or none apparent (12	ic regime. Score one or double che Check all disturbances observe	X Regularly inundat Seasonally inundat Seasonally satura eck and average.	ed/saturated (3) ated (2) ated in upper 30cm (12in) (1)
		×	Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (non x filling/grading road bed/RR track dredging other_	, i
8.5	36	Met	ric 4. Habitat Al	teration and Devel	opment.	
max 20 pts.	subtotal	X	None or none apparent (4)	e or double check and average.		
		×	bitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1) Ibitat alteration. Score one or or or or or or or or or or or or or			
ļ	36	X	None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observe X	x shrub/sapling rem herbaceous/aqua sedimentation dredging farming	
211	btotal this na			toxic pollutants	nutrient enrichme	nt

Site: Wet	tland LP-012	Rater(s): BAO	Date: 2021-11-10
	6		
0 3	6 Metric 5. Specia	al Wetlands.	
	Check all that apply and score Bog (10) Fen (10) Old growth forest (1	e as indicated. 0)	
	Lake Erie coastal/tri	ibutary wetland-unrestricted hydrology (10) ibutary wetland-restricted hydrology (5) airies (Oak Openings) (10)	
	Known occurrence significant migrator	y songbird/water fowl habitat or usage (10) See Question 1 Qualitative Rating (-10)	
-1 3		communities, interspersion,	
max 20 pts. sub	ototal 6a. Wetland Vegetation Com Score all present using 0 to 3		s <0.1ha (0.2471 acres) contiguous area
	O Aquatic bed	· · · · · · · · · · · · · · · · · · ·	omprises small part of wetland's
	1 Emergent	vegetation and is o	of moderate quality, or comprises a
	0 Shrub 0 Forest	significant part but 2 Present and either c	omprises significant part of wetland's
	0 Mudflats	vegetation and is o	of moderate quality or comprises a small
	Other	part and is of high Present and comprise	quality ses significant part, or more, of wetland's
	0 Other6b. horizontal (plan view) Inte		
	Select only one.		
	High (5)	Narrative Description of Vegetati	
	Moderately high(4) Moderate (3)	disturbance tolerar	•
	Moderately low (2) X Low (1)		nant component of the vegetation, e and/or disturbance tolerant native spp
	None (0)		nt, and species diversity moderate to
	6c. Coverage of invasive plar		out generally w/o presence of rare
	to Table 1 ORAM long form for		
	or deduct points for coverage		native species, with nonnative spp
	X Extensive >75% co	, ,	e tolerant native spp absent or virtually
	Moderate 25-75% c Sparse 5-25% cove	· · · · · · · · · · · · · · · · · · ·	pp diversity and often, but not always, re, threatened, or endangered spp
	Nearly absent <5%	` ,	
	Absent (1)	Mudflat and Open Water Class Q	
	6d. Microtopography. Score all present using 0 to 3	0 Absent <0.1ha (0.24 scale. 1 Low 0.1 to <1ha (0.24 scale).	
	0 Vegetated hummuc		·
	Coarse woody debri		
	0 Standing dead >250		
	2 Amphibian breeding	pools Microtopography Cover Scale	
		0 Absent	
		of marginal quality	
			amounts, but not of highest amounts of highest quality
		3 Present in moderate	
25		and of highest qua	
35 GF	RAND TOTAL (max 100	pts)	

Site: Wetland	LP-013	Rater(s): BAO		Date: 2021-11-10
	Metric 1. Wetland A	rea (size)		
	elect one size class and assign scol >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1. × 0.1 to <0.3 acres (0.04 to <	e. 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
5 6	Metric 2. Upland bu	ffers and surround	ling land use.	
max 14 pts. subtotal 2	a. Calculate average buffer width. S WIDE. Buffers average 50 MEDIUM. Buffers average X NARROW. Buffers average VERY NARROW. Buffers average VERY LOW. Buffers average VERY LOW. 2nd growth of X LOW. Old field (>10 years) X MODERATELY HIGH. Res	Select only one and assign score. m (164ft) or more around wetland p 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetlar. Select one or double check and older forest, prairie, savannah, will, shrubland, young second growth sidential, fenced pasture, park, con	Do not double check. berimeter (7) d wetland perimeter (4) and wetland perimeter (1) and perimeter (0) average. Idlife area, etc. (7) forest. (5) servation tillage, new fallo	ow field. (3)
15 5 21 5		en pasture, row cropping, mining,	construction. (1)	
max 30 pts. subtotal 3.	All America 3. Hydrology a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surfater Perennial surface water (lal co. Maximum water depth. Select or 10.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (1) 4. Modifications to natural hydrological None or none apparent (12)	apply. 3b. ce water (3) (e or stream) (5) 3d. (ly one and assign score. (2) c regime. Score one or double che Check all disturbances observe	X Part of wetland/up X Part of riparian or Duration inundation/satu Semi- to permane X Regularly inundat X Seasonally inundat Seasonally saturated and average.	in (1) lake and other human use (1) cland (e.g. forest), complex (1) cupland corridor (1) curation. Score one or dbl check ently inundated/saturated (4) led/saturated (3) ated (2) ated in upper 30cm (12in) (1)
6.5 28 1	X Recovered (7) X Recovering (3) Recent or no recovery (1)	ditch tile dike weir x stormwater input	point source (non x filling/grading x road bed/RR track dredging other	
	Metric 4. Habitat Ala. Substrate disturbance. Score on		opment.	
4	None or none apparent (4) X Recovered (3) X Recovering (2) Recent or no recovery (1) b. Habitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3)	/ one and assign score.		
	× Poor to fair (2) Poor (1)	davible about and average		
28	None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)	Check all disturbances observe mowing grazing x clearcutting selective cutting x woody debris removal toxic pollutants	d X shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: We	tlan	d LP-013	Rater(s): BAO		Date: 2021-11-10
subtota	28 al first pa	ge				
0 2	28	Metric 5. Speci	al Wetlan	ds.		
	ubtotal	Check all that apply and score Bog (10) Fen (10) Old growth forest (1) Mature forested we Lake Erie coastal/tr Lake Erie coastal/tr Lake Plain Sand Pr Relict Wet Prairies	e as indicated. 10) titland (5) ributary wetland-retrairies (Oak Open (10) state/federal threery songbird/water	nrestricted hyd estricted hydrol ings) (10) atened or enda fowl habitat or	ngered species (10) usage (10)	
-2 2	26	Metric 6. Plant	communi	ities, inte	erspersion, microto	opography.
max 20 pts. su	ubtotal	6a. Wetland Vegetation Com		-	Community Cover Scale	pog. apriy.
max 20 pto.	abtotal	Score all present using 0 to 3		0	Absent or comprises <0.1ha (0.24	471 acres) contiguous area
		O Aquatic bed Emergent O Shrub		1	Present and either comprises sm vegetation and is of moderate or significant part but is of low qua	quality, or comprises a
		0 Forest 0 Mudflats 0 Open water		2	Present and either comprises sign vegetation and is of moderate of part and is of high quality	nificant part of wetland's
		0 Other6b. horizontal (plan view) Inte	erspersion.	3	Present and comprises significan vegetation and is of high quality	
		Select only one. High (5)		Narrative De	escription of Vegetation Quality	
		Moderately high(4) Moderate (3)		low	Low spp diversity and/or predomi disturbance tolerant native spec	cies
		Moderately low (2) X Low (1) None (0) 6c. Coverage of invasive plant		mod	Native spp are dominant compon although nonnative and/or distu can also be present, and specie moderately high, but generally	rbance tolerant native spp es diversity moderate to
		to Table 1 ORAM long form for		- In Sector	threatened or endangered spp	
		or deduct points for coverage X Extensive >75% co Moderate 25-75% co Sparse 5-25% cove	ver (-5) cover (-3) er (-1)	high	A predominance of native species and/or disturbance tolerant nati absent, and high spp diversity a the presence of rare, threatene	ve spp absent or virtually and often, but not always,
		Nearly absent <5% Absent (1)	cover (0)	Mudflot and	Open Water Class Quality	
		6d. Microtopography.		0	Open Water Class Quality 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	cres)
		0 Vegetated hummud		2	Moderate 1 to <4ha (2.47 to 9.88	acres)
		O Coarse woody debr		3	High 4ha (9.88 acres) or more	
		0 Standing dead >251 Amphibian breeding	. ,	Microtopog	raphy Cover Scale	
		Amphibian breeding	g pools	0	Absent	
				1	Present very small amounts or if of marginal quality	
				2	Present in moderate amounts, bu quality or in small amounts of h	ighest quality
26 g	D A N	ID TOTAL /may 400	l ntol	3	Present in moderate or greater ar and of highest quality	mounts
احال احا	KAN	ID TOTAL (max 100	pts)			

Site: V	Vetlar	<u>ıd L</u>	_P-014	Rater(s): MJA		Date: 2021-10-21
0	0	M	etric 1. Wetland	Area (size).		
max 6 pts.	subtotal	-	ect one size class and assign so	core. ts) <20.2ha) (5 pts) 0.1ha) (4 pts) ha) (3 pts) <1.2ha) (2pts) o <0.12ha) (1 pt)		
4	4	М	etric 2. Upland b	uffers and surround	ling land use.	
max 14 pts.	subtotal	2a.	Calculate average buffer width. WIDE. Buffers average substitution of Suffers average substit	Select only one and assign score. 50m (164ft) or more around wetland pge 25m to <50m (82 to <164ft) around age 10m to <25m (32ft to <82ft) around se average <10m (<32ft) around wetland se. Select one or double check and a or older forest, prairie, savannah, will rs), shrubland, young second growth desidential, fenced pasture, park, consopen pasture, row cropping, mining,	Do not double check. perimeter (7) d wetland perimeter (4) and wetland perimeter (1) and perimeter (0) average. Idlife area, etc. (7) forest. (5) servation tillage, new fallo	
10	14	1.,			construction. (1)	
max 30 pts.	subtotal		etric 3. Hydrolog Sources of Water. Score all th High pH groundwater (5)	at apply. 3b.	Connectivity. Score all 100 year floodpla	
			Other groundwater (3) X Precipitation (1) Seasonal/Intermittent sur Perennial surface water (face water (3)	Between stream/l Part of wetland/up Part of riparian or	lake and other human use (1) pland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl check
		3c.	Maximum water depth. Select >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6i x <0.4m (<15.7in) (1)	only one and assign score.	Semi- to permane Regularly inundat Seasonally inunda	ently inundated/saturated (4) ted/saturated (3)
		3e.	Modifications to natural hydrologous None or none apparent (eck and average.	
			x Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir	point source (non filling/grading x road bed/RR trac dredging	,
	_	7		stormwater input	X other Culvert	
7	21	М	etric 4. Habitat A	Alteration and Develo	opment.	
max 20 pts.	subtotal	4a.	Substrate disturbance. Score of None or none apparent (4) Recovered (3) Recovering (2)	one or double check and average. 4)		
		4b.	Recent or no recovery (1) Habitat development. Select o Excellent (7) Very good (6) Good (5)) only one and assign score.		
			Moderately good (4) Fair (3) Poor to fair (2)			
		4c.	Poor (1) Habitat alteration. Score one o			
		1	None or none apparent (S Recovered (6) X Recovering (3) Recent or no recovery (1)	mowing grazing	x shrub/sapling rem herbaceous/aqua sedimentation dredging	
s	21	age		woody debris removal toxic pollutants	farming nutrient enrichme	nt

Site: Wetland LP-014	Rater(s): MJA	Date: 2021-10-21
21 subtotal first page		
0 21 Metric 5. Specia	l Wetlands.	
max 10 pts. subtotal Check all that apply and score a Bog (10) Fen (10) Old growth forest (10) Mature forested wetlate Lake Erie coastal/trib Lake Erie coastal/trib Lake Plain Sand Praiter Relict Wet Prairies (1) Known occurrence state Significant migratory Category 1 Wetland.	as indicated.) and (5) utary wetland-unrestricted hydrology (10) utary wetland-restricted hydrology (5) ries (Oak Openings) (10)	
23 Metric 6. Plant c	communities, interspersion, n	nicrotopography.
max 20 pts. subtotal 6a. Wetland Vegetation Comm	•	. •
Score all present using 0 to 3 se		<0.1ha (0.2471 acres) contiguous area
O Aquatic bed 1 Emergent 0 Shrub		mprises small part of wetland's moderate quality, or comprises a s of low quality
0 Forest 0 Mudflats 0 Open water		mprises significant part of wetland's moderate quality or comprises a small uality
O Other 6b. horizontal (plan view) Inters		s significant part, or more, of wetland's high quality
Select only one. High (5)	Narrative Description of Vegetatio	n Quality
Moderately high(4) Moderate (3)	low Low spp diversity and disturbance tolerant	or predominance of nonnative or native species
Moderately low (2) Low (1) X None (0) 6c. Coverage of invasive plants	although nonnative can also be present	ant component of the vegetation, and/or disturbance tolerant native spp , and species diversity moderate to t generally w/o presence of rare
to Table 1 ORAM long form for		
or deduct points for coverage Extensive >75% cover Moderate 25-75% cover Sparse 5-25% cover	er (-5) and/or disturbance t ever (-3) absent, and high sp	ntive species, with nonnative spp colerant native spp absent or virtually p diversity and often, but not always, e, threatened, or endangered spp
Nearly absent <5% co	· /	
x Absent (1) 6d. Microtopography.	Mudflat and Open Water Class Qu 0 Absent <0.1ha (0.247	
Score all present using 0 to 3 se		•
0 Vegetated hummucks		·
0 Coarse woody debris	, ,	or more
O Standing dead >25cn	• •	
0 Amphibian breeding	pools Microtopography Cover Scale 0 Absent	
		nounts or if more common
	quality or in small ar	amounts, but not of highest mounts of highest quality
GRAND TOTAL (max 100)	3 Present in moderate of and of highest quality	
23 GRAND TOTAL (max 100 p	pis)	

Site: V	/etlan	d LP-	015	Rater(s): MJA		Date: 2021-10-21
	0	Natu	wie 4 Wetlewel A	(oi-o)		
			ric 1. Wetland A	•		
max 6 pts.	subtotal	Select o	one size class and assign scon >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20 10 to <25 acres (4 to <10.1h 3 to <10 acres (1.2 to <4ha) 0.3 to <3 acres (0.12 to <1.2 0.1 to <0.3 acres (0.04 to <0 <0.1 acres (0.04ha) (0 pts)	0.2ha) (5 pts) na) (4 pts) (3 pts) 2ha) (2pts)		
1	1	Metr	ric 2. Upland bu	ffers and surrounc	ling land use.	
max 14 pts.	subtotal	X	WIDE. Buffers average 50r MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers a ensity of surrounding land use. VERY LOW. 2nd growth or LOW. Old field (>10 years) MODERATELY HIGH. Res	select only one and assign score. In (164ft) or more around wetland p 25m to <50m (82 to <164ft) around 10m to <25m (32ft to <82ft) around Inverage <10m (<32ft) around wetla Inverage <10m (sacreta around wetla Inverage <10m (sacreta around wetla Inverage <10m (sacreta around wetla Inverage <10m (sacreta around wetla Inverage <10m (sacreta around wetla Inverage <10m (sacreta around wetla Inverage <10m (sacreta around around wetla Inverage <10m (sacreta around around wetla) Inverage <10m (sacreta around around wetla) Inverage <10m (sacreta around around wetla) Inverage <10m (sacreta around around around wetla) Inverage <10m (sacreta around	perimeter (7) d wetland perimeter (4) und wetland perimeter (1) and perimeter (0) average. Idlife area, etc. (7) forest. (5) servation tillage, new fallo	ow field. (3)
		Х	HIGH. Urban, industrial, op	en pasture, row cropping, mining,	construction. (1)	
6	7	Metr	ric 3. Hydrology			
max 30 pts.	subtotal	3a. Sou x x 3c. Max	urces of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surface Perennial surface water (lak ximum water depth. Select on >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) <0.4m (<15.7in) (1)	apply. 3b. te water (3) te or stream) (5) 3d. ly one and assign score. (2)	Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundat Seasonally inundat X Seasonally satura	in (1) lake and other human use (1) cland (e.g. forest), complex (1) cupland corridor (1) curation. Score one or dbl checl ently inundated/saturated (4) led/saturated (3)
	40	X	None or none apparent (12) Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (non filling/grading road bed/RR track dredging X other_Wetland beneated	k
6	13			teration and Develo	opment.	
max 20 pts.	subtotal	X	bstrate disturbance. Score one None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) bitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	e or double check and average.		
		4c. Hab	bitat alteration. Score one or d			
	13	x	None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observe mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	d X shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal
cul	htotal this na	-		I — -		I

Site: Wetland	d LP-015	Rater(s): MJA	Date: 2021-10-21	
13 subtotal first pag	ge			
0 13	Metric 5. Special V	/etlands.		
	Check all that apply and score as inc Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (9) Lake Erie coastal/tributary Lake Plain Sand Prairies (10) Known occurrence state/fr Significant migratory song Category 1 Wetland. See	dicated. wetland-unrestricted hyd wetland-restricted hydrol Oak Openings) (10) ederal threatened or enda bird/water fowl habitat or	ogy (5) ingered species (10) usage (10)	
-4 9	Metric 6. Plant con	nmunities, into	erspersion, microto	opography.
	6a. Wetland Vegetation Communitie	es. <u>Vegetation (</u>	Community Cover Scale	
	Score all present using 0 to 3 scale. O Aquatic bed Emergent	<u> </u>	Absent or comprises <0.1ha (0.24) Present and either comprises sm vegetation and is of moderate of	all part of wetland's _l uality, or comprises a
	0 Shrub 0 Forest 0 Mudflats	2	significant part but is of low qua Present and either comprises sig vegetation and is of moderate of	nificant part of wetland's
	Open waterOther	3	part and is of high quality Present and comprises significan	t part, or more, of wetland's
	6b. horizontal (plan view) Interspers		vegetation and is of high quality	
	Select only one.			
	High (5) Moderately high(4)	Narrative De	Low spp diversity and/or predomi	nance of nonnative or
	Moderate (3)		disturbance tolerant native spec	cies
	Moderately low (2) Low (1) X None (0)	mod	Native spp are dominant compon although nonnative and/or distu can also be present, and specie	rbance tolerant native spp
	6c. Coverage of invasive plants. Re	efer	moderately high, but generally	•
	to Table 1 ORAM long form for list.		threatened or endangered spp	
	or deduct points for coverage X Extensive >75% cover (-5 Moderate 25-75% cover (-1) Sparse 5-25% cover (-1)	•	A predominance of native species and/or disturbance tolerant nati absent, and high spp diversity a the presence of rare, threatene	ve spp absent or virtually and often, but not always,
	Nearly absent <5% cover	(0)	,	.,
	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 acres)	eroe)
	O Vegetated hummucks/tus		Moderate 1 to <4ha (2.47 to 9.88	
	O Coarse woody debris >150 O Standing dead >25cm (10	cm (6in) 3	High 4ha (9.88 acres) or more	
	0 Amphibian breeding pools		raphy Cover Scale	
		<u> </u>	Absent Present very small amounts or if	more common
			of marginal quality	
		2	Present in moderate amounts, bu quality or in small amounts of h	ighest quality
		3	Present in moderate or greater ar	mounts
9 GRAN	D TOTAL (max 100 pts)		and of highest quality	

Site: Wetlan	d LP-016	Rater(s): MJA		Date: 2021-10-21
2 2	Metric 1. Wetland A	rea (size).		
max 6 pts. subtotal	Select one size class and assign sco	re.) (0.2ha) (5 pts) ha) (4 pts) () (3 pts) 2ha) (2pts)		
8 10	Metric 2. Upland bu	ffers and surroundi	ng land use.	
max 14 pts. subtotal	2a. Calculate average buffer width. WIDE. Buffers average 50 X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2b. Intensity of surrounding land use VERY LOW. 2nd growth of the company of the	Select only one and assign score. D m (164ft) or more around wetland pe 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetlan	o not double check. erimeter (7) wetland perimeter (4) d wetland perimeter (1) d perimeter (0) verage. life area, etc. (7) orest. (5) ervation tillage, new fallo	
7.5 17.5	Metric 3. Hydrology	<i>'</i> .		
max 30 pts. subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) × Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la 3c. Maximum water depth. Select of	ce water (3) ke or stream) (5) 3b.	Part of wetland/up × Part of riparian or Duration inundation/satu	
	>0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) x <0.4m (<15.7in) (1) 3e. Modifications to natural hydrolog None or none apparent (12 Recovered (7)	ic regime. Score one or double chec Check all disturbances observed ditch	Regularly inundat X Seasonally inundat X Seasonally satura k and average. point source (non	ed/saturated (3) ated (2) ated in upper 30cm (12in) (1)
8 25.5	X Recovering (3) Recent or no recovery (1)	tile dike weir stormwater input	filling/grading x road bed/RR track dredging other	(
max 20 pts. subtotal	Metric 4. Habitat Al 4a. Substrate disturbance. Score or		pment.	
	None or none apparent (4) X Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select onl 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		
25.5	None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observed mowing grazing x clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-016	ater(s): MJA		Date: 2021-10-21
25.5 subtotal first page 25.5 Metric 5 Special Wes			
incurio 3. Opeciai vic			
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 weten Lake Plain Sand Prairies (Oak Relict Wet Prairies (10) Known occurrence state/feder Significant migratory songbird Category 1 Wetland. See Quit	tland-unrestricted hyd tland-restricted hydrol (Openings) (10) ral threatened or enda (water fowl habitat or	angered species (10) usage (10)	
0 25.5 Metric 6. Plant comm	nunities, int	erspersion, microto	pography.
max 20 pts. subtotal 6a. Wetland Vegetation Communities.	· ·	Community Cover Scale	11 - 3 - 11 - 7
Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	171 acres) contiguous area
0 Aquatic bed	1	Present and either comprises small	
1 Emergent		vegetation and is of moderate q	•
0 Shrub 0 Forest	2	significant part but is of low qua Present and either comprises sign	
0 Mudflats	_	vegetation and is of moderate of	
Open water	-	part and is of high quality	
O Other	3	Present and comprises significan	
6b. horizontal (plan view) Interspersion. Select only one.		vegetation and is of high quality	
High (5)	Narrative De	escription of Vegetation Quality	
Moderately high(4)	low	Low spp diversity and/or predomi	
Moderate (3)		disturbance tolerant native spec	
Moderately low (2) Low (1)	mod	Native spp are dominant compon- although nonnative and/or distu	
X None (0)		can also be present, and specie	
6c. Coverage of invasive plants. Refer		moderately high, but generally v	
to Table 1 ORAM long form for list. Add		threatened or endangered spp	
or deduct points for coverage Extensive >75% cover (-5)	high	A predominance of native species and/or disturbance tolerant native	
Moderate 25-75% cover (-3)		absent, and high spp diversity a	
X Sparse 5-25% cover (-1)		the presence of rare, threatened	d, or endangered spp
Nearly absent <5% cover (0) Absent (1)	Mudflot ond	LOngo Water Class Quality	
6d. Microtopography.	0	Open Water Class Quality 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	eres)
0 Vegetated hummucks/tussuck		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 O Amphibian breeding pools		raphy Cover Scale	
7 tiliphilatai aroodii g poolo	0	Absent	
	1	Present very small amounts or if	more common
		of marginal quality	t not of highest
	2	Present in moderate amounts, bu quality or in small amounts of h	_
	3	Present in moderate or greater ar	
05.5		and of highest quality	
25.5 GRAND TOTAL (max 100 pts)			

Site: V	Vetlan	d LP-017	Rater(s): MJA		Date: 2021-10-21
2	2	Metric 1. Wetl	and Area (size).		
max 6 pts.	subtotal	Select one size class and a >50 acres (>20.2 25 to <50 acres 10 to <25 acres 3 to <10 acres (assign score. 2ha) (6 pts) (10.1 to <20.2ha) (5 pts) (4 to <10.1ha) (4 pts) (2 to <4ha) (3 pts) 0.12 to <1.2ha) (2pts) (0.04 to <0.12ha) (1 pt)		
8	10	Metric 2. Upla	nd buffers and surre	ounding land use.	
max 14 pts.	subtotal	2a. Calculate average buf WIDE. Buffers a X MEDIUM. Buffe NARROW. Buff VERY NARROW 2b. Intensity of surroundin VERY LOW. 2n	fer width. Select only one and assign average 50m (164ft) or more around was average 25m to <50m (82 to <164ft) ers average 10m to <25m (32ft to <8 //. Buffers average <10m (<32ft) aroung land use. Select one or double ched growth or older forest, prairie, savar	score. Do not double check. vetland perimeter (7) t) around wetland perimeter (4) 2ft) around wetland perimeter (1) nd wetland perimeter (0) eck and average. nnah, wildlife area, etc. (7)	
		X MODERATELY	>10 years), shrubland, young second HIGH. Residential, fenced pasture, p dustrial, open pasture, row cropping,	ark, conservation tillage, new fallo	ow field. (3)
6.5	16.5	Metric 3. Hydı	ology.		
max 30 pts.	subtotal	3a. Sources of Water. Sc High pH groundwat Other groundwat X Precipitation (1) Seasonal/Interm	ore all that apply. vater (5) er (3) ittent surface water (3)	Part of wetland/up Part of riparian or	nin (1) lake and other human use (1) pland (e.g. forest), complex (1) r upland corridor (1)
		3c. Maximum water depth >0.7 (27.6in) (3) 0.4 to 0.7m (15.7x <0.4m (<15.7in)	(1)	Semi- to permane Regularly inundat X Seasonally inund X Seasonally satura	
		None or none ap Recovered (7) Recovering (3) Recent or no rec	ditch tile	observed point source (non filling/grading road bed/RR trac dredging	,
6	22.5	Metric 4. Hab	itat Alteration and D	evelopment.	
max 20 pts.	subtotal	4a. Substrate disturbance None or none ap Recovered (3) Recovering (2) Recent or no rec		rage.	
		4b. Habitat development. Excellent (7) Very good (6) Good (5) Moderately good Fair (3) Poor to fair (2) X Poor (1)	Select only one and assign score.		
c)	22.5	None or none ap Recovered (6) X Recovering (3) Recent or no rec	mowing grazing	x shrub/sapling ren herbaceous/aqua sedimentation dredging	atic bed removal

Site: Wetland LP-017	Rater(s):	MJA		Date: 2021-10-21
22.5 subtotal first page				
0 22.5 Metric !	5. Special Wetlands.			
max 10 pts. subtotal Check all that Bog Fen Old Mat Lak Lak Reli Kno	apply and score as indicated. (10) (10) (10) (10) (10) (10) (10) (10	cted hydrology 10) d or endange abitat or usa	ered species (10) ge (10)	
-3 19.5 Metric (6. Plant communities	s, inter	spersion, microto	pography.
		-	nmunity Cover Scale	
	ent using 0 to 3 scale.		bsent or comprises <0.1ha (0.24	
	atic bed	1 P	resent and either comprises sma	
1 Em	ergent		vegetation and is of moderate q significant part but is of low qual	•
0 For			resent and either comprises sign	•
o Mud	dflats		vegetation and is of moderate q	
	en water		part and is of high quality	
0 Oth	er I (plan view) Interspersion.	3 P	resent and comprises significant vegetation and is of high quality	part, or more, of wetland's
Select only or			vegetation and is of high quality	
·		rative Desc	ription of Vegetation Quality	
	derately high(4)	low L	ow spp diversity and/or predomir	
	derate (3)	mod N	disturbance tolerant native spec	
	derately low (2) v (1)	mod N	ative spp are dominant compone although nonnative and/or distur	•
	ne (0)		can also be present, and specie	• • • • • • • • • • • • • • • • • • • •
	of invasive plants. Refer		moderately high, but generally v	v/o presence of rare
	AM long form for list. Add	In in the	threatened or endangered spp	
·	nts for coverage ensive >75% cover (-5)	high A	predominance of native species and/or disturbance tolerant nativ	
L	derate 25-75% cover (-3)		absent, and high spp diversity a	
	rse 5-25% cover (-1)		the presence of rare, threatened	
	arly absent <5% cover (0) sent (1) Mud	lflat and On	on Water Class Quality	
6d. Microtopo			ben Water Class Quality bsent <0.1ha (0.247 acres)	
	ent using 0 to 3 scale.		ow 0.1 to <1ha (0.247 to 2.47 ac	res)
	etated hummucks/tussucks		loderate 1 to <4ha (2.47 to 9.88	acres)
	arse woody debris >15cm (6in)	3 H	igh 4ha (9.88 acres) or more	
	nding dead >25cm (10in) dbh phibian breeding pools Mici	rotonogran	hy Cover Scale	
	primari breeding pools		bsent	
			resent very small amounts or if r	nore common
			of marginal quality	
		2 P	resent in moderate amounts, but	_
		3 P	quality or in small amounts of hi resent in moderate or greater an	
40.5		<u> </u>	and of highest quality	
19.5 GRAND TOTAL	. (max 100 pts)			

Site: V	Vetlan	d LP-018	Rater(s): MJA		Date: 2021-10-22
1	1	Metric 1. Wetland	Area (size)		
max 6 pts.	subtotal	Select one size class and assign so >50 acres (>20.2ha) (6 p 25 to <50 acres (10.1 to 10 to <25 acres (4 to <10 3 to <10 acres (1.2 to <4 0.3 to <3 acres (0.12 to < 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04 to <0.1 acres (0.04ha) (0 pt	core. ts) <20.2ha) (5 pts) 0.1ha) (4 pts) ha) (3 pts) <1.2ha) (2pts) o <0.12ha) (1 pt)		
3	4	Metric 2. Upland b	uffers and surround	ding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width WIDE. Buffers average MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers average VERY LOW. Buffers average VERY LOW. 2nd growth LOW. Old field (>10 year MODERATELY HIGH. F	Select only one and assign score. 50m (164ft) or more around wetland ge 25m to <50m (82 to <164ft) around age 10m to <25m (32ft to <82ft) around see. Select one or double check and or older forest, prairie, savannah, wirs), shrubland, young second growth Residential, fenced pasture, park, coropen pasture, row cropping, mining,	Do not double check. perimeter (7) Id wetland perimeter (4) und wetland perimeter (1) and perimeter (0) average. Idlife area, etc. (7) forest. (5) nservation tillage, new fallo	
6	10	Metric 3. Hydrolog	ıy.		
max 30 pts.	subtotal	3a. Sources of Water. Score all the High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent sure Perennial surface water (3) 3c. Maximum water depth. Select >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6 x) < 0.4m (<15.7in) (1) 	face water (3) (lake or stream) (5) only one and assign score.	Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundat Seasonally inundat X Seasonally satura	in (1) lake and other human use (1) lake and other human use (1) land (e.g. forest), complex (1) lupland corridor (1) luration. Score one or dbl checle lently inundated/saturated (4) led/saturated (3)
6	16	None or none apparent (Recovered (7) Recovering (3) Recent or no recovery (1	ditch tile dike weir stormwater input	point source (non filling/grading x road bed/RR track dredging other	, and the second
max 20 pts.	subtotal	Metric 4. Habitat A 4a. Substrate disturbance. Score	Alteration and Develone or double check and average.	opment.	
		None or none apparent (Recovered (3) X Recovering (2) Recent or no recovery (1 4b. Habitat development. Select of Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2))		
		x Poor (1) 4c. Habitat alteration. Score one of		- 4	
SI	16	None or none apparent (Recovered (6) Recovering (3) Recent or no recovery (1	x mowing grazing	shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: V	/etlan	d LP-018	Rater(s): MJA		Date: 2021-10-22
	16	ľ			
O	16	Metric 5. Special V	Vetlands.		
max 10 pts.	subtotal	Check all that apply and score as in Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (in Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (in Relict Wet Prairies (in Known occurrence state/fit Significant migratory song Category 1 Wetland. See	dicated. 5) y wetland-unrestricted hydro y wetland-restricted hydro (Oak Openings) (10) ederal threatened or enda	angered species (10) usage (10)	
-4	12	Metric 6. Plant con	nmunities, int	erspersion, microto	pography.
max 20 pts.	subtotal	6a. Wetland Vegetation Communiti	es. <u>Vegetation</u>	Community Cover Scale	
		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	
		O Aquatic bed Emergent O Shrub	1	Present and either comprises sm vegetation and is of moderate of significant part but is of low qua	juality, or comprises a
		0 Forest 0 Mudflats 0 Open water	2	Present and either comprises sign vegetation and is of moderate of part and is of high quality	nificant part of wetland's
		0 Other	3	Present and comprises significan	t part, or more, of wetland's
		6b. horizontal (plan view) Interspers	sion.	vegetation and is of high quality	1
		Select only one.	Name the D		
		High (5) Moderately high(4)	low	escription of Vegetation Quality Low spp diversity and/or predomi	nance of nonnative or
		Moderate (3)	1011	disturbance tolerant native spec	
		Moderately low (2) Low (1)	mod	Native spp are dominant compon although nonnative and/or distu	ent of the vegetation,
		X None (0)		can also be present, and specie	•
		6c. Coverage of invasive plants. Re		moderately high, but generally w	
		to Table 1 ORAM long form for list. or deduct points for coverage	high	threatened or endangered spp A predominance of native species	
		X Extensive >75% cover (-5	_	and/or disturbance tolerant nation	
		Moderate 25-75% cover (-	-3)	absent, and high spp diversity a	and often, but not always,
		Sparse 5-25% cover (-1)	(0)	the presence of rare, threatened	d, or endangered spp
		Nearly absent <5% cover Absent (1)	• •	d 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	cres)
		0 Vegetated hummucks/tus		Moderate 1 to <4ha (2.47 to 9.88	acres)
		O Coarse woody debris >15		High 4ha (9.88 acres) or more	
		Standing dead >25cm (10Amphibian breeding pools		raphy Cover Scale	
		o , unprission processing pools	0	Absent	
			1	Present very small amounts or if of marginal quality	more common
			2	Present in moderate amounts, bu quality or in small amounts of h	_
			3	Present in moderate or greater ar and of highest quality	
l12 l	GRAN	ID TOTAL (max 100 pts	<u> </u>		

Site: Wetland LP-019 Rater(s): MJA			Date: 2021-10-22			
1	1	l _M	etric 1. Wetland A	rea (size)		
max 6 pts.	subtotal		ct one size class and assign scolors >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1. x 0.1 to <0.3 acres (0.04 to < <0.1 acres (0.04ha) (0 pts)	re. 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
3	4	Me	etric 2. Upland bu	ffers and surround	ling land use.	
max 14 pts.	subtotal	2a.	Calculate average buffer width. S WIDE. Buffers average 50 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers Intensity of surrounding land use VERY LOW. 2nd growth o LOW. Old field (>10 years) MODERATELY HIGH. Res	Select only one and assign score. Im (164ft) or more around wetland program to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetland. Select one or double check and a rolder forest, prairie, savannah, will share the standard program of the savannah, will share the savannah, share	Do not double check. Doerimeter (7) d wetland perimeter (4) and wetland perimeter (1) and perimeter (0) average. Idlife area, etc. (7) forest. (5) servation tillage, new fallo	
3	7] M€	etric 3. Hydrology	'.		
max 30 pts.	subtotal	3a. 3c.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (lal Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) <0.4m (<15.7in) (1) Modifications to natural hydrologi Recovered (7)	apply. 3b. ce water (3) ke or stream) (5) 3d. nly one and assign score. (2) c regime. Score one or double che Check all disturbances observed ditch	Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundat Seasonally inundat X Seasonally satura eck and average. d point source (non	in (1) lake and other human use (1) pland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl check ently inundated/saturated (4) ted/saturated (3) ated (2) ated in upper 30cm (12in) (1)
4	11	l _m	Recovering (3) Recent or no recovery (1) etric 4. Habitat Al	tile dike weir stormwater input teration and Develo	filling/grading x road bed/RR track dredging other opment.	k
max 20 pts.	subtotal		Substrate disturbance. Score on None or none apparent (4) Recovered (3) X Recovering (2) Recent or no recovery (1)		·	
			Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) Habitat alteration. Score one or of	double check and average.		
S.	11		None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observed mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling rem herbaceous/aqua sedimentation dredging X farming nutrient enrichme	tic bed removal

