AMERICAN TRANSMISSION SYSTEMS, INCORPORATED A FIRSTENERGY COMPANY

LETTER OF NOTIFICATION

DARROW-HUDSON EAST 138 kV TRANSMISSION LINE STRUCTURE REPLACEMENT AND ADDITION PROJECT

Case No.: 24-0243-EL-BLN

April 29, 2024

American Transmission Systems, Incorporated 76 South Main Street Akron, Ohio 44308

LETTER OF NOTIFICATION DARROW-HUDSON EAST 138 kV TRANSMISSION LINE STRUCTURE REPLACEMENT AND ADDITION PROJECT

The following information is being provided in accordance with the procedures in the Ohio Administrative Code (OAC) Chapter 4906-6 for the application and review of Accelerated Certificate Applications. Based upon the requirements found in Appendix A to OAC Rule 4906-1-01, this Project qualifies for submittal to the Ohio Power Siting Board ("OPSB") as a Letter of Notification application.

4906-6-05(B): LETTER OF NOTIFICATION REQUIREMENTS

4906-6-05(B) (1): Name and Reference Number

Name of Project:	Darrow-Hudson East 138 kV Transmission Line Structure Replacement and Addition Project ("Project")
Reference Number:	2317-1

4906-6-05(B)(1): Brief Description of Project

In this Project, American Transmission Systems, Incorporated, ("ATSI"), a FirstEnergy company, is proposing to install seven (7) new midspan structures and replace nine (9) existing structures at various locations on the existing Darrow-Hudson East 138 kV Transmission Line. The existing conductor and shield wires will be transferred to the new mid-span and replaced structures. The Project is needed to address multiple clearance concerns that were identified on the existing Darrow-Hudson East 138 kV Transmission Line.

The Project is located in the city of Hudson, Summit County, and the city of Streetsboro, Portage County, Ohio. The general location of the Project is shown in Exhibit 1, a partial copy of the United States Geologic Survey, Summit and Portage Counties, OH, Quad Map. Exhibit 2 is a copy of ESRI aerial imagery of the Project area. The general layout of the Project is shown in Exhibit 3.

4906-6-05(B)(1): Letter of Notification Requirement

The Project meets the requirements for a Letter of Notification application because the Project is within the types of projects defined by Item (2)(b) of the Application Requirement Matrix for Electric Power Transmission Lines. Appendix A of OAC Rule 4906-1-01. This item states:

(2) Adding new circuits on existing structures designed for multiple circuit use, replacing conductors on existing structures with larger or bundled conductors, adding structures to an existing transmission line, or replacing structures with a different type of structure, for a distance of:

(b) More than two miles.

The proposed Project is within the requirements of Item (2)(b) because it involves the replacement of structures for a distance greater than 2 miles.

4906-6-05 (B)(2): Need for the Project

As a part of ATSI's Right-Of-Way ("ROW") Assurance Program, a program that assesses existing transmission lines and their associated ROWs for clearance issues that violate the National Electric Reliability Corporation ("NERC") design and operating field condition requirements; and the National Electrical Safety Code ("NESC") minimum transmission line conductor-to-conductor clearance requirements, multiple clearance concerns throughout the existing Darrow-Hudson East 138 kV Transmission Line have been identified. After modeling the circuits with new LiDAR data, it was found that actual field clearances did not match the design clearances for the operation of the circuits.

Upon discovery of the clearance concern, immediate action was taken to reduce the allowable ratings of the Darrow-Hudson East 138 kV Transmission Line ("de-rate")

and to begin developing permanent mitigation to achieve adequate clearances at the transmission line's maximum operating temperature.

The proposed permanent solution consists of installing seven (7) new mid-span wooden h-frame structures and replacing nine (9) wooden h-frame structures. These proposed structures will reestablish adequate clearances for the conductors.

4906-6-05 (B)(3): Location of the Project Relative to Existing or Proposed Lines

The location of the Project relative to existing or proposed lines is shown in the ATSI Transmission Network Map, included as part of the confidential portion of the FirstEnergy Corp. 2023 Long-Term Forecast Report. This map was submitted to the Public Utilities Commission of Ohio ("PUCO") in Case No. 23-0504-EL-FOR under Rule 4901:5-5:04 (C)(2)(b) of the Ohio Administrative Code. This map is incorporated by reference only. The Project was not included in the 2023 LTFR as it was not identified at the time of filing and does not entail any topology or rating change. The general location of the Project area is shown in Exhibits 1 and 2. The general layout is shown in Exhibit 3.

4906-6-05 (B)(4): Alternatives Considered

Due to the nature of the identified clearance issue, there were no alternatives considered for this project.

4906-6-05(B)(5): Public Information Program

ATSI's manager of External Affairs will advise local officials of features and the status of the proposed Project as necessary. ATSI will maintain a copy of this Letter of Notification, along with other Project information, on FirstEnergy's website: https://www.firstenergycorp.com/about/transmission_projects/ohio.html.

ATSI will publish notice of the Project in the Akron Beacon Journal and the Ravenna Record Courier within 7 days of filing this Letter of Notification application. The notice will comply with OAC 4906-6-08(A)(1)-(6). In addition to the public notice,

ATSI will mail letters in accordance with OAC 4906-6-08(B) explaining the Project to affected landowners and tenants and informing them of the Project's anticipated sequencing of construction and restoration activities, including the start date and overall time frame. During all phases of this Project, the public may contact ATSI through the transmission projects hotline at 1-888-311-4737 or via email at: transmissionprojects@firstenergycorp.com.

4906-6-05(B)(6): Construction Schedule

Construction on the Project is expected to begin as early as August 2024 and be completed/in-service by November 2024.

4906-6-05(B)(7): Area Map

The general location of the Project is shown in Exhibit 1, a partial copy of the United States Geologic Survey, Summit County and Portage County, OH, Quad Map. Exhibit 2 is a copy of ESRI aerial imagery of the Project area. The general layout of the Project is shown in Exhibit 3.

4906-6-05(B)(8): Properties List

The Project is located on existing right-of-way. New temporary access rights may be required as part of the Project. Exhibit 4 contains a list of properties affected by the Project.

4906-6-05(B)(9): TECHNICAL FEATURES OF THE PROJECT

4906-6-05(B)(9)(a): Operating Characteristics

The transmission line construction will have the following characteristics:

Voltage:	138 kV
Conductors:	477 kcmil 26/7 ACSR (existing)
Static Wire:	134.6 kcmil 12/7 ACSR (Existing from Darrow Substation to
	Existing Structure 7845)

	101.8 kcmil 12/7 ACSR (Existing from structure 7485 to
	Hudson East Substation
Insulators:	Polymer, Glass
ROW Width:	100 feet
Land Requirements:	Access Rights
Structure Types:	Sixteen (16) new structures will be installed.
	Exhibit 5: Two Pole Wood H-Frame Nonstandard Midspan
	Post Structure (6 Structures)
	Exhibit 6: Two Pole Wood H-Frame Nonstandard Deadend
	Structure (1 Structure)
	Exhibit 7: Single Circuit Wood Pole Structure Suspension
	Horizontal Two Pole H-Frame (6 Structures)
	Exhibit 8: Single Circuit Wood Pole Structure Tangent Strain
	Horizontal Two Pole H-Frame (3 Structures)

4906-6-05 (B)(9)(b): Electric and Magnetic Fields

As there are occupied residences or institutions within 100 feet from the existing transmission line centerline, Electric and Magnetic Field ("EMF") calculations are required by this code provision.

4906-6-05 (B)(9)(b)(i): Calculated Electric and Magnetic Fields Strength Levels

The Project is an approximately 7.65-mile single circuit 138 kV transmission line located within an existing 100-foot-wide rights-of-way that does not share the right-of-way with any other transmission lines.

Table 1 itemizes the line loading of the Project. The normal line loading represents FirstEnergy's peak system load for the transmission line. The emergency line loading represents the maximum line loading under contingency operation. The winter rating is based on the continuous maximum conductor rating ("MCR") of the circuit for the single conductors per phase and an ambient temperature of zero degrees centigrade (32 °F), wind speed of 1.3 miles per hour, and a circuit design operating temperature of 100 °C (212 °F).

Line Name	Normal	Emergency	Winter Rating
	Loading Amps	Loading Amps	Amps
Darrow-Hudson East 138 kV Transmission Line	96.9	233	1198

Table 1: Transmission Line Loading

Table 2 provides an approximation of the magnetic and electric field strengths of the Darrow-Hudson East 138 kV Transmission Line between tangent-to-tangent structures. The calculations provide an approximation of the electric and magnetic field levels based on specific assumptions utilizing the EPRI EMF Workstation 2015 program software. This program software assumes the input transmission line configuration is located on flat terrain. Also, a balanced, three-phase circuit loading is assumed for the transmission circuit. The model utilizes the normal, emergency, and winter rating of the transmission line.