Site: Wetland LP-019	Rater(s): MJA	Date: 2021-10-22
11 subtotal first page		
0 11 Metric 5. Special V	Vetlands.	
max 10 pts. subtotal Check all that apply and score as in Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (Lake Erie coastal/tributar) Lake Erie coastal/tributar) Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state/t	dicated. 5) y wetland-unrestricted hydrology (10) y wetland-restricted hydrology (5)	(10)
2 13 Metric 6. Plant cor	nmunities, interspersio	on, microtopography.
max 20 pts. subtotal 6a. Wetland Vegetation Communit	es Vegetation Community Cov	ver Scale
Score all present using 0 to 3 scale		prises <0.1ha (0.2471 acres) contiguous area
0 Aquatic bed 1 Emergent 0 Shrub	vegetation a	ither comprises small part of wetland's nd is of moderate quality, or comprises a art but is of low quality
0 Shrub 0 Forest 0 Mudflats 0 Open water	2 Present and ei vegetation a	ither comprises significant part of wetland's nd is of moderate quality or comprises a small f high quality
Other6b. horizontal (plan view) Intersper	3 Present and co	omprises significant part, or more, of wetland's nd is of high quality
Select only one.		
High (5)	Narrative Description of Ve	
Moderately high(4) Moderate (3)	disturbance	sity and/or predominance of nonnative or tolerant native species
Moderately low (2) Low (1)	although nor	edominant component of the vegetation, nnative and/or disturbance tolerant native spp
X None (0) 6c. Coverage of invasive plants. R	efer moderately h	present, and species diversity moderate to nigh, but generally w/o presence of rare
to Table 1 ORAM long form for list. or deduct points for coverage		or endangered spp ce of native species, with nonnative spp
Extensive >75% cover (-5 Moderate 25-75% cover (Sparse 5-25% cover (-1)	and/or distur absent, and	rbance tolerant native spp absent or virtually high spp diversity and often, but not always, a of rare, threatened, or endangered spp
Nearly absent <5% cover	• •	
X Absent (1)	Mudflat and Open Water Cl	
6d. Microtopography.		a (0.247 acres)
Score all present using 0 to 3 scale		na (0.247 to 2.47 acres)
0 Vegetated hummucks/tus 0 Coarse woody debris >15		3 <4ha (2.47 to 9.88 acres) 3 acres) or more
0 Coarse woody debris >15 0 Standing dead >25cm (10	,	acres) or more
0 Amphibian breeding pool		ale
	0 Absent	
		mall amounts or if more common
	2 Present in mo	derate amounts, but not of highest small amounts of highest quality
		derate or greater amounts
13 GRAND TOTAL (max 100 pts		· ,

Site: V	Vetlan	d LP-020	Rater(s): MJA		Date: 2021-10-22
1	1	Metric 1. Wetland	Area (size).		
max 6 pts.	subtotal	Select one size class and assign so	core. ts) <20.2ha) (5 pts) .1ha) (4 pts) na) (3 pts) :1.2ha) (2pts) o <0.12ha) (1 pt)		
4	5	Metric 2. Upland b	uffers and surroun	ding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width WIDE. Buffers average of MEDIUM. Buffers average of NARROW. Buffers average of VERY NARROW. Buffers average of NARROW. Buffers average of NARROW. Buffers average of NARROW. Buffer of Surrounding land use of NARROW. 2nd growth LOW. Old field (>10 year MODERATELY HIGH. Fig. 12.	Select only one and assign score. 50m (164ft) or more around wetland ge 25m to <50m (82 to <164ft) around age 10m to <25m (32ft to <82ft) around wetland or saverage <10m (<32ft) around wetland or older forest, prairie, savannah, wers), shrubland, young second growth desidential, fenced pasture, park, coopen pasture, row cropping, mining	Do not double check. perimeter (7) nd wetland perimeter (4) bund wetland perimeter (1) land perimeter (0) d average. vildlife area, etc. (7) n forest. (5) nservation tillage, new fallo	
16	21	Metric 3. Hydrolog	V.		
max 30 pts.	subtotal	3a. Sources of Water. Score all the High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent sure Perennial surface water (3c. Maximum water depth. Select >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6	face water (3) lake or stream) (5) only one and assign score.	Part of wetland/up X Part of riparian or Duration inundation/satu Semi- to permane X Regularly inundat Seasonally inundat	in (1) lake and other human use (1) pland (e.g. forest), complex (1) rupland corridor (1) uration. Score one or dbl check ently inundated/saturated (4) ted/saturated (3) ated (2)
		× <0.4m (<15.7in) (1) 3e. Modifications to natural hydrolo None or none apparent (Recovered (7) Recovering (3) Recent or no recovery (1	ditch	neck and average.	k
6	27	Metric 4. Habitat A	Alteration and Devel	lopment.	
max 20 pts.	subtotal	4a. Substrate disturbance. Score None or none apparent (Recovered (3) Recovering (2) Recent or no recovery (1 4b. Habitat development. Select of Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor (4)	4)		
		Poor (1) 4c. Habitat alteration. Score one of			
SI	27	None or none apparent (9) Recovered (6) Recovering (3) X Recent or no recovery (1)	x mowing grazing	shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-020	Rater(s): MJA		Date: 2021-10-22
27 subtotal first page			
0 27 Metric 5. Special We	etlands.		
max 10 pts. subtotal Check all that apply and score as indiced Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary w	ated.	logy (10)	
Lake Erie coastal/tributary w Lake Plain Sand Prairies (Or Relict Wet Prairies (10) Known occurrence state/fed Significant migratory songbir Category 1 Wetland. See Q	ak Openings) (10) eral threatened or endang d/water fowl habitat or us	gered species (10) sage (10)	
-1 26 Metric 6. Plant com	munities, inte	rspersion, microto	pography.
max 20 pts. subtotal 6a. Wetland Vegetation Communities		ommunity Cover Scale	
Score all present using 0 to 3 scale.		Absent or comprises <0.1ha (0.24	
0 Aquatic bed 1 Emergent	1	Present and either comprises sma vegetation and is of moderate q	
0 Shrub		significant part but is of low qual	
0 Forest	2	Present and either comprises sigr	·
0 Mudflats		vegetation and is of moderate q	uality or comprises a small
O Open water		part and is of high quality	
0 Other6b. horizontal (plan view) Interspersion		Present and comprises significant vegetation and is of high quality	part, or more, of wetland's
Select only one.	1.	vegetation and is of high quality	
High (5)	Narrative Des	cription of Vegetation Quality	
Moderately high(4)		Low spp diversity and/or predomir	
Moderate (3)		disturbance tolerant native spec	
Moderately low (2) Low (1)	mod	Native spp are dominant compone although nonnative and/or distur	•
X None (0)		can also be present, and specie	• • • • • • • • • • • • • • • • • • • •
6c. Coverage of invasive plants. Refe		moderately high, but generally v	•
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	
X 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)		Open Water Class Quality	
6d. Microtopography. Score all present using 0 to 3 scale.		Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 ac	res)
0 Vegetated hummucks/tussu		Moderate 1 to <4ha (2.47 to 9.88	
0 Coarse woody debris >15cm		High 4ha (9.88 acres) or more	
0 Standing dead >25cm (10in)	dbh		
1 Amphibian breeding pools		phy Cover Scale	
		Absent Present very small amounts or if r	more common
	'	of marginal quality	nore common
	2	Present in moderate amounts, bu	_
		quality or in small amounts of hi	
	3	Present in moderate or greater an and of highest quality	IOUNTS
26 GRAND TOTAL (max 100 pts)		and or highest quality	

Site: V	Vetlan	<u>d LP-0</u>)21	Rater(s): MJA		Date: 2021-10-22
1	1	Metri	ic 1. Wetland A	rea (size).		
max 6 pts.	subtotal	Select on	ne size class and assign scor >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1. 0.1 to <0.3 acres (0.04 to < <0.1 acres (0.04ha) (0 pts)	re. 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
4	5	Metri	ic 2. Upland bu	ffers and surround	ding land use.	
max 14 pts.	subtotal	2a. Calcu	ulate average buffer width. S WIDE. Buffers average 50 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers	Select only one and assign score. m (164ft) or more around wetland 25m to <50m (82 to <164ft) arour e 10m to <25m (32ft to <82ft) arour average <10m (<32ft) around wetla	Do not double check. perimeter (7) nd wetland perimeter (4) und wetland perimeter (1) and perimeter (0)	
		Х	VERY LOW. 2nd growth or LOW. Old field (>10 years) MODERATELY HIGH. Res HIGH. Urban, industrial, op	Select one or double check and rolder forest, prairie, savannah, was shrubland, young second growth sidential, fenced pasture, park, corpen pasture, row cropping, mining,	rildlife area, etc. (7) n forest. (5) nservation tillage, new fallo	ow field. (3)
15.5	20.5	Metri	ic 3. Hydrology	_		
max 30 pts.	subtotal	3a. Sour	rces of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (lal	apply. 3b	Part of wetland/u × Part of riparian or	
		X	mum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) <0.4m (<15.7in) (1)	nly one and assign score.	Semi- to permane Regularly inundat X Seasonally inund X Seasonally satura	ently inundated/saturated (4) ed/saturated (3)
		х	None or none apparent (12 Recovered (7) Recovering (3) Recent or no recovery (1)			, i
8	28.5	l Metri	ic 4. Habitat Al	teration and Devel	opment.	
max 20 pts.	subtotal	4a. Subs	strate disturbance. Score on None or none apparent (4) Recovered (3) Recovering (2)	e or double check and average.	•	
		X	Recent or no recovery (1) itat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)			
SI	28.5	X	itat alteration. Score one or of None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observed mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	x shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-021	Rater(s): MJA	Date: 2021-10-22
28.5 subtotal first page 28.5 Metric 5. Special W	<i>l</i> otlands	
incure of operation		
Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (Relict Wet Prairies (10) Known occurrence state/fe Significant migratory song	i) wetland-unrestricted hydrology (10) wetland-restricted hydrology (5)	
4 32.5 Metric 6. Plant con	nmunities, interspersion	. microtopography.
max 20 pts. subtotal 6a. Wetland Vegetation Communitie	•	
Score all present using 0 to 3 scale.	0 Absent or compris	ses <0.1ha (0.2471 acres) contiguous area
0 Aquatic bed		r comprises small part of wetland's
1 Emergent 1 Shrub		s of moderate quality, or comprises a
0 Forest		out is of low quality r comprises significant part of wetland's
0 Mudflats		s of moderate quality or comprises a small
0 Open water	part and is of hig	
O Other_		orises significant part, or more, of wetland's
6b. horizontal (plan view) Interspers Select only one.	on. vegetation and i	s or nigh quality
High (5)	Narrative Description of Veget	ation Quality
Moderately high(4)		and/or predominance of nonnative or
Moderate (3)		rant native species
X Moderately low (2) Low (1)		minant component of the vegetation, ive and/or disturbance tolerant native spp
None (0)	_	sent, and species diversity moderate to
6c. Coverage of invasive plants. Re	fer moderately high	, but generally w/o presence of rare
to Table 1 ORAM long form for list.		
or deduct points for coverage Extensive >75% cover (-5)		of native species, with nonnative sppace tolerant native spp absent or virtually
Moderate 25-75% cover (-		spp diversity and often, but not always,
X Sparse 5-25% cover (-1)	the presence of	rare, threatened, or endangered spp
Nearly absent <5% cover	•	• "
Absent (1) 6d. Microtopography.	Mudflat and Open Water Class 0 Absent < 0.1ha (0	
Score all present using 0 to 3 scale.		0.247 to 2.47 acres)
0 Vegetated hummucks/tuss		ha (2.47 to 9.88 acres)
O Coarse woody debris >15c		res) or more
0 Standing dead >25cm (10i 1 Amphibian breeding pools	n) dbn <u>Microtopography Cover Scale</u>	
Amphibian breeding pools	0 Absent	
		Il amounts or if more common
	of marginal qual	<u> </u>
		ate amounts, but not of highest
		all amounts of highest quality ate or greater amounts
[aa =	and of highest a	
32.5 GRAND TOTAL (max 100 pts)		

Site: Wetland LP-022		Rater(s): BCR		Date : 2021-09-10		
0	0	Ma	trio 1 Wotland A	ree (eize)		
<u> </u>			tric 1. Wetland A	` '		
max 6 pts.	subtotal	Selec	ct one size class and assign scor >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20 10 to <25 acres (4 to <10.1b 3 to <10 acres (1.2 to <4ha) 0.3 to <3 acres (0.12 to <1.2 0.1 to <0.3 acres (0.04 to <0 × <0.1 acres (0.04ha) (0 pts)	0.2ha) (5 pts) na) (4 pts) I (3 pts) 2ha) (2pts)		
8	8	Ме	tric 2. Upland bu	ffers and surround	ling land use.	
max 14 pts.	subtotal		WIDE. Buffers average 50r X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers a	Select only one and assign score. In (164ft) or more around wetland p 25m to <50m (82 to <164ft) around 10m to <25m (32ft to <82ft) around In average <10m (<32ft) around wetla Select one or double check and	perimeter (7) d wetland perimeter (4) and wetland perimeter (1) and perimeter (0)	
			X LOW. Old field (>10 years)X MODERATELY HIGH. Res	older forest, prairie, savannah, wil , shrubland, young second growth idential, fenced pasture, park, con- en pasture, row cropping, mining,	forest. (5) servation tillage, new fallo	ow field. (3)
9.5	17.5	Ме	tric 3. Hydrology	•		
max 30 pts.	subtotal	E	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surface	ce water (3)	Part of wetland/up Part of riparian or	in (1) lake and other human use (1) pland (e.g. forest), complex (1) upland corridor (1)
			Perennial surface water (lak Maximum water depth. Select on >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) x <<a ><<a >	ly one and assign score.	Semi- to permane Regularly inundat X Seasonally inundat X Seasonally satura	
			None or none apparent (12) Recovered (7) X Recovering (3) Recent or no recovery (1)			
7	24.5	Ме	etric 4. Habitat Alf	teration and Develo	opment.	
max 20 pts.	subtotal		Substrate disturbance. Score one None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)	e or double check and average.		
		4b. F	Habitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1)	one and assign score.		
		4с. F	Habitat alteration. Score one or department (9)	louble check and average. Check all disturbances observed	d	
]	0.4 =	<u> </u>	Recovered (6) X Recovering (3) Recent or no recovery (1)	mowing grazing x clearcutting selective cutting	× shrub/sapling rem herbaceous/aqua sedimentation dredging	
011	24.5	90		x woody debris removal toxic pollutants	farming nutrient enrichme	nt

Site: Wetland LP-022	Rater(s): BCR	Date: 2021-09-10
24.5		
0 24.5 Metric 5. Special V	Vetlands	
max 10 pts. subtotal Check all that apply and score as in Bog (10) Fen (10) Old growth forest (10)		
Mature forested wetland (Lake Erie coastal/tributary	y wetland-unrestricted hydrology (10) y wetland-restricted hydrology (5)	
Relict Wet Prairies (10) Known occurrence state/f Significant migratory song	rederal threatened or endangered species (10) gbird/water fowl habitat or usage (10) e Question 1 Qualitative Rating (-10)	
-4 20.5 Metric 6. Plant cor	nmunities, interspersion, m	. •
max 20 pts. subtotal 6a. Wetland Vegetation Communiti		
Score all present using 0 to 3 scale. O Aquatic bed		.1ha (0.2471 acres) contiguous area prises small part of wetland's
1 Emergent		noderate quality, or comprises a
0 Shrub	significant part but is o	
0 Forest	2 Present and either comp	orises significant part of wetland's
0 Mudflats	vegetation and is of m	oderate quality or comprises a small
0 Open water	part and is of high qua	•
0 Other		significant part, or more, of wetland's an quality
Select only one.	<u> </u>	
High (5)	Narrative Description of Vegetation	Quality
Moderately high(4) Moderate (3)	low Low spp diversity and/or disturbance tolerant no	r predominance of nonnative or
Moderately low (2)		t component of the vegetation,
Low (1)		id/or disturbance tolerant native spp
X None (0)		and species diversity moderate to
6c. Coverage of invasive plants. R	· · · · · · · · · · · · · · · · · · ·	generally w/o presence of rare
to Table 1 ORAM long form for list.		
or deduct points for coverage	high A predominance of nativ	ve species, with nonnative spp
X Extensive >75% cover (-5	,	erant native spp absent or virtually
Moderate 25-75% cover (,	diversity and often, but not always,
Sparse 5-25% cover (-1)		threatened, or endangered spp
Nearly absent <5% cover Absent (1)	Mudflat and Open Water Class Qual	ity
6d. Microtopography.	0 Absent <0.1ha (0.247 a	
Score all present using 0 to 3 scale.	`	,
0 Vegetated hummucks/tus	· · · · · · · · · · · · · · · · · · ·	
0 Coarse woody debris >15		·
0 Standing dead >25cm (10	Din) dbh	
0 Amphibian breeding pools	Microtopography Cover Scale	
	0 Absent	
	1 Present very small amor	unts or if more common
	of marginal quality 2 Present in moderate am	nounts, but not of highest
		ounts, but not of nignest ounts of highest quality
	3 Present in moderate or	
	and of highest quality	grouter arrivante
20.5 GRAND TOTAL (max 100 pts)	

Site: V	Vetlan	d Li	P-023,024	Rater(s): BCR		Date: 2021-09-10
3	3	Me	etric 1. Wetland A	rea (size).		
max 6 pts.	subtotal	Sele	ct one size class and assign scor >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <20 10 to <25 acres (4 to <10.1 to × 3 to <10 acres (1.2 to <4ha) 0.3 to <3 acres (0.12 to <1.2 0.1 to <0.3 acres (0.04 to <0.4 <0.1 acres (0.04ha) (0 pts)	0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
5	8	Me	etric 2. Upland bu	ffers and surround	ing land use.	
max 14 pts.	subtotal	2a. (Calculate average buffer width. S WIDE. Buffers average 50r MEDIUM. Buffers average X NARROW. Buffers average VERY NARROW. Buffers a	Select only one and assign score. Em (164ft) or more around wetland pe 25m to <50m (82 to <164ft) around a 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetlar	oo not double check. erimeter (7) wetland perimeter (4) ad wetland perimeter (1) ad perimeter (0)	
			VERY LOW. 2nd growth or LOW. Old field (>10 years) X MODERATELY HIGH. Res HIGH. Urban, industrial, op	Select one or double check and a colder forest, prairie, savannah, wilco, shrubland, young second growth foodential, fenced pasture, park, consider pasture, row cropping, mining, consider the color of	llife area, etc. (7) orest. (5) ervation tillage, new fallo	ow field. (3)
8.5	16.5	Me	etric 3. Hydrology			
max 30 pts.	subtotal	3a. Ş	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surface Perennial surface water (lak Maximum water depth. Select on >0.7 (27.6in) (3)	apply. 3b. ce water (3) se or stream) (5) 3d.	Part of wetland/up Part of riparian or Duration inundation/satu	in (1) ake and other human use (1) bland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl checkently inundated/saturated (4)
		3e. I	0.4 to 0.7m (15.7 to 27.6in) × <0.4m (<15.7in) (1)	(2) c regime. Score one or double chec	X Seasonally inundaX Seasonally satura	
			None or none apparent (12) Recovered (7) X Recovering (3) Recent or no recovery (1)	Check all disturbances observed X	point source (non x filling/grading x road bed/RR track x dredging other_	
6	22.5	l I Me	etric 4. Habitat Alf	teration and Develo	pment.	
max 20 pts.	subtotal	4a. S	Substrate disturbance. Score one None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)	e or double check and average.		
			Habitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1)			
SI	22.5]	Habitat alteration. Score one or of the second of the seco	Check all disturbances observed x mowing grazing x clearcutting selective cutting woody debris removal toxic pollutants	x shrub/sapling rem herbaceous/aqua x sedimentation x dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-023,024	Rater(s): BCR	Date:	2021-09-10
22.5 subtotal first page			
0 22.5 Metric 5. Special V	Vetlands.		
max 10 pts. subtotal Check all that apply and score as in Bog (10) Fen (10)			
Old growth forest (10)			
Mature forested wetland (: Lake Erie coastal/tributary	5) wetland-unrestricted hydro	ology (10)	
<u> </u>	wetland-restricted hydrolog	•• , ,	
Relict Wet Prairies (10)			
	ederal threatened or endan bird/water fowl habitat or us	• ` ` ` ` /	
Category 1 Wetland. See	Question 1 Qualitative Rat	ing (-10)	
7 29.5 Metric 6. Plant con	nmunities, inte	rspersion, microtopogra	aphy.
max 20 pts. subtotal 6a. Wetland Vegetation Communiti		ommunity Cover Scale	. ,
Score all present using 0 to 3 scale.		Absent or comprises <0.1ha (0.2471 acres)	
o Aquatic bed	1	Present and either comprises small part of w	
1 Emergent 1 Shrub		vegetation and is of moderate quality, or consignificant part but is of low quality	omprises a
0 Forest	2	Present and either comprises significant par	t of wetland's
0 Mudflats	_	vegetation and is of moderate quality or co	
0 Open water		part and is of high quality	
O Other_	3	Present and comprises significant part, or m	ore, of wetland's
6b. horizontal (plan view) Interspers Select only one.	sion.	vegetation and is of high quality	
High (5)	Narrative Des	cription of Vegetation Quality	
Moderately high(4)	low	Low spp diversity and/or predominance of no	onnative or
Moderate (3)		disturbance tolerant native species	
Moderately low (2)	mod	Native spp are dominant component of the v	-
Low (1) None (0)		although nonnative and/or disturbance tole can also be present, and species diversity	• • • • • • • • • • • • • • • • • • • •
6c. Coverage of invasive plants. Re	efer	moderately high, but generally w/o present	
to Table 1 ORAM long form for list.		threatened or endangered spp	
or deduct points for coverage	_	A predominance of native species, with nonr	• • •
Extensive >75% cover (-5 Moderate 25-75% cover (-	*	and/or disturbance tolerant native spp abs absent, and high spp diversity and often, b	
X Sparse 5-25% cover (-1)	0)	the presence of rare, threatened, or endan	-
Nearly absent <5% cover	(0)		
Absent (1)		Open Water Class Quality	
6d. Microtopography. Score all present using 0 to 3 scale.		Absent <0.1ha (0.247 acres)	
2 Vegetated hummucks/tus		Low 0.1 to <1ha (0.247 to 2.47 acres) Moderate 1 to <4ha (2.47 to 9.88 acres)	
1 Coarse woody debris >15		High 4ha (9.88 acres) or more	
0 Standing dead >25cm (10			
1 Amphibian breeding pools		phy Cover Scale	
	<u> </u>	Absent Present very small amounts or if more comn	non
	'	of marginal quality	1011
	2	Present in moderate amounts, but not of hig	hest
		quality or in small amounts of highest qual	ity
		Present in moderate or greater amounts	
29.5 GRAND TOTAL (max 100 pts))	and of highest quality	

Site: Wetlar	nd LP-025	Rater(s): BCR		Date: 2021-09-29
1 1	Metric 1 Wetland	Aroa (sizo)		
max 6 pts. subtotal	Metric 1. Wetland A Select one size class and assign so >50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to < 10 to <25 acres (4 to <10. 3 to <10 acres (1.2 to <4h 0.3 to <3 acres (0.12 to <7) x 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pts	ore. s) 20.2ha) (5 pts) 1ha) (4 pts) a) (3 pts) 1.2ha) (2pts) <0.12ha) (1 pt)		
2 3	Metric 2. Upland bu	uffers and surround	ling land use.	
max 14 pts. subtotal	2a. Calculate average buffer width. WIDE. Buffers average 5 MEDIUM. Buffers averag NARROW. Buffers averag VERY NARROW. Buffers 2b. Intensity of surrounding land us VERY LOW. 2nd growth LOW. Old field (>10 years MODERATELY HIGH. Re		Do not double check. Doerimeter (7) d wetland perimeter (4) and wetland perimeter (1) and perimeter (0) average. Idlife area, etc. (7) forest. (5) servation tillage, new fallo	ow field. (3)
6.5 9.5	Metric 3. Hydrolog	V.		
max 30 pts. subtotal	3a. Sources of Water. Score all the High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surf Perennial surface water (i) 3c. Maximum water depth. Select (i) >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) X <0.4m (<15.7in) (1)	ace water (3) ake or stream) (5) only one and assign score.	Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundati x Seasonally inundati	n (1) ake and other human use (1) bland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl checl ently inundated/saturated (4) ed/saturated (3)
	3e. Modifications to natural hydrolog None or none apparent (1 Recovered (7) Recovering (3) Recent or no recovery (1)	gic regime. Score one or double che Check all disturbances observed ditch tile dike weir stormwater input		
5 14.5	Metric 4. Habitat A	Iteration and Develo	opment.	
max 20 pts. subtotal	4a. Substrate disturbance. Score of None or none apparent (4 × Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select or Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2)	ne or double check and average.)		
	X Poor (1) 4c. Habitat alteration. Score one or			
14.5	4	x mowing grazing	x shrub/sapling rem herbaceous/aquat sedimentation dredging farming nutrient enrichmen	tic bed removal

Site: Wetland LP-025	Rater(s): BCR	Date: 2021-09-29
14.5 subtotal first page		
0 14.5 Metric 5. Special	Wetlands	
max 10 pts. subtotal Check all that apply and score as Bog (10)		
Fen (10) Old growth forest (10) Mature forested wetland Lake Erie coastal/tribut Lake Erie coastal/tribut Lake Plain Sand Prairie Relict Wet Prairies (10) Known occurrence stat	ary wetland-unrestricted hydrology (10) ary wetland-restricted hydrology (5) es (Oak Openings) (10)	
	See Question 1 Qualitative Rating (-10)	
0 14.5 Metric 6. Plant co	ommunities, interspersion, m	nicrotopography.
max 20 pts. subtotal 6a. Wetland Vegetation Commun		
Score all present using 0 to 3 sca		0.1ha (0.2471 acres) contiguous area prises small part of wetland's
0 Aquatic bed 1 Emergent		moderate quality, or comprises a
0 Shrub	significant part but is	
0 Forest		nprises significant part of wetland's
0 Mudflats 0 Open water	vegetation and is of lipart and is of high qu	moderate quality or comprises a small
0 Open water 0 Other		s significant part, or more, of wetland's
6b. horizontal (plan view) Intersp		
Select only one.		
High (5) Moderately high(4)	Narrative Description of Vegetation low Low spp diversity and/	or predominance of nonnative or
Moderate (3)	disturbance tolerant	
Moderately low (2)		nt component of the vegetation,
Low (1)	g .	and/or disturbance tolerant native spp
X None (0) 6c. Coverage of invasive plants.	· · · · · · · · · · · · · · · · · · ·	and species diversity moderate to generally w/o presence of rare
to Table 1 ORAM long form for lis		
or deduct points for coverage		tive species, with nonnative spp
Extensive >75% cover	` '	plerant native spp absent or virtually
Moderate 25-75% cove X Sparse 5-25% cover (-'	- · ·	o diversity and often, but not always, threatened, or endangered spp
Nearly absent <5% cov	•	tilleateried, or endangered spp
Absent (1)	Mudflat and Open Water Class Qua	ality
6d. Microtopography.	0 Absent <0.1ha (0.247	,
Score all present using 0 to 3 sca		<u> </u>
0 Coarse woody debris >		· · ·
0 Standing dead >25cm (
0 Amphibian breeding po		
	0 Absent 1 Present very small am	ounts or if more commen
	of marginal quality	ounts or if more common
		mounts, but not of highest
	quality or in small an	nounts of highest quality
	3 Present in moderate o	=
14.5 GRAND TOTAL (max 100 pt	and of highest quality	У

Site: Wetl	and L	.P-026,02 <i>1</i>	Rater(s): BCR		Date : 2021-09-29
2 2	Пм	etric 1. Wetland A	rea (size).		
max 6 pts. subt		>50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha x 0.3 to <3 acres (0.12 to <1. 0.1 to <0.3 acres (0.04 to < <0.1 acres (0.04ha) (0 pts)	ne. 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
8 10	M	etric 2. Upland bu	ffers and surround	ding land use.	
max 14 pts. subt	otal 2a.	Calculate average buffer width. S WIDE. Buffers average 50 X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers average VERY NARROW. Buffers average VERY LOW. 2nd growth of	Select only one and assign score. m (164ft) or more around wetland 25m to <50m (82 to <164ft) aroun e 10m to <25m (32ft to <82ft) aroun average <10m (<32ft) around wetla Select one or double check and r older forest, prairie, savannah, w h, shrubland, young second growth	Do not double check. perimeter (7) Id wetland perimeter (4) und wetland perimeter (1) and perimeter (0) average. ildlife area, etc. (7)	
		× MODERATELY HIGH. Res	sidential, fenced pasture, park, cor pen pasture, row cropping, mining,	nservation tillage, new fallo	ow field. (3)
13.5 23	.5 M	etric 3. Hydrology	, •		
max 30 pts. subt		Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surfa Perennial surface water (lal	apply. 3b	× Part of wetland/up× Part of riparian or	117
		Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) x <0.4m (<15.7in) (1)	aly one and assign score.	Semi- to permane Regularly inundat X Seasonally inunda X Seasonally satura	ently inundated/saturated (4) red/saturated (3)
		None or none apparent (12 x Recovered (7) x Recovering (3) Recent or no recovery (1)	Check all disturbances observed ditch tile dike weir stormwater input	point source (non x filling/grading x road bed/RR track dredging other	
9.5 33	3 _M	etric 4. Habitat Al	teration and Devel	opment.	
max 20 pts. subt	otal 4a.	Substrate disturbance. Score on None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)	e or double check and average.		
		Habitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1)			
	4c.	Habitat alteration. Score one or of the second of the second (9) X Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observed x mowing grazing x clearcutting	x shrub/sapling rem herbaceous/aqua sedimentation	
33	3		selective cutting woody debris removal toxic pollutants	dredging farming nutrient enrichme	nt

Site: Wetland LP-026,027		Rater(s): BCR		Date: 2021-09-29	
	33]			
su	btotal first p	age			
0	33	Metric 5. Special \	Netlands.		
max 10 pts.	subtotal	Check all that apply and score as in	ndicated.		
		Bog (10) Fen (10)			
		Old growth forest (10)			
		Mature forested wetland	(5)		
			ry wetland-unrestricted hyd		
			y wetland-restricted hydro	ology (5)	
		Lake Plain Sand Prairies Relict Wet Prairies (10)	(Oak Openings) (10)		
			federal threatened or enda	angered species (10)	
			gbird/water fowl habitat or		
		Category 1 Wetland. Se	e Question 1 Qualitative F	Rating (-10)	
1	34	Matria C. Diant and			
I	JT			erspersion, microt	opograpny.
max 20 pts.	subtotal	6a. Wetland Vegetation Communit		Community Cover Scale)474
		Score all present using 0 to 3 scale O Aquatic bed	e. <u>0</u>	Absent or comprises <0.1ha (0.2 Present and either comprises sn	
		1 Emergent	•	vegetation and is of moderate	
		0 Shrub		significant part but is of low qu	ality
		0 Forest	2	Present and either comprises sig	
		0 Mudflats		vegetation and is of moderate	quality or comprises a small
		Open water Other	3	part and is of high quality Present and comprises significant	nt nart or more of wetland's
		6b. horizontal (plan view) Intersper		vegetation and is of high qualit	
		Select only one.			
		High (5)		escription of Vegetation Quality	inamas of manusative as
		Moderately high(4) Moderate (3)	low	Low spp diversity and/or predom disturbance tolerant native spe	
		Moderately low (2)	mod	Native spp are dominant compo	
		Low (1)		although nonnative and/or dist	urbance tolerant native spp
		X None (0)	. <i>.</i>	can also be present, and spec	
		6c. Coverage of invasive plants. F to Table 1 ORAM long form for list.		moderately high, but generally threatened or endangered spp	
		or deduct points for coverage	high	A predominance of native species	
		Extensive >75% cover (-		and/or disturbance tolerant nat	
		Moderate 25-75% cover		absent, and high spp diversity	
		X Sparse 5-25% cover (-1) Nearly absent <5% cove		the presence of rare, threatene	ed, or endangered spp
		Absent (1)	` '	d Open Water Class Quality	
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale		Low 0.1 to <1ha (0.247 to 2.47 a	
		1 Vegetated hummucks/tu		Moderate 1 to <4ha (2.47 to 9.8	8 acres)
		O Coarse woody debris >15 O Standing dead >25cm (1		High 4ha (9.88 acres) or more	
		0 Amphibian breeding pool		graphy Cover Scale	
			0	Absent	
			1	Present very small amounts or if	more common
			2	of marginal quality Present in moderate amounts, b	ut not of highest
			۷	quality or in small amounts of I	_
			3	Present in moderate or greater a	
0.4				and of highest quality	
34	GRAN	ND TOTAL (max 100 pts	s)		

Site: V	Vetlan	d LP-028,029,030	Rater(s): BCR		Date: 2021-09-21
3	3	Metric 1. Wetland A	rea (size).		
max 6 pts.	subtotal	Select one size class and assign scores (>20.2ha) (6 pts) >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 × 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1. 0.1 to <0.3 acres (0.04 to < <0.1 acres (0.04ha) (0 pts)	e. 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
9	12	Metric 2. Upland bu	ffers and surround	ing land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width. S WIDE. Buffers average 50: X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers average VERY NARROW. Buffers average VERY LOW. Buffers average VERY LOW. Buffers average VERY LOW. Buffers average VERY LOW. Old field (>10 years)	Select only one and assign score. Em (164ft) or more around wetland per 25m to <50m (82 to <164ft) around at 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetlar Select one or double check and a stolder forest, prairie, savannah, wild, shrubland, young second growth for	Oo not double check. erimeter (7) wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) everage. dlife area, etc. (7) orest. (5)	
			sidential, fenced pasture, park, cons ben pasture, row cropping, mining, c		ow field. (3)
10	22	Metric 3. Hydrology	•		
max 30 pts.	subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surfa Perennial surface water (lal 3c. Maximum water depth. Select or >0.7 (27.6in) (3)	ce water (3) se or stream) (5) 3d.	× Part of wetland/up Part of riparian or Duration inundation/satu	in (1) lake and other human use (1) pland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl checl ently inundated/saturated (4)
		0.4 to 0.7m (15.7 to 27.6in) × <0.4m (<15.7in) (1)		Seasonally inunda X Seasonally satura	
		3e. Modifications to natural hydrologi None or none apparent (12) Recovered (7) Recovering (3) X Recent or no recovery (1)			ŕ
6	28	Metric 4. Habitat Al	teration and Develo	pment.	
max 20 pts.	subtotal	4a. Substrate disturbance. Score on None or none apparent (4) Recovered (3) Recovering (2) X Recent or no recovery (1)	•		
		4b. Habitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1) 4c. Habitat alteration. Score one or or	double check and average.		
ci	28	None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observed x mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: V	Vetlan	d LP-028,029,030	Rater(s): BCR		Date: 2021-09-21
su	28 ubtotal first pa	age			
0	28	Metric 5. Special V	/etlands.		
max 10 pts.	subtotal	Check all that apply and score as inc Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (1) Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (10) Known occurrence state/fic Significant migratory song Category 1 Wetland. See	dicated. 5) wetland-unrestricted hydrologologologologologologologologologolo	angered species (10) usage (10)	
3	31	Metric 6. Plant con	nmunities, int	erspersion, microto	opography.
max 20 pts.	subtotal	6a. Wetland Vegetation Communitie	es. <u>Vegetation</u>	Community Cover Scale	
		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	
		0 Aquatic bed	1	Present and either comprises sm	
		1 Emergent		vegetation and is of moderate of	
		1 Shrub		significant part but is of low qua	
		0 Forest	2	Present and either comprises sig	
		0 Mudflats		vegetation and is of moderate of	quality of comprises a small
		Open water Other	3	part and is of high quality Present and comprises significan	t part or more of wotland's
		6b. horizontal (plan view) Interspers		vegetation and is of high quality	
		Select only one.		vegetation and is of high quality	
		High (5)	Narrative De	escription of Vegetation Quality	
		Moderately high(4)	low	Low spp diversity and/or predomi	nance of nonnative or
		Moderate (3)		disturbance tolerant native spec	
		Moderately low (2)	mod	Native spp are dominant compon	
		x Low (1)		although nonnative and/or distu	<u> </u>
		None (0)		can also be present, and specie	
		6c. Coverage of invasive plants. Re	efer	moderately high, but generally	w/o presence of rare
		to Table 1 ORAM long form for list.		threatened or endangered spp	
		or deduct points for coverage	high	A predominance of native species	s, with nonnative spp
		Extensive >75% cover (-5		and/or disturbance tolerant nati	
		Moderate 25-75% cover (-	3)	absent, and high spp diversity a	
		X Sparse 5-25% cover (-1)		the presence of rare, threatene	d, or endangered spp
		Nearly absent <5% cover	• •		
		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	
		Vegetated hummucks/tus		Moderate 1 to <4ha (2.47 to 9.88	acres)
		1 Coarse woody debris >150 0 Standing dead >25cm (10	, ,	High 4ha (9.88 acres) or more	
		o Standing dead >25cm (10 o Amphibian breeding pools		raphy Cover Scale	
		Amphibian breeding pools	<u>wiicrotopog</u> 0	Absent	
			1	Present very small amounts or if	more common
			•	of marginal quality	
			2	Present in moderate amounts, bu	it not of highest
			_	quality or in small amounts of h	_
			3	Present in moderate or greater ar	
				and of highest quality	
31	GRAN	ND TOTAL (max 100 pts)			

Site: Wetland LP-031		Rater(s): BCR		Date : 2021-09-28
0 0	Metric 1. Wetland A	roa (sizo)		
max 6 pts. subtotal	Select one size class and assign sco	re.) (0.2ha) (5 pts) ha) (4 pts) (1) (3 pts) (2ha) (2pts) (0.12ha) (1 pt)		
3 3	Metric 2. Upland bu	ffers and surround	ing land use.	
max 14 pts. subtotal	2a. Calculate average buffer width. WIDE. Buffers average 50 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2b. Intensity of surrounding land use VERY LOW. 2nd growth o LOW. Old field (>10 years X MODERATELY HIGH. Res	Select only one and assign score. E m (164ft) or more around wetland po 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetlar	Do not double check. erimeter (7) wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) average. dlife area, etc. (7) forest. (5) servation tillage, new fallo	
6.5 9.5	Metric 3. Hydrology	'.		
max 30 pts. subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la 3c. Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) X <0.4m (<15.7in) (1)	ce water (3) ke or stream) (5) aly one and assign score.	Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundat X Seasonally inundat	in (1) lake and other human use (1) cland (e.g. forest), complex (1) cupland corridor (1) curation. Score one or dbl checl ently inundated/saturated (4) led/saturated (3)
	3e. Modifications to natural hydrolog None or none apparent (12 Recovered (7) Recovering (3) Recent or no recovery (1)		ck and average.	stormwater)
7 16.5	Metric 4. Habitat Al	teration and Develo	pment.	
max 20 pts. subtotal	 4a. Substrate disturbance. Score on None or none apparent (4) × Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) 	, and the second		
	Poor (1) 4c. Habitat alteration. Score one or	double check and average.		
16.5	None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observed x mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling rem herbaceous/aqua x sedimentation x dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-031 Ra	ter(s): BCR		Date: 2021-09-28
16.5 subtotal first page			
0 16.5 Metric 5. Special Wet	lands.		
max 10 pts. subtotal Check all that apply and score as indicate			
Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetland Exiliar Coastal/tributary wetland Exiliar Sand Prairies (Oak Relict Wet Prairies (10) Known occurrence state/federa	and-unrestricted hydro and-restricted hydro Openings) (10) all threatened or enda water fowl habitat or	angered species (10) usage (10)	
-3 13.5 Metric 6. Plant comm	unities. int	erspersion, microto	opography.
max 20 pts. subtotal 6a. Wetland Vegetation Communities.	-	Community Cover Scale	- P - 9 P
Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	
0 Aquatic bed 1 Emergent	1	Present and either comprises sm vegetation and is of moderate of	
0 Shrub		significant part but is of low qua	· •
0 Forest	2	Present and either comprises sig	
0 Mudflats		vegetation and is of moderate of	quality or comprises a small
Open water Other	3	part and is of high quality Present and comprises significan	t part or more of wetland's
6b. horizontal (plan view) Interspersion.		vegetation and is of high quality	
Select only one.			
High (5) Moderately high(4)	Narrative D	escription of Vegetation Quality Low spp diversity and/or predomi	nance of nonnative or
Moderate (3)	IOW	disturbance tolerant native spec	
Moderately low (2)	mod	Native spp are dominant compon	
Low (1)		although nonnative and/or distu	
x None (0) 6c. Coverage of invasive plants. Refer		can also be present, and specie moderately high, but generally	•
to Table 1 ORAM long form for list. Add		threatened or endangered spp	
or deduct points for coverage	high	A predominance of native species	
X Extensive >75% cover (-5) Moderate 25-75% cover (-3)		and/or disturbance tolerant nati absent, and high spp diversity a	
Sparse 5-25% cover (-5)		the presence of rare, threatener	
Nearly absent <5% cover (0)			
Absent (1)		Open Water Class Quality	
6d. Microtopography. Score all present using 0 to 3 scale.	<u> </u>	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)	eres)
1 Vegetated hummucks/tussucks		Moderate 1 to <4ha (2.47 to 9.88	
0 Coarse woody debris >15cm (6		High 4ha (9.88 acres) or more	
O Standing dead >25cm (10in) db		ranhy Cayar Saala	
0 Amphibian breeding pools	0	Absent	
	1	Present very small amounts or if	more common
		of marginal quality	t not of high out
	2	Present in moderate amounts, bu quality or in small amounts of h	_
	3	Present in moderate or greater ar	
40.5		and of highest quality	
13.5 GRAND TOTAL (max 100 pts)			_

Site: V	Vetlan	d LP-032	Rater(s): MJA		Date: 2021-10-20
2	2	Metric 1. Wetlan	d Area (size).		
max 6 pts.	subtotal	Select one size class and assig >50 acres (>20.2ha) 25 to <50 acres (10.1 10 to <25 acres (4 to 3 to <10 acres (1.2 to x	In score. (6 pts) to <20.2ha) (5 pts) <10.1ha) (4 pts) 0 <4ha) (3 pts) to <1.2ha) (2pts) 04 to <0.12ha) (1 pt)		
8	10	Metric 2. Upland	buffers and surrou	nding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer w WIDE. Buffers avera X MEDIUM. Buffers av NARROW. Buffers av VERY NARROW. B 2b. Intensity of surrounding lar	idth. Select only one and assign scor ige 50m (164ft) or more around wetlar erage 25m to <50m (82 to <164ft) arc everage 10m to <25m (32ft to <82ft) a uffers average <10m (<32ft) around w and use. Select one or double check a	re. Do not double check. nd perimeter (7) bund wetland perimeter (4) around wetland perimeter (1) retland perimeter (0) and average.	
		X LOW. Old field (>10 X MODERATELY HIGH HIGH. Urban, indust	owth or older forest, prairie, savannah, years), shrubland, young second grow H. Residential, fenced pasture, park, or rial, open pasture, row cropping, minir	wth forest. (5) conservation tillage, new fallo	ow field. (3)
12.5	22.5	Metric 3. Hydrol	ogy.		
max 30 pts.	subtotal	3a. Sources of Water. Score a High pH groundwater (3 X Precipitation (1) Seasonal/Intermitten	all that apply. (5)) t surface water (3)	Part of wetland/up Part of riparian or	in (1) lake and other human use (1) pland (e.g. forest), complex (1) upland corridor (1)
		3c. Maximum water depth. Se >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 2 × <0.4m (<15.7in) (1)	lect only one and assign score.	X Semi- to permane Regularly inundat Seasonally inundat X Seasonally satura	
		None or none appare X Recovered (7) Recovering (3) Recent or no recover	cht (12) Check all disturbances obse		ŕ
8	30.5	Metric 4. Habita	t Alteration and Deve	elopment.	
max 20 pts.	subtotal	4a. Substrate disturbance. Sc None or none appare Recovered (3) Recovering (2) Recent or no recover			
		4b. Habitat development. Sele Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1)			
c)	30.5	None or none appare Recovered (6) Recovering (3) Recent or no recover	Check all disturbances obsex mowing grazing	x shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-032	Rater(s): MJA	Date: 2021-10-20
30.5 subtotal first page		
0 30.5 Metric 5. Special V	Vetlands.	
max 10 pts. subtotal Check all that apply and score as in Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (Lake Erie coastal/tributary Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state/fi Significant migratory song	dicated. 5) y wetland-unrestricted hydrology (10) y wetland-restricted hydrology (5)	
-3 27.5 Metric 6 Plant cor	nmunities, interspersion, m	icrotonography
max 20 pts. subtotal 6a. Wetland Vegetation Communiti	•	. •
Score all present using 0 to 3 scale		0.1ha (0.2471 acres) contiguous area
0 Aquatic bed		prises small part of wetland's
1 Emergent 0 Shrub	, and the second	noderate quality, or comprises a
0 Shrub 0 Forest	significant part but is Present and either com	prises significant part of wetland's
0 Mudflats		noderate quality or comprises a small
0 Open water	part and is of high qu	<u> </u>
0 Other6b. horizontal (plan view) Intersper		significant part, or more, of wetland's
Select only one.		<u> </u>
High (5)	Narrative Description of Vegetation	
Moderately high(4) Moderate (3)	low Low spp diversity and/o disturbance tolerant r	or predominance of nonnative or
Moderate (3) Moderately low (2)		nt component of the vegetation,
Low (1)		nd/or disturbance tolerant native spp
X None (0)	·	and species diversity moderate to
6c. Coverage of invasive plants. R	■	generally w/o presence of rare
to Table 1 ORAM long form for list. or deduct points for coverage		ive species, with nonnative spp
X Extensive >75% cover (-5		lerant native spp absent or virtually
Moderate 25-75% cover (diversity and often, but not always,
Sparse 5-25% cover (-1)		threatened, or endangered spp
Nearly absent <5% cover Absent (1)	Mudflat and Open Water Class Qua	lity
6d. Microtopography.	0 Absent <0.1ha (0.247	
Score all present using 0 to 3 scale		
0 Vegetated hummucks/tus		
0 Coarse woody debris >15 0 Standing dead >25cm (10		or more
1 Amphibian breeding pools		
	0 Absent	
	•	ounts or if more common
	of marginal quality Present in moderate ar	nounts, but not of highest
		ounts of highest quality
	3 Present in moderate or	greater amounts
27.5 GRAND TOTAL (max 100 pts	and of highest quality	
Line GRAND TOTAL (Max 100 pts)	

Site: Wetland LP-033		Rater(s): MJA		Date : 2021-10-20		
2	2] M€	etric 1. Wetland A	rea (size).		
max 6 pts.	subtotal	•	2ct one size class and assign scolors >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <25 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha x 0.3 to <3 acres (0.12 to <1. 0.1 to <0.3 acres (0.04 to < <0.1 acres (0.04ha) (0 pts) 0 0 0 0 0 0 0 0 0	re.) 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
10	12	l Me	etric 2. Upland bu	ffers and surround	ling land use.	
max 14 pts.	subtotal	2a. 2b.	Calculate average buffer width. S WIDE. Buffers average 50 X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers s Intensity of surrounding land use X VERY LOW. 2nd growth o X LOW. Old field (>10 years) MODERATELY HIGH. Res HIGH. Urban, industrial, op	Select only one and assign score. If m (164ft) or more around wetland p 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetla. Select one or double check and a rolder forest, prairie, savannah, will b, shrubland, young second growth sidential, fenced pasture, park, conspen pasture, row cropping, mining, or	Do not double check. berimeter (7) d wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) average. dlife area, etc. (7) forest. (5) servation tillage, new fallo	
11.5	23.5	Μe	etric 3. Hydrology	'.		
max 30 pts.	subtotal	3a.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (lal Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in)	apply. 3b. ce water (3) ke or stream) (5) 3d. nly one and assign score.	x Part of wetland/u Part of riparian or Duration inundation/sate Semi- to permane Regularly inundat x Seasonally inund	in (1) lake and other human use (1) pland (e.g. forest), complex (1) rupland corridor (1) uration. Score one or dbl check ently inundated/saturated (4) ted/saturated (3) ated (2)
		3e.	 < <0.4m (<15.7in) (1) Modifications to natural hydrologi None or none apparent (12 Recovered (7) Recovering (3) Recent or no recovery (1) 	c regime. Score one or double che Check all disturbances observed ditch tile dike weir stormwater input	eck and average.	,
8	31.5	lм	etric 4. Habitat Al	teration and Develo	opment.	
max 20 pts.	subtotal		Substrate disturbance. Score on None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)			
			Habitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2) Poor (1) Habitat alteration. Score one or of	· •		
			None or none apparent (9) Recovered (6) Recovering (3)	Check all disturbances observed mowing grazing	shrub/sapling ren herbaceous/aqua	
	31.5		Recent or no recovery (1)	clearcutting selective cutting woody debris removal toxic pollutants	sedimentation dredging farming nutrient enrichme	

Site: Wetland LP-033	ater(s): MJA		Date: 2021-10-20
31.5			
0 31.5 Metric 5. Special We	tlands.		
max 10 pts. subtotal Check all that apply and score as indica			
Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary we Lake Erie coastal/tributary we Lake Plain Sand Prairies (Oa Relict Wet Prairies (10) Known occurrence state/fede Significant migratory songbird Category 1 Wetland. See Qu	etland-unrestricted hydro etland-restricted hydro k Openings) (10) ral threatened or enda l/water fowl habitat or	angered species (10) usage (10)	
4 20.5			_
-1 30.5 Metric 6. Plant comm		•	opography.
max 20 pts. subtotal 6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale.		Community Cover Scale	471 paras) contiguous aras
O Aquatic bed	<u>0</u>	Absent or comprises <0.1ha (0.24) Present and either comprises sm	
1 Emergent		vegetation and is of moderate of	quality, or comprises a
0 Shrub	2	significant part but is of low qua	
0 Forest 0 Mudflats	2	Present and either comprises sign vegetation and is of moderate of	
0 Open water		part and is of high quality	,
O Other	3	Present and comprises significan	
 6b. horizontal (plan view) Interspersion Select only one. 		vegetation and is of high quality	
High (5)	Narrative D	escription of Vegetation Quality	
Moderately high(4)	low	Low spp diversity and/or predomi	
Moderate (3) Moderately low (2)	mod	disturbance tolerant native special Native spp are dominant compon	
X Low (1)	mou	although nonnative and/or distu	<u> </u>
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 or deduct points for coverage	high	threatened or endangered spp A predominance of native species	
X Extensive >75% cover (-5)	9	and/or disturbance tolerant nation	
Moderate 25-75% cover (-3)		absent, and high spp diversity a	
Sparse 5-25% cover (-1)		the presence of rare, threatener	d, or endangered spp
Nearly absent <5% cover (0) Absent (1)	Mudflat and	d 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	
1 Vegetated hummucks/tussuc 1 Coarse woody debris >15cm		Moderate 1 to <4ha (2.47 to 9.88 High 4ha (9.88 acres) or more	acres)
0 Standing dead >25cm (10in)	(- /	Triigit and (0.00 dores) of more	
Amphibian breeding pools		raphy Cover Scale	
	0	Absent	mara aamman
	1	Present very small amounts or if of marginal quality	more common
	2	Present in moderate amounts, but	it not of highest
		quality or in small amounts of h	ighest quality
	3	Present in moderate or greater ar	nounts
30.5 GRAND TOTAL (max 100 pts)	-	and of highest quality	

Site: V	Vetlan	d LP-034	Rater(s): MJA		Date: 2021-10-20
1	1	Metric 1. Wetland	Area (size).		
max 6 pts.	subtotal	Select one size class and assign so	core. (ts) <20.2ha) (5 pts) (.1ha) (4 pts) (na) (3 pts) (1.2ha) (2pts) (20.12ha) (1 pt)		
8	9	Metric 2. Upland b	uffers and surround	ding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer width WIDE. Buffers average ! X MEDIUM. Buffers average ! NARROW. Buffers average ! VERY NARROW. Buffers average ! VERY LOW. Old field (>10 year X MODERATELY HIGH. First	Select only one and assign score. 50m (164ft) or more around wetland ge 25m to <50m (82 to <164ft) aroun age 10m to <25m (32ft to <82ft) arous average <10m (<32ft) around wetlase. Select one or double check and or older forest, prairie, savannah, wirs), shrubland, young second growth desidential, fenced pasture, park, conopen pasture, row cropping, mining,	Do not double check. perimeter (7) Id wetland perimeter (4) und wetland perimeter (1) and perimeter (0) average. Idlife area, etc. (7) forest. (5) nservation tillage, new fallo	
6	15	Metric 3. Hydrolog	y.		
max 30 pts.	subtotal	3a. Sources of Water. Score all th High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent sur Perennial surface water (3c. Maximum water depth. Select >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6i X <0.4m (<15.7in) (1)	at apply. 3b face water (3) lake or stream) (5) 3d only one and assign score.	Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundat Seasonally inundat X Seasonally satura	in (1) lake and other human use (1) pland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl checl ently inundated/saturated (4) ted/saturated (3)
6	21	None or none apparent (Recovered (7) X Recovering (3) Recent or no recovery (1	ditch tile dike weir stormwater input	point source (non filling/grading x road bed/RR track dredging other	ŕ
max 20 pts.	subtotal	4a. Substrate disturbance. Score		opment.	
		None or none apparent (4) Recovered (3) X Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select of Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2))		
		Poor (1) 4c. Habitat alteration. Score one c			
SI	21	None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1	x mowing grazing	x shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-034		Rater(s): MJA		Date: 2021-10-20
21 subtotal first	page			
0 21	Metric 5. Special W	letlands.		
max 10 pts. subtotal	-	dicated. 5) wetland-unrestricted hydro wetland-restricted hydro Oak Openings) (10) ederal threatened or enda bird/water fowl habitat or	angered species (10) usage (10)	
-3 18	Metric 6. Plant con	nmunities. int	erspersion, microto	opography.
max 20 pts. subtotal	-	<u>-</u>	Community Cover Scale	- 1 · 3 · 1 · 7
	Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	471 acres) contiguous area
	O Aquatic bed 1 Emergent O Shrub	1	Present and either comprises small vegetation and is of moderate of significant part but is of low quart	juality, or comprises a
	0 Forest 0 Mudflats 0 Open water	2	Present and either comprises sign vegetation and is of moderate of part and is of high quality	nificant part of wetland's
	Other6b. horizontal (plan view) Interspers	ion.	Present and comprises significan vegetation and is of high quality	
	Select only one. High (5)	Narrativo D	escription of Vegetation Quality	
	Moderately high(4) Moderate (3)	low	Low spp diversity and/or predoming disturbance tolerant native spec	
	Moderately low (2) Low (1) X None (0)	mod	Native spp are dominant compon- although nonnative and/or distu- can also be present, and specie	rbance tolerant native spp
	6c. Coverage of invasive plants. Reto Table 1 ORAM long form for list.		moderately high, but generally withreatened or endangered spp	•
	or deduct points for coverage X Extensive >75% cover (-5) Moderate 25-75% cover (-1) Sparse 5-25% cover (-1)	3)	A predominance of native species and/or disturbance tolerant native absent, and high spp diversity a the presence of rare, threateners	ve spp absent or virtually and often, but not always,
	Nearly absent <5% cover Absent (1)	• •	LOngo 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	cres)
	0 Vegetated hummucks/tuss	sucks 2	Moderate 1 to <4ha (2.47 to 9.88	
	0 Coarse woody debris >150	cm (6in) 3	High 4ha (9.88 acres) or more	
	0 Standing dead >25cm (101 Amphibian breeding pools	•	raphy Cover Scale	
	7 unprisblant brocking poole	0	Absent	
		1	Present very small amounts or if of marginal quality	
		2	Present in moderate amounts, bu quality or in small amounts of h	ighest quality
10	ND TOTAL (3	Present in moderate or greater ar and of highest quality	mounts
18 gra	ND TOTAL (max 100 pts)			

Site: V	Vetlan	d LP-035	Rater(s): MJA		Date: 2021-1	0-20
2	2	Metric 1. V	Vetland Area (s	ize).			
max 6 pts.	subtotal	Select one size clas	•	ots)			
8	10	Metric 2. U	Jpland buffers	and surround	ing land use.		
max 14 pts.	subtotal	2a. Calculate avera WIDE. Bi X MEDIUM. NARROW VERY NA 2b. Intensity of surr VERY LO X MODERA	ge buffer width. Select only uffers average 50m (164ft) of Buffers average 25m to <5 buffers average 10m to <6 RROW. Buffers average <1 bunding land use. Select of W. 2nd growth or older fore of field (>10 years), shrubland TELY HIGH. Residential, fe	one and assign score. En more around wetland per 0m (82 to <164ft) around <25m (32ft to <82ft) around (0m (<32ft) around wetlar ne or double check and a st, prairie, savannah, wild d, young second growth fernced pasture, park, cons	oo not double check. erimeter (7) wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) verage. llife area, etc. (7) orest. (5) ervation tillage, new fallo	ow field. (3)	
16	26	<u> </u>	ban, industrial, open pasture	e, row cropping, mining, c	onstruction. (1)		
max 30 pts.	subtotal	High pH g	er. Score all that apply. roundwater (5) undwater (3)	3b.			
		Perennial 3c. Maximum water >0.7 (27.6	m (15.7 to 27.6in) (2)	m) (5) 3d.	Duration inundation/satu X Semi- to permane Regularly inundat X Seasonally inundat	ently inundated/saturated/saturated	ted (4)
		3e. Modifications to None or n Recovere Recoverir	natural hydrologic regime. one apparent (12) d (7) g (3) no recovery (1) Check in the difference of t	all disturbances observed ch e ke	ck and average.	stormwater)	
11	37	Metric 4. I	Habitat Alteration	on and Develo	pment.		
max 20 pts.	subtotal	4a. Substrate distur None or n Recovere Recoverir	bance. Score one or double one apparent (4) d (3)				
		4b. Habitat develop Excellent Very good Good (5) Moderatel Fair (3) X Poor to fa Poor (1)	ment. Select only one and a (7) (6) y good (4)				
q	37	X Recovere Recovering Recent or	d (6) mo g (3) granno recovery (1) cle	all disturbances observed owing azing earcutting lective cutting oody debris removal kic pollutants	x shrub/sapling rem herbaceous/aquat sedimentation dredging farming nutrient enrichme	tic bed removal	

Site: W	/etlan	d LP-035	Rater(s): MJA		Date: 2021-10-20
	37				
	ototal first pa	ĺ	A		
U	<u> </u>	Metric 5. Special \			
max 10 pts.	subtotal	Lake Erie coastal/tributa Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state Significant migratory sor	(5) ry wetland-unrestricted hydro ry wetland-restricted hydro	angered species (10) usage (10)	
1	38	Metric 6. Plant co	mmunities, int	erspersion, microto	opography.
max 20 pts.	subtotal	6a. Wetland Vegetation Communi	•	Community Cover Scale	opog.up.i.y.
max 20 pto.	oubtotal	Score all present using 0 to 3 scale		Absent or comprises <0.1ha (0.24	471 acres) contiguous area
		0 Aquatic bed	1	Present and either comprises sm	, <u> </u>
		1 Emergent		vegetation and is of moderate of	
		0 Shrub		significant part but is of low qua	
		0 Forest0 Mudflats	2	Present and either comprises sig vegetation and is of moderate of	
		Open water		part and is of high quality	dunity of complices a circum
		0 Other	3	Present and comprises significan	t part, or more, of wetland's
		6b. horizontal (plan view) Interspe	rsion.	vegetation and is of high quality	1
		Select only one.	Normative D	accription of Variation Quality	
		High (5) Moderately high(4)	low	escription of Vegetation Quality Low spp diversity and/or predomi	nance of nonnative or
		Moderate (3)		disturbance tolerant native spec	
		Moderately low (2)	mod	Native spp are dominant compon	ent of the vegetation,
		Low (1)		although nonnative and/or distu	
		X None (0) 6c. Coverage of invasive plants. I	Pofor	can also be present, and species moderately high, but generally	•
		to Table 1 ORAM long form for list		threatened or endangered spp	w/o presence or rare
		or deduct points for coverage	high	A predominance of native species	s, with nonnative spp
		Extensive >75% cover (-	•	and/or disturbance tolerant nati	
		Moderate 25-75% cover		absent, and high spp diversity a	-
		X Sparse 5-25% cover (-1) Nearly absent <5% cover		the presence of rare, threatene	d, or endangered spp
		Absent (1)	• •	d Open Water Class Quality	
		6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale		Low 0.1 to <1ha (0.247 to 2.47 ac	
		0 Vegetated hummucks/tu		Moderate 1 to <4ha (2.47 to 9.88	3 acres)
		Coarse woody debris >1Standing dead >25cm (1		High 4ha (9.88 acres) or more	
		1 Amphibian breeding poo	•	raphy Cover Scale	
			0	Absent	
			1	Present very small amounts or if	more common
				of marginal quality	it not of highoot
			2	Present in moderate amounts, bu quality or in small amounts of h	=
			3	Present in moderate or greater a	
				and of highest quality	
38	GRAN	ND TOTAL (max 100 pts	s)		

Site: V	Vetlan	d LP-036	Rater(s): MJA		Date: 2021-10-20
0	0	Metric 1. Wetlan	d Area (size).		
max 6 pts.	subtotal	Select one size class and assig >50 acres (>20.2ha) 25 to <50 acres (10.1 10 to <25 acres (4 to 3 to <10 acres (1.2 to 0.3 to <3 acres (0.12 0.1 to <0.3 acres (0.04ha) (gn score. (6 pts) 1 to <20.2ha) (5 pts) <10.1ha) (4 pts) o <4ha) (3 pts) to <1.2ha) (2pts) 04 to <0.12ha) (1 pt)		
8	8	Metric 2. Upland	I buffers and surro	unding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer w WIDE. Buffers avera X MEDIUM. Buffers av NARROW. Buffers av VERY NARROW. B 2b. Intensity of surrounding lar VERY LOW. 2nd gro X LOW. Old field (>10 X MODERATELY HIGH	ridth. Select only one and assign sage 50m (164ft) or more around we verage 25m to <50m (82 to <164ft) average 10m to <25m (32ft to <82 to verage 10m to <25m (32ft to <82 to verage 10m (32ft) around use. Select one or double checowth or older forest, prairie, savanry years), shrubland, young second of the Residential, fenced pasture, partial, open pasture, row cropping, manage 50m (164ft).	score. Do not double check. etland perimeter (7) a around wetland perimeter (4) ft) around wetland perimeter (1) d wetland perimeter (0) ck and average. nah, wildlife area, etc. (7) growth forest. (5) rk, conservation tillage, new fallo	
15.5	23.5	Metric 3. Hydrol		3,	
max 30 pts.	subtotal	3a. Sources of Water. Score a High pH groundwater Other groundwater (3 X Precipitation (1) X Seasonal/Intermitten	all that apply. (5) 3)	Part of wetland/u	
		3c. Maximum water depth. Se >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 2 × <0.4m (<15.7in) (1)	,	Semi- to permane Regularly inundal X Seasonally inund X Seasonally satura	
		None or none appare × Recovered (7) Recovering (3) Recent or no recover	cnt (12) Check all disturbances of ditch tile		k
7	30.5	Metric 4. Habita	t Alteration and De	evelopment.	
max 20 pts.	subtotal	4a. Substrate disturbance. Sc None or none appare Recovered (3) Recovering (2)	ore one or double check and avera ent (4)		
		Recent or no recover 4b. Habitat development. Sele Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) 4c. Habitat alteration. Score of	y (1) ect only one and assign score. ne or double check and average.		
	30.5	None or none appare Recovered (6) Recovering (3) Recent or no recover	ent (9) Check all disturbances of mowing grazing	X shrub/sapling ren herbaceous/aqua sedimentation dredging	ttic bed removal
SI	ubtotal this pa	age			

Site: Wetland LP-036	Rater(s): MJA	Date: 2021-10-20
30.5 subtotal first page		
0 30.5 Metric 5. Special V	Vetlands.	
max 10 pts. subtotal Check all that apply and score as in Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (Lake Erie coastal/tributary Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state/f Significant migratory song	dicated. 5) 7 wetland-unrestricted hydrology (10) 8 wetland-restricted hydrology (5)	
33.5 Metric 6. Plant con	nmunities, interspersion,	microtopography.
max 20 pts. subtotal 6a. Wetland Vegetation Communiti		
Score all present using 0 to 3 scale.		s <0.1ha (0.2471 acres) contiguous area
0 Aquatic bed 1 Emergent		omprises small part of wetland's of moderate quality, or comprises a
0 Shrub	significant part but	
0 Forest		omprises significant part of wetland's
0 Mudflats		of moderate quality or comprises a small
0 Open water 0 Other	part and is of high 3 Present and comprise	ses significant part, or more, of wetland's
6b. horizontal (plan view) Interspers	 ·	
Select only one.	-	
High (5)	Narrative Description of Vegetati	
Moderately high(4) Moderate (3)	low Low spp diversity an disturbance tolerar	nd/or predominance of nonnative or nt native species
Moderately low (2)		nant component of the vegetation,
X Low (1)		e and/or disturbance tolerant native spp
None (0)	·	nt, and species diversity moderate to
6c. Coverage of invasive plants. R to Table 1 ORAM long form for list.		out generally w/o presence of rare
or deduct points for coverage		native species, with nonnative spp
Extensive >75% cover (-5	, I	tolerant native spp absent or virtually
Moderate 25-75% cover (spp diversity and often, but not always,
Sparse 5-25% cover (-1) Nearly absent <5% cover		re, threatened, or endangered spp
X Absent (1)	Mudflat and Open Water Class Q	uality
6d. Microtopography.	0 Absent <0.1ha (0.24	,
Score all present using 0 to 3 scale.	<u>`</u>	<u> </u>
0 Vegetated hummucks/tus 0 Coarse woody debris >15		
0 Standing dead >25cm (10	, ,	,
0 Amphibian breeding pools		
	0 Absent	amounto or if more common
	1 Present very small a of marginal quality	amounts or if more common
		amounts, but not of highest
	quality or in small	amounts of highest quality
	3 Present in moderate	=
33.5 GRAND TOTAL (max 100 pts	and of highest qua	iiity

Site: Wetland	I LP-037	Rater(s): MJA		Date: 2021-10-20
0 0	Metric 1. Wetland A	rea (size).		
	Select one size class and assign sco	re. 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
8 8	Metric 2. Upland bu	ffers and surround	ing land use.	
max 14 pts. subtotal 2	2a. Calculate average buffer width. S WIDE. Buffers average 50 X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2b. Intensity of surrounding land use VERY LOW. 2nd growth o X MODERATELY HIGH. Res	Select only one and assign score. E m (164ft) or more around wetland po 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetlar	Oo not double check. erimeter (7) wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) average. dlife area, etc. (7) orest. (5) ervation tillage, new fallo	ow field. (3)
10 18	Metric 3. Hydrology	'.		
max 30 pts. subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa X Perennial surface water (lal 3c. Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) X <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic	apply. 3b. ce water (3) ke or stream) (5) nly one and assign score.	Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundat Seasonally inundat X Seasonally satura	in (1) ake and other human use (1) bland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl check ently inundated/saturated (4) ed/saturated (3)
	None or none apparent (12 Recovered (7) X Recovering (3) Recent or no recovery (1)			· ·
	Metric 4. Habitat Al		pment.	
	4a. Substrate disturbance. Score on None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2)	, and the second		
4	x Poor (1) 4c. Habitat alteration. Score one or one		1	
24	None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)	Check all disturbances observed x mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	x shrub/sapling rem herbaceous/aquar sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-037	Rater(s): MJA	Date: 2021-10-20
24 subtotal first page		
0 24 Metric 5. Speci	ial Wetlands.	
max 10 pts. subtotal Check all that apply and score Bog (10) Fen (10) Old growth forest (* Mature forested we Lake Erie coastal/tr Lake Plain Sand Pr Relict Wet Prairies Known occurrence Significant migrator	re as indicated. 10) etland (5) ributary wetland-unrestricted hydrology (10) ributary wetland-restricted hydrology (5) rairies (Oak Openings) (10)	
26 Metric 6. Plant	communities, interspersion, m	nicrotopography.
max 20 pts. subtotal 6a. Wetland Vegetation Com	•	
Score all present using 0 to 3		0.1ha (0.2471 acres) contiguous area
O Aquatic bed 1 Emergent O Shrub		nprises small part of wetland's moderate quality, or comprises a of low quality
0 Forest 0 Mudflats 0 Open water	2 Present and either com	nprises significant part of wetland's moderate quality or comprises a small
0 Other6b. horizontal (plan view) Inte	3 Present and comprises	s significant part, or more, of wetland's
Select only one. High (5)	Narrative Description of Vegetation	Quality
Moderately high(4) Moderate (3)	low Low spp diversity and/o disturbance tolerant in	or predominance of nonnative or native species
Moderately low (2) Low (1) X None (0) 6c. Coverage of invasive plan	although nonnative a can also be present, moderately high, but	nt component of the vegetation, ind/or disturbance tolerant native spp and species diversity moderate to generally w/o presence of rare
to Table 1 ORAM long form for		
or deduct points for coverage Extensive >75% co Moderate 25-75% co Sparse 5-25% cove	over (-5) and/or disturbance to absent, and high spp er (-1) the presence of rare,	ive species, with nonnative spp plerant native spp absent or virtually diversity and often, but not always, threatened, or endangered spp
Nearly absent <5%		. Ita.
x Absent (1) 6d. Microtopography.	Mudflat and Open Water Class Qua 0 Absent <0.1ha (0.247	
Score all present using 0 to 3		-
0 Vegetated hummud		·
0 Coarse woody debi	, ,	or more
O Standing dead >25	, ,	
0 Amphibian breeding	g pools Microtopography Cover Scale 0 Absent	
		ounts or if more common
	2 Present in moderate ar quality or in small am	mounts, but not of highest nounts of highest quality
26 GRAND TOTAL (max 100	3 Present in moderate or and of highest quality	
26 GRAND TOTAL (max 100	pts)	