Table 2: EMF Calculations for Darrow-Hudson	East 138 kV Transmission Line
Tangent to Tangent Structures	

Darrow-Hudson East 138 kV Transmission Line Tangent to Tangent Structures, 100-foot ROW		Electric Field kV/m	Magnetic Field mG	
Normal	Under Lowest Conductors	2.299	31.53	
Loading	At Right-of-Way Edges	0.627 / 0.647	6.52 / 6.92	
Emergency	Under Lowest Conductors	2.299	76.09	
Loading	At Right-of-Way Edges	0.627 / 0.647	15.26 / 16.10	
Winter	Under Lowest Conductors	2.299	391.23	
Rating	At Right-of-Way Edges	0.627 / 0.647	78.48 / 79.80	

4906-6-05 (B)(9)(b)(ii): Alternative Design Consideration for Electric and **Magnetic Fields**

The strength of EMFs can potentially be reduced by installing the transmission line conductors in a compact configuration by selecting conductor phasing that reduces the field strengths. ATSI designs its facilities according to the requirements of the NESC. The pole heights and configuration were chosen based on NESC specifications, engineering parameters, and cost. In this Project, ATSI proposes to install 138 kV transmission lines primarily on single circuit wood H-frame tangent structures supported on suspension insulators.

4906-6-05(B)(9)(c): Estimated Cost

The estimated cost for the proposed Project is \$1,758,521. Although not statutorily required for approval, at the request of OPSB Staff, ATSI confirms that ATSI's costs will be captured and allocated via FERC formula rates for the ATSI Transmission Zone, Attachment H-21 in the PJM OATT.

4906-6-05(B)(10): Social and Ecological Impacts

4906-6-05(B)(10)(a): Land Uses

The Project is located in the city of Hudson, Summit County and the city of Streetsboro, Portage County, Ohio. There are various land uses along the route of the line, mainly residential uses, with agricultural, commercial and industrial uses to a lesser extent.

4906-6-05(B)(10)(b): Agricultural Land

A list of all agricultural land and acreage including agricultural district land is

provided in Exhibit 4.

4906-6-05(B)(10)(c): Archaeological or Cultural Resources

As part of the investigation for this Construction Notice, TRC submitted a request to the Ohio State Historic Preservation Office to review and provide comments on the

project area on March 6, 2024. On April 3, 2024, the Ohio State Historic Preservation Office (SHPO) replied to the request, attached as part of Exhibit 9. SHPO concluded that several historic properties, districts, or archaeological sites are located within or adjacent to the affected project area (APE). A summary of these sites is listed in Exhibit 9. Based on this information and the nature of the proposed project, it is the SHPO's opinion that no cultural resource studies are warranted for the Project. Furthermore, as proposed, the Project will have no effect to historic properties. No further coordination is required for this Project unless the scope of work changes or archaeological remains are discovered during the course of the Project. A map of the surveyed APE is also attached as part of Exhibit 9.

<u>4906-6-05(B)(10)(d): Construction Filings with Local, State and Federal</u> <u>Governmental Agencies</u>

Table 3 shows the list of government agency requirements for the Project.

Agency	Documents
USACE	NWP 57
Portage County Engineer	Individual Haul Permits, or RUMA
Portage County Soil and Water Conservation District	Stormwater Plan Review
Summit Soil and Water Conservation District	Stormwater Plan Review
Ohio Environmental Protection Agency	Stormwater Plan
Notice of Intent (NOI) for National Pollutant Discharge Elimination System (NPDES)	Ohio EPA
Storm Water Pollution Prevention Plan Review	Lucas County Engineer's Office

Table 3. List of Government Agency Requirements.

4906-6-05 (B)(10)(e): Endangered, Threatened, Rare and Designated Species Investigation

As part of the investigation, ATSI retained TRC to conduct the necessary environmental surveys. TRC submitted a request to the Ohio Department of Natural Resources (ODNR) Office of Real Estate to conduct an Environmental Review. As part of the Environmental Review, the ODNR Office of Real Estate conducted a search of the ODNR Division of Wildlife's Natural Heritage Database to research the presence of any endangered, threatened, or rare species within one (1) mile of the Project Study Area. The ODNR's Office of Real Estate's response on December 22, 2023, indicated that there are 42 records of state and/or federally listed plants, animals, and communities located within a one-mile radius of the Project Study Area. Additionally, the Project is within the range of 12 state and/or federally listed plants or animal species. A copy of ODNR's Office of Real Estate's response is included as Exhibit 10. A list of all endangered, threatened, and rare species, as identified by ODNR, within a one-mile radius of the Project is provided in Table 4 and a list of all endangered, threatened, and rare species, as identified by ODNR, within the range of the Project is provided in Table 5.

As part of the investigation, TRC also submitted a request to the US Fish and Wildlife Service (USFWS) for an Ecological Review to research the presence of any endangered, threatened, rare, or designated species within one (1) mile of the Project Area. A copy of USFWS's Ecological Review response, dated November 29, 2023, is included as Exhibit 11. The response indicated that the proposed Project is in the vicinity of one or more confirmed records of Indiana bats and/or northern long-eared bats. Seasonal tree clearing is recommended by USFWS to avoid any adverse effects to Indiana bats and northern long-eared bats. Due to the project type, size, location, and the proposed implementation of seasonal tree cutting, the USFWS does not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat.

Common Name	Scientific Name	State Listed Status	Federal Listed Status	Affected Habitat		
		Birds				
Sora Rail	Porzana carolina	Species of Concern	N/A	Freshwater wetlands with emergent vegetation such as cattails, sedges, and rushes		
Virginia Rail	Rallus limicola	Species of Concern	N/A	Fresh and brackish wetlands with cattails and bulrushes, and secondarily use coastal saltmarshes		
Wilson's Snipe	Gallinago delicata	Special Interest	N/A	Muddy pond edges, damp fields, and other wet, open habitats		
		Insects				
Sphagnum Sprite	Nehalennia gracilis	Species of Concern	N/A	Sphagnum bogs and grassy ponds with dense beds of sedges and grasses		
		Mussels		•		
Creek Heelsplitter	Lasmigona compressa	Species of Concern	N/A	Perennial streams with fine gravel or sand		
Plants and Plant Communities						
Autumn Willow	Salix serissima	Potentially Threatened	N/A	Shores, fens, swamps, bogs, floating mats, sedge meadows, and peatlands		
Bayberry	Myrica pensylvanica	Endangered	N/A	Sandy, peaty, and slightly acidic well drained soils receiving full to partial sun		
Bearded Wheat Grass	Elymus trachycaulus	Threatened	N/A	Average to dry sandy or rocky soil; prairies, savanna, dunes, shores, forest openings, rocky slopes, rock outcrops		
Bebb's Sedge	Carex bebbii	Potentially Threatened	N/A	Shores, stream banks, swamps, meadows, forest clearings, swales		
Blue-leaved Willow	Salix myricoides	Potentially Threatened	N/A	Beaches and dunes of the Lakes, and occasionally along inland streams and in fens, if calcareous		
Bog Bedstraw	Galium labradoricum	Endangered	N/A	Fens, swamps, cold bogs, wet meadows, moist thickets		
Boreal fen plant community	N/A	N/A	N/A	N/A		
Broad-winged Sedge	Carex alata	Potentially Threatened	N/A	Marshes, swamps, meadows, and fens, particularly those with limestone or non-acidic substrates		
Bunchberry	Cornus canadensis	Threatened	N/A	Acidic soil; moist woods, bogs		

Table 4. List of Endangered, Threatened, and Rare Species within a 1-mile radius of Project Area

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Bunchflower	Veratrum virginicum	Threatened	N/A	Open bottomland woodlands, damp meadows, swamps, marshes, fens, floating bogs, and roadside ditches
Crinkled Hair Grass	Avenella flexuosa	Potentially Threatened	N/A	Dry, open woods; fields, roadsides, and hillsides; often on sandy soils
False Asphodel	Triantha glutinosa	Threatened	N/A	Calcareous soil; fens, seeps, marly shorelines, wet meadows
Floating Pondweed	Potamogeton natans	Potentially Threatened	N/A	Shallow to 8 feet deep water; lakes, ponds, streams, rivers
Fuzzy Hypnum Moss	Tomentypnum nitens	Endangered	N/A	Calcareous to intermediately mineral-rich habitats, mesotrophic fens
Great St. John's-wort	Hypericum ascyron ssp. pyramidatum	Threatened	N/A	Floodplain (river or stream floodplains), marshes, meadows and fields, shores of rivers or lakes
Green Cotton-grass	Eriophorum viridicarinatum	Threatened	N/A	Bogs, conifer swamps, marshes, fens, wet meadows, wet woods, shores
Highbush-cranberry	Viburnum opulus var. americanum	Endangered	N/A	Moist soil; forest edges, clearings, swamps, fens, shores, banks
Hoary Willow	Salix candida	Threatened	N/A	Calcareous fens, swamps, wet meadows, floating mats, shores, peatlands
Leather-leaf	Chamaedaphne calyculata	Threatened	N/A	Bogs, peatlands, swampy streambanks in coniferous forests
Lesser Panicled Sedge	Carex diandra	Endangered	N/A	Swamps, marshes, floating mats, wet meadows, shores
Little Green Sedge	Carex viridula	Threatened	N/A	Moist to wet, sandy or rocky soil; marshes, fens, lakeshores, wet meadows, seeps, swales
Marsh Arrow-grass	Triglochin palustris	Potentially Threatened	N/A	Fens, marshes, bogs
Mixed emergent marsh plant community	N/A	N/A	N/A	N/A
Prairie Rattlesnake-root	Nabalus racemosus	Potentially Threatened	N/A	Moist sandy soil; wet meadows, prairies, stream banks, fens
Pumpkin Ash	Fraxinus profunda	Potentially Threatened	N/A	Swamps, floodplains and other wet bottomland habitats
Showy Lady's-slipper	Cypripedium reginae	Threatened	N/A	Moist prairies, sedge meadows, calcareous fens
Slender Sedge	Carex lasiocarpa	Potentially Threatened	N/A	Sedge meadows, fens, bogs, lakeshores

Small Yellow Lady's- slipper	Cypripedium parviflorum var. makasin	Endangered	N/A	Wet to moist soil; conifer swamps, fens, boreal forests
Tamarack	Larix laricina	Potentially Threatened	N/A	Moist to wet; boggy swamps, lakeshores, along streams, upland forest
Water Avens	Geum rivale	Potentially Threatened	N/A	Wet meadows, fens, swamps, along streams and lakes
White Beak-rush	Rhynchospora alba	Potentially Threatened	N/A	Wetlands, fens, bogs, peatlands, floating mats
White Wand-lily	Anticlea elegans	Potentially Threatened	N/A	Sunny, rich, moist prairies and meadows
Wrinkled-leaved Marsh Hypnum	Hypnum pratense	Endangered	N/A	Wet places in open swamps and meadows
Yellow Sedge	Carex flava	Potentially Threatened	N/A	Moist to wet; fens, coniferous swamps, sedge meadows, along streams in deciduous and mixed forest
		Reptiles		
Kirtland's Snake	Clonophis kirtlandii	Threatened	N/A	Open wetlands or edges of forested wetlands
Smooth Greensnake	Opheodrys vernalis	Endangered	N/A	Many different habitats, including marshes, meadows, the edges of streams, and open woods
Spotted Turtle	Clemmys guttata	Threatened	N/A	Shallow, sluggish waters of wet prairies and meadows, fens, bogs, marshes, small streams, ditches, and pond edges

Table 5. List of Endangered, Threatened, and Rare Species within range of Project Area

Common Name	Scientific Name	State Listed Status	Federal Listed Status	Affected Habitat
		Birds		
Sandhill Crane	Antigone canadensis	Threatened	N/A	On their wintering grounds, they will utilize agricultural fields. On breeding grounds, they require a rather large tract of wet meadow, shallow marsh, or bog for nesting.
Trumpeter Swan	Cygnus buccinator	Threatened	N/A	Large marshes and lakes ranging in size from 40 to 150 acres

American Transmission Systems, Incorporated A FirstEnergy company 12

		Fish			
Iowa Darter	Etheostoma exile	Endangered	N/A	Clear, sluggishly vegetated streams and weedy areas of glacial lakes, marshes, and ponds	
Lake Chubsucker	Erimyzon sucetta	Threatened	N/A	Lakes, ponds, and swamps	
Paddlefish	Polyodon spathula	Threatened	N/A	Freshwater perennial streams and lakes	
Pugnose Minnow	Opsopoeodus emiliae	Endangered	N/A	Slow, clear, vegetated waters of rivers and shallow areas of lakes	
Western banded killifish	Fundulus diaphanus menona	Endangered	N/A	Shallow areas of clear lakes, ponds, rivers, and estuaries with sandy gravel or muddy bottoms	
		Mammals			
Indiana Bat	Myotis sodalis	Endangered	Endangered	Trees and forests	
Little Brown Bat	Myotis lucifugus	Endangered	N/A	Trees and forests	
Northern Long-eared Bat	Myotis septentrionalis	Endangered	Endangered	Trees and forests	
Tricolored Bat	Perimyotis subflavus	Endangered	N/A	Trees and forests	
Reptiles					
Spotted Turtle	Clemmys guttata	Threatened	N/A	Shallow, sluggish waters of wet prairies and meadows, fens, bogs, marshes, small streams, ditches, and pond edges	

Based on the information received from correspondence with ODNR, the Project is within the vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, and the little brown bat (*Myotis lucifugus*), a state endangered species. Since presence of state endangered bat species has been established in the area, the DOW states that summer tree cutting is not recommended, and additional summer surveys would not indicate presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with the DOW. Although several bat species were identified, there is no structure removal or tree clearing anticipated as a result of this Project; therefore, no impacts to these species are expected.

The Project is within the range of the Iowa darter (Etheostoma exile), a state endangered fish; the pugnose minnow (Opsopoeodus emiliae), a state endangered

fish; the western banded killifish (*Fundulus diaphanus menona*), a state endangered fish; the lake chubsucker (*Erimyzon sucetta*), a state threatened fish; and the paddlefish (*Polyodon spathula*), a state threatened fish. Since no in-water work is proposed in a perennial stream, the Project is not likely to impact these or other aquatic species.

The response from ODNR, DOW indicated that the Project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs, and other wetland features, including small streams. The DOW recommended that an approved herpetologist conduct a habitat suitability survey to determine if suitable habitat is present within the Project area. A site visit was conducted on March 7, 2024, by ODNR approved herpetologist, Jeffrey G. Davis, to examine seven areas of interest identified as potential habitat during a desktop survey. Based on the findings of the Habitat Assessment Report dated March 11, 2024, attached as Exhibit 12, there is limited concern for impact to spotted turtles or their habitat along the project ROW; therefore, a presence - absence survey was not recommended. However, because spotted turtles may use Tinker's Creek as a migration corridor, a barrier consisting of silt fencing buried 3 inches below grade to block turtles that might move from Tinker's Creek and migrate toward the wetland adjacent to Structure 7870 was recommended. The fence will extend from Structure 7869, north to the base of the embankment upon which the east bound lane of Interstate 80 is located. Due to the implementation of silt fencing within the Project Study Area, negative impacts to this state listed species are not anticipated by the Project.

The Project is within the range of the sandhill crane (*Antigone canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds, they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through August 31. This habitat

will not be impacted; therefore, this Project is not likely to have an impact on this species.

The Project is also within the range of the trumpeter swan (*Cygnus buccinator*), a state threatened bird. Trumpeter swans prefer large marshes and lakes ranging in size from 40 to 150 acres. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through June 15. This habitat type will not be impacted by Project activities; therefore, this Project is not likely to impact this species.

4906-6-05 (B)(10)(f): Areas of Ecological Concern

TRC conducted a wetland and waterway delineation for this Project on February 21 - 23 and February 26, 2024. The Project Study Area is 53.7 acres total in size and is located in the City of Hudson in Summit County and the City of Streetsboro in Portage County, Ohio. The Project Study Area occurs in an existing, maintained utility right-of-way located within agricultural, forested, industrial, and residential lands. During the field investigation, TRC did not observe the presence of any of the ODNR listed species due to the highly maintained and urban nature of the utility right-of-way. The surface water delineation report and photo record are included in Exhibit 13. A review of the National Conservation Easement Database (www.conservationeasement.us) revealed no conservation easements are located within the Project Study Area.

4906-6-05(B)(10)(g): Other Information

Construction and operation of the proposed Project will be in accordance with the requirements specified in the latest revision of the NESC as adopted by the PUCO and will meet all applicable safety standards established by the Occupational Safety and Health Administration.

No other or unusual conditions are expected that will result in significant environmental, social, health or safety impacts.

4906-6-07: Documentation of Letter of Notification Transmittal and Availability

for Public Review

This Letter of Notification application is being provided concurrently with its docketing with the Board to the following officials.