Site: V	/vetlan	d L	.P-038	Rater(s): MJA	Date : 2021-10-20	
0	0	1 _м	etric 1. Wetland A	Area (size)		
max 6 pts.	subtotal	4	ect one size class and assign sc >50 acres (>20.2ha) (6 pt 25 to <50 acres (10.1 to < 10 to <25 acres (4 to <10. 3 to <10 acres (1.2 to <4h 0.3 to <3 acres (0.12 to < 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pts)	ore. s) :20.2ha) (5 pts) .1ha) (4 pts) na) (3 pts) 1.2ha) (2pts) <0.12ha) (1 pt)		
11	11	lм	etric 2. Upland b	uffers and surround	ding land use.	
max 14 pts.	subtotal	2a.	Calculate average buffer width. X WIDE. Buffers average 5 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers average VERY NARROW. Buffers Intensity of surrounding land us VERY LOW. 2nd growth LOW. Old field (>10 year X MODERATELY HIGH. R	Select only one and assign score. 50m (164ft) or more around wetland ple 25m to <50m (82 to <164ft) around ge 10m to <25m (32ft to <82ft) around services average <10m (<32ft) around wetlate. Select one or double check and or older forest, prairie, savannah, wires), shrubland, young second growth esidential, fenced pasture, park, conopen pasture, row cropping, mining,	Do not double check. perimeter (7) d wetland perimeter (4) und wetland perimeter (1) and perimeter (0) average. ildlife area, etc. (7) forest. (5) aservation tillage, new fallo	
6	17	M	etric 3. Hydrolog	y.		
max 30 pts.	subtotal	3a. 3c.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surful Perennial surface water (I) Maximum water depth. Select of Sol. (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (1) X <0.4m (<15.7in) (1)	face water (3) ake or stream) (5) only one and assign score.	Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundat Seasonally inundat X Seasonally satura	in (1) lake and other human use (1) pland (e.g. forest), complex (1) rupland corridor (1) uration. Score one or dbl check ently inundated/saturated (4) ted/saturated (3)
6		1	None or none apparent (1 Recovered (7) Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (non filling/grading x road bed/RR track dredging other_	,
6 max 20 pts.	23			Iteration and Develone or double check and average.	opment.	
mex 20 pts.	Subtotal		None or none apparent (4 Recovered (3) X Recovering (2) Recent or no recovery (1) Habitat development. Select or Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2)	·)		
		4c.	Poor (1) Habitat alteration. Score one o			
_	23]	None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)	x mowing grazing	x shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	ttic bed removal

Site: Wetland LP-038	Rater(s): MJA	Date: 2021-10-20
23 subtotal first page		
0 23 Metric 5. Special V	Vetlands.	
max 10 pts. subtotal Check all that apply and score as in Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (Lake Erie coastal/tributar Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state/st	dicated. (5) y wetland-unrestricted hydrology (10) y wetland-restricted hydrology (5)))
-4 19 Metric 6. Plant cor	nmunities, interspersior	n, microtopography.
max 20 pts. subtotal 6a. Wetland Vegetation Communit	•	
Score all present using 0 to 3 scale		ses <0.1ha (0.2471 acres) contiguous area
0 Aquatic bed 1 Emergent 0 Shrub	vegetation and	er comprises small part of wetland's is of moderate quality, or comprises a but is of low quality
0 Forest 0 Mudflats 0 Open water	2 Present and either	er comprises significant part of wetland's is of moderate quality or comprises a small
Other6b. horizontal (plan view) Intersper	3 Present and com	prises significant part, or more, of wetland's is of high quality
Select only one.	Narrativa Description of Vaga	tation Quality
High (5) Moderately high(4) Moderate (3)		v and/or predominance of nonnative or erant native species
Moderately low (2) Low (1)	although nonna	ominant component of the vegetation, ative and/or disturbance tolerant native spp
X None (0)6c. Coverage of invasive plants. Rto Table 1 ORAM long form for list.	efer moderately high	esent, and species diversity moderate to h, but generally w/o presence of rare endangered spp
or deduct points for coverage X Extensive >75% cover (-5 Moderate 25-75% cover (-1) Sparse 5-25% cover (-1)	high A predominance and/or disturba absent, and hig the presence or	of native species, with nonnative spp nce tolerant native spp absent or virtually ih spp diversity and often, but not always, f rare, threatened, or endangered spp
Nearly absent <5% cover		- 0
Absent (1) 6d. Microtopography.	Mudflat and Open Water Clas 0 Absent <0.1ha (0	
Score all present using 0 to 3 scale		(0.247 to 2.47 acres)
0 Vegetated hummucks/tus		4ha (2.47 to 9.88 acres)
0 Coarse woody debris >15	, ,	cres) or more
0 Standing dead >25cm (10 Amphibian breeding pools	•	
<u></u>	0 Absent	
	1 Present very sma of marginal qua	<u> </u>
	quality or in sm	rate amounts, but not of highest all amounts of highest quality
10	and of highest	rate or greater amounts quality
19 GRAND TOTAL (max 100 pts)	

Site: V	Vetlan	d LP-039		Rater(s): MJA		Date: 2021-10-20
0	0	Metric 1	. Wetland A	rea (size)		
max 6 pts.	subtotal	Select one size >50 25 to 10 to 3 to 0.3 to 0.1 to	e class and assign scor acres (>20.2ha) (6 pts) <50 acres (10.1 to <20 <25 acres (4 to <10.1 <10 acres (1.2 to <4ha) o <3 acres (0.12 to <1.3 o <0.3 acres (0.04 to <0 acres (0.04ha) (0 pts)	e. O.2ha) (5 pts) na) (4 pts) I (3 pts) Pha) (2pts)		
8	8	Metric 2	. Upland bu	ffers and surrou	nding land use.	
max 14 pts.	subtotal	2a. Calculate a WID X MED NAR VER 2b. Intensity o X LOW X MOD	average buffer width. SE. Buffers average 50r IUM. Buffers average ROW. Buffers average Y NARROW. Buffers at surrounding land use. Y LOW. 2nd growth or J. Old field (>10 years) DERATELY HIGH. Res	Select only one and assign scom (164ft) or more around wetla 25m to <50m (82 to <164ft) are 10m to <25m (32ft to <82ft) average <10m (<32ft) around v Select one or double check a older forest, prairie, savannah, shrubland, young second groidential, fenced pasture, park, sen pasture, row cropping, minimal (164ft) around v select one or double check a older forest, prairie, savannah, shrubland, young second groidential, fenced pasture, park, sen pasture, row cropping, minimal (164ft) around v select one or double check a control of the contro	re. Do not double check. Ind perimeter (7) Ound wetland perimeter (4) around wetland perimeter (1) vetland perimeter (0) and average. In, wildlife area, etc. (7) with forest. (5) conservation tillage, new fall	
14.5	22.5	Metric 3	. Hydrology			
max 30 pts.	subtotal	3a. Sources of High Othe X Prec X Seas Pere 3c. Maximum >0.7 0.4 to	water. Score all that pH groundwater (5) r groundwater (3) ipitation (1) sonal/Intermittent surfactionals surface water (lakwater depth. Select on (27.6in) (3) to 0.7m (15.7 to 27.6in)	apply. ce water (3) se or stream) (5) ly one and assign score.	Part of wetland/u X Part of riparian o 3d. Duration inundation/sat Semi- to perman Regularly inunda X Seasonally inunda	ain (1) lake and other human use (1) pland (e.g. forest), complex (1) r upland corridor (1) uration. Score one or dbl checl ently inundated/saturated (4) ted/saturated (3) lated (2)
			m (<15.7in) (1) ons to natural hydrologi	c regime. Score one or double		ated in upper 30cm (12in) (1)
		X Reco	e or none apparent (12) overed (7) overing (3) ent or no recovery (1)	Check all disturbances observed ditch tile dike weir stormwater input	point source (nor filling/grading x road bed/RR tracded) other	
7	29.5	Metric 4	. Habitat Alt	teration and Dev	elopment.	
max 20 pts.	subtotal	4a. Substrate None X Reco Reco Reco 4b. Habitat de	disturbance. Score one or none apparent (4) overed (3) overing (2) ent or no recovery (1) ovelopment. Select only	e or double check and average	2.	
		Very Good Mode Fair Poor X Poor	erately good (4) (3) to fair (2) (1)	louble check and average.		
si	29.5	None Recc X Recc	e or none apparent (9) overed (6) overing (3) ent or no recovery (1)	Check all disturbances observations of the control	x shrub/sapling rer herbaceous/aqua sedimentation dredging farming nutrient enrichme	atic bed removal

Site: Wetland LP-039 Ra	ater(s): MJA		Date: 2021-10-20
29.5 subtotal first page 0 29.5 max 10 pts. subtotal Check all that apply and score as indica			
Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wet Lake Erie coastal/tributary wet Lake Plain Sand Prairies (Oak Relict Wet Prairies (10) Known occurrence state/feder Significant migratory songbird Category 1 Wetland. See Que	tland-unrestricted hydro tland-restricted hydro t Openings) (10) al threatened or enda /water fowl habitat or	angered species (10) usage (10)	
32.5 Metric 6. Plant comm	nunities, int	erspersion, microto	pography.
max 20 pts. subtotal 6a. Wetland Vegetation Communities.	Vegetation	Community Cover Scale	
Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	71 acres) contiguous area
0 Aquatic bed	1	Present and either comprises sma	all part of wetland's
1 Emergent		vegetation and is of moderate q	uality, or comprises a
0 Shrub		significant part but is of low qua	·
0 Forest	2	Present and either comprises sign	
0 Mudflats		vegetation and is of moderate q	uality or comprises a small
Open water		part and is of high quality	
0 Other	3	Present and comprises significant	part, or more, of wetland's
6b. horizontal (plan view) Interspersion.		vegetation and is of high quality	
Select only one.			
High (5)		escription of Vegetation Quality	
Moderately high(4)	low	Low spp diversity and/or predomin	
Moderate (3)		disturbance tolerant native spec	
Moderately low (2)	mod	Native spp are dominant compone	
X Low (1)		although nonnative and/or distu	
None (0) 6c. Coverage of invasive plants. Refer		can also be present, and specie	•
to Table 1 ORAM long form for list. Add		moderately high, but generally v	wo presence or rare
or deduct points for coverage	high	threatened or endangered spp A predominance of native species	with poppative enn
Extensive >75% cover (-5)	nign	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)		the presence of fare, threatened	i, or cridarigered app
X Absent (1)	Mudflat and	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)
0 Vegetated hummucks/tussuck		Moderate 1 to <4ha (2.47 to 9.88	
0 Coarse woody debris >15cm (High 4ha (9.88 acres) or more	
0 Standing dead >25cm (10in) of	• ,		
0 Amphibian breeding pools		raphy Cover Scale	
<u>-</u> , sister and poore	0	Absent	
	1	Present very small amounts or if r	nore common
	•	of marginal quality	
	2	Present in moderate amounts, but	t not of highest
	_	quality or in small amounts of hi	_
	3	Present in moderate or greater an	
	•	and of highest quality	
32.5 GRAND TOTAL (max 100 pts)		, , , , , , , , , , , , , , , , , , ,	
- (max 100 pto)			

Site: V	Vetlan	<u>d LP-(</u>	040			Rater(s): MJA				Date: 2021	⊦-10-21
1	1	Metr	ic 1.	Wetland	Ar	rea (size).					
max 6 pts.	subtotal	4	ne size classification >50 acm	ass and assign es (>20.2ha) (6 0 acres (10.1 to 5 acres (4 to < acres (1.2 to < 3 acres (0.12 to 0.3 acres (0.04 es (0.04ha) (0	score pts) 0 <20 10.1h (4ha) 0 <1.2 to <0	e. 1.2ha) (5 pts) 1a) (4 pts) (3 pts) 2ha) (2pts)					
8	9	Metr	ic 2.	Upland	buf	fers and surr	ound	ing	land use.		
max 14 pts.	subtotal	2a. Cald	wilate ave WIDE. MEDIUI NARRO VERY N	rage buffer wid Buffers average M. Buffers aver W. Buffers aver IARROW. Buff Irrounding land	th. S e 50m age 2 erage ers a use	elect only one and assign n (164ft) or more around v 25m to <50m (82 to <164ft 10m to <25m (32ft to <8 verage <10m (<32ft) arou Select one or double ch	score. [vetland p t) around 2ft) aroui nd wetlai eck and a	Do not erimete wetland wetland wetland werage	double check. er (7) nd perimeter (4) land perimeter (1) meter (0) e.		
		Х	LOW. (MODEF HIGH.	Old field (>10 ye ATELY HIGH. Jrban, industria	ears), Resi II, ope	older forest, prairie, savar shrubland, young second dential, fenced pasture, p en pasture, row cropping,	l growth f ark, cons	forest. servatio	(5) on tillage, new fallo	ow field. (3)	
15.5	24.5	Metr	ic 3.	Hydrolo	gy.	•					
max 30 pts.	subtotal	3a. Sou	rces of W High ph Other g Precipit Season	ater. Score all groundwater (§ coundwater (§ coundwater (3) ation (1) al/Intermittent s	that a	apply.		X	ectivity. Score all 100 year floodplai Between stream/l Part of wetland/up Part of riparian or ion inundation/satu	in (1) ake and other hun bland (e.g. forest), upland corridor (1	complex (1)
		X	>0.7 (27 0.4 to 0 <0.4m ('.6in) (3) 7m (15.7 to 27. <15.7in) (1)	.6in) (y one and assign score. (2) c regime. Score one or do	ouble che	Χ	Regularly inundat Seasonally inundat Seasonally satura	ated (2)	, ,
		X	None or Recove Recove	none apparent ed (7)	(12)			x	point source (non filling/grading road bed/RR track dredging other Culvert	,	
7	31.5	Metr	ric 4.	Habitat	Alt	eration and D	evelo	pm	ent.		
max 20 pts.	subtotal		None or Recove Recove	urbance. Score none apparent red (3)	e one (4)	e or double check and ave		-			
		X	Exceller Very go Good (5 Modera Fair (3) Poor to	opment. Select at (7) od (6)) ely good (4) fair (2)	only	one and assign score. ouble check and average.					
SI	31.5	X X	None or Recove Recove	none apparent ed (6)	(9)	Check all disturbances X mowing grazing clearcutting selective cutting woody debris remotoxic pollutants	observed	×	shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal	

Site: Wetland LP-040	Rater(s): MJA	Date: 2021-10-21
31.5		
0 04.5	atlanda	
Metrio o. opediai W		
Lake Erie coastal/tributary w Lake Plain Sand Prairies (O Relict Wet Prairies (10) Known occurrence state/fed Significant migratory songbi	retland-unrestricted hydrology (10 retland-restricted hydrology (5)	pecies (10) 0)
2 33.5 Metric 6 Plant com	munities interend	ersion, microtopography.
	· · · · · · · · · · · · · · · · · · ·	
max 20 pts. subtotal 6a. Wetland Vegetation Communities Score all present using 0 to 3 scale.		or comprises <0.1ha (0.2471 acres) contiguous area
0 Aquatic bed		t and either comprises small part of wetland's
1 Emergent		tation and is of moderate quality, or comprises a
0 Shrub		icant part but is of low quality
0 Forest		t and either comprises significant part of wetland's
0 Mudflats 0 Open water		tation and is of moderate quality or comprises a small and is of high quality
0 Other		t and comprises significant part, or more, of wetland's
6b. horizontal (plan view) Interspersio		tation and is of high quality
Select only one.		
High (5)		n of Vegetation Quality
Moderately high(4) Moderate (3)	-	p diversity and/or predominance of nonnative or bance tolerant native species
Moderate (3) Moderately low (2)		spp are dominant component of the vegetation,
Low (1)		ugh nonnative and/or disturbance tolerant native spp
X None (0)		also be present, and species diversity moderate to
6c. Coverage of invasive plants. Refe		erately high, but generally w/o presence of rare
to Table 1 ORAM long form for list. Ac or deduct points for coverage		tened or endangered spp ominance of native species, with nonnative spp
Extensive >75% cover (-5)	•	or disturbance tolerant native spp absent or virtually
Moderate 25-75% cover (-3)		nt, and high spp diversity and often, but not always,
Sparse 5-25% cover (-1)		resence of rare, threatened, or endangered spp
Nearly absent <5% cover (0		
x Absent (1) 6d. Microtopography.	Mudflat and Open W 0 Absent	<pre>class Quality <0.1ha (0.247 acres)</pre>
Score all present using 0 to 3 scale.		1 to <1ha (0.247 to 2.47 acres)
0 Vegetated hummucks/tussu		ate 1 to <4ha (2.47 to 9.88 acres)
0 Coarse woody debris >15cm		na (9.88 acres) or more
O Standing dead >25cm (10in)		OI-
0 Amphibian breeding pools	Microtopography Co 0 Absent	
		t very small amounts or if more common
	of ma	arginal quality
		t in moderate amounts, but not of highest
		ry or in small amounts of highest quality
		t in moderate or greater amounts of highest quality
33.5 GRAND TOTAL (max 100 pts)	and c	. Ingriosi quality

Site: V	Vetlan	d LF	² -041	Rater(s): MJA		Date: 2021-10-21
1	1] Me	etric 1. Wetland A	Area (size).		
max 6 pts.	subtotal		ct one size class and assign sco >50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to < 10 to <25 acres (4 to <10. 3 to <10 acres (1.2 to <4h 0.3 to <3 acres (0.12 to < × 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pts	ore. s) 20.2ha) (5 pts) 1ha) (4 pts) a) (3 pts) 1.2ha) (2pts) <0.12ha) (1 pt)		
4	5	Me	tric 2. Upland b	uffers and surround	ing land use.	
max 14 pts.	subtotal	2a. C	Calculate average buffer width. WIDE. Buffers average 5 MEDIUM. Buffers averag X NARROW. Buffers avera VERY NARROW. Buffers ntensity of surrounding land us VERY LOW. 2nd growth LOW. Old field (>10 years X MODERATELY HIGH. Re	Select only one and assign score. In the control of	Do not double check. serimeter (7) d wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) average. dlife area, etc. (7) forest. (5) servation tillage, new fallo	
10	15	$\prod_{M \in \mathcal{M}}$	etric 3. Hydrology	. ,	onou douon. (1)	
max 30 pts.	subtotal		Sources of Water. Score all the High pH groundwater (5) Other groundwater (3) X Precipitation (1)	at apply. 3b.	Part of wetland/up	in (1) lake and other human use (1) pland (e.g. forest), complex (1)
		3c. M	Seasonal/Intermittent surf Perennial surface water (la Maximum water depth. Select of >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) × <0.4m (<15.7in) (1)	ake or stream) (5) 3d. only one and assign score.	Duration inundation/satu Semi- to permane Regularly inundat Seasonally inundat	
		3e. M		gic regime. Score one or double che 2) Check all disturbances observed ditch tile dike weir stormwater input	eck and average.	stormwater)
5	20] Me	etric 4. Habitat A	Iteration and Develo	opment.	
max 20 pts.	subtotal	4a. S	Substrate disturbance. Score o None or none apparent (4 Recovered (3) Recovering (2)	ne or double check and average.		
			Recent or no recovery (1) Habitat development. Select or Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) Habitat alteration. Score one or			
SI	20]	None or none apparent (9 Recovered (6) Recovering (3) X Recent or no recovery (1)		x shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-041	Rater(s): MJA	Rater(s): MJA		
20 subtotal first page				
0 20 Metric 5. Spe	cial Wetlands			
max 10 pts. subtotal Check all that apply and s Bog (10) Fen (10) Old growth fore Mature forested Lake Erie coas Lake Plain San Relict Wet Prai Known occurre	est (10) d wetland (5) tal/tributary wetland-unrestricted hy tal/tributary wetland-restricted hydr d Prairies (Oak Openings) (10)	dangered species (10)		
Category 1 We	tland. See Question 1 Qualitative	Rating (-10)		
	·	terspersion, microto	opography.	
max 20 pts. subtotal 6a. Wetland Vegetation 0 Score all present using 0		Absent or comprises <0.1ha (0.2c	471 acres) contiguous area	
0 Aquatic bed	1 1	Present and either comprises sm		
1 Emergent		vegetation and is of moderate of		
0 Shrub		significant part but is of low qua	·	
0 Forest 0 Mudflats	2	Present and either comprises sig vegetation and is of moderate of		
0 Open water		part and is of high quality	jaanty or comprisce a cinan	
0 Other	3	Present and comprises significan		
6b. horizontal (plan view)) Interspersion.	vegetation and is of high quality	1	
Select only one. High (5)	Narrative	Description of Vegetation Quality		
Moderately high		Low spp diversity and/or predomi	nance of nonnative or	
Moderate (3)		disturbance tolerant native spec		
Moderately low	mod	Native spp are dominant compon although nonnative and/or distu		
Low (1) X None (0)		can also be present, and specie	• • • • • • • • • • • • • • • • • • • •	
6c. Coverage of invasive	plants. Refer	moderately high, but generally	-	
to Table 1 ORAM long for		threatened or endangered spp		
or deduct points for cover Extensive >75%	•	A predominance of native species		
X Moderate 25-75	` ,	and/or disturbance tolerant nati absent, and high spp diversity a		
Sparse 5-25%	, ,	the presence of rare, threatene		
Nearly absent				
Absent (1) 6d. Microtopography.	Mudflat ar 0	Absent <0.1ha (0.247 acres)		
Score all present using 0		Low 0.1 to <1ha (0.247 to 2.47 acres)		
	mucks/tussucks 2	Moderate 1 to <4ha (2.47 to 9.88		
	debris >15cm (6in) 3	High 4ha (9.88 acres) or more		
─	>25cm (10in) dbh	graphy Cover Scale		
0 Amphibian bree	0	graphy Cover Scale Absent		
	1	Present very small amounts or if	more common	
		of marginal quality		
	2	Present in moderate amounts, bu	_	
	3	quality or in small amounts of h Present in moderate or greater a		
40		and of highest quality		
18 GRAND TOTAL (max 1	00 pts)			

Site: V	Vetlan	d LP-04	-2	Rater(s): MJA		Date: 2021-10-19
2	2	Metric	1. Wetland A	rea (size).		
max 6 pts.	subtotal	Select one s	size class and assign score 50 acres (>20.2ha) (6 pts) 5 to <50 acres (10.1 to <20 0 to <25 acres (4 to <10.1 to <10 acres (1.2 to <4ha) .3 to <3 acres (0.12 to <1.2 .1 to <0.3 acres (0.04 to <0 0.1 acres (0.04ha) (0 pts)	e. 0.2ha) (5 pts) na) (4 pts) (3 pts) 2ha) (2pts)		
9	11	 Metric	2. Upland bu	ffers and surrou	nding land use.	
max 14 pts.	subtotal	2a. Calcula	ate average buffer width. S VIDE. Buffers average 50n IEDIUM. Buffers average 2 IARROW. Buffers average ERY NARROW. Buffers a ty of surrounding land use. ERY LOW. 2nd growth or OW. Old field (>10 years), IODERATELY HIGH. Res	select only one and assign scorn (164ft) or more around wetlar 25m to <50m (82 to <164ft) around to <25m to <25m (32ft to <82ft) a average <10m (<32ft) around we select one or double check a older forest, prairie, savannah, shrubland, young second grovidential, fenced pasture, park, cen pasture, row cropping, minir	re. Do not double check. and perimeter (7) bund wetland perimeter (4) around wetland perimeter (1) etland perimeter (0) and average. buildlife area, etc. (7) with forest. (5) conservation tillage, new fallo	
8	19	 Metric	3. Hydrology.			
max 30 pts.	subtotal	3a. Source H O X P S P 3c. Maximu O X <	s of Water. Score all that a ligh pH groundwater (5) other groundwater (3) recipitation (1) leasonal/Intermittent surfacterennial surface water (lak lum water depth. Select onl 0.7 (27.6in) (3) .4 to 0.7m (15.7 to 27.6in) 0.4m (<15.7in) (1)	ee water (3) te or stream) (5) ly one and assign score.	Part of wetland/up Part of riparian or 3d. Duration inundation/satu Semi- to permane x Regularly inundat Seasonally inundat Seasonally satura	in (1) lake and other human use (1) lake and other human use (1) land (e.g. forest), complex (1) lupland corridor (1) luration. Score one or dbl checle lently inundated/saturated (4) led/saturated (3)
8	27	R X R R	lone or none apparent (12) lecovered (7) lecovering (3) lecent or no recovery (1)	ditch tile dike weir stormwater input	point source (non filling/grading x road bed/RR trace dredging other	, and the second
max 20 pts.	subtotal	4		teration and Develor or double check and average.	•	
		X R R R R R R R R R R R R R R R R R R R	lone or none apparent (4) lecovered (3) lecovering (2) lecent or no recovery (1) lecent (7) lecent (7) lecent (7) lecent (8) lecent (9) le			
q	27	N R X R R	alteration. Score one or done or none apparent (9) decovered (6) decovering (3) decent or no recovery (1)	Check all disturbances obse mowing grazing x clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-042	Rater(s): MJA	Date: 2021-10-19
27 subtotal first page		
0 27 Metric 5. Special	Wetlands.	
Check all that apply and score as Bog (10) Fen (10) Old growth forest (10) Mature forested wetland Lake Erie coastal/tributa Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state Significant migratory son Category 1 Wetland. Se	I (5) ary wetland-unrestricted hydrology (10) ary wetland-restricted hydrology (5)	
2 29 Metric 6. Plant co	mmunities, interspersion, m	nicrotopography.
max 20 pts. subtotal 6a. Wetland Vegetation Commun	•	
Score all present using 0 to 3 scal		0.1ha (0.2471 acres) contiguous area
O Aquatic bed 1 Emergent O Shrub		nprises small part of wetland's moderate quality, or comprises a of low quality
0 Forest 0 Mudflats 0 Open water	2 Present and either com	nprises significant part of wetland's moderate quality or comprises a small
6b. horizontal (plan view) Interspe		s significant part, or more, of wetland's nigh quality
Select only one. High (5)	Narrative Description of Vegetation	Quality
Moderately high(4) Moderate (3)	low Low spp diversity and/o disturbance tolerant	or predominance of nonnative or native species
Moderately low (2) Low (1) X None (0) 6c. Coverage of invasive plants.	although nonnative a can also be present, moderately high, but	nt component of the vegetation, and/or disturbance tolerant native spp and species diversity moderate to generally w/o presence of rare
to Table 1 ORAM long form for list		
or deduct points for coverage Extensive >75% cover (-1) Moderate 25-75% cover (-1)	-5) and/or disturbance to absent, and high spp the presence of rare,	tive species, with nonnative spp blerant native spp absent or virtually bliversity and often, but not always, threatened, or endangered spp
X Nearly absent <5% cove	• •	-126
Absent (1) 6d. Microtopography.	Mudflat and Open Water Class Qua 0 Absent <0.1ha (0.247	
Score all present using 0 to 3 scal		-
0 Vegetated hummucks/tu		
1 Coarse woody debris >1		or more
O Standing dead >25cm (•	
o Amphibian breeding poo	ols Microtopography Cover Scale 0 Absent	
		ounts or if more common
	quality or in small am	mounts, but not of highest nounts of highest quality
20 CRAND TOTAL /may 400 mt	Present in moderate or and of highest quality	
29 GRAND TOTAL (max 100 pt	5)	

Site: V	Vetlan	d LP-043	Rater(s): MJ	1	Date: 2021-10-19
0	0	Metric 1. W	etland Area (size).		
max 6 pts.	subtotal	Select one size class	• •		
8	8	Metric 2. U	pland buffers and su	rrounding land us	se.
max 14 pts.	subtotal	2a. Calculate average WIDE. Buf X MEDIUM. I NARROW. VERY NAR 2b. Intensity of surrou VERY LOW X LOW. Old X MODERATI	e buffer width. Select only one and as fers average 50m (164ft) or more around the saverage 25m to <50m (82 to <80m (82 to)80m (82 to)90m ssign score. Do not double check. and wetland perimeter (7) 164ft) around wetland perimeter (0) 0 <82ft) around wetland perimeter (around wetland perimeter (1) e check and average. Eavannah, wildlife area, etc. (7) cond growth forest. (5) re, park, conservation tillage, new	4)	
10	18	Metric 3. H	ydrology.		
max 30 pts.	subtotal	3a. Sources of Water High pH ground of the ground with the gro	Score all that apply. Sundwater (5) Idwater (3) In (1) Itermittent surface water (3) In (3) Itermitent Select only one and assign score) Itermitent Select only one and assign score) Itermitent Select only one and assign score	Part of wetlar Part of riparia 3d. Duration inundation. Fere. Semi- to perm Regularly inu Seasonally in	dplain (1) am/lake and other human use (1) ad/upland (e.g. forest), complex (1) an or upland corridor (1) /saturation. Score one or dbl check nanently inundated/saturated (4) ndated/saturated (3) undated (2)
		None or not X Recovered Recovering	atural hydrologic regime. Score one ne apparent (12) Check all disturbar (7)	or double check and average. lices observed point source (·
7	25	Metric 4. H	abitat Alteration and	Development.	
max 20 pts.	subtotal	4a. Substrate disturb None or not Recovered Recovering Recent or n	ance. Score one or double check and ne apparent (4) (3) (2) o recovery (1) ent. Select only one and assign scor) 6) good (4)	average.	
		Poor (1) 4c. Habitat alteration	Score one or double check and aver	<u> </u>	
SI	25	Recovered X Recovering Recent or n		x shrub/sapling herbaceous/a sedimentation dredging removal farming	aquatic bed removal n

Site: Wetland LP-043	Rater(s): MJA	Date : 2021-10-19
25 subtotal first page		
0 25 Metric 5. Special W	/etlands.	
max 10 pts. subtotal Check all that apply and score as income Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary Lake Plain Sand Prairies (10) Known occurrence state/fe Significant migratory songle	dicated. i) wetland-unrestricted hydrology (10) wetland-restricted hydrology (5) Oak Openings) (10) ideral threatened or endangered species (10) bird/water fowl habitat or usage (10)	
	Question 1 Qualitative Rating (-10)	
	nmunities, interspersion,	microtopography.
max 20 pts. subtotal 6a. Wetland Vegetation Communitie		
Score all present using 0 to 3 scale. O Aquatic bed		es <0.1ha (0.2471 acres) contiguous area comprises small part of wetland's
1 Emergent		of moderate quality, or comprises a
0 Shrub	significant part b	ut is of low quality
0 Forest		comprises significant part of wetland's
0 Mudflats 0 Open water	part and is	s of moderate quality or comprises a small h quality
0 Other		rises significant part, or more, of wetland's
6b. horizontal (plan view) Interspers	ion. vegetation and is	of high quality
Select only one.	Namedia Bassintia of Vand	otton Overtter
High (5) Moderately high(4)	Narrative Description of Vegeta	and/or predominance of nonnative or
Moderate (3)		ant native species
Moderately low (2)	• • • • • • • • • • • • • • • • • • • •	ninant component of the vegetation,
Low (1)		ve and/or disturbance tolerant native spp
X None (0) 6c. Coverage of invasive plants. Re	• • • • • • • • • • • • • • • • • • •	ent, and species diversity moderate to but generally w/o presence of rare
to Table 1 ORAM long form for list.		
or deduct points for coverage		f native species, with nonnative spp
Extensive >75% cover (-5)		ce tolerant native spp absent or virtually
Moderate 25-75% cover (- X Sparse 5-25% cover (-1)	,	spp diversity and often, but not always, rare, threatened, or endangered spp
Nearly absent <5% cover (are, tributeriou, or endangered opp
Absent (1)	Mudflat and Open Water Class	
6d. Microtopography.	0 Absent <0.1ha (0.	247 acres) .247 to 2.47 acres)
Score all present using 0 to 3 scale. O Vegetated hummucks/tuss	,	na (2.47 to 9.88 acres)
0 Coarse woody debris >150		<u> </u>
0 Standing dead >25cm (10i		
0 Amphibian breeding pools	Microtopography Cover Scale 0 Absent	
		amounts or if more common
	of marginal quali	ty
		te amounts, but not of highest
		Il amounts of highest quality te or greater amounts
	and of highest qu	=
25 GRAND TOTAL (max 100 pts)	<u> </u>	

Site: Wetland	I LP-044	Rater(s): MJA		Date : 2021-10-19
0 0	Matria 1 Watland A	roo (oizo)		
<u> </u>	Metric 1. Wetland A			
max 6 pts. subtotal (Select one size class and assign scores (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1. 0.1 to <0.3 acres (0.04 to < x <0.1 acres (0.04ha) (0 pts)) 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
8 8	Metric 2. Upland bu	ffers and surround	ing land use.	
	X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2b. Intensity of surrounding land use VERY LOW. 2nd growth o X LOW. Old field (>10 years) X MODERATELY HIGH. Res	m (164ft) or more around wetland po 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) arour average <10m (<32ft) around wetlar	erimeter (7) I wetland perimeter (4) and wetland perimeter (1) and perimeter (0) average. dlife area, etc. (7) forest. (5) servation tillage, new fallo	ow field. (3)
6 14	Metric 3. Hydrology	'.		
· ·	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (lal 3c. Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) X <0.4m (<15.7in) (1) 3e. Modifications to natural hydrologic	ce water (3) ke or stream) (5) 3d. nly one and assign score. (2) c regime. Score one or double chemics.	Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundat Seasonally inundat X Seasonally satura ck and average.	in (1) lake and other human use (1) cland (e.g. forest), complex (1) cupland corridor (1) curation. Score one or dbl checl ently inundated/saturated (4) led/saturated (3)
7 21	Recovered (7) X Recovering (3) Recent or no recovery (1)	ditch tile dike weir stormwater input	point source (non: filling/grading x road bed/RR track dredging other	
	Metric 4. Habitat Al		pment.	
	4a. Substrate disturbance. Score on None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2)	, and the second		
4	X Poor (1)4c. Habitat alteration. Score one or one	double check and average.		
21	None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)	Check all disturbances observed mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: W	/etlan	d LP-044	Rater(s): MJA		Date: 2021-10-19
	21 ototal first pa	age			
0	21	Metric 5. Special W	/etlands.		
max 10 pts.	subtotal	Check all that apply and score as ind Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (! Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (Relict Wet Prairies (10) Known occurrence state/fe Significant migratory song Category 1 Wetland. See	dicated. wetland-unrestricted hydrowetland-restricted hydrowetland-restricted hydrowetland (10) dederal threatened or endabird/water fowl habitat or	angered species (10) usage (10)	
1	22	Metric 6. Plant con	nmunities, int	erspersion, microto	opography.
max 20 pts.	subtotal	6a. Wetland Vegetation Communitie	es. <u>Vegetation</u>	Community Cover Scale	
		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.2	471 acres) contiguous area
		O Aquatic bed	1	Present and either comprises sm	all part of wetland's
		1 Emergent		vegetation and is of moderate of	
		0 Shrub		significant part but is of low qua	•
		0 Forest	2	Present and either comprises sig	
		0 Mudflats		vegetation and is of moderate of	quality or comprises a small
		Open water		part and is of high quality	A
		O Other_	3	Present and comprises significan	
		6b. horizontal (plan view) Interspers		vegetation and is of high quality	/
		Select only one.	Norrotivo D	accription of Vagatation Quality	
		High (5) Moderately high(4)	low	escription of Vegetation Quality Low spp diversity and/or predomi	nance of nonnative or
		Moderate (3)	IOW	disturbance tolerant native spe	
		Moderately low (2)	mod	Native spp are dominant compon	
		Low (1)	mou	although nonnative and/or distu	
		X None (0)		can also be present, and specie	• • • • • • • • • • • • • • • • • • • •
		6c. Coverage of invasive plants. Re	efer	moderately high, but generally	-
		to Table 1 ORAM long form for list.	Add	threatened or endangered spp	
		or deduct points for coverage	high	A predominance of native specie	s, with nonnative spp
		Extensive >75% cover (-5	,	and/or disturbance tolerant nati	
		Moderate 25-75% cover (-	3)	absent, and high spp diversity a	and often, but not always,
		Sparse 5-25% cover (-1)		the presence of rare, threatene	d, or endangered spp
		X Nearly absent <5% cover	• •		
		Absent (1)		d 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 a)	
		Vegetated hummucks/tus: Coarse weedy debrie > 15.		Moderate 1 to <4ha (2.47 to 9.88	s acres)
		O Coarse woody debris >150 O Standing dead >25cm (10	(' '	High 4ha (9.88 acres) or more	
		Amphibian breeding pools		raphy Cover Scale	
		, anymolan breeding pools	0	Absent	
			1	Present very small amounts or if	more common
			•	of marginal quality	
			2	Present in moderate amounts, bu	it not of highest
				quality or in small amounts of h	_
			3	Present in moderate or greater a	
				and of highest quality	
22	GRAN	ND TOTAL (max 100 pts)			