Summit County

Ms. Ilene Shapiro Summit County Executive 175 S Main St 7th floor Akron, OH 44308

Ms. Rita Darrow Summit County Council VP 175 S Main St 7th floor Akron, OH 44308 Mr. Alan Brubaker Summit County Engineer 538 E South St Akron, OH 44311

Ms. Kristen Scalise Summit County Fiscal Officer 538 E South St Akron, OH 44311

Summit Soil and Water Conservation District 1180 South Main Street #230 Akron, OH 44301

<u>Hudson</u>

Mr. Jeffrey Anzevino Hudson Mayor 115 Executive Pkwy STE 400 Hudson, OH 44236

Mr. Chris Banweg Hudson City Council 115 Executive Pkwy STE 400 Hudson, OH 44236

Portage

Mr. Tony Badalamenti Portage County Commissioner 449 S. Meridian St. Room 101 Ravenna, OH 44266

Ms. Sabrina Christian-Bennett Portage County Commissioner 449 S. Meridian St. Room 101 Ravenna, OH 44266 Ms. Karen Heater Hudson City Council 115 Executive Pkwy STE 400 Hudson, OH 44236

Ms. Nicole Kowalski Hudson City Council 115 Executive Pkwy STE 400 Hudson, OH 44236

Mr. Mike Tinlin Portage County Commissioner 449 S. Meridian St. Room 101 Ravenna, OH 44266

Mr. Larry Jenkins P.E. P.S. Portage County Engineer 332 Majors Ln. Kent, OH 44240

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16

Streetsboro

Mr. Justin Ring Streetsboro City Council 555 Frost Road Streetsboro, OH 44241

Mr. Steve Michniak Streetsboro City Council 555 Frost Road Streetsboro, OH 44241 Mr. Jon Hannan Streetsboro City Council 555 Frost Road Streetsboro, OH 44241

Mr. Glenn Broska Streetsboro Mayor 555 Frost Road Streetsboro, OH 44241

Library

Ms. Leslie Polott Hudson Library & Historical Society Executive Director 96 Library Street Hudson, OH 44236

Mr. Jonathan Harris Portage County District Library Director 8990 Kirby Lane Streetsboro, OH 44241

Copies of the transmittal letters to these officials have been included with this application as proof of compliance under OAC Rule 4906-6-07 (B) to provide the Board with proof of notice to local officials as required by OAC Rule 4906-6-07 (A)(1) and to libraries per OAC Rule 4906-6-07 (A)(2).

Information is posted at:

www.firstenergycorp.com/about/transmission_project/ohio.html on how to request an electronic or paper copy of this Letter of Notification application. The link to this website is being provided to meet the requirements of OAC Rule 4906-6-07 (B) and to provide the Board with proof of compliance with the notice requirements in OAC Rule 4906-6-07 (A)(3).







EXHIBIT 3 - Inset 1

GENERAL PROJECT LAYOUT



DARROW-HUDSON EAST 138 kV TRANSMISSION LINE STRUCTURE **REPLACEMENT AND ADDITION PROJECT**



EXHIBIT 3 - Inset 2







EXHIBIT 3 - Inset 3

Exhibit 4

Property owner list and Agricultural Land Darrow-Hudson East 138 kV Transmission Line Structure Addition and Replacement Project

Case No.: 24-0243-El-BLN

Parcel Number	Acreage	Easement Status	Agricultural District (Yes/No)	Agricultural District Expiration Year
3001786	6.434	Existing	No	N/A
3001051	5.87	Existing	No	N/A
35-091-00-00-016-012, 35-091-00-00-016-011	13.227 13.876	Existing	No	N/A
3004151	7.06	Existing	Yes	2025
3003372, 3003371	.4591 .5739	Existing	No	N/A
3001047	7.73	Existing	No	N/A
3002041	3.4539	Existing	No	N/A
3009557	.9642	Existing	No	N/A
35-091-00-00-016-013	8.607	Existing	No	N/A
3002081 3001531 3001350	58.02 6.1 23.28	Existing	No	N/A
3009425 3003549	102.77 96.01	Existing	No	N/A
35-051-00-00-014-002, 35-051-00-00-014-003, 35-051-00-00-014-004, 35-051-00-00-014-001	3.34 4.96 3.47 6.60	Existing	No	N/A
35-081-00-00-021-000	67.96	Existing	No	N/A
3004497	6.07	Existing	No	N/A
3004381	1.79	Existing	No	N/A
3004380	2.19	Existing	No	N/A
3004379	2.21	Existing	No	N/A
3004378	1.77	Existing	No	N/A
3001541	19.06	Existing	No	N/A
3009198	N/A	Existing	No	N/A

35-041-00-00-002-000	50.54	Existing	No	N/A
35-041-00-00-004-000	64.96	Existing	No	N/A
35-052-10-00-001-000	N/A	Existing	No	N/A
35-061-00-00-035-001 35-061-00-00-035-000	5.00 76.31	Existing	No	N/A
35-072-00-00-006-003	15.23	Existing	No	N/A
35-072-00-00-006-005	17.00	Existing	No	N/A
35-081-00-00-021-000	67.96	Existing	No	N/A





EXHIBIT 5

TWO POLE WOOD H-FRAME (WITH TWO X-BRACES) NONSTANDARD MIDSPAN POST STRUCTURE







EXHIBIT 6

TWO POLE WOOD H-FRAME (WITH TWO X-BRACES) NONSTANDARD DEADEND STRUCTURE

ATSI ® American Transmission Systems, Inc a subsidier of Pericherty Con





Ъ PACKAGE, MITIGATION 138KV, DARROW-HUDSON EAST

EXHIBIT 7

TR-138045 138KV SINGLE CIRCUIT WOOD POLE STRUCTURE SUSPENSION HORIZONTAL TWO POLE H-FRAME ANGLES 0° TO 5°



EXHIBIT 8

TR-138080 138KV SINGLE CIRCUIT WOOD POLE STRUCTURE TANGENT STRAIN HORIZONTAL TWO POLE H-FRAME

American Transmission Systems, Inc



EXHIBIT 9

<u>Ohio archaeological Inventory (OAI), The Ohio Historic Inventory (OHI), previous cultural</u> resource surveys, and the Ohio Genealogical Society (OGS) cemetery inventory

National Historic Registered Places

Resource Name	<u>Address</u>	<u>City</u>	<u>County</u>
Case Barlow Farm	1931 Barlow Rd	Hudson	Summit

List of OHI Listed Structural Resources

OHI Number	Present Name	Historic Use	County	Municipality
POR0000105	Lowell Spencer Farm	Single Dwelling	Portage	Streetsboro
POR0048205	Cadwallader Crawford House	Single Dwelling	Portage	Streetsboro
SUM0001709	Stow Heritage House	Single Dwelling	Summit	Stow
SUM0085605	Earl D Flood House	Single Dwelling	Summit	Hudson (Township of)
SUM0085705		Single Dwelling	Summit	Hudson (Township of)
SUM0085805	George Oswald House	Single Dwelling	Summit	Hudson (Township of)
SUM0085905	Arthur Malarik House	Single Dwelling	Summit	Hudson (Township of)
SUM0086005		Single Dwelling	Summit	Hudson (Township of)
SUM0086105	Thomas Mancuso House	Single Dwelling	Summit	Hudson (Township of)
SUM0086205		Single Dwelling	Summit	Hudson (Township of)
SUM0086305	Donald Barlow House	Single Dwelling	Summit	Hudson (Township of)
SUM0086405		Single Dwelling	Summit	Hudson (Township of)
SUM0086505	Roger Bourgeoise House	Single Dwelling	Summit	Hudson (Township of)
SUM0086605	TE Neal House	Single Dwelling	Summit	Hudson (Township of)
SUM0086705		Single Dwelling	Summit	Hudson (Township of)
SUM0086805		Single Dwelling	Summit	Hudson (Township of)
SUM0089105	Ford Bush House	Unknown Use	Summit	Hudson (Township of)
SUM0089305	Ford Bush Commercial Units	Animal Facilities	Summit	Hudson (Township of)

SUM0089505	Charles Szeles House	Single Dwelling	Summit	Hudson (Township of)
SUM0089605	Brubaker Cole &	Single Dwelling	Summit	Hudson (Township of)
SUM0089705	Tallmadge	Storage	Summit	Hudson (Township of)
SUM0089805		Single Dwelling	Summit	Hudson
SUM0089905		Single Dwelling	Summit	Hudson
SUM0092705	F Gladden House	Single Dwelling	Summit	Hudson
SUM0092805	Gary Korb House	One Room	Summit	Hudson
SUM0092905	R Dawson House	Single Dwelling	Summit	Hudson
SUM0093005	J Bouyer House	Single Dwelling	Summit	Hudson
SUM0093105	Charles Walder	Single Dwelling	Summit	Hudson
SUM0093205	John Litzell House	Single Dwelling	Summit	Hudson
SUM0093305	Lighton Barn	Barn	Summit	Hudson
SUM0093405	Wesley Dean	Single Dwelling	Summit	Hudson
SUM0093505	J Henderson	Single Dwelling	Summit	Hudson
SUM0093605	Margery Clelland	Barn	Summit	Hudson
SUM0093705	Clinton Airline	Rail Related	Summit	Hudson
SUM0093805	Edward Fitch	Single Dwelling	Summit	Hudson
SUM0093905	Ogden S Residence	Single Dwelling	Summit	Hudson (Township of)
SUM0094005	Spring Hill Farm	Single Dwelling	Summit	Hudson (Township of)
SUM0094105	J Graver House	Barn	Summit	Hudson (Township of)
SUM0094205	Keith Dixon	Single Dwelling	Summit	Hudson (Township of)
SUM0094305	A Daugherty	Single Dwelling	Summit	Hudson (Township of)
SUM0094405	W Kremser Rental	Single Dwelling	Summit	Hudson (Township of)
SUM0096005	Robert Entenman	Single Dwelling	Summit	Hudson (Township of)
SUM0096105	Thomas McDonald House	Single Dwelling	Summit	Hudson (Township of)
SUM0096205	Peter Flood	Single Dwelling	Summit	Hudson (Township of)
SUM0096305	Robert A Murphy House	Single Dwelling	Summit	Hudson (Township of)

SUM0096705	L McCoy House	Single Dwelling	Summit	Hudson
SUM0096805	M Kurvla House	Single Dwelling	Summit	Hudson
001110000000		Olingie Dweimig	Cumme	(Township of)
SUM0096905	Charles	Sinale Dwellina	Summit	Hudson
	Turnblacer House			(Township of)
SUM0097005	W B Sargent	Single Dwelling	Summit	Hudson
	House			(Township of)
SUM0097605	Richard Andrews	Single Dwelling	Summit	Hudson
	House			(Township of)
SUM0097705	Randall Trump	Single Dwelling	Summit	Hudson
01104000000	House			(Township of)
SUM0097805	Paul Cosma	Single Dwelling	Summit	Hudson
SUM0007005	House Mike Jeesha Ir	Single Dwelling	Cummit	(I OWNSNIP OT)
201010097905		Single Dwelling	Summit	
SUM0098005	Paul Sergi House	Single Dwelling	Summit	Hudson
5010030003			Summe	(Township of)
SUM0098105		Single Dwelling	Summit	Hudson
				(Township of)
SUM0098205	Lonnie Blaney	Single Dwelling	Summit	Hudson
	House			(Township of)
SUM0098305		Single Dwelling	Summit	Hudson
				(Township of)
SUM0098405	J Stefano House	Single Dwelling	Summit	Hudson
				(Township of)
SUM0099105	Remains of	Agricultural	Summit	Hudson
011040000005	Outbuildings	Outbuildings	0	(I ownship of)
SUM0099205	L Mordarski	Road/Venicle	Summit	Hudson (Township of)
SUM0000205	R Basta House	Single Dwelling	Summit	
3010099303	D Dasia House		Summe	(Township of)
SUM0099405	. I Morgan House	Agricultural	Summit	Hudson
001100000400	o morgan nouse	Outbuildings	Cumme	(Township of)
SUM0099505	Guillermo	Single Dwelling	Summit	Hudson
	Carrasco House	- 5 5		(Township of)
SUM0099605	Gabriel Fortin	Single Dwelling	Summit	Hudson
	House			(Township of)
SUM0099705		Single Dwelling	Summit	Hudson
				(Township of)
SUM0099805	Mary Weaver	Single Dwelling	Summit	Hudson
011040000005	House			(Township of)
SUM0099905	SJ Hasbrouck	Single Dwelling	Summit	Hudson
SUM0100005	HOUSE	Agricultural	Cummit	(I OWNSNIP OT)
5010100005	Crib & Shod	Agricultural	Summit	
SUM0100105	Thomas	One Room	Summit	Hudson
5010100100	Armbruster House	Schoolhouse	Garmin	(Townshin of)
SUM0100205	NJ Oberle House	Single Dwelling	Summit	Hudson
		engle Enolinig	Cannin	(Township of)
SUM0100305	L Salatsky House	Single Dwelling	Summit	Hudson
				(Township of)
SUM0100405	JW Douds House	Single Dwelling	Summit	Hudson
				(Township of)

SUM0100705	David Cesaratto	Sinale Dwellina	Summit	Hudson
	House			(Township of)
SUM0100805	McArn Angus	Barn	Summit	Hudson
	Barn			(Township of)
SUM0100905	Angus McArn	Barn	Summit	Hudson
	Barn			(Township of)
SUM0101405	E Fenn Johston	Agricultural	Summit	Hudson
	House	Outbuildings		(Township of)
SUM0101505	R Poritsky House	Single Dwelling	Summit	Hudson
				(Township of)
SUM0101605	F Trotter House	Single Dwelling	Summit	Hudson
			_	(Township of)
SUM0101705	A Talbert House	Single Dwelling	Summit	Hudson
				(Township of)
SUM0101805	C Klisky House	Single Dwelling	Summit	Hudson
				(Township of)
SUM0101905	R Daberko House	Single Dwelling	Summit	Hudson
011040400005				(Township of)
SUM0102005	Charles Sharp	Single Dwelling	Summit	Hudson
0110400405	House		0	(I ownship of)
SUM0102105	A Exline House	Single Dwelling	Summit	Hudson
011140400005	DW/ Is a Harrison		0	(Township of)
SUM0102205	P Wides House	Single Dwelling	Summit	Hudson
011140400005	D Alestri Lleves	Oin alla Duuallin a	0	(Township of)
SUM0102305	P Alestri House	Single Dweiling	Summit	Hudson (Taurachin of)
011140400405		Oin alla Duuallin a	O	(Township of)
SUM0102405	J Thomas House	Single Dweiling	Summit	Hudson
SUM0102505		Single Dwelling	Summit	
3010102505	r Kelley House	Single Dwelling	Summu	(Township of)
SUM0102605		Single Dwelling	Summit	(Township or)
3010102003		Single Dweiling	Summe	(Township of)
SUM0102705	E Breedon House	Single Dwelling	Summit	Hudson
0010102703	E Diccuoir riouse	Olligie Dweiling	Odmini	(Township of)
SUM0102805	G Hale House	Single Dwelling	Summit	Hudson
001110102000		Olingio Divoling	Culture	(Township of)
SUM0102905	B Stranahan	One Room	Summit	Hudson
	House	Schoolhouse		(Township of)
SUM0103005	WR Hall House	Single Dwelling	Summit	Hudson
		5 5		(Township of)
SUM0103905	TR Maas Log	Storage	Summit	Hudson
	Cabin	Ū		(Township of)
SUM0108905	Faculty Housing	Single Dwelling	Summit	Hudson
	WR Academy			
SUM0109005	Neil Jones House	Single Dwelling	Summit	Hudson
SUM0109105	William Danforth	Single Dwelling	Summit	Hudson
	House			
SUM0109205	Joan Von Osdol	Single Dwelling	Summit	Hudson
	House			
SUM0109305	June Mohler	Single Dwelling	Summit	Hudson
	House			
SUM0109405	Roxanna Brannan	Single Dwelling	Summit	Hudson
	House			
SUM0109505	F Webber House	Single Dwelling	Summit	Hudson

SUM0109605	Thomas Murdough House	Single Dwelling	Summit	Hudson
SUM0109705	William Jennings House	Single Dwelling	Summit	Hudson
SUM0109805	John Burke House	Single Dwelling	Summit	Hudson
SUM0109905	Virginia Rogers House	Single Dwelling	Summit	Hudson
SUM0110005	W Niederst House	Single Dwelling	Summit	Hudson
SUM0110105	William Newkirk House	Single Dwelling	Summit	Hudson
SUM0110205	David Mikelycyk House	Single Dwelling	Summit	Hudson
SUM0110305	Perry Noe House	Single Dwelling	Summit	Hudson
SUM0110405	F Dobson House	Single Dwelling	Summit	Hudson
SUM0110505	A Kallman House	Single Dwelling	Summit	Hudson
SUM0110605	M Oberlin House	Single Dwelling	Summit	Hudson
SUM0110705	Rev Reid Heydt House	Single Dwelling	Summit	Hudson
SUM0110805	Henry Leonard House	Single Dwelling	Summit	Hudson
SUM0110905	John D Ong House	Single Dwelling	Summit	Hudson
SUM0111005	S Baker House	Single Dwelling	Summit	Hudson
SUM0111105	J Renner House	Single Dwelling	Summit	Hudson
SUM0111205	John Leonard House	Single Dwelling	Summit	Hudson
SUM0111305	J Sorgi House	Single Dwelling	Summit	Hudson
SUM0111405	William Cordier House	Secondary Structure (Residential)	Summit	Hudson
SUM0111505	Edward Dollmeyer House	Agricultural Outbuildings	Summit	Hudson
SUM0111605	Grissom Farm Silos	Agricultural Outbuildings	Summit	Hudson (Township of)
SUM0119205	Bicknell Gymnasium WRAcadmy	Sport Facility	Summit	Hudson
SUM0119805		Single Dwelling	Summit	Hudson
SUM0120005	Wstrn Res Academy Residence	Single Dwelling	Summit	Hudson
SUM0120105	Wstrn Res Academy Residence	Single Dwelling	Summit	Hudson
SUM0120205	Wstrn Res Academy Barn	Barn	Summit	Hudson
SUM0122305	Elm St Streetlight	Street Furniture/Object	Summit	Hudson
SUM0123705	G Gundlack House	Single Dwelling	Summit	Hudson
SUM0124005	J Witters House	Slaughter House	Summit	Hudson
SUM0124105		Single Dwelling	Summit	Hudson
SUM0124205	A Vince House	Single Dwelling	Summit	Hudson