Site: Wetla	ind L	.P-045	Rater(s): MJA		Date: 2021-10-19
0 0	Пм	etric 1. Wetland A	rea (size).		
max 6 pts. subtota		ect one size class and assign sco	ore.) 20.2ha) (5 pts) (ha) (4 pts) a) (3 pts) (.2ha) (2pts) (.0.12ha) (1 pt)		
7 7	Ім	etric 2. Upland bu	iffers and surround	ling land use.	
max 14 pts. subtota	al 2a.	Calculate average buffer width. WIDE. Buffers average 50 X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers Intensity of surrounding land use VERY LOW. 2nd growth of LOW. Old field (>10 years X MODERATELY HIGH. Re	Select only one and assign score. If the (164ft) or more around wetland point (164ft) or more around wetland point (164ft) around (164ft) around (164ft) around (164ft) around average <10m (<32ft) around wetland (164ft). Select one or double check and around around around (164ft), shrubland, young second growth (164ft), shrubland, young second growth (164ft), sidential, fenced pasture, park, conspen pasture, row cropping, mining, or	Do not double check. berimeter (7) d wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) average. dlife area, etc. (7) forest. (5) servation tillage, new fallo	
6 13	М	etric 3. Hydrology	<i>1</i> .		
max 30 pts. subtota	3a. 3c.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) X <0.4m (<15.7in) (1)	t apply. 3b. ace water (3) ake or stream) (5) 3d. ally one and assign score.	Part of wetland/up Part of riparian or Duration inundation/sate Semi- to permane Regularly inundat Seasonally inundat X Seasonally satura	in (1) ake and other human use (1) bland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl check ently inundated/saturated (4) ed/saturated (3)
40 100	7	None or none apparent (12 Recovered (7) X Recovering (3) Recent or no recovery (1)	Check all disturbances observed ditch tile dike weir stormwater input	point source (non filling/grading road bed/RR trac dredging X otherT-line structure and	k
13 26			teration and Develo	opment.	
max 20 pts. subtota		Substrate disturbance. Score or None or none apparent (4) Recovered (3) X Recovering (2) Recent or no recovery (1) Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) X Poor to fair (2)	Ŭ		
	4c.	Poor (1) Habitat alteration. Score one or			
26		X None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observed mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	x shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: V	Vetlan	d LP-045	Rater(s): MJA		Date: 2021-10-19
su	26 btotal first pa	age			
0	26	Metric 5. Special W	/etlands.		
max 10 pts.	subtotal	Check all that apply and score as inc Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (! Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (Relict Wet Prairies (10) Known occurrence state/fe Significant migratory song Category 1 Wetland. See	dicated. wetland-unrestricted hydrologologologologologologologologologolo	angered species (10) usage (10)	
-4	22	Metric 6. Plant con	nmunities, int	erspersion, microto	opography.
max 20 pts.	subtotal	6a. Wetland Vegetation Communitie	•	Community Cover Scale	
		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	
		O Aquatic bed Emergent O Shrub	1	Present and either comprises sm vegetation and is of moderate of significant part but is of low qua	quality, or comprises a
		0 Forest 0 Mudflats	2	Present and either comprises sig vegetation and is of moderate of	nificant part of wetland's
		Open water Other b. horizontal (plan view) Interspers	ion.	part and is of high quality Present and comprises significan vegetation and is of high quality	
		Select only one.			
		High (5) Moderately high(4) Moderate (3)	Narrative De low	Low spp diversity and/or predomi disturbance tolerant native spec	
		Moderately low (2) Low (1) X None (0)	mod	Native spp are dominant compon although nonnative and/or distu can also be present, and specie	rbance tolerant native spp
		6c. Coverage of invasive plants. Re to Table 1 ORAM long form for list.		moderately high, but generally threatened or endangered spp	w/o presence of rare
		or deduct points for coverage X Extensive >75% cover (-5 Moderate 25-75% cover (-1) Sparse 5-25% cover (-1)		A predominance of native species and/or disturbance tolerant nati absent, and high spp diversity a the presence of rare, threatene	ve spp absent or virtually and often, but not always,
		Nearly absent <5% cover	` '		
		Absent (1) 6d. Microtopography.	Mudflat and	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to 3 scale.	1	Low 0.1 to <1ha (0.247 dcres)	cres)
		0 Vegetated hummucks/tus	sucks 2	Moderate 1 to <4ha (2.47 to 9.88	
		O Coarse woody debris >150 O Standing dead >25cm (10		High 4ha (9.88 acres) or more	
		Amphibian breeding pools	•	raphy Cover Scale	
			0	Absent Present very small amounts or if	more common
				of marginal quality	
			2	Present in moderate amounts, bu quality or in small amounts of h	ighest quality
22			3	Present in moderate or greater an and of highest quality	mounts
 	GRAN	ND TOTAL (max 100 pts)			

Site: V	<u>Vetlan</u>	<u>d L</u>	.P-046	Rater(s): MJA		Date: 2021-10-19
0	0	Me	etric 1. Wetland	Area (size).		
max 6 pts.	subtotal	4	ect one size class and assign so >50 acres (>20.2ha) (6 p) 25 to <50 acres (10.1 to < 10 to <25 acres (4 to <10 3 to <10 acres (1.2 to <4) 0.3 to <3 acres (0.12 to < 0.1 to <0.3 acres (0.04 to < × 0.1 acres (0.04ha) (0 pt) 	core. ts) <20.2ha) (5 pts) 0.1ha) (4 pts) ha) (3 pts) <1.2ha) (2pts) o <0.12ha) (1 pt)		
7	7	Me	etric 2. Upland b	uffers and surroun	ding land use.	
max 14 pts.	subtotal	2a.	Calculate average buffer width. WIDE. Buffers average ! MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffer	. Select only one and assign score. 50m (164ft) or more around wetland ge 25m to <50m (82 to <164ft) arour age 10m to <25m (32ft to <82ft) arors average <10m (<32ft) around wetles. Select one or double check and	Do not double check. perimeter (7) nd wetland perimeter (4) und wetland perimeter (1) and perimeter (0)	
		1	VERY LOW. 2nd growth LOW. Old field (>10 yea MODERATELY HIGH. R	or older forest, prairie, savannah, w rs), shrubland, young second growth Residential, fenced pasture, park, co open pasture, row cropping, mining	vildlife area, etc. (7) n forest. (5) nservation tillage, new fallo	ow field. (3)
6.5	13.5	Me	etric 3. Hydrolog	IV.		
max 30 pts.	subtotal	За.	Sources of Water. Score all th High pH groundwater (5) Other groundwater (3) × Precipitation (1) Seasonal/Intermittent sur	nat apply. 3t	Part of wetland/up Part of riparian or	in (1) lake and other human use (1) cland (e.g. forest), complex (1) lupland corridor (1)
			Perennial surface water (Maximum water depth. Select >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6i x <0.4m (<15.7in) (1)	only one and assign score. in) (2)	Semi- to permane Regularly inundat X Seasonally inund X Seasonally satura	
		3e.	None or none apparent (** Recovered (7) X Recovering (3) Recent or no recovery (1)	ditch tile	point source (non filling/grading road bed/RR trac dredging	·
6	19.5	l M	etric 4. Habitat A	Alteration and Devel	lopment.	
max 20 pts.	subtotal		Substrate disturbance. Score of None or none apparent (4) Recovered (3) X Recovering (2)	one or double check and average. 4)		
		4b.	Recent or no recovery (1) Habitat development. Select of Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1)			
		4c.	Habitat alteration. Score one of the None or none apparent (Score (Score)) Recovered (6) Recovering (3) Recent or no recovery (1)	9) Check all disturbances observed mowing grazing	ed X shrub/sapling rem herbaceous/aqua sedimentation	
si	19.5			selective cutting woody debris removal toxic pollutants	dredging farming nutrient enrichme	nt

Site: Wetland LP-046	ater(s): MJA		Date: 2021-10-19
19.5 subtotal first page			
0 19.5 Metric 5. Special Wes	tlands.		
max 10 pts. subtotal Check all that apply and score as indicate			
Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wet Lake Erie coastal/tributary wet Lake Plain Sand Prairies (Oak Relict Wet Prairies (10) Known occurrence state/feder Significant migratory songbird. Category 1 Wetland. See Que	land-unrestricted hydro land-restricted hydro Openings) (10) al threatened or enda (water fowl habitat or	angered species (10) usage (10)	
-2 17.5 Metric 6. Plant comm	nunitiae int	erspersion microto	nnogranhy
max 20 pts. subtotal 6a. Wetland Vegetation Communities.	-	Community Cover Scale	opograpity.
Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	471 acres) contiguous area
0 Aquatic bed	1	Present and either comprises sm	
1 Emergent 0 Shrub		vegetation and is of moderate of significant part but is of low qua	
0 Forest	2	Present and either comprises sig	•
0 Mudflats		vegetation and is of moderate of	
Other		part and is of high quality	t mant an mann of wattenalls
0 Other Othe	3	Present and comprises significan vegetation and is of high quality	
Select only one.		rogetation and to et mgir quality	
High (5)	Narrative D	escription of Vegetation Quality	
Moderately high(4) Moderate (3)	low	Low spp diversity and/or predomi disturbance tolerant native spec	
Moderately low (2)	mod	Native spp are dominant compon	
Low (1)		although nonnative and/or distu	
X None (0)		can also be present, and specie	•
6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add		moderately high, but generally threatened or endangered spp	
or deduct points for coverage	high	A predominance of native species	
Extensive >75% cover (-5)	_	and/or disturbance tolerant nati	ve spp absent or virtually
Moderate 25-75% cover (-3)		absent, and high spp diversity a	
Sparse 5-25% cover (-1) Nearly absent <5% cover (0)		the presence of rare, threatene	a, or endangered spp
Absent (1)	Mudflat and	d Open Water Class Quality	
6d. Microtopography.	0	Absent <0.1ha (0.247 acres)	
Score all present using 0 to 3 scale.	.s <u>1</u>	Low 0.1 to <1ha (0.247 to 2.47 a)	
0 Vegetated hummucks/tussuck 0 Coarse woody debris >15cm (Moderate 1 to <4ha (2.47 to 9.88 High 4ha (9.88 acres) or more	dies)
0 Standing dead >25cm (10in) d	,		
0 Amphibian breeding pools		raphy Cover Scale	
	<u>0</u> 1	Absent Present very small amounts or if	more common
	1	Present very small amounts or if of marginal quality	more common
	2	Present in moderate amounts, bu	it not of highest
		quality or in small amounts of h	ighest quality
	3	Present in moderate or greater a	mounts
17.5 GRAND TOTAL (max 100 pts)		and of highest quality	

Site: V	Vetlar	id L	_P-047	Rater(s): MJA		Date: 2021-10-19
0	0] _M	etric 1. Wetland A	Area (size).		
max 6 pts.	subtotal	-	ect one size class and assign sc >50 acres (>20.2ha) (6 pt 25 to <50 acres (10.1 to < 10 to <25 acres (4 to <10. 3 to <10 acres (1.2 to <4h 0.3 to <3 acres (0.12 to < 0.1 to <0.3 acres (0.04 to	ore. s) <20.2ha) (5 pts) .1ha) (4 pts) na) (3 pts) 1.2ha) (2pts) <0.12ha) (1 pt)		
7	7	M	etric 2. Upland b	uffers and surroun	ding land use.	
max 14 pts.	subtotal	2a.	Calculate average buffer width. WIDE. Buffers average 5 X MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers Intensity of surrounding land us VERY LOW. 2nd growth LOW. Old field (>10 year	Select only one and assign score. 50m (164ft) or more around wetland ge 25m to <50m (82 to <164ft) arounge 10m to <25m (32ft to <82ft) arous average <10m (<32ft) around wetland. Select one or double check and or older forest, prairie, savannah, was), shrubland, young second growthesidential, fenced pasture, park, co	Do not double check. perimeter (7) nd wetland perimeter (4) bund wetland perimeter (1) land perimeter (0) d average. vildlife area, etc. (7) h forest. (5)	
	I	1		open pasture, row cropping, mining		
15	22	M	etric 3. Hydrolog	y.		
max 30 pts.	subtotal	3a.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) x Precipitation (1) Seasonal/Intermittent surf	face water (3)	Part of wetland/up	in (1) ake and other human use (1) bland (e.g. forest), complex (1) upland corridor (1)
			Perennial surface water (I Maximum water depth. Select of Select o	only one and assign score.	Semi- to permane Regularly inundat Seasonally inundat X Seasonally satura	
			X None or none apparent (1 Recovered (7) Recovering (3) Recent or no recovery (1)	2) Check all disturbances observed ditch tile		
7	29	Тм	etric 4. Habitat A	Iteration and Deve	lonment	
max 20 pts.	subtotal	-	Substrate disturbance. Score of None or none apparent (4 Recovered (3) Recovering (2)	one or double check and average.		
		4b.	Recent or no recovery (1) Habitat development. Select or Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1)			
		4c.	Habitat alteration. Score one of None or none apparent (9		ed	
•	29	age	Recovered (6) X Recovering (3) Recent or no recovery (1)	mowing grazing	x shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-047	Rater(s): MJA		Date: 2021-10-19
29 subtotal first page			
0 29 Metric 5. S	pecial Wetlands.		
max 10 pts. subtotal Check all that apply a Bog (10) Fen (10) Old growth Mature fore Lake Erie C Lake Plain Relict Wet Known occ Significant	forest (10) ested wetland (5) coastal/tributary wetland-unrestricted hydroastal/tributary wetland-restricted hydrosand Prairies (Oak Openings) (10) Prairies (10) urrence state/federal threatened or endmigratory songbird/water fowl habitat o	langered species (10) r usage (10)	
	Wetland. See Question 1 Qualitative	Rating (-10)	
-4 25 Metric 6. P	lant communities, in	terspersion, microto	opography.
max 20 pts. subtotal 6a. Wetland Vegetat	ion Communities. <u>Vegetation</u>	Community Cover Scale	
Score all present usir	-	Absent or comprises <0.1ha (0.24	
O Aquatic bed	d 1	Present and either comprises sm	
1 Emergent 0 Shrub		vegetation and is of moderate of significant part but is of low qua	
0 Forest	2	Present and either comprises sig	•
0 Mudflats		vegetation and is of moderate of	
0 Open wate		part and is of high quality	
O Other	3	Present and comprises significan	
6b. horizontal (plan v	view) interspersion.	vegetation and is of high quality	
Select only one. High (5)	Narrative I	Description of Vegetation Quality	
Moderately		Low spp diversity and/or predomi	nance of nonnative or
Moderate (• , ,	disturbance tolerant native spec	
Moderately	low (2) mod	Native spp are dominant compon	
Low (1)		although nonnative and/or distu	
X None (0) 6c. Coverage of inva	sive plants Refer	can also be present, and specie moderately high, but generally	•
to Table 1 ORAM Ion		threatened or endangered spp	
or deduct points for c		A predominance of native species	
	>75% cover (-5)	and/or disturbance tolerant nati	
	25-75% cover (-3)	absent, and high spp diversity a	
	5% cover (-1) ent <5% cover (0)	the presence of rare, threatene	a, or endangered spp
Absent (1)		d Open Water Class Quality	
6d. Microtopography		Absent <0.1ha (0.247 acres)	
Score all present using	-	Low 0.1 to <1ha (0.247 to 2.47 ac	
	hummucks/tussucks 2	Moderate 1 to <4ha (2.47 to 9.88	3 acres)
	ody debris >15cm (6in) 3 ead >25cm (10in) dbh	High 4ha (9.88 acres) or more	
		graphy Cover Scale	
	0	Absent	
	1	Present very small amounts or if	more common
	2	of marginal quality Present in moderate amounts, but	ut not of highost
	2	quality or in small amounts of h	_
	3	Present in moderate or greater a	
05		and of highest quality	
25 GRAND TOTAL (ma	x 100 pts)		

Site: v	vellan	1 LP-048	Rater(s): IVIJA		Date: 2021-10-19
0	0	Metric 1. Wetlar	nd Area (size).		
max 6 pts.	subtotal	Select one size class and ass >50 acres (>20.2ha 25 to <50 acres (10. 10 to <25 acres (4 to 3 to <10 acres (1.2 to 0.3 to <3 acres (0.1)	gn score. (6 pts) 1 to <20.2ha) (5 pts) 5 <10.1ha) (4 pts) 6 <4ha) (3 pts) 2 to <1.2ha) (2pts) 04 to <0.12ha) (1 pt)		
7	7	Metric 2. Upland	d buffers and surrou	unding land use.	
max 14 pts.	subtotal	2a. Calculate average buffer value wide. Buffers average with MEDIUM. Buffers and NARROW. Buffers very NARROW. Etc. Intensity of surrounding laward very LOW. 2nd grant LOW. Old field (>10 x MODERATELY HIG	width. Select only one and assign so rage 50m (164ft) or more around weth verage 25m to <50m (82 to <164ft) a average 10m to <25m (32ft to <82ft) Buffers average <10m (<32ft) around ind use. Select one or double check rowth or older forest, prairie, savanna by years), shrubland, young second grift. Residential, fenced pasture, park	core. Do not double check. land perimeter (7) around wetland perimeter (4)) around wetland perimeter (1) wetland perimeter (0) and average. ah, wildlife area, etc. (7) cowth forest. (5) a, conservation tillage, new fallo	
40	4 7	HIGH. Urban, indus	strial, open pasture, row cropping, mi	ning, construction. (1)	
10 max 30 pts.	17	Metric 3. Hydro		3b. Connectivity. Score all	that annly
max 30 pts.	Subtotal	High pH groundwater (er (5) 3) Int surface water (3) ater (lake or stream) (5) elect only one and assign score. 27.6in) (2)	100 year floodpla Between stream/l Part of wetland/up Part of riparian or 3d. Duration inundation/sate Semi- to permane Regularly inundat Seasonally inundat X Seasonally satura	in (1) lake and other human use (1) pland (e.g. forest), complex (1) rupland corridor (1) uration. Score one or dbl checl ently inundated/saturated (4) ted/saturated (3)
		None or none appar X Recovered (7) Recovering (3) Recent or no recove	ditch		, i
7	24	Metric 4. Habita	nt Alteration and Dev	velopment.	
max 20 pts.	subtotal	4a. Substrate disturbance. S None or none appar Recovered (3) Recovering (2) Recent or no recove	core one or double check and averagent (4) ery (1)	<u>-</u>	
		Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1)	ect only one and assign score. one or double check and average.		
9	24	None or none appar Recovered (6) X Recovering (3) Recent or no recove	mowing grazing	x shrub/sapling rem herbaceous/aqua sedimentation dredging	itic bed removal

Site: Wetland LP-048	ater(s): MJA		Date: 2021-10-19
24 subtotal first page			
0 24 Metric 5. Special Wet	lande		
max 10 pts. subtotal Check all that apply and score as indicat			
Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetl Lake Erie coastal/tributary wetl Lake Plain Sand Prairies (Oak Relict Wet Prairies (10) Known occurrence state/federa Significant migratory songbird/ Category 1 Wetland. See Que	land-unrestricted hydro land-restricted hydro Openings) (10) al threatened or enda water fowl habitat or	angered species (10) usage (10)	
-4 20 Metric 6. Plant comm	unities int	orenoreion microta	nography
	•	Community Cover Scale	pograpny.
max 20 pts. subtotal 6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale.	vegetation 0	Absent or comprises <0.1ha (0.24	471 acres) contiguous area
0 Aquatic bed	1	Present and either comprises sm	, ,
1 Emergent		vegetation and is of moderate of	
0 Shrub		significant part but is of low qua	•
0 Forest	2	Present and either comprises sig	
0 Mudflats 0 Open water		vegetation and is of moderate of part and is of high quality	quality of comprises a small
0 Other	3	Present and comprises significan	t part, or more, of wetland's
6b. horizontal (plan view) Interspersion.		vegetation and is of high quality	
Select only one.			
High (5)		escription of Vegetation Quality	nance of nannative or
Moderately high(4) Moderate (3)	low	Low spp diversity and/or predomi disturbance tolerant native spec	
Moderately low (2)	mod	Native spp are dominant compon	
Low (1)		although nonnative and/or distu	_
X None (0)		can also be present, and specie	•
6c. Coverage of invasive plants. Refer		moderately high, but generally	w/o presence of rare
to Table 1 ORAM long form for list. Add or deduct points for coverage	high	threatened or endangered spp A predominance of native species	s with nonnative snn
X Extensive >75% cover (-5)	iligii	and/or disturbance tolerant nati	
Moderate 25-75% cover (-3)		absent, and high spp diversity a	• •
Sparse 5-25% cover (-1)		the presence of rare, threatene	d, or endangered spp
Nearly absent <5% cover (0) Absent (1)	Mudflat and	d 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	cres)
0 Vegetated hummucks/tussuck		Moderate 1 to <4ha (2.47 to 9.88	acres)
Coarse woody debris >15cm (60in) d		High 4ha (9.88 acres) or more	
O Standing dead >25cm (10in) d O Amphibian breeding pools		raphy Cover Scale	
TAmphibian breeding pools	0	Absent	
	1	Present very small amounts or if	more common
		of marginal quality	
	2	Present in moderate amounts, bu	_
	3	quality or in small amounts of h Present in moderate or greater ar	
	J	and of highest quality	
20 GRAND TOTAL (max 100 pts)		_	

Site: Wetla	nd LP-049		Rater(s): MJA		Date: 2021-10-19
0 0					
		Wetland A	• •		
max 6 pts. subtota	>50 ac 25 to < 10 to < 3 to <1 0.3 to	class and assign score cres (>20.2ha) (6 pts) 50 acres (10.1 to <20 25 acres (4 to <10.1h 0 acres (1.2 to <4ha) <3 acres (0.12 to <1.2 <0.3 acres (0.04 to <0 cres (0.04ha) (0 pts)	0.2ha) (5 pts) na) (4 pts) (3 pts) 2ha) (2pts)		
10 10	Metric 2.	Upland but	ffers and surrou	nding land use.	
max 14 pts. subtota	X WIDE. MEDIL NARR VERY	Buffers average 50n JM. Buffers average OW. Buffers average NARROW. Buffers a	elect only one and assign sco n (164ft) or more around wetle 25m to <50m (82 to <164ft) ar 10m to <25m (32ft to <82ft) verage <10m (<32ft) around v Select one or double check	and perimeter (7) round wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0)	
	VÉRY LOW. × MODE	LOW. 2nd growth or Old field (>10 years), RATELY HIGH. Res	older forest, prairie, savannal shrubland, young second gro idential, fenced pasture, park, en pasture, row cropping, min	n, wildlife area, etc. (7) owth forest. (5) conservation tillage, new fall	ow field. (3)
6.5 16.	Metric 3.	Hydrology			
max 30 pts. subtota	3a. Sources of Warning High p Other (Vater. Score all that a H groundwater (5) groundwater (3) tation (1) nal/Intermittent surfac	apply.	Part of wetland/u	
	3c. Maximum wa >0.7 (2 0.4 to 0 × <0.4m	27.6in) (3) 0.7m (15.7 to 27.6in) (<15.7in) (1)	ly one and assign score.	Semi- to perman Regularly inunda X Seasonally inund X Seasonally satura	
	None of Recovery	s to natural hydrologid or none apparent (12) ered (7) ering (3) t or no recovery (1)	Cregime. Score one or double Check all disturbances obs ditch tile dike weir stormwater input		k
7 23.	Metric 4.	Habitat Alt	eration and Dev	elopment.	
max 20 pts. subtota	4a. Substrate di None d Recov	sturbance. Score one or none apparent (4) ered (3) ering (2) t or no recovery (1)	e or double check and average	е.	
	4b. Habitat deve	elopment. Select only ent (7) ood (6) (5) ately good (4) o fair (2)	one and assign score.		
	None o	or none apparent (9)	ouble check and average. Check all disturbances obs		
23.	X Recov	ered (6) ering (3) t or no recovery (1)	mowing grazing clearcutting selective cutting woody debris removal	x shrub/sapling ren herbaceous/aqua sedimentation dredging farming	
subtotal this	_		toxic pollutants	nutrient enrichme	ent

Site: Wetland LP-049	Rater(s): MJA	Date: 2021-10-19
23.5 subtotal first page		
0 23.5 Metric 5. Special V	Vetlands.	
max 10 pts. subtotal Check all that apply and score as in Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (Lake Erie coastal/tributar Lake Plain Sand Prairies Relict Wet Prairies (10) Known occurrence state/t	dicated. 5) y wetland-unrestricted hydrology (10) y wetland-restricted hydrology (5)	
-3 20.5 Metric 6. Plant cor	nmunities, interspersion,	microtopography.
max 20 pts. subtotal 6a. Wetland Vegetation Communit	- · · · · · · · · · · · · · · · · · · ·	
Score all present using 0 to 3 scale		<0.1ha (0.2471 acres) contiguous area
0 Aquatic bed		omprises small part of wetland's
1 Emergent 0 Shrub	significant part but	of moderate quality, or comprises a
0 Forest		omprises significant part of wetland's
0 Mudflats		of moderate quality or comprises a small
Open water	part and is of high	• •
0 Other6b. horizontal (plan view) Intersper		ses significant part, or more, of wetland's
Select only one.	vegetation and is c	in riigir quality
High (5)	Narrative Description of Vegetati	on Quality
Moderately high(4)		d/or predominance of nonnative or
Moderate (3)	disturbance tolerar	•
Moderately low (2) Low (1)		nant component of the vegetation, e and/or disturbance tolerant native spp
X None (0)	_	nt, and species diversity moderate to
6c. Coverage of invasive plants. R	• • • • • • • • • • • • • • • • • • •	ut generally w/o presence of rare
to Table 1 ORAM long form for list.		
or deduct points for coverage	=	native species, with nonnative spp
X Extensive >75% cover (-5 Moderate 25-75% cover (,	tolerant native spp absent or virtually pp diversity and often, but not always,
Sparse 5-25% cover (-1)	•	re, threatened, or endangered spp
Nearly absent <5% cover	(0)	
Absent (1)	Mudflat and Open Water Class Q	
6d. Microtopography. Score all present using 0 to 3 scale	0 Absent <0.1ha (0.2a 1 Low 0.1 to <1ha (0.2a	,
0 Vegetated hummucks/tus		
0 Coarse woody debris >15		
0 Standing dead >25cm (10		
1 Amphibian breeding pool		
		mounts or if more common
	of marginal quality	
		amounts, but not of highest
		amounts of highest quality
	3 Present in moderate and of highest qua	=
20.5 GRAND TOTAL (max 100 pts	and or highest qua	псу

Site: V	Vetlar	d L	.P-050	Rater(s): MJA		Date : 2021-10-19
2	2	М	etric 1. Wetland A	rea (size).		
max 6 pts.	subtotal	Sel	>50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha x) 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
13	15	М	etric 2. Upland bu	ffers and surround	ling land use.	
max 14 pts.	subtotal	2a.	Calculate average buffer width. S X WIDE. Buffers average 50 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers signature. S Intensity of surrounding land use X VERY LOW. 2nd growth of the companion of t	Select only one and assign score. Im (164ft) or more around wetland program to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetland. Select one or double check and or older forest, prairie, savannah, will), shrubland, young second growth sidential, fenced pasture, park, consoren pasture, row cropping, mining, or mining, minin	Do not double check. berimeter (7) d wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) average. dlife area, etc. (7) forest. (5) servation tillage, new fallo	
17	32	М	etric 3. Hydrology	'.		
max 30 pts.	subtotal	3a. 3c.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) X Seasonal/Intermittent surfa Perennial surface water (lal Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) X < 0.4m (<15.7in) (1)	apply. 3b. ce water (3) ke or stream) (5) 3d. nly one and assign score.	x Part of wetland/u Part of riparian or Duration inundation/sate Semi- to permane X Regularly inundat Seasonally inundat Seasonally satura	in (1) lake and other human use (1) pland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl check ently inundated/saturated (4) led/saturated (3)
		1	None or none apparent (12 x Recovered (7) Recovering (3) Recent or no recovery (1)	Check all disturbances observed ditch tile dike weir stormwater input	d point source (non filling/grading road bed/RR trac dredging other_	,
9	41	М	etric 4. Habitat Al	teration and Develo	opment.	
max 20 pts.	subtotal	4b.	Substrate disturbance. Score on None or none apparent (4) X Recovered (3) Recovering (2) Recent or no recovery (1) Habitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) X Fair (3) Poor to fair (2) Poor (1) Habitat alteration. Score one or or	y one and assign score.		
		-τυ.	None or none apparent (9)	Check all disturbances observed		
	41		Recovered (6) X Recovering (3) Recent or no recovery (1)	mowing grazing x clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling ren herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: W	/etlan	d LP-050	Rater(s): MJA		Date: 2021-10-19
	41 ototal first pa	ge			
0	41	Metric 5. Special W	/etlands.		
max 10 pts.	subtotal	Check all that apply and score as inc Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (! Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (Relict Wet Prairies (10) Known occurrence state/fe Significant migratory song Category 1 Wetland. See	dicated. wetland-unrestricted hyd wetland-restricted hydrol (Oak Openings) (10) ederal threatened or enda bird/water fowl habitat or	ogy (5) Ingered species (10) usage (10)	
2	43	Metric 6. Plant con	nmunities, int	erspersion, microto	ppography.
max 20 pts.	subtotal	6a. Wetland Vegetation Communitie	es. <u>Vegetation</u>	Community Cover Scale	
		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	
		O Aquatic bed	1	Present and either comprises small	-
		1 Emergent		vegetation and is of moderate of	•
		0 Shrub		significant part but is of low qua	•
		0 Forest	2	Present and either comprises sign	
		0 Mudflats		vegetation and is of moderate q	quality or comprises a small
		Open waterOther	3	part and is of high quality Present and comprises significan	t part or more of wetland's
		6b. horizontal (plan view) Interspers		vegetation and is of high quality	
		Select only one.		vegetation and is of high quality	
		High (5)	Narrative De	escription of Vegetation Quality	
		Moderately high(4)	low	Low spp diversity and/or predomin	nance of nonnative or
		Moderate (3)		disturbance tolerant native spec	
		Moderately low (2)	mod	Native spp are dominant component	
		Low (1)		although nonnative and/or distu	_
		X None (0)		can also be present, and specie	es diversity moderate to
		6c. Coverage of invasive plants. Re	efer	moderately high, but generally v	w/o presence of rare
		to Table 1 ORAM long form for list.	Add	threatened or endangered spp	
		or deduct points for coverage	high	A predominance of native species	
		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)	(0)	the presence of rare, threatened	d, or endangered spp
		X Nearly absent <5% cover		0 Watan Olasa O	
		Absent (1)		Open Water Class Quality	
		6d. Microtopography. Score all present using 0 to 3 scale.	<u> </u>	Absent <0.1ha (0.247 acres) Low 0.1 to <1ha (0.247 to 2.47 acres)	eroe)
		Vegetated hummucks/tus:		Moderate 1 to <4ha (2.47 to 9.88	
		0 Coarse woody debris >150		High 4ha (9.88 acres) or more	- deres)
		0 Standing dead >25cm (10	` '	Trigit ind (e.ee deree) of mere	
		1 Amphibian breeding pools		raphy Cover Scale	
		, , , , , , , , , , , , , , , , ,	0	Absent	
			1	Present very small amounts or if	more common
				of marginal quality	
			2	Present in moderate amounts, bu	t not of highest
				quality or in small amounts of h	
			3	Present in moderate or greater ar	nounts
40				and of highest quality	
43	GRAN	ID TOTAL (max 100 pts)			

Site: Wetla	ind LP-051	Rater(s): MJA		Date: 2021-10-18
0 0	Metric 1. Wetland A	` '		
max 6 pts. subtot	Select one size class and assign sco >50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to < 10 to <25 acres (4 to <10. 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1 0.1 to <0.3 acres (0.04 to <1 0.1 acres (0.04ha) (0 pts)	s) 20.2ha) (5 pts) 1ha) (4 pts) a) (3 pts) I.2ha) (2pts) <0.12ha) (1 pt)		
11 11	Metric 2. Upland bu	uffers and surround	ling land use.	
max 14 pts. subtot	2a. Calculate average buffer width. X WIDE. Buffers average 50 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2b. Intensity of surrounding land use VERY LOW. 2nd growth of X MODERATELY HIGH. Re	Select only one and assign score. Om (164ft) or more around wetland pee 25m to <50m (82 to <164ft) around ge 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetland	Do not double check. perimeter (7) d wetland perimeter (4) und wetland perimeter (1) and perimeter (0) average. Idlife area, etc. (7) forest. (5) servation tillage, new fallo	ow field. (3)
8 19	Metric 3. Hydrology	y.		
max 30 pts. subtot		ace water (3) ake or stream) (5) only one and assign score.	Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundat Seasonally inundat X Seasonally satura	n (1) ake and other human use (1) bland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl checl ently inundated/saturated (4) ed/saturated (3)
G 125	None or none apparent (12) Recovered (7) X Recovering (3) Recent or no recovery (1)	Check all disturbances observe ditch tile dike weir stormwater input	point source (nons filling/grading x road bed/RR track dredging x other_	
6 25			opment.	
max 20 pts. subtot	4a. Substrate disturbance. Score of None or none apparent (4) Recovered (3) X Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select on Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1)			
	4c. Habitat alteration. Score one or		ad.	
25		mowing grazing	x shrub/sapling rem herbaceous/aquat sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-051	Rater(s): MJA	Date: 2021-10-18
25 subtotal first page		
0 25	vial Watlands	
ouro di opot		
Lake Erie coastal Lake Plain Sand Relict Wet Prairie Known occurrenc Significant migrat	(10) wetland (5) l/tributary wetland-unrestricted hydrology (10) l/tributary wetland-restricted hydrology (5) Prairies (Oak Openings) (10)	
-4 21 Metric 6 Plan	t communities interenersion m	iorotopography
Modifie of Triali	t communities, interspersion, m	. •
max 20 pts. subtotal 6a. Wetland Vegetation Co		
Score all present using 0 to		0.1ha (0.2471 acres) contiguous area prises small part of wetland's
0 Aquatic bed 1 Emergent		noderate quality, or comprises a
0 Shrub	significant part but is	
0 Forest		prises significant part of wetland's
0 Mudflats		noderate quality or comprises a small
0 Open water	part and is of high qua	
0 Other_		significant part, or more, of wetland's
6b. horizontal (plan view) li		
Select only one.	•	
High (5)	Narrative Description of Vegetation	
Moderately high(or predominance of nonnative or
Moderate (3)	disturbance tolerant n	•
Moderately low (2		nt component of the vegetation,
Low (1)	_	nd/or disturbance tolerant native spp
x None (0) 6c. Coverage of invasive p	·	and species diversity moderate to generally w/o presence of rare
to Table 1 ORAM long form		
or deduct points for coverage		ve species, with nonnative spp
X Extensive >75%	· I ·	lerant native spp absent or virtually
Moderate 25-75%	· ·	diversity and often, but not always,
Sparse 5-25% co	• • • •	threatened, or endangered spp
Nearly absent <5	, ,	, , , , , , , , , , , , , , , , , , ,
Absent (1)	Mudflat and Open Water Class Qual	lity
6d. Microtopography.	0 Absent <0.1ha (0.247 a	acres)
Scor <u>e all</u> present using 0 to	<u>`</u>	
0 Vegetated humm	<u>`</u>	-
0 Coarse woody de		or more
0 Standing dead >2		
0 Amphibian breed	• .	
	0 Absent	unto or if more comme
		ounts or if more common
	of marginal quality Present in moderate an	nounts, but not of highest
		ounts of highest quality
	quality or in small and 3 Present in moderate or	
	and of highest quality	
21 GRAND TOTAL (max 10		