SUM0124305	A Kerr House	Single Dwelling	Summit	Hudson
SUM0124405	L Hutchinson	Single Dwelling	Summit	Hudson
	House			
SUM0124805	Leonard Carlson	Single Dwelling	Summit	Hudson
SUM0124005	House	Single Dwelling	Summit	Hudeon
501010124905	House		Summit	Hudson
SUM0125005	Flizabeth Phinns	Single Dwelling	Summit	Hudson
00110120000	House	Chilgio Divolning	Commit	
SUM0125705	Wstrn Res Acdmy	Single Dwelling	Summit	Hudson
	Faculty Hsg			
SUM0125805	Wstrn Res Acdmy	Single Dwelling	Summit	Hudson
	Faculty House			
SUM0125905	Wstrn Res Acdmy	Single Dwelling	Summit	Hudson
SUM0126005	P A Clowell	Single Dwelling	Summit	Hudeon
3010120005			Summu	пиизоп
SUM0126105	Robert Sauer	Single Dwelling	Summit	Hudson
00110120100	House	Chilgle Differing	Commit	
SUM0126205	Walter Maischoss	Single Dwelling	Summit	Hudson
	House	0 0		
SUM0126305	Jeffrey Case	Single Dwelling	Summit	Hudson
	House			
SUM0126405	Alonzo Church	Single Dwelling	Summit	Hudson
SUM0126E0E		Single Dwelling	Summit	Hudaan
SUM0126505		Single Dwelling	Summit	Hudson
SUM0126505		Single Dwelling	Summit	Hudson
5010126705	House		Summit	Hudson
SUM0126805	G Winklepleck	Single Dwelling	Summit	Hudson
00110120000	House	Chilgle Differing	Commit	
SUM0126905	D Kimmerle	Road/Vehicle	Summit	Hudson
	House	Related		
SUM0134805	James Maurer	Single Dwelling	Summit	Hudson
	House			
SUM0144705		Double	Summit	Hudson
SUM0144805	Peter Euse House	Single Dwelling	Summit	Hudson
SUM0144905	L C Honeycutt	Single Dwelling	Summit	Hudson
SUM0145005	House	Single Dwelling	Summit	Hudson
SUM0145405	Gary Doich House	Single Dwelling	Summit	Hudson
301010145405	House		Summu	пиизоп
SUM0145505	G Morse House	Single Dwelling	Summit	Hudson
SUM0146505	Streetsboro Street	Street	Summit	Hudson
	Light	Furniture/Object	Commit	
SUM0150305	G Philabaum	Single Dwelling	Summit	Hudson
	House	-		
SUM0150605	David & Patricia	Single Dwelling	Summit	Hudson
011140450505	Zabell			
SUM0150705	Dale Smith House	Single Dwelling	Summit	Hudson
SUM0150805	J Tyrell House	Single Dwelling	Summit	Hudson
SUM0150905	R Romano House	Single Dwelling	Summit	Hudson
SUM0151005	Charles Taylor	Single Dwelling	Summit	Hudson
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SUM0151105	W Kinney House	Single Dwelling	Summit	Hudson
SUM0151305	D Polzin House	Single Dwelling	Summit	Hudson
SUM0151405	K Davis House	Single Dwelling	Summit	Hudson
SUM0151505	M McCadam House	Single Dwelling	Summit	Hudson
SUM0152305	Paul Ruxin House	Barn	Summit	Hudson
SUM0152405	John Shaw House	Single Dwelling	Summit	Hudson
SUM0154809	Hanson Fred House	Single Dwelling	Summit	Stow
SUM0154909	Ruggles House	Single Dwelling	Summit	Stow
SUM0159009	Silver Springs Farmhouse	Single Dwelling	Summit	Stow
SUM0159609	Green Valley Baptist Church	School	Summit	Stow
SUM0159709	Darrow Minnie House	Single Dwelling	Summit	Stow
SUM0160305	Raymond W King House	Single Dwelling	Summit	Hudson
SUM0176409		Single Dwelling	Summit	Stow
SUM0176509		Single Dwelling	Summit	Stow
SUM0192209		Single Dwelling	Summit	Stow
SUM0329305	M More House	Single Dwelling	Summit	Hudson (Township of)

List of OGS Cemetery Inventory

OGS ID	Name	County	Municipality
10698	Walker Graveyard	Summit	Hudson
11787	Cackler	Portage	Streetsboro
11789	Moran-Trotter Farm	Portage	Streetsboro
11790	Myers/Meyers	Portage	Streetsboro
11919	Draper	Summit	Hudson
12766	Silver Springs	Summit	Stow



In reply refer to: 2024-POR-60616

April 3, 2024

Justin McKissick, MA, RPA Project Archaeologist/Field Director TRC Environmental Corporation 317 E Carson Street, Suite 113 Pittsburgh, PA 15219 Email: <u>JMcKissick@trccompanies.com</u>

RE: Section 106 Review: Darrow-Hudson East 138kV Project, City of Streetsboro, Portage County, and City of Hudson, Summit County, Ohio

Dear Mr. McKissick:

This letter is in response to the correspondence received on March 6, 2024, regarding the above reference project in Portage and Summit Counties, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code (O.R.C.) and the Ohio Power Siting Board rules for siting this project. The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The proposed project consists of the maintenance of existing structures within the Darrow-Hudson East 138kV transmission line corridor. No ground disturbance is anticipated for the project. According to the submission, which included a check of our records, several National Register-listed and/or -eligible resources were identified in the study area, although none of the properties will be directly impacted by the proposed work. Due to the nature of the project, which involves the maintenance of existing structures and repairing or replacing infrastructure at or below existing heights, no new visual impacts are anticipated. Therefore, based on this information, it is the SHPO's opinion that no cultural resource studies are warranted for the project. Furthermore, as proposed, the project will have no effect on historic properties. No further coordination is required for this project. In such a situation, this office should be contacted as required by 36 CFR § 800.13. If you have any questions concerning this review, please contact either myself via email at <u>sbiehl@ohiohistory.org</u> or Ms. Joy Williams at jwilliams@ohiohistory.org. Thank you for your cooperation.

Sincerely,

- M. Biell

Stephen M. Biehl, Project Reviews Coordinator (archaeology) Resource Protection and Review State Historic Preservation Office

RPR Serial No. 1102124

"Please be advised that this is a Section 106 decision. This review decision may not extend to other SHPO programs."

800 E. 17th Ave., Columbus, OH 43211-2474 • 614.297.2300 • ohiohistory.org

Exhibit 9



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Ohio Department of Natural Resources



MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Exhibit 10

Office of Real Estate Tara Paciorek, Chief 2045 Morse Road – Bldg. E-2 Columbus, OH 43229 Phone: (614) 265-6661 Fax: (614) 267-4764

December 22, 2023

Jenna Slabe TRC Companies, Inc. 1382 West 9th Street, Suite 400 Cleveland, Ohio 44113

Re: 23-1407 Darrow-Hudson East 138kV Project - ROW Assurance Program Project

Project: The proposed project involves the maintenance of existing structures on the Darrow-Hudson East 138kV transmission line, as part of FirstEnergy's ROW Assurance Project.

Location: The proposed project is located in the City of Hudson of Summit County, and the City of Streetsboro of Portage County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state, or federal agency nor relieve the applicant of the obligation to comply with any local, state, or federal laws or regulations.

Natural Heritage Database: The Natural Heritage Database has the following data at or within one mile of the project area:

White Wand-lily (Anticlea elegans), P Crinkled Hair Grass (Avenella flexuosa), P Broad-winged Sedge (Carex alata), P Bebb's Sedge (Carex bebbii), P Lesser Panicled Sedge (Carex diandra), E Yellow Sedge (Carex flava), P Slender Sedge (Carex lasiocarpa), P Little Green Sedge (Carex viridula), T Leather-leaf (Chamaedaphne calyculata), T Bunchberry (Cornus canadensis), T Small Yellow Lady's-slipper (Cvpripedium parviflorum var. makasin), E Showy Lady's-slipper (Cypripedium reginae), T Bearded Wheat Grass (Elymus trachycaulus), T Green Cotton-grass (Eriophorum viridicarinatum), T Pumpkin Ash (Fraxinus profunda), P Bog Bedstraw (Galium labradoricum), E Water Avens (Geum rivale), P

Great St. John's-wort (Hypericum ascyron ssp. pyramidatum), T Tamarack (Larix laricina), P Bayberry (*Mvrica pensvlvanica*), E Prairie Rattlesnake-root (Nabalus racemosus), P Floating Pondweed (Potamogeton natans), P White Beak-rush (Rhynchospora alba), P Hoary Willow (Salix candida), T Blue-leaved Willow (Salix myricoides), P Autumn Willow (Salix serissima), P False Asphodel (Triantha glutinosa), T Marsh Arrow-grass (Triglochin palustris), P Bunchflower (Veratrum virginicum), T Highbush-cranberry (Viburnum opulus var. americanum), E Wrinkled-leaved Marsh Hypnum (Hypnum pratense), E Fuzzy Hypnum Moss (Tomentypnum nitens), E Spotted Turtle (Clemmys guttata), T Kirtland's Snake (Clonophis kirtlandii), T Wilson's Snipe (Gallinago delicata), SI Smooth Greensnake (Opheodrys vernalis), E Sora Rail (Porzana carolina), SC Virginia Rail (Rallus limicola), SC Creek Heelsplitter (Lasmigona compressa), SC Sphagnum Sprite (Nehalennia gracilis), SC Boreal fen plant community Mixed emergent marsh plant community

Conservation status abbreviations are as follows: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federally endangered, and FT = federally threatened. Records for high quality plant communities indicate the presence of sites that are in our inventory of the best remaining examples of Ohio's pre-settlement ecosystems.

The review was performed on the specified project area as well as an additional one-mile radius. Records searched date from 1980. Features searched include locations of rare and endangered plants and animals determined to be of value to the conservation of their species, high quality plant communities, animal breeding assemblages, and outstanding geological features.

Of the species and features listed above, only the Kirtland's Snake and Creek Heelsplitter are recorded within or just outside the boundaries of the specified project area. Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for an area is not a statement that rare species or unique features are absent from that area.

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that Best Management Practices be utilized to minimize erosion and sedimentation.

The project is within the vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis*

septentrionalis), a state endangered and federally endangered species, and the little brown bat (*Myotis lucifugus*), a state endangered species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

In addition, the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. During the spring and summer (April 1 through September 30), these bat species predominately roost in trees behind loose, exfoliating bark, in crevices and cavities, or in the leaves. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with DBH ≥ 20 if possible.

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "<u>RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED BAT SURVEY GUIDELINES</u>." If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Eileen Wyza for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the Iowa darter (*Etheostoma exile*), a state endangered fish, the pugnose minnow (*Opsopoeodus emiliae*), a state endangered fish, the western banded killifish (*Fundulus diaphanus menona*), a state endangered fish, the lake chubsucker (*Erimyzon sucetta*), a state threatened fish, and the paddlefish (*Polyodon spathula*) a state threatened fish. The DOW recommends no in-water work in perennial streams from March 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but also is known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. The DOW recommends that an approved herpetologist conducts a habitat suitability survey to determine if suitable habitat is present within the project area. If suitable habitat is determined to be present; the DOW recommends that a presence/absence survey be conducted, or an avoidance/minimization plan be developed and implemented by the approved herpetologist. A list of approved herpetologists has been provided for your convenience.

The project is within the range of the sandhill crane (*Antigone canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds, they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction

should be avoided in this habitat during the species' nesting period of April 1 through August 31. If this habitat will not be impacted, this project is not likely to have an impact on this species.

The project is within the range of the trumpeter swan (*Cygnus buccinator*), a state threatened bird. Trumpeter swans prefer large marshes and lakes ranging in size from 40 to 150 acres. They like shallow wetlands one to three feet deep with a diverse mix of plenty of emergent and submergent vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through June 15. If this habitat will not be impacted, this project is not likely to have an impact on this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the US Fish & Wildlife Service.

Water Resources: The Division of Water Resources has the following comment.

The <u>local floodplain administrator</u> should be contacted concerning the possible need for any floodplain permits or approvals for this project.

ODNR appreciates the opportunity to provide these comments. Please contact Mike Pettegrew at <u>mike.pettegrew@dnr.ohio.gov</u> if you have questions about these comments or need additional information.

Mike Pettegrew Environmental Services Administrator

Exhibit 11

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services 4625 Morse Road, Suite 104 Columbus, Ohio 43230 (614) 416-8993 / FAX (614) 416-8994

November 29, 2023

Project Code: 2024-0016932

Dear Jenna Slabe:

The U.S. Fish and Wildlife Service (Service) has received your recent correspondence requesting information about the subject proposal. We offer the following comments and recommendations to assist you in minimizing and avoiding adverse impacts to threatened and endangered species pursuant to the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq), as amended (ESA).

Federally Threatened and Endangered Species: The endangered Indiana bat (Myotis sodalis) and northern long-eared bat (Myotis septentrionalis) occur throughout the State of Ohio. The Indiana bat and northern long-eared bat may be found wherever suitable habitat occurs unless a presence/absence survey has been performed to document absence. Suitable summer habitat for Indiana bats and northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and breed that may also include adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, woodlots, fallow fields, and pastures. Roost trees for both species include live and standing dead trees ≥ 3 inches diameter at breast height (dbh) that have any exfoliating bark, cracks, crevices, hollows and/or cavities. These roost trees may be located in forested habitats as well as linear features such as fencerows, riparian forests, and other wooded corridors. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet of other forested/wooded habitat. Northern long-eared bats have also been observed roosting in human-made structures, such as buildings, barns, bridges, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Tree Clearing for Federally Listed Bat Species: The proposed project is in the vicinity of one or more confirmed records of Indiana bats and/or northern long-eared bats. Should the proposed project site contain trees \geq 3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees \geq 3 inches dbh cannot be avoided, we recommend removal of any trees \geq 3 inches dbh only occur between November 15 and March 15. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. Please note that, because Indiana bat and/or northern long-eared bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for these species.





<u>Section 7 Coordination</u>: If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), then no tree clearing should occur on any portion of the project area until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence. This letter provides technical assistance only and does not serve as a completed section 7 consultation document.

<u>Stream and Wetland Avoidance</u>: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (<u>https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf</u>). We recommend avoiding and minimizing project impacts to all wetland habitats (e.g., forests, streams, vernal pools) to the maximum extent possible in order to benefit water quality and fish and wildlife habitat. Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the U.S. Army Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. Disturbed areas should be mulched and revegetated with native plant species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

Due to the project type, size, and location, we do not anticipate adverse effects to any other federally endangered, threatened, or proposed species, or proposed or designated critical habitat. Should the project design change, or additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, coordination with the Service should be initiated to assess any potential impacts.

Thank you for your efforts to conserve listed species and sensitive habitats in Ohio. We recommend coordinating with the Ohio Department of Natural Resources due to the potential for the proposed project to affect state listed species and/or state lands. Contact Mike Pettegrew, Environmental Services Administrator, at (614) 265-6387 or at <u>mike.pettegrew@dnr.ohio.gov</u>.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or <u>ohio@fws.gov</u>.

Sincerely,

Scott Hicks

Scott Hicks Acting Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW Eileen Wyza, ODNR-DOW

Exhibit 12

Report: A Spotted Turtle Habitat Assessment along the Darrow-Hudson East 138 kV Project – ROW Assurance Program in Summit and Portage Counties, Ohio

ODNR Project Number 23-1407

Submitted to:

Brad Falkinburg TRC 1382 West Ninth Street, Suite 400 Cleveland, Ohio 44113

March 11, 2024

Jeffrey G. Davis, LLC 625 Crescent Road Hamilton, Ohio 45013 (513) 470-8748 ohiofrogs@gmail.com Ohio Division of Wildlife Approved Herpetologist USFWS Massasauga Permit Holder

Introduction

This report provides the results of a Spotted Turtle Habitat Assessment along the Darrow-Hudson East 138 kV Project – ROW Assurance Program in Summit and Portage Counties, Ohio. In his letter to Jenna Slabe (TRC), Mike Pettegrew (ODNR) mentions that Kirtland's Snake is recorded within or just outside the boundaries of the project area. This species was included in the desktop survey and site visits during the present study.

1.0 Subject Site

The proposed Project Study Area is approximately 46.41 acres, located in the City of Hudson in Summit County, Ohio and the City of Streetsboro in Portage County. The proposed Project Study Area (Figure 1: Aerial Map) occurs within existing, maintained utility right-of-way (ROW) located within agricultural, forested, industrial, and residential lands.