Site: Wetlan	d LP-052	Rater(s): MJA		Date: 2021-10-18
	 1			
0 0	Metric 1. Wetland A	` '		
max 6 pts. subtotal	Select one size class and assign sco >50 acres (>20.2ha) (6 pts 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1 0.1 to <0.3 acres (0.04 to < × <0.1 acres (0.04ha) (0 pts)) 20.2ha) (5 pts) ha) (4 pts) ı) (3 pts) .2ha) (2pts) :0.12ha) (1 pt)		
11 11	Metric 2. Upland bu	iffers and surround	ing land use.	
max 14 pts. subtotal	2a. Calculate average buffer width. X WIDE. Buffers average 50 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers 2b. Intensity of surrounding land use VERY LOW. 2nd growth o X LOW. Old field (>10 years X MODERATELY HIGH. Res	Select only one and assign score. Em (164ft) or more around wetland per 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) arour average <10m (<32ft) around wetlar	Do not double check. erimeter (7) wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) everage. dlife area, etc. (7) everyation tillage, new fallo	ow field. (3)
12 23	Metric 3. Hydrology			
max 30 pts. subtotal	3a. Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la	apply. 3b. since water (3) ke or stream) (5) 3d.	Part of wetland/up Part of riparian or Duration inundation/satu	in (1) ake and other human use (1) bland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl checl
	3c. Maximum water depth. Select of x >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) <0.4m (<15.7in) (1) 3e. Modifications to natural hydrolog None or none apparent (12 x Recovered (7) Recovering (3)	ic regime. Score one or double check. Check all disturbances observed ditch tile	Regularly inundat Seasonally inundat X Seasonally satura ck and average. point source (non- filling/grading	ated (2) sted in upper 30cm (12in) (1) stormwater)
7 30	Recent or no recovery (1)	dike weir stormwater input	x road bed/RR track dredging other	
max 20 pts. subtotal	Metric 4. Habitat Al 4a. Substrate disturbance. Score or		pment.	
	None or none apparent (4) X Recovered (3) Recovering (2) Recent or no recovery (1) 4b. Habitat development. Select onl Excellent (7) Very good (6) Good (5)	y one and assign score.		
	Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) 4c. Habitat alteration. Score one or None or none apparent (9)			
30	Recovered (6) X Recovering (3) Recent or no recovery (1)	mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	x shrub/sapling rem herbaceous/aquat sedimentation dredging farming nutrient enrichme	tic bed removal

Site: Wetland LP-052 Rate	r(s): MJA		Date: 2021-10-18
30			
<u> </u>			
subtotal first page			
0 30 Metric 5. Special Wetla	nds.		
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	-unrestricted hydrol	logy (10)	
Lake Erie coastal/tributary wetland		y (5)	
Lake Plain Sand Prairies (Oak Ope Relict Wet Prairies (10)	enings) (10)		
Known occurrence state/federal thi	reatened or endang	ered species (10)	
Significant migratory songbird/water	er fowl habitat or us	age (10)	
Category 1 Wetland. See Question	n 1 Qualitative Rati	ng (-10)	
-4 26 Metric 6. Plant commun	sition into	ronoroion mioroto	nography
mount of main commu	•	•	pograpny.
max 20 pts. subtotal 6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale.		mmunity Cover Scale Absent or comprises < 0.1ha (0.24)	71 acres) contiguous area
Ocore all present dailing of to 3 scale.		Present and either comprises small	
1 Emergent		vegetation and is of moderate q	
0 Shrub	2	significant part but is of low qual	•
0 Forest 0 Mudflats	2	Present and either comprises sigr vegetation and is of moderate q	
0 Open water		part and is of high quality	
0 Other	3 F	Present and comprises significant	part, or more, of wetland's
6b. horizontal (plan view) Interspersion.Select only one.		vegetation and is of high quality	
High (5)	Narrative Desc	cription of Vegetation Quality	
Moderately high(4)	low [ow spp diversity and/or predomir	
Moderate (3) Moderately low (2)	mod I	disturbance tolerant native spec	
Low (1)	mod	Native spp are dominant compone although nonnative and/or distur	=
X None (0)		can also be present, and specie	• • • • • • • • • • • • • • • • • • • •
6c. Coverage of invasive plants. Refer		moderately high, but generally w	v/o presence of rare
to Table 1 ORAM long form for list. Add or deduct points for coverage	high A	threatened or endangered spp A predominance of native species	with nonnative spp
X 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) Nearly absent <5% cover (0)		the presence of rare, threatened	l, or endangered spp
Absent (1)	Mudflat and O	pen Water Class Quality	
6d. Microtopography.		Absent <0.1ha (0.247 acres)	
Score all present using 0 to 3 scale.		_ow 0.1 to <1ha (0.247 to 2.47 ac	
0 Vegetated hummucks/tussucks 0 Coarse woody debris >15cm (6in)		Moderate 1 to <4ha (2.47 to 9.88 High 4ha (9.88 acres) or more	acres)
0 Standing dead >25cm (10in) dbh	<u> </u>	ngir ma (eree deree) er mere	
0 Amphibian breeding pools		ohy Cover Scale	
		Absent Present very small amounts or if r	more common
	'	of marginal quality	nore common
	2 F	Present in moderate amounts, but	_
		quality or in small amounts of hi	
	3	Present in moderate or greater an and of highest quality	nounts
26 GRAND TOTAL (max 100 pts)		or my wor quality	

Site: V	Vetlan	d LP	'-053	Rater(s): MJA		Date: 2021-10-18
2	2	Met	tric 1. Wetland A	rea (size).		
max 6 pts.	subtotal	Select	t one size class and assign scor >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha < 0.3 to <3 acres (0.12 to <1. 0.1 to <0.3 acres (0.04 to < <0.1 acres (0.04ha) (0 pts)	0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
11	13	Met	tric 2. Upland bu	ffers and surround	ing land use.	
max 14 pts.	subtotal	2a. C	Calculate average buffer width. State WIDE. Buffers average 500 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers average VERY LOW. 2nd growth out of the width of the w	Select only one and assign score. If m (164ft) or more around wetland p 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) around average <10m (<32ft) around wetland average <10m (<32ft) around wetland arolder forest, prairie, savannah, wild share share share forest, prairie, savannah, wild share share forest, prairie, savannah, wild share forest, prairie, sa	Do not double check. erimeter (7) I wetland perimeter (4) nd wetland perimeter (1) nd perimeter (0) average. dlife area, etc. (7) forest. (5) servation tillage, new fallo	
15	28] Met	tric 3. Hydrology	' <u>-</u>		
max 30 pts.	subtotal	3a. S	High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfar Perennial surface water (lakalaximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in)	apply. 3b. ce water (3) ke or stream) (5) 3d. ally one and assign score.	Part of wetland/up Part of riparian or Duration inundation/satu	in (1) lake and other human use (1) lake and other human use (1) land (e.g. forest), complex (1) lupland corridor (1) luration. Score one or dbl check ently inundated/saturated (4) led/saturated (3)
		3e. M	<0.4m (<15.7in) (1)	c regime. Score one or double che	Seasonally saturated and average.	stormwater)
8	36] Me	tric 4. Habitat Al	teration and Develo	opment.	
max 20 pts.	subtotal	4a. S	None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1) Rabitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)	e or double check and average.		
		4c. H	labitat alteration. Score one or o			
ci	36]	None or none apparent (9) Recovered (6) Recovering (3) Recent or no recovery (1)	Check all disturbances observed mowing grazing clearcutting selective cutting woody debris removal toxic pollutants	shrub/sapling rem herbaceous/aqua sedimentation dredging farming nutrient enrichme	tic bed removal

Site: V	Vetlan	d LP-053	Rater	(s): MJA		Date: 2021-10-18
su	36 ubtotal first pa	ige				
0	36	Metric 5. Spec	cial Wetlan	ds.		
max 10 pts.	subtotal	Check all that apply and so Bog (10) Fen (10) Old growth fores Mature forested Lake Erie coasta Lake Erie coasta Lake Plain Sand Relict Wet Prairie Known occurrence Significant migra	t (10) wetland (5) ll/tributary wetland-ul/tributary wetland-r Prairies (Oak Openes (10)	unrestricted hydro estricted hydro nings) (10) eatened or enda fowl habitat or	angered species (10) usage (10)	
-3	33	Metric 6. Plan	t commun	ities, int	erspersion, microto	opography.
max 20 pts.	subtotal	6a. Wetland Vegetation Co		-	Community Cover Scale	
		Score all present using 0 to	o 3 scale.	0	Absent or comprises <0.1ha (0.2d	471 acres) contiguous area
		0 Aquatic bed		1	Present and either comprises sm	all part of wetland's
		1 Emergent			vegetation and is of moderate of	quality, or comprises a
		0 Shrub			significant part but is of low qua	·
		0 Forest		2	Present and either comprises sig	
		0 Mudflats			vegetation and is of moderate of	quality or comprises a small
		0 Open water			part and is of high quality	
		O Other		3	Present and comprises significan	
		6b. horizontal (plan view) I	nterspersion.		vegetation and is of high quality	/
		Select only one.		Normative D	accounting of Variation Quality	
		High (5) Moderately high((A)	low	escription of Vegetation Quality Low spp diversity and/or predomi	nance of nonnative or
		Moderate (3)	+)	IOW	disturbance tolerant native spec	
		Moderate (6) Moderately low (2)	2)	mod	Native spp are dominant compon	
		Low (1)	-)	mod	although nonnative and/or distu	
		X None (0)			can also be present, and specie	
		6c. Coverage of invasive p	olants. Refer		moderately high, but generally	•
		to Table 1 ORAM long form			threatened or endangered spp	
		or deduct points for covera	ge	high	A predominance of native species	
		X Extensive >75%	cover (-5)		and/or disturbance tolerant nati	ve spp absent or virtually
		Moderate 25-75%			absent, and high spp diversity a	
		Sparse 5-25% co	, ,		the presence of rare, threatene	d, or endangered spp
		Nearly absent <5	5% cover (0)			
		Absent (1)			d Open Water Class Quality	
		6d. Microtopography.	0	0	Absent <0.1ha (0.247 acres)	
		Score all present using 0 to		1	Low 0.1 to <1ha (0.247 to 2.47 a)	
		0 Vegetated humm	ebris >15cm (6in)	3	Moderate 1 to <4ha (2.47 to 9.88 High 4ha (9.88 acres) or more	s acres)
		0 Standing dead >			Trigit 4tla (9.00 acres) or filore	
		1 Amphibian breed		Microtopoo	raphy Cover Scale	
			9 1-2.0	0	Absent	
				1	Present very small amounts or if	more common
					of marginal quality	
				2	Present in moderate amounts, bu	ut not of highest
					quality or in small amounts of h	ighest quality
	_			3	Present in moderate or greater a	mounts
22	l				and of highest quality	
 	GRAN	ID TOTAL (max 10	00 pts)			

Site: Wetl	and L	.P-054	Rater(s): MJA		Date: 2021-10-18
0 0		atria 4 National A	(aia)		
		etric 1. Wetland A	•		
max 6 pts. subto	stal Sel	>50 acres (>20.2ha) (6 pts) >50 acres (>20.2ha) (6 pts) 25 to <50 acres (10.1 to <2 10 to <25 acres (4 to <10.1 3 to <10 acres (1.2 to <4ha 0.3 to <3 acres (0.12 to <1. 0.1 to <0.3 acres (0.04 to < x <0.1 acres (0.04ha) (0 pts)) 0.2ha) (5 pts) ha) (4 pts)) (3 pts) 2ha) (2pts)		
11 11	М	etric 2. Upland bu	ffers and surroun	ding land use.	
max 14 pts. subto		MIDE. Buffers average 50 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers Intensity of surrounding land use VERY LOW. 2nd growth o X LOW. Old field (>10 years) X MODERATELY HIGH. Res	Select only one and assign score. m (164ft) or more around wetland 25m to <50m (82 to <164ft) arour e 10m to <25m (32ft to <82ft) arour average <10m (<32ft) around wetl. Select one or double check and rolder forest, prairie, savannah, w), shrubland, young second growth sidential, fenced pasture, park, copen pasture, row cropping, mining	perimeter (7) nd wetland perimeter (4) bund wetland perimeter (1) land perimeter (0) d average. vildlife area, etc. (7) n forest. (5) nservation tillage, new fallo	ow field. (3)
6 17	\sqrt{M}	etric 3. Hydrology	'.		
max 30 pts. subto	otal 3a.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (lal Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in)	ce water (3) ke or stream) (5) ally one and assign score.	Part of wetland/up Part of riparian or Duration inundation/satu Semi- to permane Regularly inundat Seasonally inundat	in (1) ake and other human use (1) bland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl checl ently inundated/saturated (4) ed/saturated (3) ated (2)
	3e.	 X < < 0.4m (<15.7in) (1) Modifications to natural hydrologing None or none apparent (12) Recovered (7) X Recovering (3) Recent or no recovery (1) 	c regime. Score one or double ch Check all disturbances observed ditch tile dike weir stormwater input	neck and average.	
5 22	2 м	etric 4. Habitat Al	teration and Devel	lopment.	
max 20 pts. subto	otal 4a.	Substrate disturbance. Score on None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)	e or double check and average.		
		Habitat development. Select only Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) Habitat alteration. Score one or of	· · · · · ·		
22	<u>Σ</u>	None or none apparent (9) Recovered (6) Recovering (3) X Recent or no recovery (1)	Check all disturbances observed mowing grazing clearcutting selective cutting woody debris removal	ed X shrub/sapling rem herbaceous/aqua sedimentation dredging farming	
subtotal ti			toxic pollutants	nutrient enrichme	nt

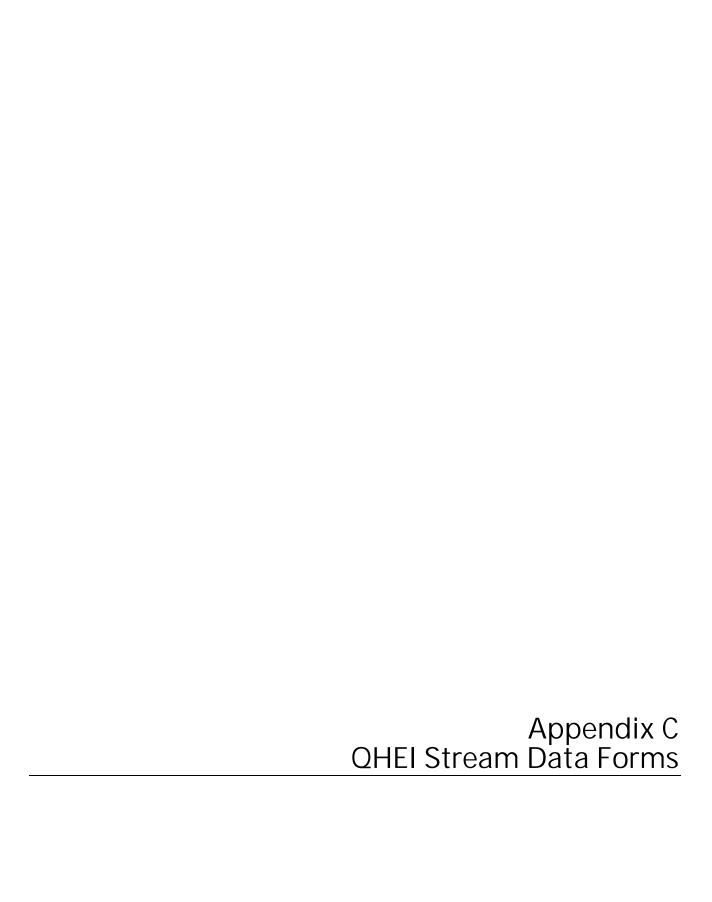
Site: V	Vetlan	d LP-054	Rater(s): MJA		Date: 2021-10-18
	22 btotal first pa	age			
0	22	Metric 5. Special W	etlands.		
max 10 pts.	subtotal	Check all that apply and score as ind Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5 Lake Erie coastal/tributary Lake Erie coastal/tributary Lake Plain Sand Prairies (0 Relict Wet Prairies (10) Known occurrence state/fe Significant migratory songt Category 1 Wetland. See	icated.) wetland-unrestricted hydwetland-restricted hydroloak Openings) (10) deral threatened or enda	logy (5) Ingered species (10) usage (10)	
-4	18	Metric 6. Plant com	munities, int	erspersion, microto	opography.
max 20 pts.	subtotal	6a. Wetland Vegetation Communitie	S. <u>Vegetation</u>	Community Cover Scale	
		Score all present using 0 to 3 scale.	0	Absent or comprises <0.1ha (0.24	171 acres) contiguous area
		O Aquatic bed	1	Present and either comprises small	all part of wetland's
		1 Emergent		vegetation and is of moderate of	· ·
		0 Shrub		significant part but is of low qua	Ţ
		0 Forest	2	Present and either comprises sign	
		0 Mudflats		vegetation and is of moderate of	uality or comprises a small
		O Open water	3	part and is of high quality	t part or mara of watland's
		O Other6b. horizontal (plan view) Interspersi	_	Present and comprises significan vegetation and is of high quality	
		Select only one.	UII.	vegetation and is of high quality	
		High (5)	Narrative D	escription of Vegetation Quality	
		Moderately high(4)	low	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 component	
		Low (1)		although nonnative and/or distu	=
		X None (0)		can also be present, and specie	• • • • • • • • • • • • • • • • • • • •
		6c. Coverage of invasive plants. Re	fer	moderately high, but generally v	w/o presence of rare
		to Table 1 ORAM long form for list. A	\dd	threatened or endangered spp	
		or deduct points for coverage	high	A predominance of native species	s, with nonnative spp
		X Extensive >75% cover (-5)		and/or disturbance tolerant nativ	• • •
		Moderate 25-75% cover (-3	3)	absent, and high spp diversity a	•
		Sparse 5-25% cover (-1)		the presence of rare, threatened	d, or endangered spp
		Nearly absent <5% cover (On an Water Olana Oscilla	
		Absent (1)		Open Water Class Quality	
		6d. Microtopography.	<u>0</u> 1	Absent <0.1ha (0.247 acres)	oron)
		Score all present using 0 to 3 scale. O Vegetated hummucks/tuss		Low 0.1 to <1ha (0.247 to 2.47 ac Moderate 1 to <4ha (2.47 to 9.88	
		0 Coarse woody debris >15c		High 4ha (9.88 acres) or more	acres)
		o Standing dead >25cm (10ii	` /	Trigit 4tta (5.00 acres) of there	
		Amphibian breeding pools		raphy Cover Scale	
			0	Absent	
			1	Present very small amounts or if	more common
				of marginal quality	
			2	Present in moderate amounts, bu	t not of highest
				quality or in small amounts of h	=
			3	Present in moderate or greater ar	
4.0			-	and of highest quality	
18	GRAN	ND TOTAL (max 100 pts)			

Site: Wetla	and L	.P-055	Rater(s): MJA		Date: 2021-10-18
0 0	<u> </u>				
		etric 1. Wetland A	• •		
max 6 pts. subto	tal Sel	ect one size class and assign sco) 20.2ha) (5 pts) ha) (4 pts) ı) (3 pts) .2ha) (2pts) :0.12ha) (1 pt)		
11 11	М	etric 2. Upland bu	iffers and surroun	ding land use.	
max 14 pts. subto	tal 2a.	Calculate average buffer width. X WIDE. Buffers average 50 MEDIUM. Buffers average NARROW. Buffers average VERY NARROW. Buffers Intensity of surrounding land use VERY LOW. 2nd growth o X LOW. Old field (>10 years X MODERATELY HIGH. Res	Select only one and assign score. Im (164ft) or more around wetland 25m to <50m (82 to <164ft) around e 10m to <25m (32ft to <82ft) around wetland e 25m (32ft to <82ft) around wetland in Select one or double check and or older forest, prairie, savannah, which is to the control of the contro	Do not double check. perimeter (7) nd wetland perimeter (4) und wetland perimeter (1) land perimeter (0) d average. vildlife area, etc. (7) n forest. (5) nservation tillage, new fallo	
6 17	ЛМ	etric 3. Hydrology	1.		
max 30 pts. subto	tal 3a.	Sources of Water. Score all that High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent surfa Perennial surface water (la Maximum water depth. Select or >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in)	ace water (3) ke or stream) (5) ally one and assign score.	Part of wetland/up Part of riparian or Duration inundation/sate Semi- to permane Regularly inundat Seasonally inund	in (1) lake and other human use (1) pland (e.g. forest), complex (1) upland corridor (1) uration. Score one or dbl checl ently inundated/saturated (4) ted/saturated (3) ated (2)
	3e.	X <0.4m (<15.7in) (1) Modifications to natural hydrolog None or none apparent (12 Recovered (7) X Recovering (3) Recent or no recovery (1)	Check all disturbances observed ditch tile dike weir stormwater input	neck and average.	
7 24	М	etric 4. Habitat Al	teration and Devel	lopment.	
max 20 pts. subto	tal 4a.	Substrate disturbance. Score on None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)	e or double check and average.		
		Habitat development. Select onl Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1) Habitat alteration. Score one or	, <u> </u>		
24	ī	None or none apparent (9) Recovered (6) X Recovering (3) Recent or no recovery (1)	mowing grazing clearcutting selective cutting woody debris removal	X shrub/sapling rem herbaceous/aqua sedimentation dredging farming	tic bed removal
subtotal th	is nage		toxic pollutants	nutrient enrichme	nt

Site: Wetland LP-055 Rat	ter(s): MJA		Date: 2021-10-18
24 subtotal first page			
0 24 Metric 5. Special Wetl	ands.		
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 wetla Lake Erie coastal/tributary wetla Lake Plain Sand Prairies (Oak C Relict Wet Prairies (10) Known occurrence state/federal Significant migratory songbird/w Category 1 Wetland. See Ques	and-unrestricted hydro and-restricted hydro Openings) (10) threatened or enda ater fowl habitat or	angered species (10) usage (10)	
-4 20 Metric 6. Plant commi	unities int	erenersion microto	nography
	-	Community Cover Scale	pograpny.
max 20 pts. subtotal 6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale.	<u>vegetation</u>	Absent or comprises <0.1ha (0.24	171 acres) contiguous area
0 Aquatic bed	1	Present and either comprises sm	
1 Emergent		vegetation and is of moderate of	
0 Shrub		significant part but is of low qua	-
0 Forest 0 Mudflats	2	Present and either comprises sign vegetation and is of moderate of	
0 Open water		part and is of high quality	daily or comprises a small
0 Other	3	Present and comprises significan	t part, or more, of wetland's
6b. horizontal (plan view) Interspersion.		vegetation and is of high quality	
Select only one.	Norretive D	accription of Variation Quality	
High (5) Moderately high(4)	low	escription of Vegetation Quality Low spp diversity and/or predomi	nance of nonnative or
Moderate (3)	1011	disturbance tolerant native spec	
Moderately low (2)	mod	Native spp are dominant compon	ent of the vegetation,
Low (1)		although nonnative and/or distu	• • • • • • • • • • • • • • • • • • • •
X None (0)		can also be present, and specie	•
 Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add 		moderately high, but generally threatened or endangered spp	wo presence of rare
or deduct points for coverage	high	A predominance of native species	s, with nonnative spp
X Extensive >75% cover (-5)	_	and/or disturbance tolerant nati	
Moderate 25-75% cover (-3)		absent, and high spp diversity a	
Sparse 5-25% cover (-1) Nearly absent <5% cover (0)		the presence of rare, threatener	d, or endangered spp
Absent (1)	Mudflat and	d 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/tussucks	2	Moderate 1 to <4ha (2.47 to 9.88	acres)
0 Coarse woody debris >15cm (6i 0 Standing dead >25cm (10in) dbl		High 4ha (9.88 acres) or more	
Amphibian breeding pools		raphy Cover Scale	
	0	Absent	
	1	Present very small amounts or if	more common
	2	of marginal quality Present in moderate amounts, bu	t not of highest
	2	quality or in small amounts of h	=
	3	Present in moderate or greater ar	
		and of highest quality	
20 GRAND TOTAL (max 100 pts)			

Site: V	Vetlan	d Ll	P-056	Rater(s): MJA		Date: 2021-08-09
2	2	Me	etric 1. Wetland	Area (size).		
max 6 pts.	subtotal	4	ct one size class and assign s >50 acres (>20.2ha) (6 p 25 to <50 acres (10.1 to 10 to <25 acres (4 to <10 3 to <10 acres (1.2 to <4 x 0.3 to <3 acres (0.12 to < 0.1 to <0.3 acres (0.04 to <0.1 acres (0.04ha) (0 pt)	core. tts) <20.2ha) (5 pts) 0.1ha) (4 pts) ha) (3 pts) <1.2ha) (2pts) o <0.12ha) (1 pt)		
8	10	Μe	etric 2. Upland b	ouffers and surrou	nding land use.	
max 14 pts.	subtotal	2a.	Calculate average buffer width WIDE. Buffers average X MEDIUM. Buffers avera NARROW. Buffers avera VERY NARROW. Buffers lateral very NARROW. Buffers avera VERY LOW. Old field (>10 yean X MODERATELY HIGH. F	s. Select only one and assign sco 50m (164ft) or more around wetla ge 25m to <50m (82 to <164ft) ar age 10m to <25m (32ft to <82ft) are average <10m (<32ft) around v se. Select one or double check a or older forest, prairie, savannahars), shrubland, young second gro Residential, fenced pasture, park, open pasture, row cropping, mini	ore. Do not double check. and perimeter (7) round wetland perimeter (4) around wetland perimeter (1) wetland perimeter (0) and average. n, wildlife area, etc. (7) both forest. (5) conservation tillage, new falle	
6	16] Me	etric 3. Hydrolog	ıv.		
max 30 pts.	subtotal	3a. :	Sources of Water. Score all the High pH groundwater (5) Other groundwater (3) X Precipitation (1) Seasonal/Intermittent su Perennial surface water of Maximum water depth. Select >0.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6)	nat apply. rface water (3) (lake or stream) (5) conly one and assign score.	Part of wetland/u Part of riparian o 3d. Duration inundation/sat Semi- to perman Regularly inunda Seasonally inunda	ain (1) lake and other human use (1) pland (e.g. forest), complex (1) r upland corridor (1) ruration. Score one or dbl check ently inundated/saturated (4) ted/saturated (3)
		3e.		ditch tile	e check and average.	nstormwater)
7	23	Me	etric 4. Habitat A	Alteration and Dev	elopment.	
max 20 pts.	subtotal	4b.	None or none apparent (X Recovered (3) Recovering (2) Recent or no recovery (1 Habitat development. Select of Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) X Poor (1)) only one and assign score.).	
91	23]	Habitat alteration. Score one of None or none apparent (Recovered (6) Recovering (3) Recent or no recovery (1	9) Check all disturbances observed mowing grazing	x shrub/sapling rer herbaceous/aqua sedimentation dredging	atic bed removal

Site: Wetland LP-056	ater(s): MJA	Date: 2021-08-09
23 subtotal first page		
0 23 Metric 5. Special We	atlande	
max 10 pts. subtotal Check all that apply and score as indic		
Bog (10) Fen (10) Old growth forest (10) Mature forested wetland (5) Lake Erie coastal/tributary wetlake Erie coastal/tributary wetlake Erie coastal/tributary wetlake Plain Sand Prairies (Oat Relict Wet Prairies (10) Known occurrence state/fede Significant migratory songbir	etland-unrestricted hydrology (10) etland-restricted hydrology (5)	s (10)
0 23 Metric 6. Plant com	nunitiae intarenarei	on microtonography
mount of Flant com	•	on, microtopography.
max 20 pts. subtotal 6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale.	Vegetation Community Co 0 Absent or cor	mprises <0.1ha (0.2471 acres) contiguous area
0 Aquatic bed		either comprises small part of wetland's
1 Emergent		and is of moderate quality, or comprises a
0 Shrub		part but is of low quality
0 Forest		either comprises significant part of wetland's
0 Mudflats 0 Open water		and is of moderate quality or comprises a small of high quality
0 Other		comprises significant part, or more, of wetland's
6b. horizontal (plan view) Interspersion		and is of high quality
Select only one.		
High (5)	Narrative Description of Vo	
Moderately high(4) Moderate (3)		rsity and/or predominance of nonnative or tolerant native species
Moderately low (2)		e dominant component of the vegetation,
Low (1)		onnative and/or disturbance tolerant native spp
X None (0)		present, and species diversity moderate to
6c. Coverage of invasive plants. Refe		high, but generally w/o presence of rare
to Table 1 ORAM long form for list. Ad or deduct points for coverage		or endangered spp nce of native species, with nonnative spp
Extensive >75% cover (-5)		irbance tolerant native spp absent or virtually
Moderate 25-75% cover (-3)		I high spp diversity and often, but not always,
X Sparse 5-25% cover (-1)	the present	ce of rare, threatened, or endangered spp
Nearly absent <5% cover (0) Absent (1)	Mudflat and Open Water C	class Quality
6d. Microtopography.		na (0.247 acres)
Score all present using 0 to 3 scale.		ha (0.247 to 2.47 acres)
0 Vegetated hummucks/tussuc		o <4ha (2.47 to 9.88 acres)
0 Coarse woody debris >15cm		8 acres) or more
0 Standing dead >25cm (10in) 0 Amphibian breeding pools	Microtopography Cover So	cale
7 thiphibian breeding pools	0 Absent	oute
	1 Present very	small amounts or if more common
	of marginal 2 Present in mo	, ,
		oderate amounts, but not of highest small amounts of highest quality
		oderate or greater amounts
	and of highe	
23 GRAND TOTAL (max 100 pts)		





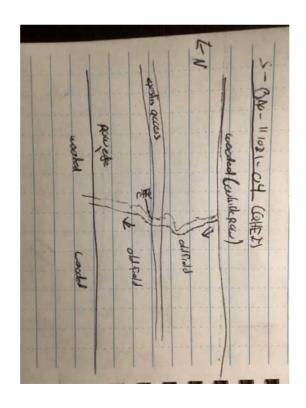


Stream & Location:	Stream LP-01	Leroy Center-Mayf	ield 138 kV Transm	ission Line Project	<i>RM:</i> 3	Date:	11/10/21
S-BAO-111021-04				ne & Affiliation:	BAO		Jacobs
<i>River Code.</i> 04110004		STORET #:	<i>Lat.</i> / <i>LO.</i> — — (NAD 83 - deci	77.9.1.41.66905	/ -81.1	4287	<i>Office verified</i> Medication Med
REST TYPES	ate % or note eve POOL RIFFLE 5 0 10 50 10 0 TYPES: 4 or	ry type present OTHER TYPES HARDPAN [4] DETRITUS [3] MUCK [2] SILT [2] ARTIFICIAL [0] (Score natural si	70 0 □ 5 50 □ ubstrates; ignore □ point-sources) □	Check COORIGIN LIMESTONE [1] TILLS [1] WETLANDS [0] HARDPAN [0] SANDSTONE [0] RIP/RAP [0] LACUSTURINE [0] SHALE [-1] COAL FINES [-2]	SILT	average) QUAL HEAVY [- MODERA NORMAL FREE [1] EXTENSI MODERA NORMAL NONE [1]	2] .TE [-1] Substrate
quality; 3-Highest quality is diameter log that is stable 0 UNDERCUT BANK. 2 OVERHANGING VE 1 SHALLOWS (IN SL 0 ROOTMATS [1]	quality; 2-Mode in moderate or gre e, well developed r S [1] EGETATION [1]	erate amounts, but no eater amounts (e.g., vo ootwad in deep / fast OPOCLS > 70c ROOTWADS	t of highest quality of the property of the pr	or in small amounts n deep or fast water	of highest r, large pools. ERS [1]	Check ONE (O EXTENSIVE MODERATE SPARSE 5 NEARLY AB	r 2 & average) >75% [11] 25-75% [7]
3] CHANNEL MORPH							
X HIGH [4] □ E MODERATE [3] X G LOW [2] X F	/ELOPMENT EXCELLENT [7] GOOD [5] FAIR [3] POOR [1]	CHANNELIZ NONE [6] RECOVERED [4 RECOVERING [6] RECENT OR NO	[] [3]	STABILITY ☐ HIGH [3] ☑ MODERATE [2] ☐ LOW [1]		ı	Channel 13.5
4] BANK EROSION / River right looking downstres EROSION NONE / LITTLE [3] MODERATE [2] HEAVY / SEVERE [1]	AIT RIPAR RIPAR WIDE > 9 MODERA NARRO	IAN WIDTH 50m [4]	FLOOD R FOREST, SWA SHRUB OR OL RESIDENTIAL, FENCED PAST	D PLAIN QUALI MP [3] LD FIELD [2] PARK, NEW FIELD	TY R C C C C C C C C C C C C C C C C C C	CONSERVATIO IRBAN OR INE INING / CONS predominant la Om riparian.	TRUCTION [0]
5] POOL / GL/DE AN MAXIMUM DEPTH Check ONE (ONLY!) > 1m [6] 0.7	CHAN Check ON POOL WIDTH POOL WIDTH POOL WIDTH tional riffles; species: RUN D MAXIMUM MAXIMUM	INEL WIDTH E (Or 2 & average) I > RIFFLE WIDTH [2] I = RIFFLE WIDTH [0] I < RIFFLE WIDTH [0] Best areas must Check (EPTH RIFF > 50cm [2] STAB < 50cm [1] MOD.	Checl TORRENTIAL VERY FAST [1] MODERATE Indicate for t be large enougher (Or 2 & average) LE / RUN SUB LE (e.g., Cobble, I	□ INTERMIT [1] □ EDDIES [1 reach - pools and ri Igh to support ge). STRATE RIFI Boulder) [2] rge Gravel) [1]	TIAL [-1] TENT [-2]] ffles. a populat FLE / RUN	Secondar (circle one and co	Potential Contact Ty Contact Ty Contact Ty Current Maximum 12 RIFFLE [metric=0] EDNESS
6] GRADIENT (51.3 DRAINAGE AREA (1.45	\	Y LOW - LOW [2-4] DERATE [6-10] H - VERY HIGH [10-6		POOL: 40 RUN: 5	%GLIDE	: 50	Gradient 4 Maximum 10

A] SAMPLED REACH		Comment RE: Reach consistency/	s reach typical of steam?, Recreation	on/Observed - Inferred, Other/	Sampling observations, Concerns, Acc	cess directions, etc.
Check ALL that apply						
METHOD STAGE						
□ BOAT 1st -sample pass- □ WADE □ HIGH □ L. LINE □ UP □ OTHER ☑ NORMAL DISTANCE □ DRY						
□ 0.5 Km □ 0.2 Km CLARIT	Υ	B] AESTHETICS	D] MAINTENANCE	Circle some & COMMENT	E] ISSUES	F] MEASUREMENT.
0.15 Km	TB [☐ INVASIVE MACROPHYTES ☐ EXCESS TURBIDITY ☐ DISCOLORATION ☐ FOAM / SCUM ☐ OIL SHEEN ☐ TRASH / LITTER ☐ NUISANCE ODOR ☐ SI LIDGE DEPOSITS	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		WWTP / CSO / NPDES / INDUSTRY HARDENED / URBAN / DIRT&GRIME CONTAMINATED / LANDFILL BMPS - CONSTRUCTION - SEDIMENT LOGGING / IRRIGATION / COOLING BANK / EROSION / SURFACE FALSE BANK / MANURE / LAGOON WASH H20 / TILE / H20 TABLE ACID / MINE / QUARRY / FLOW NATURAL / WETLAND / STAGNANT PARK / GOLF / LAWN / HOME	x width 6 x depth 8 max. depth 20 x bankfull width 8 bankfull x depth W/D ratio bankfull max. depth floodprone x² width entrench. ratio
☐ 10%-<30% <i>C] RI</i>	ECRL	<i>FATION</i> AREA DEPTH <i>POOL:</i> □ >100ft² □ >3ft	LEGO CONTINUE / DIAMAGE		ATMOSPHERE / DATA PAUCITY	Legacy Tree:

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

Stream Drawing:









Downstream



Substrate





Stream & Location: Stream L	LP-04 Leroy Center-Mayfield 138 kV Transmission Line Project RM: 2.2 Date:	11/10/21
S-BAO-111021-02	Scorers Full Name & Affiliation: BAO	Jacobs
River Code: 04110004-0606	STORET #: Lat./Long.: 41.64306	<i>Office verified</i> location ✓
BEST TYPES □ □ BLDR /SLABS [10] □ □ BOULDER [9] □ □ COBBLE [8] 35 5 □ □ GRAVEL [7] 35 35 □ □ SAND [6] 20 1	note every type present Check ONE (Or 2 & average)	2] TE [-1] Substrate [0]
quality: 3-Highest quality in modera	TER) [1] 0 BOULDERS [1] 0 LOGS OR WOODY DEBRIS [1] NEARLY ABS	r 2 & average) > 75% [11] 25-75% [7]
-	CYCheck ONE in each category (Or 2 & average)	
SINUOSITY HIGH [4] MODERATE [3] LOW [2] NONE [1] Comments DEVELOPI SINUOSITY FAICELLE FAICE POOR [1]	ENT [7]	Channel Maximum 20
River right looking downstream R EROSION	RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average) RIPARIAN WIDTH WIDE > 50m [4] MODERATE 10-50m [3] NARROW 5-10m [2] VERY NARROW < 5m [1] NONE [0] PROBER TO LOSE (ACH BANK (Or 2 per bank & average) FLOOD PLAIN QUALITY FLOOD PLAIN QUALITY RESIDENTIAL, PARK, NEW FIELD [2] MINING / CONS Indicate predominant langest 100m riparian.	DUSTRIAL [0] TRUCTION [0]
☐ > 1m [6]	CHANNEL WIDTH Check ONE (Or 2 & average) CL WIDTH > RIFFLE WIDTH [2] CL WIDTH = RIFFLE WIDTH [1] CL WIDTH < RIFFLE WIDTH [1] CL WIDTH < RIFFLE WIDTH [0] DL WIDTH < RIFFLE WIDTH [0] DL WIDTH < RIFFLE WIDTH [0] MODERATE [1] Indicate for reach - pools and riffles. Recreation Primary Secondary (circle one and continued to the	Potential Contact y Contact
of riffle-obligate specie RIFFLE DEPTH ☑ BEST AREAS > 10cm [2] □ M/	riffles; Best areas must be large enough to support a population check ONE (Or 2 & average). RUN DEPTH RIFFLE / RUN SUBSTRATE RIFFLE / RUN EMBEDDE AXIMUM > 50cm [2] STABLE (e.g., Cobble, Boulder) [2] NONE [2] AXIMUM < 50cm [1] MOD. STABLE (e.g., Large Gravel) [1] SLOW [1] MODERATE [0] EXTENSIVE [-1]	RIFFLE [metric=0] EDNESS Riffle
6] GRADIENT (50 ft/mi) DRAINAGE AREA (1.52 mi²)	MODERATE [6-10]	Gradient Maximum

A] SAMPLED RE	ACH (Comment RE: Reach consistency/I	s reach typical of steam?, Recreation	on/Observed - Inferred, Other/	Sampling observations, Concerns, Acc	cess directions, etc.
Check ALL that	apply					
METHOD S	TAGE					
WADE	P					
□ 0.5 Km □ 0.2 Km	LARITY	B] AESTHETICS	D] MAINTENANCE	Circle some & COMMENT	E] ISSUES	F] MEASUREMENT.
☐ 0.15 Km ☐ < 20 ☐ 20- ☐ OTHER ☐ 40-7 ☐ > 70	:40 cm	 NUISANCE ALGAE INVASIVE MACROPHYTES EXCESS TURBIDITY DISCOLORATION FOAM / SCUM OIL SHEEN TRASH / LITTER NUISANCE ODOR SLUDGE DEPOSITS CSOs/SSOs/OUTFALLS 	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		WWTP / CSO / NPDES / INDUSTRY HARDENED / URBAN / DIRT&GRIME CONTAMINATED / LANDFILL BMPS - CONSTRUCTION - SEDIMENT LOGGING / IRRIGATION / COOLING BANK / EROSION / SURFACE FALSE BANK / MANURE / LAGOON WASH H20 / TILE / H20 TABLE ACID / MINE / QUARRY / FLOW NATURAL / WETLAND / STAGNANT PARK / GOLF / LAWN / HOME	x width 12 x depth 4 max. depth 30 x bankfull width 12 bankfull x depth W/D ratio bankfull max. depth floodprone x² width entrench. ratio
☐ 10%-<30% ☐ <10%- CLOSED	C] RECRE	ATION AREA DEPTH POOL: □>100ft2□>3ft	1 EGGD GONTHOL / DIAMAGE		ATMOSPHERE / DATA PAUCITY	Legacy Tree:

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

Stream Drawing:









Downstream



Substrate





Stream & Location: Stream LP-09	Leroy Center-Mayfield 138 kV Transmission Line Project	t <i>RM:</i> 1.2 <i>Date:</i> 9/29/21
S-BCR-092921-03	Scorers Full Name & Affiliation	2. BCR Jacobs
	TORET#: Lat./Long.: 41.62179	-81.18744 Office verified
1] SUBSTRATE Check ONLY Two substantial estimate % or note ever	v type present Check	ONE (Or 2 & average)
BEST TYPES □□ BLDR /SLABS [10] □□ □□ □□ □□ □□ □□ □□ □□ □□ □□ □□ □□ □□	OTHER TYPES POOL RIFFLE LIMESTONE [1] DETRITUS [3] 10 0 WETLANDS [0] MUCK [2] 20 10 HARDPAN [0] ARTIFICIAL [0] SANDSTONE [0] (Score natural substrates: ignore RIP/RAP [0]	MODERATE [-1] Maximum NORMAL [0] NONE [1]
quality; 2-Mode quality; 3-Highest quality in moderate or grediameter log that is stable, well developed rounders. [1]	ce 0 to 3: 0 -Absent; 1 -Very small amounts or if more commorate amounts, but not of highest quality or in small amount ater amounts (e.g., very large boulders in deep or fast water, or deep, well-defined, functions of the pools > 70cm [2] OOD ONBOWS, BACKWAT AQUATIC MACROPH BOULDERS [1] OOD LOGS OR WOODY DE	check ONE (<i>Or 2 & average</i>) al pools. ERS [1] MODERATE 25-75% [7] YTES [1] SPARSE 5-<25% [3]
3] CHANNEL MORPHOLOGY Check SINUOSITY DEVELOPMENT HIGH [4]	ONE in each category (Or 2 & average) CHANNELIZATION NONE [6] RECOVERED [4] RECOVERING [3] RECENT OR NO RECOVERY [1] STABILITY HIGH [3] MODERATE [2] LOW [1]	Channel Maximum 20 9.5
River right looking downstream RIPAR EROSION NONE / LITTLE [3] MODERATE [2] RIPAR RIPAR NODERATE [2]	ITE 10-50m [3]	LITY CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] D [1] MINING / CONSTRUCTION [0] Indicate predominant land use(s)
Check ONE (ONLY!) Check ONI □ > 1m [6] □ POOL WIDTH □ 0.7-<1m [4]	NEL WIDTH E (Or 2 & average) RIFFLE WIDTH [2] RIFFLE WIDTH [1] RIFFLE WIDTH [1] RIFFLE WIDTH [0] Primary Contact Secondary Contact X Secondary C	
of riffle-obligate species: RIFFLE DEPTH RUN DI BEST AREAS > 10cm [2] MAXIMUM BEST AREAS 5-10cm [1] MAXIMUM BEST AREAS < 5cm [metric=0] Comments	> 50cm [2] STABLE (e.g., Cobble, Boulder) [2] < 50cm [1] MOD. STABLE (e.g., Large Gravel) [1] UNSTABLE (e.g., Fine Gravel, Sand) [0]	NO RIFFLE [metric=0]
DRAINAGE AREA	Y LOW - LOW [2-4]) %GLIDE: (30

WASH H20 / TILE / H20 TABLE

ACID / MINE / QUARRY / FLOW

NATURAL / WETLAND / STAGNANT

PARK / GOLF / LAWN / HOME

ATMOSPHERE / DATA PAUCITY

bankfull max. depth

floodprone x² width

entrench. ratio

Legacy Tree:

MOVING - BEDLOAD - STABLE

ARMOURED / SLUMPS

ISLANDS / SCOURED

IMPOUNDED / DESICCATED

FLOOD CONTROL / DRAINAGE

Stream Drawing:

pass

2nd_

■ NUISANCE ODOR

CIRECREATION AREA DEPTH

☐ SLUDGE DEPOSITS

POOL: № >100ft2 № >3ft

☐ CSOs/SSOs/OUTFALLS

S-BCR-092921-03 PEM Wetland eph. tributary vicele B

× > 85%- OPEN

☐ 55%-<85%

□ 30%-<55%

10%-<30%

<10%- CLOSED



Upstream



Downstream



Substrate





Stream & Location: Stream LP-15	Leroy Center-Mayfield 138 kV Transmission Line Project RM:	13.4 <i>Date:</i> 10/20/21
S-MJA-102021-04	Scorers Full Name & Affiliation: MJA	Jacobs
	— — — — (NAD 83 - decimal °)	31.20693 Office verified location
1] SUBSTRATE Check ONLY Two subsestimate % or note eve	rate TYPE BOXES; y type present Check ONE (Or	2 & average)
BEST TYPES POOL RIFFLE	OTHER TYPES POOL RIFFLE ORIGIN	QUALITY
]	☐ HEAVY [-2] ✓ MODERATE [-1] Substrate
□ X COBBLE [8] 15 30	□ MUCK [2] □ WETLANDS [0]	NORMAL [0]
☐ GRAVEL [7] 15 25 50 30 ☐]	FREE [1] 11
BEDROCK [5]	(Score natural substrates: ignore RIP/RAP [0]	MODERATE [-1] Maximum
NUMBER OF BEST TYPES:	more [2] sludge from point-sources) LACUSTURINE [0] SHALE [-1]	NORMAL [0] 20
Comments	☐ COAL FINES [-2]	
21 ///STRF4M_COVFR Indicate preser	ce 0 to 3: 0 -Absent; 1 -Very small amounts or if more common of mal	ginal AMOUNT
quality; 2 -Mode	rate amounts, but not of highest quality or in small amounts of highe ater amounts (e.g., very large boulders in deep or fast water, large	st Check ONE (Or 2 & average)
diameter log that is stable, well developed r	potwad in deep / fast water, or deep, well-defined, functional pools.	EXTENSIVE >75% [11]
0 UNDERCUT BANKS [1] 0 OVERHANGING VEGETATION [1]	1 POOLS > 70cm [2] 0 OXBOWS, BACKWATERS [1] 1 ROOTWADS [1] 0 AQUATIC MACROPHYTES [1]	MODERATE 25-75% [7]X SPARSE 5-<25% [3]
1 SHALLOWS (IN SLOW WATER) [1] 1 ROOTMATS [1]	1 BOULDERS [1] 1 LOGS OR WOODY DEBRIS [1]	☐ NEARLY ABSENT <5% [1]
Comments		Cover 10
		20
3] CHANNEL MORPHOLOGY Check		
SINUOSITY DEVELOPMENT HIGH [4] EXCELLENT [7]	CHANNELIZATION STABILITY NONE [6] HIGH [3]	
☐ MODERATE [3] ☐ GOOD [5]	☐ RECOVERED [4] ☐ MODERATE [2]	
X LOW [2]X FAIR [3]D NONE [1]X POOR [1]	☐ RECOVERING [3] ☐ LOW [1] ☐ RECENT OR NO RECOVERY [1]	Channel
Comments	- Macriti ettile Macritin (.)	Maximum 20
-		
-	<i>N ZONE</i> Check ONE in each category for <i>EACH BANK</i> (0 <i>r</i> 2 <i>per b</i> IAN WIDTH FLOOD PLAIN QUALITY	ank & average)
L R EROSION X WIDE > 1	<u> </u>	CONSERVATION TILLAGE [1]
NONE / LITTLE [3]	TE 10-50m [3] 🗵 🗵 SHRUB OR OLD FIELD [2]	URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0]
		cate predominant land use(s)
		t 100m riparian. Riparian
Comments		Maximum 10
5] POOL / GLIDE AND RIFFLE / R		
	NEL WIDTH CURRENT VELOCITY E (Or 2 & average) Check ALL that apply	Recreation Potential Primary Contact
	> RIFFLE WIDTH [2] ☐ TORRENTIAL [-1] ☑ SLOW [1]	Secondary Contact ×
	= RIFFLE WIDTH [1] □ VERY FAST [1] □ INTERSTITIAL [-1] < RIFFLE WIDTH [0] □ FAST [1] □ INTERMITTENT [-1]	(circle one and comment on back)
☐ 0.2-<0.4m [1]	MODERATE [1] ☐ EDDIES [1]	Pool/
□ < 0.2m [0] Comments	Indicate for reach - pools and riffles.	Current 7 Maximum
	5-4	12
of riffle-obligate species:	Best areas must be large enough to support a popu Check ONE (Or 2 & average).	NO RIFFLE [metric=0]
RIFFLE DEPTH RUN D		RUN EMBEDDEDNESS
		NONE [2] LOW [1]
BEST AREAS < 5cm [metric=0]	UNSTABLE (e.g., Fine Gravel, Sand) [0]	MODERATE (0) Riffle
Comments	L	EXTENSIVE [-1] Run 8
6] GRADIENT (36.1 ft/mi) VER	Y LOW - LOW [2-4] %POOL: (20) %GLI	
DRAINAGE AREA D MOI	BERATE [6-10] WRUN: 5 %RIFF	

entrench. ratio

Legacy Tree:

PARK / GOLF / LAWN / HOME

ATMOSPHERE / DATA PAUCITY

IMPOUNDED / DESICCATED

FLOOD CONTROL / DRAINAGE

☐ CSOs/SSOs/OUTFALLS

POOL: □ >100ft² □ >3ft

AREA DEPTH

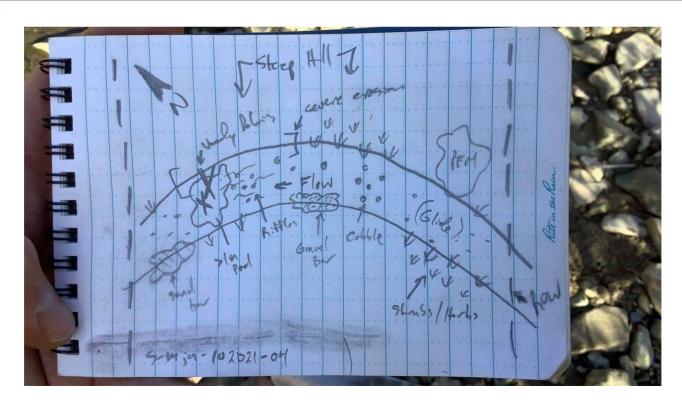
CI RECREATION

Stream Drawing:

□ 30%-<55%

☐ 10%-<30%

<10%- CLOSED







Upstream Downstream



Substrate





Headwater Habitat Evaluation Index Field Form HHEI Score (sum of metrics 1+2+3)

64
O I

SITE NAME/LOCATION Stream LP-02 Leroy Center-Mayfield 138 kV Transmission Line Project	
SITE NUMBER S-BAO-111021-03 RIVER BASIN 04110004 RIVER CODE DRAINAGE AREA (mi²) 0.	
LENGTH OF STREAM REACH (ft) 287 LAT 41.65255 LONG -81.14312 RIVER MILE	
DATE 11/10/2021 SCORER BAO COMMENTS Concrete conveyance	
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute of the Complete All Items On This Field Manual (Institute Institute Insti	tructions
STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR N	IO RECOVERY
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B TYPE PERCENT SILT [3 pt] SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] LEAF PACK/WOODY DEBRIS [3 pts] COBBLE (65-256 mm)[12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock MAX of 32). Check ONLY two predominant substrate TYPE boxes. SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] CLAY or HARDPAN [0 pt] MUCK [0 pts] ARTIFICIAL [3 pts]	HHEI Metric Points Substrate Max = 40 14
Bldr Slabs, Boulder, Cobble, Bedrock 10 (A) SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 5	A + B
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts]	Pool Depth Max = 30
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts]	Bankfull Width Max=30
COMMENTS AVERAGE BANKFULL WIDTH (feet):	
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream ★	
RIPARIAN WIDTH L R (Per Bank) L R Wide >10m Moderate 5-10m Moderate 5-10m X Narrow <5m None RIPARIAN WIDTH L R FLOODPLAIN QUALITY (Most Predominant per Bank) L R L R Conservation Tillage Urban or Industrial Residential, Park, New Field Dopen Pasture, Row Ci	•
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing	nt)
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): □ None □ 1.0 □ 2.0 □ 3.0 ▼ 0.5 □ 1.5 □ 2.5 □ >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/	100 ft)

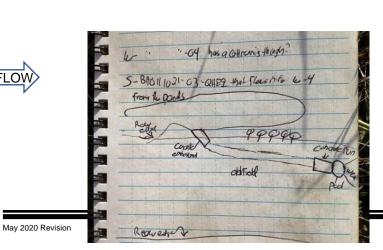
ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? ☐ Yes ☒ No QHEI Score	(If Yes, Attach Completed QHEI form)
DOWNSTREAM DESIGNATED USE(S)	
□ WWH Name:	Distance from Evaluated Stream
X CWH Name: East Creek	Distance from Evaluated Stream 0
☐ EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE V	VATERSHED AREA. CLEARLY MARK THE SITE LOCATION.
USGS Quadrangle Name: Painesville NRCS Soil	il Map Page:NRCS Soil Map Stream Order:
County: Lake Township/C	_{sity:} Leroy Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Yes Date of last precipitation: 10/3	0.14 Quantity: 0.14
Photo-documentation Notes:	
Elevated Turbidity? (Y/N): No Canopy (% open): 85	-
Were samples collected for water chemistry? (Y/N): No Lab Sa	ample # or ID (attach results):
Field Measures: Temp (°C) Dissolved Oxygen (mg/l)	pH (S.U.) Conductivity (umhos/cm)
Is the sampling reach representative of the stream (Y/N) \underline{Yes} If not, ex	xplain:
Additional comments/description of pollution impacts:	
BIOLOGICAL OBSERVA	
(Record all observations by	,
Fish Observed? (Y/N) Species observed (if known):	
Frogs or Tadpoles Observed? (Y/N) Species observed (if known):
Salamanders Observed? (Y/N) Species observed (if known):	
Aquatic Macroinvertebrates Observed? (Y/N) Species observed ((if known):
Comments Regarding Biology:	

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location







Upstream



Substrate



Downstream



Headwater Habitat Evaluation Index Field Form HHEI Score (sum of metrics 1+2+3)

38

SITE NAME/LOCATION Stream LP-03 Leroy Center-Mayfield 138 kV Transmission Line Project			
SITE NUMBER S-BAO-110921-01 RIVER BASIN 04110004 RIVER CODE DRAINAGE AREA (mi²) 0.37	70		
LENGTH OF STREAM REACH (ft) 315 LAT 41.64371 LONG -81.15405 RIVER MILE			
DATE 11/09/2021 SCORER BAO COMMENTS Concrete conveyance			
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Instru	uctions		
STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO) RECOVERY		
BLDR SLABS [16 pts]	HHEI Metric Points Substrate Max = 40 8		
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 5			
time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts]	Pool Depth Max = 30 25		
OUMMENTO INAXIMONT OCE DEL TIT (INCINES).			
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts]	Bankfull Width Max=30		
COMMENTS AVERAGE BANKFULL WIDTH (feet):			
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream ★			
RIPARIAN WIDTH L R (Per Bank) L R Wide >10m Moderate 5-10m Narrow <5m None COMMENTS 1 FLOODPLAIN QUALITY (Most Predominant per Bank) L R L R L R Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction	p		
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing	t) -		
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): □ None □ 1.0 □ 2.0 □ 3.0 □ 0.5 □ 1.5 □ 2.5 □ >3			
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100	ın ft)		

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? ☐ Yes ☒ No QHEI Score	(If Yes, Attach Completed QHEI form)		
DOWNSTREAM DESIGNATED USE(S)			
☐ WWH Name:	Distance from Evaluated Stream		
	Distance from Evaluated Stream 0.03 mile		
EWH Name:	Distance from Evaluated Stream		
MAPPING: ATTACH COPIES OF MAPS, INCLUDING	THE <u>ENTIRE</u> WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.		
USGS Quadrangle Name: Painesville	NRCS Soil Map Page: NRCS Soil Map Stream Order:		
County: Lake	Township/City: Leroy Township		
MISCELLANEOUS			
Base Flow Conditions? (Y/N): Yes Date of last precipita	ation: 10/31/21 Quantity: 0.14		
Photo-documentation Notes:			
Elevated Turbidity? (Y/N): No Canopy (% open):	100		
Were samples collected for water chemistry? (Y/N): No Lab Sample # or ID (attach results):			
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (umhos/cm)			
Is the sampling reach representative of the stream (Y/N) Yes If not, explain:			
Additional comments/description of pollution impacts:			
	AL OBSERVATIONS observations below)		
Fish Observed? (Y/N) Species observed (if known):			
Frogs or Tadpoles Observed? (Y/N) Species observed	red (if known):		
Salamanders Observed? (Y/N) Species observed (if	known):		
Aquatic Macroinvertebrates Observed? (Y/N) Species	es observed (if known):		
Comments Regarding Biology:			

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





May 2020 Revision Page 2



Upstream



Substrate



Downstream



Headwater Habitat Evaluation Index Field Form HHEI Score (sum of metrics 1+2+3)

47	
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SITE NAME/LOCATION Stream LP-05 Leroy Center-Mayfield 138 kV Transmission Line Project			
SITE NUMBER S-BAO-111021-01 RIVER BASIN 04110004 RIVER CODE DRAINAGE AREA (mi²) 0.	041		
LENGTH OF STREAM REACH (ft) 270 LAT 41.64204 LONG -81.15683 RIVER MILE			
DATE 11/10/2021 SCORER BAO COMMENTS Manmade concrete conveyance, intermittent. Concrete channelized	throughout		
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Ins	tructions		
STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR N	IO RECOVERY		
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pts]	HHEI Metric Points Substrate Max = 40 17 A + B		
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5pts] NO WATER OR MOIST CHANNEL [0pts]	Pool Depth Max = 30		
COMMENTS MAXIMUM POOL DEPTH (inches): 4			
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check <i>ONLY</i> one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8")[15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] ≤ 1.0 m (≤ 3' 3") [5 pts] > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]	Bankfull Width Max=30		
COMMENTS AVERAGE BANKFULL WIDTH (feet): 2			
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream ★			
RIPARIAN WIDTH FLOODPLAIN QUALITY (Most Predominant per Bank) L R (Per Bank) L R L R			
X X Wide >10m			
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (interstitial) COMMENTS The Community of Evaluation (Check ONLY one box): Moist Channel, isolated pools, no flow (intermitted pools) Dry channel, no water (ephemeral)	nt)		
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): □ None ▼ 1.0 □ 2.0 □ 3.0 □ 0.5 □ 1.5 □ 2.5 □ >3			
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/	100 (1)		

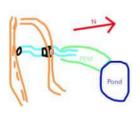
ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? ☐ Yes ☑ No QHEI Score	e (If Yes, Attach Completed QHEI form)
DOWNSTREAM DESIGNATED USE(S)	
☐ WWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream 0.14 mile
☐ EWH Name:	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING	THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.
USGS Quadrangle Name: Painesville	NRCS Soil Map Page: NRCS Soil Map Stream Order:
	Township/City: Leroy Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Yes Date of last precipit	ation: 10/31/21 Quantity: 0.14
Photo-documentation Notes:	
Elevated Turbidity? (Y/N): No Canopy (% open): _	100
Were samples collected for water chemistry? (Y/N): \underline{No}	Lab Sample # or ID (attach results):
Field Measures: Temp (°C) Dissolved Oxygen (mg	g/l) pH (S.U.) Conductivity (umhos/cm)
Is the sampling reach representative of the stream (Y/N) $\underline{\underline{Y}}$	<u>es</u> If not, explain:
Additional comments/description of pollution impacts:	
<u></u>	AL OBSERVATIONS Il observations below)
,	n):
	ved (if known):
Salamanders Observed? (Y/N) Species observed (i	if known):
Aquatic Macroinvertebrates Observed? (Y/N) Specie	es observed (if known):
Comments Regarding Biology:	

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





May 2020 Revision Page 2



Upstream



Substrate



Downstream



40

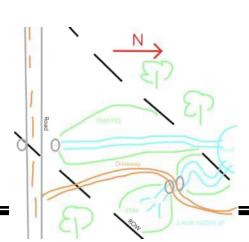
SITE NAME/LOCATION_Stream LP-06 Leroy Center-Mayfield 138 kV Transmission Line Project		
SITE NUMBER S-MJA-102221-01 RIVER BASIN 04110004 RIVER CODE DRAINAGE AREA (mi²)	0.170	
LENGTH OF STREAM REACH (ft) <u>263</u> LAT <u>41.63068</u> LONG <u>-81.17436</u> RIVER MILE _		
DATE 10/22/2021 SCORER MJA COMMENTS Ephemeral. Culverted		
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for In	structions	
STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL IN RECOVERED RECOVERING RECENT OF	R NO RECOVERY	
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B TYPE BLDR SLABS [16 pts] BOULDER (>256 mm)[16 pts] BEDROCK [16 pts]	HHEI Metric Points Substrate Max = 40 15	
2. Maximum Pool Depth (<i>Measure the <u>maximum</u> pool depth within the 61 meter (200 feet)</i> evaluation reach at the	Pool Depth	
time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check <i>ONLY</i> one box): > 30 centimeters [20 pts] 5 cm - 10 cm [15 pts]	Max = 30	
> 22.5 - 30 cm [30 pts] < 5 cm [5pts]	20	
> 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0pts]		
COMMENTS MAXIMUM POOL DEPTH (inches): 18		
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check ONL Y one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8")[15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] × ≤ 1.0 m (≤ 3' 3") [5 pts] > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]	Bankfull Width Max=30	
COMMENTS AVERAGE BANKFULL WIDTH (feet):		
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY (Most Predominant per Bank) L R (Per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage Moderate 5-10m Mining or Industrial Narrow <5m Residential, Park, New Field Open Pasture, Row Crop None Residential, Park, New Field Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Moist Channel, isolated pools, no flow (intermittent)		
Subsurface flow with isolated pools (interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		
STREAM GRADIENT ESTIMATE		
Flat (0.5 ft/100 ft) X Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe Severe	ft/100 ft)	

QHEI PERFORMED? ☐ Yes ☑ No QHEI Score	(If Yes, Attach Completed QHEI form)	
☐ CWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING T	HE <u>entire</u> watershed area. Clearly mark the site location.	
USGS Quadrangle Name: Painesville	NRCS Soil Map Page: NRCS Soil Map Stream Order:	
	Township/City: Hambden Township	
MISCELLANEOUS		
Base Flow Conditions? (Y/N): NO Date of last precipita	ion: 10/22/21 Quantity: 0.29	
Photo-documentation Notes:		
Elevated Turbidity? (Y/N): No Canopy (% open): 9	5	
Were samples collected for water chemistry? (Y/N): No	Lab Sample # or ID (attach results):	
) pH (S.U.) Conductivity (umhos/cm)	
Is the sampling reach representative of the stream (Y/N)	S If not, explain:	
Additional comments/description of pollution impacts:		
	Description below)	
Fish Observed? (Y/N) Species observed (if known):		
Frogs or Tadpoles Observed? (Y/N) Species observed (if known):		
Salamanders Observed? (Y/N) Species observed (if	known):	
Aquatic Macroinvertebrates Observed? (Y/N) Species	s observed (if known):	
Comments Regarding Biology:		

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location







Upstream



Downstream



Substrate



45

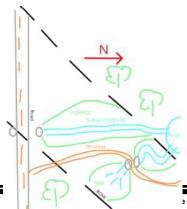
SITE NAME/LOCATION Stream LP-07 Leroy Center-Mayfield 138 kV Transmission Line Project	
SITE NUMBER S-MJA-102221-02 RIVER BASIN 04110004 RIVER CODE DRAINAGE AREA (mi²) 0	100
LENGTH OF STREAM REACH (ft) 321.015981813013 LAT 41.63013766700004 LONG -81.17489489999997 RIVER MILE	
DATE 10/22/2021 SCORER MJA COMMENTS Intermittent. Culverted	
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Ins	tructions
STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR	NO RECOVERY
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pts] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock BIDR SLABS [16 pts] ARTIFICIAL [3 pts] (A) 45	HHEI Metric Points Substrate Max = 40 20 A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 15 TOTAL NUMBER OF SUBSTRATE TYPES: 5	~ 15
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Solution Soluti	Pool Depth Max = 30
COMMENTS MAXIMUM POOL DEPTH (inches):	
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8")[15 pts] ≥ 1.0 m (≤ 3' 3")[5 pts] ≥ 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]	Bankfull Width Max=30
COMMENTS AVERAGE BANKFULL WIDTH (feet):	
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstreams	*
RIPARIAN WIDTH L R (Per Bank) L R Wide >10m Moderate 5-10m None Residential, Park, New Field FLOODPLAIN QUALITY (Most Predominant per Bank) L R L R Mature Forest, Wetland Conservation Tillage Urban or Industrial Residential, Park, New Field Open Pasture, Row C Mining or Construction COMMENTS	•
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing	ent)
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): ☒ None ☐ 1.0 ☐ 2.0 ☐ 3.0 ☐ 0.5 ☐ 1.5 ☐ 2.5 ☐ >3	
STREAM GRADIENT ESTIMATE	

QHEI PERFORMED? ☐ Yes ☒ No QHEI Score _	(If Yes, Attach Completed QHEI form)	
☐ CWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING TH	HE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.	
USGS Quadrangle Name: Painesville	NRCS Soil Map Page: NRCS Soil Map Stream Order:	
County: Geauga	Township/City: Hambden Township	
MISCELLANEOUS Base Flow Conditions? (Y/N): No Date of last precipitate		
Photo-documentation Notes: Elevated Turbidity? (Y/N): No Canopy (% open): 90 Were samples collected for water chemistry? (Y/N): No Lab Sample # or ID (attach results):		
	pH (S.U.) Conductivity (umhos/cm)S If not, explain:	
Additional comments/description of pollution impacts:		
(Record all c	OBSERVATIONS bservations below)	
Fish Observed? (Y/N) Species observed (if known):		
Frogs or Tadpoles Observed? (Y/N) Species observed (if known):		
	(nown):	
Aquatic Macroinvertebrates Observed? (Y/N) Species	s observed (if known):	
Comments Regarding Biology:		

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





May 2020 Revision



Upstream



Downstream



Substrate



12

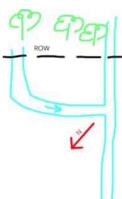
SITE NAME/LOCATION Stream LP-08 Leroy Center-Mayfield 138 kV Transmission Line Project	=
SITE NUMBER S-BCR-092921-04 RIVER BASIN 04110004 RIVER CODE DRAINAGE AREA (mi²) 0.001	
LENGTH OF STREAM REACH (ft) 118 LAT 41.62177 LONG -81.18709 RIVER MILE	
DATE 09/29/2021 SCORER BCR COMMENTS Intermittent channelized stream along road. Channelized stream along road. Flows under multiple culverts throughout r	each.
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Instruction	ons
STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO REC	OVERY
TYPE	HEI etric ints estrate x = 40
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts]	Depth x = 30
COMMENTO MAXIMOM COLDET III (Molios).	
> 4.0 meters (> 13') [30 pts]	nkfull idth x=30
COMMENTS AVERAGE BANKFULL WIDTH (feet): 3	
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream★	
RIPARIAN WIDTH (Per Bank) L R Mature Forest, Wetland Moderate 5-10m Narrow <5m None COMMENTS RESIDENTS FLOODPLAIN QUALITY (Most Predominant per Bank) L R L R Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (interstitial) COMMENTS The control of Evaluation (Check ONLY one box): Moist Channel, isolated pools, no flow (intermittent) The control of Evaluation (Check ONLY one box): Moist Channel, isolated pools, no flow (intermittent) The control of Evaluation (Check ONLY one box): Stream Flowing The control of Evaluation (Check ONLY one box): The control of Evalu	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): □ None □ 1.0 □ 2.0 □ 3.0 □ 0.5 □ 1.5 □ 2.5 □ >3	
STREAM GRADIENT ESTIMATE	

QHEI PERFORMED? ☐ Yes ☑ No QHEI Score	e (If Yes, Attach Completed QHEI form)
DOWNSTREAM DESIGNATED USE(S)	
☐ WWH Name:	Distance from Evaluated Stream
	Distance from Evaluated Stream 0 mile (direct tributary)
☐ EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING	THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.
USGS Quadrangle Name: Chardon	NRCS Soil Map Page:NRCS Soil Map Stream Order:
	Township/City: Hambden Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Yes Date of last precipite	ation: 9/23/21 Quantity: 1.72
Photo-documentation Notes:	
Elevated Turbidity? (Y/N): No Canopy (% open): _	100
Were samples collected for water chemistry? (Y/N): No	Lab Sample # or ID (attach results):
Field Measures: Temp (°C) Dissolved Oxygen (mg	y/l) pH (S.U.) Conductivity (umhos/cm)
Is the sampling reach representative of the stream (Y/N) $\underline{\underline{Y}}$	es_ If not, explain:
Additional comments/description of pollution impacts:	
·	AL OBSERVATIONS
· ·	observations below)
Fish Observed? (Y/N) Species observed (if known):	
Frogs or Tadpoles Observed? (Y/N) Species observed (if known):	
Salamanders Observed? (Y/N) Species observed (ii	f known):
Aquatic Macroinvertebrates Observed? (Y/N) Specie	es observed (if known):
Comments Regarding Biology:	

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





May 2020 Revision Page 2



Upstream



Substrate



Downstream



55

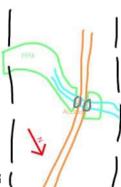
SITE NAME/LOCATION Stream LP-10 Leroy Center-Mayfield 138 kV Transmission Line Project	
SITE NUMBER S-BCR-092921-02 RIVER BASIN 04110004 RIVER CODE DRAINAGE AREA (mi²) 0.0	
LENGTH OF STREAM REACH (ft) 77 LAT 41.62112 LONG -81.18947 RIVER MILE	
DATE 09/29/2021 SCORER BCR COMMENTS Culverted	
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute 1.00 (1997) (19	ructions
STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO	O RECOVERY
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pts] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock BLDR SLABS [16 pts] SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] LEAF PACK/WOODY DEBRIS [3 pts] CLAY or HARDPAN [0 pt] ARTIFICIAL [3 pts] (B) (B)	HHEI Metric Points Substrate Max = 40 25
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
Aximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): 30 centimeters [20 pts] 5 cm - 10 cm [15 pts] 5 cm - 10 cm [5pts] 5 cm - 10 cm [5pts] NO WATER OR MOIST CHANNEL [0pts]	Pool Depth Max = 30
COMMENTS MAXIMUM POOL DEPTH (inches): 5	
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check <i>ONLY</i> one box): > 4.0 meters (> 13') [30 pts]	Bankfull Width Max=30
COMMENTS AVERAGE BANKFULL WIDTH (feet): 2.5	
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream ★	
RIPARIAN WIDTH L R (Per Bank) L R Mature Forest, Wetland D Moderate 5-10m Narrow <5m None COMMENTS FLOODPLAIN QUALITY (Most Predominant per Bank) L R FROODPLAIN QUALITY (Most Predominant per Bank)	op
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing	nt)
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): □ None □ 1.0 □ 2.0 □ 3.0 □ 0.5 □ 1.5 □ 2.5 □ >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) Flat to Moderate	00 ft)

QHEI PERFORMED? ☐ Yes ☒ No QHEI Score	(If Yes, Attach Completed QHEI form)	
DOWNSTREAM DESIGNATED USE(S)		
☐ WWH Name:	Distance from Evaluated Stream	
	Distance from Evaluated Stream 0.05 mile	
☐ EWH Name:	Distance from Evaluated Stream	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING 1	THE <u>ENTIRE</u> WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.	
USGS Quadrangle Name: Chardon	NRCS Soil Map Page:NRCS Soil Map Stream Order:	
	Township/City: Hambden Township	
MISCELLANEOUS		
Base Flow Conditions? (Y/N): Yes Date of last precipitation	1.72 display="block">9/23/21 display="block">9/23/21 display="block">1.72 display="block">1.72 display="block">1.72 display="block">1.72 display="block">1.72 display="block">1.72 display="block"/>1.72 display="block"/>1.	
Photo-documentation Notes:		
ElevatedTurbidity?(Y/N): No Canopy (% open):	80	
Were samples collected for water chemistry? (Y/N): No	Lab Sample # or ID (attach results):	
Field Measures:Temp (°C) Dissolved Oxygen (mg.	/l) pH (S.U.) Conductivity (umhos/cm)	
Is the sampling reach representative of the stream (Y/N)	If not, explain:	
Additional comments/description of pollution impacts:		
<u></u>	L OBSERVATIONS observations below)	
Fish Observed? (Y/N) Species observed (if known):		
Frogs or Tadpoles Observed? (Y/N) Species observed (if known):		
Salamanders Observed? (Y/N) Species observed (if	known):	
Aquatic Macroinvertebrates Observed? (Y/N) Specie	s observed (if known):	
Comments Regarding Biology:		

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





May 2020 Revision Page 2



Upstream





Downstream



55

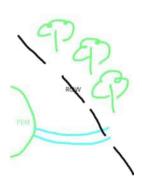
SITE NAME/LOCATION Stream LP-11 Leroy Center-Mayfield 138 kV Transmission Line Project	
SITE NUMBER S-BCR-092921-01 RIVER BASIN 04110004 RIVER CODE DRAINAGE AREA (mi²) 0.0	
LENGTH OF STREAM REACH (ft) 24 LAT 41.62097 LONG -81.18981 RIVER MILE	
DATE 09/29/2021 SCORER BCR COMMENTS Channelization, riparian clearing	
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute 1.00 (1997) (19	ructions
STREAM CHANNEL MODIFICATIONS: X NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO	O RECOVERY
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pts] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] GRAVEL (2-64 mm) [9 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock BLDR SLABS [16 pts] SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] LEAF PACK/WOODY DEBRIS [3 pts] CLAY or HARDPAN [0 pt] ARTIFICIAL [3 pts] (B) (B)	HHEI Metric Points Substrate Max = 40 25 A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): 30 centimeters [20 pts]	Pool Depth Max = 30
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check <i>ONLY</i> one box): > 4.0 meters (> 13') [30 pts]	Bankfull Width Max=30
COMMENTS AVERAGE BANKFULL WIDTH (feet):	
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream ★	
RIPARIAN WIDTH L R (Per Bank) L R Mature Forest, Wetland D Moderate 5-10m None None Fenced Pasture FLOODPLAIN QUALITY (Most Predominant per Bank) L R L R Mature Forest, Wetland D Conservation Tillage Urban or Industrial Open Pasture, Row Cro Mining or Construction COMMENTS	op
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (interstitial) COMMENTS The property of the control of the	nt) -
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): □ None □ 1.0 □ 2.0 □ 3.0 ☑ 0.5 □ 1.5 □ 2.5 □ >3	
STREAM GRADIENT ESTIMATE	

QHEI PERFORMED? ☐ Yes ☒ No QHEI Score	e (If Yes, Attach Completed QHEI form)
DOWNSTREAM DESIGNATED USE(S)	
	Distance from Evaluated Stream
	Distance from Evaluated Stream 0.05 mile
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING	THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.
USGS Quadrangle Name: Chardon	NRCS Soil Map Page: NRCS Soil Map Stream Order:
_	Township/City: Hambden Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Yes Date of last precipit	ation: 9/23/21 Quantity: 1.72
Photo-documentation Notes:	
Elevated Turbidity? (Y/N): No Canopy (% open):	90
Were samples collected for water chemistry? (Y/N): No	Lab Sample # or ID (attach results):
Field Measures:Temp (°C) Dissolved Oxygen (mg	g/l) pH (S.U.) Conductivity (umhos/cm)
Is the sampling reach representative of the stream (Y/N) $\underline{\underline{Y}}$	<u>'es</u> If not, explain:
Additional comments/description of pollution impacts:	
	AL OBSERVATIONS
,	Il observations below)
Fish Observed? (Y/N) Species observed (if known	n):
Frogs or Tadpoles Observed? (Y/N) Species observed	ved (if known):
Salamanders Observed? (Y/N) Species observed (i	if known):
Aquatic Macroinvertebrates Observed? (Y/N) Speci	ies observed (if known):
Comments Regarding Biology:	

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





May 2020 Revision Page 2



Upstream



Substrate



Downstream



40	
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SITE NAME/LOCATION Stream LP-12 Leroy Center-Mayfield 138 kV Transmission Line Project	
SITE NUMBER S-MJA-102021-01 RIVER BASIN 04110004 RIVER CODE DRAINAGE AREA (mi²) 0.073	_
LENGTH OF STREAM REACH (ft) 283 LAT 41.61357 LONG -81.20179 RIVER MILE	_
DATE 10/20/2021 SCORER MJA COMMENTS Stream 8 along road 2. Channelized, culvert	_
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Instruction	ns
STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERED	OVERY
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pts] COBBLE (65-256 mm) [12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 5 BCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B PERCENT Type PERCENT Type SILT [3 pt] LEAF PACK/WOODY DEBRIS[3 pts] Subs Max Max 15 Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 5 Bldr Slabs, Boulder, Cobble, Bedrock 5 Total NUMBER OF SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES:	eric nts etrate = 40
TOTAL NUMBER OF SUBSTRATE THES.	
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Some 10 cm [15 pts]	
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check ONLY one box): Bank	kfull
> 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] > 3.0 m - 4.0 m (> 9' 7"- 13') [25 pts] × 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] × 5	
COMMENTS AVERAGE BANKFULL WIDTH (feet): 1.5	╝
This information <u>must</u> also be completed	
RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream ★ RIPARIAN WIDTH FLOODPLAIN QUALITY (Most Predominant per Bank)	
L R (Per Bank) L R L R Wide > 10m	
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing	
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): □ None □ 1.0 □ 2.0 □ 3.0 □ 0.5 □ 1.5 × 2.5 □ >3	
STREAM GRADIENT ESTIMATE	

QHEIPERFORMED? ☐ Yes ☑ No QHEIScore	e (If Yes, Attach C	Completed QHEI form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Big Creek		ance from Evaluated Stream 0.48 mile
☐ CWH Name:	Dista	ance from Evaluated Stream
☐ EWH Name:	Dista	ance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING	THE <u>ENTIRE</u> WATERSHED AREA.	CLEARLY MARK THE SITE LOCATION.
USGS Quadrangle Name: Chardon	NRCS Soil Map Page:	NRCS Soil Map Stream Order:
County: Geauga		
County:	Township/City:	
MISCELLANEOUS		
Base Flow Conditions? (Y/N): Yes Date of last precipit	ation: 10/17/21	Quantity: 0.15
Photo-documentation Notes:		
Elevated Turbidity? (Y/N): No Canopy (% open):	70	
Were samples collected for water chemistry? (Y/N): No	Lab Sample # or ID (attac	ch results):
Field Measures: Temp (°C) Dissolved Oxygen (mg	g/l) pH (S.U.)	Conductivity (umhos/cm)
Is the sampling reach representative of the stream (Y/N) $\underline{\underline{Y}}$	es If not, explain:	
Additional comments/description of pollution impacts:		
	AL OBSERVATIONS	
· ·	l observations below)	
Fish Observed? (Y/N) Species observed (if known	n):	
Frogs or Tadpoles Observed? (Y/N) Species observed.	ved (if known):	
Salamanders Observed? (Y/N) Species observed (i	f known):	
Aquatic Macroinvertebrates Observed? (Y/N) Specie	es observed (if known):	
Comments Regarding Biology:		
	<u> </u>	

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





Surveyed up to where it loses definition for ~10 ft in wetland, but channel does continue further upstream, entering the ROW via culvert







Upstream



Downstream



Substrate



|--|

SITE NAME/LOCATION Stream LP-13 Leroy Center-Mayfie	eld 138 kV Transmission Line Project	
	RIVER CODE DRAINAGE AREA (mi²) 0.0)77
LENGTH OF STREAM REACH (ft) 29 LAT 41.612	273 LONG -81.20235 RIVER MILE	
DATE 10/20/2021 SCORER MJA COMI	MENTS Intermittent. Channelized, culvert	
NOTE: Complete All Items On This Form - Refer to "	'Headwater Habitat Evaluation Index Field Manual" for Inst	ructions
	TURAL CHANNEL X RECOVERED RECOVERING RECENT OR N	
	esent). Check ONLY two predominant substrate TYPE boxes. the types found (Max of 8). Final metric score is sum of boxes A & B TYPE SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] FINE DETRITUS [3 pts] CLAY or HARDPAN [0 pt] MUCK [0 pts] ARTIFICIAL [3 pts]	HHEI Metric Points Substrate Max = 40
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 5 SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYP	(A) (B) (B) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C	A + B
2. Maximum Pool Depth (Measure the <u>maximum</u> potime of evaluation. Avoid plunge pools from road cul > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]	5 cm - 10 cm [15 pts] < 5 cm [5pts] NO WATER OR MOIST CHANNEL [0pts]	Pool Depth Max = 30
COMMENTS	MAXIMUM POOL DEPTH (inches): 2	
	WAXIMOWIT OOL DLI TIT (IIICHES)	
3. BANK FULL WIDTH (Measured as the average of > 4.0 meters (> 13') [30 pts]		Bankfull Width Max=30
3. BANK FULL WIDTH (Measured as the average of > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7"- 13') [25 pts]	f 3 - 4 measurements) (Check <i>ONLY</i> one box): > 1.0 m - 1.5 m (> 3' 3" - 4' 8")[15 pts]	Width
3. BANK FULL WIDTH (Measured as the average of > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7"- 13') [25 pts] > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] COMMENTS This inf	f 3 - 4 measurements) (Check <i>ONL</i> Y one box):	Width Max=30
3. BANK FULL WIDTH (Measured as the average of > 4.0 meters (> 13') [30 pts]	f 3 - 4 measurements) (Check <i>ONL</i> Y one box):	Width Max=30 5
3. BANK FULL WIDTH (Measured as the average of > 4.0 meters (> 13') [30 pts]	AVERAGE BANKFULL WIDTH (feet): 2	Width Max=30 5
3. BANK FULL WIDTH (Measured as the average of > 4.0 meters (> 13') [30 pts]	AVERAGE BANKFULL WIDTH (feet): 2	Width Max=30 5

QHEIPERFORMED? ☐ Yes ☒ No QHEIScore	(If Yes, Attach Completed QHEI form)	
☐ CWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream	
,	HE <u>ENTIRE</u> WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.	
USGS Quadrangle Name: Chardon	NRCS Soil Map Page:NRCS Soil Map Stream Order:	
County: Geauga	Township/City: Chardon Township	
MISCELLANEOUS		
Base Flow Conditions? (Y/N): Yes Date of last precipita	tion: 10/17/21 Quantity: 0.15	
Photo-documentation Notes:		
Elevated Turbidity? (Y/N): No Canopy (% open):	95	
Were samples collected for water chemistry? (Y/N): No	Lab Sample # or ID (attach results):	
Field Measures: Temp (°C) Dissolved Oxygen (mg/	l) pH (S.U.) Conductivity (umhos/cm)	
Is the sampling reach representative of the stream (Y/N) $\underline{Y} \epsilon$	If not, explain:	
Additional comments/description of pollution impacts:		
Additional comments/description of pollution impacts.		
	L OBSERVATIONS Observations below)	
Fish Observed? (Y/N) Species observed (if known)	·	
Frogs or Tadpoles Observed? (Y/N) Species observed (if known):		
Salamanders Observed? (Y/N) Species observed (if	known):	
Aquatic Macroinvertebrates Observed? (Y/N) Specie	s observed (if known):	
Comments Regarding Biology:		
Service regularing stolegy.		

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





May 2020 Revision





Upstream Downstream



Substrate



34

STE IV WILL ESSENTION	y Center-Mayfield 138 kV Transmission Line Project	
SITE NUMBER S-MJA-102021-03 RIVER BASIN	N <u>04110004</u> RIVER CODE DRAINAGE AREA (mi²) <u>0.</u>	035
LENGTH OF STREAM REACH (ft) 76	LAT 41.61075 LONG -81.20538 RIVER MILE	
DATE 10/20/2021 SCORER MJA	COMMENTS Intermittent stream 09. Channelized, culvert	
NOTE: Complete All Items On This For	m - Refer to "Headwater Habitat Evaluation Index Field Manual" for Ins	tructions
STREAM CHANNEL MODIFICATIONS:	NONE / NATURAL CHANNEL ▼ RECOVERED RECOVERING RECENT OR N	NO RECOVERY
(Max of 32). Add total number of sign TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pts] COBBLE (65-256 mm) [12 pts]		HHEI Metric Points Substrate Max = 40 4
	the <u>maximum</u> pool depth within the 61 meter (200 feet) evaluation reach at the	De el Dende
	ols from road culverts or storm water pipes) (Check ONLY one box): 5 cm - 10 cm [15 pts] < 5 cm [5pts] NO WATER OR MOIST CHANNEL [0pts]	Pool Depth Max = 30
COMMENTS	MAXIMUM POOL DEPTH (inches): 5	
3. BANK FULL WIDTH (Measured as	the average of 3 - 4 measurements) (Check ONLY one box):	Bankfull
> 4.0 meters (> 13') [30 pts]	> 1.0 m - 1.5 m (> 3' 3" - 4' 8")[15 pts]	Width Max=30
> 3.0 m - 4.0 m (> 9' 7"- 13') [25 pts]	X < 1.0 m (< 3' 3") [5 pts]	Wax=30
> 3.0 m - 4.0 m (> 9' 7"- 13') [25 pts] > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts		
		5
> 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts	AVERAGE BANKFULL WIDTH (feet): 1 This information <u>must</u> also be completed	5
> 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts COMMENTS RIPARIAN ZONE AND FLOC	AVERAGE BANKFULL WIDTH (feet): This information must also be completed ODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream *	5
> 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts	AVERAGE BANKFULL WIDTH (feet): This information must also be completed ODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream * FLOODPLAIN QUALITY (Most Predominant per Bank)	5
> 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts COMMENTS RIPARIAN ZONE AND FLOC RIPARIAN WIDTH L R (Per Bank) □ □ Moderate 5-10m □ □ Narrow <5m None	AVERAGE BANKFULL WIDTH (feet): This information must also be completed ODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream * FLOODPLAIN QUALITY (Most Predominant per Bank)	5 Top
COMMENTS RIPARIAN ZONE AND FLOC RIPARIAN WIDTH L R (Per Bank) X X Wide >10m Moderate 5-10m Narrow <5m None COMMENTS	This information must also be completed ODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream * FLOODPLAIN QUALITY (Most Predominant per Bank) L R X Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Field Urban or Industrial Residential, Park, New Field Open Pasture, Row Completed Conservation Tillage Fenced Pasture Mining or Construction	5 Top
> 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts COMMENTS RIPARIAN ZONE AND FLOC RIPARIAN WIDTH L R (Per Bank) X X Wide > 10m Moderate 5-10m Narrow < 5m None	AVERAGE BANKFULL WIDTH (feet): This information must also be completed ODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream * FLOODPLAIN QUALITY (Most Predominant per Bank) L R X X Mature Forest, Wetland Conservation Tillage Immature Forest, Shrub or Old Field Urban or Industrial Residential, Park, New Field Open Pasture, Row Completed Pasture Mining or Construction Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (intermitted)	5 Top
COMMENTS RIPARIAN ZONE AND FLOCE RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Bank) Stream Flowing Subsurface flow with isolated in COMMENTS	This information must also be completed ODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream FLOODPLAIN QUALITY (Most Predominant per Bank) L R X X Mature Forest, Wetland Immature Forest, Shrub or Old Field Immature Forest, Shrub or Old Field Open Pasture, Row Completed Fenced Pasture Wining or Construction Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (intermitted)	5 Top

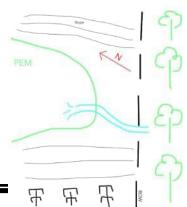
QHEI PERFORMED? ☐ Yes ☒ No QHEI Score	e (If Yes, Attach Completed QHEI form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Big Creek	Distance from Evaluated Stream 0.14 mile
☐ CWH Name:	Distance from Evaluated Stream
☐ EWH Name: Distance from Evaluated Stream	
MAPPING: ATTACH COPIES OF MAPS, INCLUDING	THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.
USGS Quadrangle Name: Chardon	NRCS Soil Map Page:NRCS Soil Map Stream Order:
	Township/City: Chardon Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Yes Date of last precipit	ation: 10/17/21 Quantity: 0.15
Photo-documentation Notes:	
ElevatedTurbidity?(Y/N): NO Canopy (% open): _	75
Were samples collected for water chemistry? (Y/N): \underline{No}	Lab Sample # or ID (attach results):
Field Measures: Temp (°C) Dissolved Oxygen (mg	g/l) pH (S.U.) Conductivity (umhos/cm)
Is the sampling reach representative of the stream (Y/N) $\underline{\underline{Y}}$	es If not, explain:
Additional comments/description of pollution impacts:	
·	AL OBSERVATIONS
,	l observations below)
Fish Observed? (Y/N) Species observed (if known	n):
Frogs or Tadpoles Observed? (Y/N) Species observed.	ved (if known):
Salamanders Observed? (Y/N) Species observed (i	f known):
Aquatic Macroinvertebrates Observed? (Y/N) Specie	es observed (if known):
Comments Regarding Biology: Frog observed, orange	cloudiness observed

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

Flows from wetland, through mowed pipeline ROW, and into woods outside of ROW







Upstream



Downstream



Substrate



OU

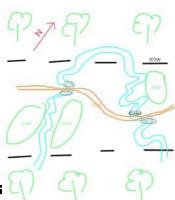
SITE NAME/LOCATION Stream LP-16 Leroy Center-Mayfield 138 kV Transmission Line Project	
SITE NUMBER S-MJA-102021-05 RIVER BASIN 04110004 RIVER CODE DRAINAGE AREA (mi²) 0.	
LENGTH OF STREAM REACH (ft) 539 LAT 41.60689 LONG -81.21183 RIVER MILE	
DATE 10/20/2021 SCORER MJA COMMENTS Ephemeral. Concrete channeled; culvert	
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Institute Complete Com	tructions
STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR	NO RECOVERY
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pts] COBBLE (65-256 mm)[12 pts] GRAVEL (2-64 mm) [9 pts] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock BLDR SLABS [16 pts] SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] CLAY or HARDPAN [0 pt] MUCK [0 pts] ARTIFICIAL [3 pts] (B) (B)	HHEI Metric Points Substrate Max = 40 25 A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 TOTAL NUMBER OF SUBSTRATE TYPES: 4	
Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): 30 centimeters [20 pts] 5 cm - 10 cm [15 pts] > 22.5 - 30 cm [30 pts] < 5 cm [5pts] > 10 - 22.5 cm [25 pts] NO WATER OR MOIST CHANNEL [0pts]	Pool Depth Max = 30
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8")[15 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] × 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] × 1.0 m (≤ 3' 3") [5 pts]	Bankfull Width Max=30
COMMENTS AVERAGE BANKFULL WIDTH (feet):	
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream ★	•
RIPARIAN WIDTH L R (Per Bank) L R Mature Forest, Wetland L R Moderate 5-10m Narrow <5m None None RIPARIAN WIDTH L R FLOODPLAIN QUALITY (Most Predominant per Bank) L R L R Mature Forest, Wetland D Conservation Tillage Urban or Industrial Residential, Park, New Field D Open Pasture, Row C Mining or Construction COMMENTS	•
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing	ent)
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): □ None □ 1.0 □ 2.0 □ 3.0 □ 0.5 □ 1.5 □ 2.5 □ >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) X Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100	100 ft)

QHEI PERFORMED? ☐ Yes ☑ No QHEI Score	e (If Yes, Attach Completed QHEI form)
☐ CWH Name:	Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream Distance from Evaluated Stream
	THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.
USGS Quadrangle Name: Chardon	NRCS Soil Map Page: NRCS Soil Map Stream Order:
County: Geauga	Township/City: Chardon Township
MISCELLANEOUS Base Flow Conditions? (Y/N): Yes Date of last precipit	ation: 10/17/21 Quantity: 0.15
Photo-documentation Notes:	
Elevated Turbidity? (Y/N): No Canopy (% open):	90
Were samples collected for water chemistry? (Y/N): No	Lab Sample # or ID (attach results):
	g/l) pH (S.U.) Conductivity (umhos/cm)
Is the sampling reach representative of the stream (Y/N) $\underline{\Upsilon}$	S If not, explain:
Additional comments/description of pollution impacts:	
BIOLOGICA	AL OBSERVATIONS
	l observations below)
Fish Observed? (Y/N) Species observed (if known	n):
	ved (if known):
Salamanders Observed? (Y/N) Species observed (i	f known):
Aquatic Macroinvertebrates Observed? (Y/N) Speci	es observed (if known):
Comments Regarding Biology:	

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





May 2020 Revision



Upstream



Substrate



Downstream



SITE NAME/LOCATION Stream LP-17 Leroy Center-Mayfield 138 kV Transmission Line Project	
SITE NUMBER S-MJA-101921-01 RIVER BASIN 04110004 RIVER CODE DRAINAGE AREA (mi²) 0.4	
LENGTH OF STREAM REACH (ft) 441 LAT 41.59917 LONG -81.22231 RIVER MILE	
DATE 10/19/2021 SCORER MJA COMMENTS Intermittent. Channelized, culvert	
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Inst	ructions
STREAM CHANNEL MODIFICATIONS: X NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR N	O RECOVERY
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B TYPE BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts] BEDROCK [16 pts] COBBLE (65-256 mm) [12 pts] SILT [3 pt] LEAF PACK/WOODY DEBRIS [3 pts] FINE DETRITUS [3 pts] CLAY or HARDPAN [0 pt] SAND (<2 mm) [6 pts] Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock Bdr Slabs, Boulder, Cobble, Bedrock (B) Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock	HHEI Metric Points Substrate Max = 40 16
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 7	A + B
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Sometimeters [20 pts] 5 cm - 10 cm [15 pts] 5 cm - 10 cm [5pts] 5 cm - 10 cm [5pts] 7 cm 5 cm	Pool Depth Max = 30
COMMENTS MAXIMUM POOL DEPTH (inches): 24	
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check ONLY one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts] ≤ 1.0 m (≤ 3' 3") [5 pts] ≤ 1.0 m (≤ 3' 3") [5 pts]	Bankfull Width Max=30
COMMENTS AVERAGE BANKFULL WIDTH (feet): 5	
This information <u>must</u> also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream ★	
RIPARIAN WIDTH L R (Per Bank) L R Wide >10m Moderate 5-10m None None RIPARIAN WIDTH (Per Bank) L R L R Mature Forest, Wetland D Conservation Tillage D Woderate Service Method D Conservation Tillage D Work Predominant per Bank) L R L R Mature Forest, Wetland D Conservation Tillage D Work Predominant per Bank) D Conservation Tillage D Work Predominant per Bank) D Residential, Park, Wetland D Open Pasture, Row Credominant per Bank) D Nature Forest, Wetland D Open Pasture, Row Credominant per Bank) D Nature Forest, Wetland D Open Pasture, Row Credominant per Bank) D Nature Forest, Wetland D Open Pasture, Row Credominant per Bank)	ор
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing	nt)
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): □ None □ 1.0 □ 2.0 ☒ 3.0 □ 0.5 □ 1.5 □ 2.5 □ >3	
STREAM GRADIENT ESTIMATE X Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/1	00 ft)

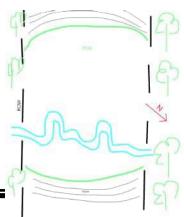
QHEIPERFORMED? ☐ Yes ☑ No QHEIScore	e (If Yes, Attach C	Completed QHEI form)		
DOWNSTREAM DESIGNATED USE(S) WWH Name: Big Creek	•	ance from Evaluated Stream 1.18 miles		
☐ CWH Name: Distance from Evaluated Stream				
☐ EWH Name: Distance from Evaluated Stream				
MAPPING: ATTACH COPIES OF MAPS, INCLUDING	THE <u>ENTIRE</u> WATERSHED AREA.	CLEARLY MARK THE SITE LOCATION.		
USGS Quadrangle Name: Chardon	NRCS Soil Man Page:	NRCS Soil Man Stream Order		
County: Geauga	Township/City: Chardon	Township		
MISCELLANEOUS				
Base Flow Conditions? (Y/N): Yes Date of last precipit	ation: 10/17/21	Quantity: 0.15		
Photo-documentation Notes:				
Elevated Turbidity? (Y/N): No Canopy (% open):	95			
Were samples collected for water chemistry? (Y/N): No	Lab Sample # or ID (attac	ch results):		
Field Measures: Temp (°C) Dissolved Oxygen (mg	g/l) pH (S.U.)	Conductivity (umhos/cm)		
Is the sampling reach representative of the stream (Y/N) \underline{Y}	es If not, explain:			
Additional comments/description of pollution impacts:				
BIOLOGICA	AL OBSERVATIONS			
(Record al	l observations below)			
Fish Observed? (Y/N) Species observed (if known	n):			
Frogs or Tadpoles Observed? (Y/N) Species observed	ved (if known):			
Salamanders Observed? (Y/N) Species observed (i	f known):			
Aquatic Macroinvertebrates Observed? (Y/N) Specie	es observed (if known):			
Comments Regarding Biology: Fish observed				
	<u> </u>			

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This <u>must</u> be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

Deeply incised channel in places







Upstream



Substrate



Downstream



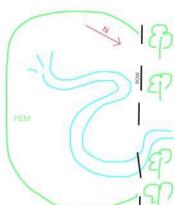
SITE NAME/LOCATION Stream LP-18 Leroy Center-Mayfield 138 kV Transmission Line Project	
SITE NUMBER S-MJA-101821-01 RIVER BASIN 04110004 RIVER CODE DRAINAGE AREA (mi²) 0.1	10
LENGTH OF STREAM REACH (ft) 103 LAT 41.59820 LONG -81.22490 RIVER MILE	
DATE 10/18/2021 SCORER MJA COMMENTS Intermittent. Channelized, culvert	
NOTE: Complete All Items On This Form - Refer to "Headwater Habitat Evaluation Index Field Manual" for Inst	ructions
STREAM CHANNEL MODIFICATIONS: X NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO	O RECOVERY
1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B TYPE PERCENT SILT [3 pt] BLDR SLABS [16 pts] BBUR SL	HHEI Metric Points Substrate Max = 40 23
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 21 TOTAL NUMBER OF SUBSTRATE TYPES: 2	A+B
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts]	Pool Depth Max = 30
COMMENTS MAXIMUM POOL DEPTH (inches): 10	
3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check <i>ONLY</i> one box): > 4.0 meters (> 13') [30 pts] > 1.0 m - 1.5 m (> 3' 3" - 4' 8")[15 pts] > 3.0 m - 4.0 m (> 9' 7"- 13') [25 pts] × 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts] × 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]	Bankfull Width Max=30
COMMENTS AVERAGE BANKFULL WIDTH (feet):	
This information must also be completed RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream ★	
RIPARIAN WIDTH (Per Bank) L R Wide >10m Moderate 5-10m Narrow <5m None COMMENTS RESIDENTS FLOODPLAIN QUALITY (Most Predominant per Bank) L R L R L R Conservation Tillage Urban or Industrial Open Pasture, Row Cro Mining or Construction	op
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing	nt) _
SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box): □ None □ 1.0 □ 2.0 ▼ 3.0 □ 0.5 □ 1.5 □ 2.5 □ >3	
STREAM GRADIENT ESTIMATE Flat (0.5 ft/100 ft) X Flat to Moderate	00 ft)

QHEI PERFORMED? ☐ Yes ☑ No QHEI Score	(If Yes, Attach Completed QHEI form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Big Creek	Distance from Evaluated Stream 1.35 miles
☐ CWH Name:	Distance from Evaluated Stream
☐ EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING	THE <u>ENTIRE</u> WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.
USGS Quadrangle Name: Chardon	NRCS Soil Map Page:NRCS Soil Map Stream Order:
	Township/City: Chardon Township
MISCELLANEOUS	
Base Flow Conditions? (Y/N): Yes Date of last precipita	ation: 10/17/21 Quantity: 0.15
Photo-documentation Notes:	
Elevated Turbidity? (Y/N): No Canopy (% open):	90
Were samples collected for water chemistry? (Y/N): No	Lab Sample # or ID (attach results):
Field Measures: Temp (°C) Dissolved Oxygen (mg	/l) pH (S.U.) Conductivity (umhos/cm)
Is the sampling reach representative of the stream (Y/N) $\frac{Y_0}{Y_0}$	es_ If not, explain:
Additional comments/description of pollution impacts:	
	AL OBSERVATIONS observations below)
Fish Observed? (Y/N) Species observed (if known):
	ved (if known):
Salamanders Observed? (Y/N) Species observed (if	known):
Aquatic Macroinvertebrates Observed? (Y/N) Specie	es observed (if known):
Comments Regarding Biology:	

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed)

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location





May 2020 Revision



Upstream



Substrate



Downstream





POND DATA SHEET FEATURE ID Pond LP-01 **ASSOCIATED FEATURES:** Survey Type: Wetland and waterbodies delineation **CLIENT/PROJECT NAME:** FirstEnergy DATE: 11/11/2021 Leroy Center-Mayfield 138 kV Transmission Line Project **ROUTE: INVESTIGATORS:** BAO STATE/COUNTY: OH IS THIS A MAPPED NWI FEATURE?: no Lake **WATERBODY CHARACTERISTICS** WATERBODY TYPE: Constructed pond Estimated 4 ft AVG. DEPTH: AVG. WIDTH (WATER SURFACE): 400 ft 4 acres **APPROXIMATE SIZE: QUALITATIVE ATTRIBUTES AVERAGE WATER APPEARANCE:** Clear PRIMARY SUBSTRATE (IF Silt OBSERVED): **POTENTIAL HABITAT FOR: SURROUNDING LAND USE:** ROW, wetlands N/A WETLAND FRINGE (IF PRESENT): **COMMENTS**





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POND DATA SHEET FEATURE ID Pond LP-02 **ASSOCIATED FEATURES:** Survey Type: Wetland and waterbodies delineation **CLIENT/PROJECT NAME:** FirstEnergy DATE: 11/10/2021 Leroy Center-Mayfield 138 kV Transmission Line Project **INVESTIGATORS: ROUTE:** BAO Is this a Mapped NWI Feature?: yes STATE/COUNTY: OH Lake **PUBGX WATERBODY CHARACTERISTICS POND** WATERBODY TYPE: Estimated 4 ft AVG. DEPTH: AVG. WIDTH (WATER SURFACE): 300 ft 10.5 acres **APPROXIMATE SIZE: QUALITATIVE ATTRIBUTES AVERAGE WATER APPEARANCE:** Good PRIMARY SUBSTRATE (IF OBSERVED): **POTENTIAL HABITAT FOR: SURROUNDING LAND USE:** Residential None WETLAND FRINGE (IF PRESENT): **COMMENTS**



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POND DATA SHEET FEATURE ID Pond LP-03 **ASSOCIATED FEATURES:** Survey Type: Wetland and waterbodies delineation **CLIENT/PROJECT NAME:** FirstEnergy DATE: 11/10/2021 Leroy Center-Mayfield 138 kV Transmission Line Project **ROUTE: INVESTIGATORS:** BAO Is this a Mapped NWI Feature?: yes STATE/COUNTY: OH **PUBG** Lake **WATERBODY CHARACTERISTICS POND** WATERBODY TYPE: Estimated 2 ft AVG. DEPTH: AVG. WIDTH (WATER SURFACE): 100 ft 1 acre **APPROXIMATE SIZE: QUALITATIVE ATTRIBUTES AVERAGE WATER APPEARANCE:** Clear PRIMARY SUBSTRATE (IF Silt OBSERVED): **POTENTIAL HABITAT FOR: SURROUNDING LAND USE:** Residential, wooded PEM WETLAND FRINGE (IF PRESENT): **COMMENTS**



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POND DATA SHEET FEATURE ID Pond LP-04 **ASSOCIATED FEATURES:** Survey Type: Wetland and waterbodies delineation CLIENT/PROJECT NAME: FirstEnergy DATE: 09/10/2021 Leroy Center-Mayfield 138 kV Transmission Line Project **ROUTE: INVESTIGATORS: BCR** Is this a Mapped NWI Feature?: yes STATE/COUNTY: OH Geauga **PUBGx WATERBODY CHARACTERISTICS** Pond WATERBODY TYPE: Estimated 4 ft AVG. DEPTH: AVG. WIDTH (WATER SURFACE): 90 0.5 acre **APPROXIMATE SIZE: QUALITATIVE ATTRIBUTES AVERAGE WATER APPEARANCE:** Clear brown PRIMARY SUBSTRATE (IF Silt OBSERVED): **POTENTIAL HABITAT FOR:** Frogs **SURROUNDING LAND USE:** Mowed N/A WETLAND FRINGE (IF PRESENT): **COMMENTS**





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POND DATA SHEET FEATURE ID Pond LP-05 **ASSOCIATED FEATURES:** Survey Type: Wetland and waterbodies delineation CLIENT/PROJECT NAME: FirstEnergy DATE: 09/10/2021 Leroy Center-Mayfield 138 kV Transmission Line Project **INVESTIGATORS: ROUTE: BCR** Is this a Mapped NWI Feature?: yes STATE/COUNTY: OH Geauga **PUBGx WATERBODY CHARACTERISTICS** Pond WATERBODY TYPE: Estimated 3 ft AVG. DEPTH: AVG. WIDTH (WATER SURFACE): 100 0.5 acre **APPROXIMATE SIZE: QUALITATIVE ATTRIBUTES AVERAGE WATER APPEARANCE:** Slightly cloudy brown PRIMARY SUBSTRATE (IF Silt OBSERVED): **POTENTIAL HABITAT FOR:** None observed **SURROUNDING LAND USE:** Mowed lawn N/A WETLAND FRINGE (IF PRESENT): **COMMENTS**





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POND DATA SHEET

		OND DA	IA OIIL	1		
FEATURE ID Pond LP-06	EATURE ID Pond LP-06 ASSOCIATED FEATURES:					
Survey Type: Wetland and waterbodies delineation						
DATE: 09/10/2021	CLIENT/PROJECT NAME:	FirstEner	gy	Leroy Center-May	field 138 kV Tra	nsmission Line Project
INVESTIGATORS: BCR		R оите:				
STATE/COUNTY: OH	Geauga		IS THIS A MAPE	ped NWI FEATURE?: ye	es	PUBGx
	١	WATERBODY CH	IARACTERIST	ics		
WATERBODY TYPE:	Pond					
AVG. DEPTH:	Estimated 3 ft					
AVG. WIDTH (WATER SURFACE):	60 ft					
APPROXIMATE SIZE:	0.25 acre					
		QUALITATIVE	ATTRIBUTES	5		
AVERAGE WATER APPEARANCE:	Slightly cloudy brov	vn/gray				
PRIMARY SUBSTRATE (IF OBSERVED):	Silt					
POTENTIAL HABITAT FOR:	Fish, turtles, damse	elflies				
SURROUNDING LAND USE:	Mowed lawn, old fie	eld ROW				
WETLAND FRINGE (IF PRESENT):	PEM outside of RO	W				
COMMENTS						





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