2.0 Spotted Turtle Natural History

The Spotted Turtle (*Clemmys guttata*) (Figure 2) is listed as threatened by the Ohio Department of Natural Resources (ODNR, 2019). It is a small (80–125 mm carapace length) freshwater turtle that inhabits shallow wetlands in the East Coast-Great Lakes Region. The ground color of the carapace is black, and it is adorned with 15–115 small, scattered, yellow spots. The plastron is usually a shade of yellow covered by a large black blotch that conceals all but an irregular-shaped area, usually in the middle of the plastron. The skin color is black to gray with yellow or bright orange spots on the head. The limbs are scaled and may or may not have yellow spots. Males have brown eyes and a tan chin; females have orange eyes and a yellow chin. The plastron of the male is concave while that of the female is flat. Males have a longer tail than females with the cloaca of the former situated beyond the margin of the plastron. Juveniles have just one yellow spots.

In early spring, Spotted Turtles leave their hibernacula and move to their feeding/breeding habitat which consists of clean shallow water with a mud bottom and ample aquatic and

emergent vegetation (i.e., bogs, fens, wet prairies, vernal pools, and even roadside ditches). Habitat for spotted turtles has little or no canopy cover. During early spring they may be found basking on logs or clumps of emergent grasses. When disturbed they will take to the water and bury themselves in the mud. Spotted Turtles are also quite terrestrial. Research has suggested over 60% of their time is spent in upland areas. They can be found in wooded areas in spring, but only before trees leaf out. The Spotted Turtle is omnivorous. Its diet consists of insects, worms, frogs, and grass. They are capable of swallowing food both in and out of water.

Nesting usually occurs during early June depending on temperatures. After this time, during the summer months, Spotted Turtles go into aestivation, burying themselves in muskrat burrows, or leaf litter. During the fall there is a brief period of activity before they return to their hibernacula for overwintering.

3.0 Kirtland's Snake Natural History

Kirtland's Snake (*Clonophis kirtlandii*) (Figure 3) is listed as threatened by the Ohio Department of Natural Resources (ODNR, 2019). It typically inhabits low wet fields, abandoned city lots where the water table is close to the surface, and even unkempt urban areas where there is abundant trash under which it can take cover. The common characteristic in each of these is hydric soils which retain sufficient moisture to provide abundant earthworms and slugs, the mainstay of Kirtland's Snake's diet, and habitat for burrowing crayfish species. Despite being a watersnake, standing water is not necessary and is seldom entered by the species, although it will cross small bodies of water. Hibernation takes place in crayfish burrows whose depth allows the snakes to avoid subfreezing winter temperatures. Crayfish burrows are usually present where Kirtland's Snakes are found and when the snakes are encountered in early spring, they often have a coat of mud covering them, suggesting they had recently emerged from a burrow. Because they spend much of their time in crayfish burrows or under cover when at the surface, this species is difficult to detect. Through June 2023, of 385 encounters with this species at four of my study sites, I have found only two individuals moving at the surface. Adding to the difficulty in finding Kirtland's Snake is that it is highly nocturnal. During the day it typically retreats into a crayfish burrow. If it is found during the daylight hours, it is usually under cover objects such as rocks, logs, bark slabs, or refuse such as boards, old carpet, or cardboard left by people. During dry periods, the species becomes inactive and apparently retreats underground. Mating takes place in May and five to ten offspring are born alive from late July through August. Kirtland's Snake distribution is not widespread, but where the correct conditions are present, it can be a rare, but abundant species.

4.0 Methods

Habitat Assessment methods for Spotted Turtles and Kirtland's Snakes are approved by the Ohio Division of Wildlife and are conducted in two phases (described below). A Presence-Absence Survey may be recommended based on the results of the desktop survey and site visit.

4.1 Desktop Survey

A literature review and a search for Spotted Turtle and Kirtland's Snake museum specimens was conducted to determine their known distribution in the vicinity of the subject site. The proximity of the subject site to known Spotted Turtle populations in the region and the availability of the type of open-canopy wetlands preferred by the species was determined by examining aerial photographs and topographic maps.

4.2 Site Visit

A site visit was made on 7 March 2024 to examine seven areas of interest identified as potential Spotted Turtle habitat during the desktop survey. They were examined for dominant vegetation species, hydrologic conditions, and surrounding land-use and land cover. Determination of potential habitat was made by comparing on-site conditions to areas of known occupancy in the region. The segment of the transmission line near where the Kirtland's Snake was reported along the north edge of the Wood Hollow Metro Park between structures 2188 and 2190 was also examined.

4.3 Habitat Survey Assessment and Report

In the sections below, the results of the site visits are combined with the literature and museum search results to determine the suitability of the subject site for Spotted Turtles and Kirtland's Snake.

5.0 Results

5.1 Desktop Survey (Museum and Literature Search)

5.1.1 Museum Search

Seventy-two Spotted Turtle records from Portage County, Streetsboro Township were found in the Cincinnati Museum Center's Herpetological Photodocumentation Collection. These records are from Gott Fen State Nature Preserve and environs along Tinker's Creek which flows along the eastern margin of Gott Fen. Portions of the project ROW are just 0.3 miles west of Gott Fen (Figure 4) and Area of Interest No. 5 is just 125 meters west of Tinker's Creek. Museum records from Portage and Summit Counties were also found in the collections of the Cleveland Museum of Natural History. The Ohio State University Museum of Biodiversity has a Spotted Turtle specimen collected from Summit County. Museum records from the region surrounding the subject site are summarized in Table 1 and illustrated in Figure 5.

In addition to the museum records, the Summit County Metro Parks has photographic records of Spotted Turtles from the Pond Brook Conservation Area, part of Liberty Park north of the project ROW in Summit County, Twinsburg Township (Ramsey Langford, pers. comm.). Pond Brook is a tributary of Tinker's Creek upstream of the subject site.

A Kirtland's Snake was photographed at 41.21676° N, 81.41413° W in Wood Hollow Metro Park in Summit County, Hudson Township on September 3, 2019 by park visitor Doug Dawes (pers. comm.). The closest documented record for Kirtland's Snake is 29 miles southwest of Wood Hollow Metro Park in Wayne County, Ohio. Two specimens, collected there in 1960 are accessioned into the collections of the Carnegie Museum of Natural History in Pittsburg, and another, collected at the same time, is in the collections of the University of Colorado.

5.1.2 Literature Search

A literature review resulted in published records of Spotted Turtles from near the subject site in Portage County, Aurora Township (Conant, 1938; Lipps, 2013), and Summit County, Northampton Township (Lipps, 2013). Lipps (2013) also reported Spotted Turtles from Portage County, Brimfield Township, Suffield Township, and Summit County, Green Township reinforcing the species' presence in the region. Wynn and Moody (2006) reported records from Portage County, Suffield Township. Figure 5 illustrates the proximity of these townships to the project ROW. The records published in these works are the same as those found during the museum search.

5.2 Site Visit Results

The seven areas of interest for Spotted Turtles, identified during the desktop survey and visited on 7 March 2024, are discussed in Sections 5.2.1 through 5.2.6 below. The habitat where Kirtland's Snake was reported is discussed in Section 5.2.7. Photographs of each area of interest are provided in Figures 6 through 12.

5.2.1 Area of Interest No. 1

This site, located east of Stow Road in Summit County, Hudson Township at 41.21772° N, 81.40657°W, is a deep permanent pond on the edge of the project ROW (Figure 6). It does not provide habitat for Spotted Turtles.

5.2.2 Area of Interest No. 2

Located west of Stow Road in Summit County, Hudson Township at the northern edge of Wood Hollow Metro Park at 41.21774° N, -81.41436° W (Figure 7). The appearance, on aerial photographs, suggested this area might be a wet meadow with emergent vegetation. It is indeed wet, but it was vegetated with plants typical of hydric soil, but it only has shallow temporary pools of water after heavy rain events (Ramsey Langford, pers. comm.). During summer it can be very dry. It does not provide suitable habitat for Spotted Turtles.

5.2.3 Areas of Interest No. 3 and 4

Located approximately 650 meters north of Ravenna Road in Portage County, Streetsboro Township at 41.21559° N, -81.38207° W (Figure 8). On aerial photographs from 2003 through 2017 on Google Earth, this appeared to be a shallow wetland which warranted a site visit. Areas of Interest 3 and 4 were marked at the eastern and western extremes of the wetland, respectively. At the time of the site visit, there was a depression and no water, and the entire area was vegetated by Reed Canary Grass. Areas of Interest 3 and 4 do not provide habitat for Spotted Turtles.

5.2.4 Area of Interest No. 5

Located adjacent to Structure 7870, approximately 75 m south of Interstate 80 and 125 meters west of Tinker's Creek, at 41.25304° N, -81.39612° W in Summit County, Hudson Township (Figure 9), this wetland has an open canopy during spring but after leaf out, the trees that surround much of it close the canopy. During high water events, this wetland could connect to Tinker's Creek across its floodplain creating a migration corridor for Spotted Turtles.

5.2.5 Area of Interest No. 6

This wetland is a deep permanent pond located at the edge of Portage County, Streetsboro Township at 41.24571°N, -81.39182°W (Figure 10). It does not provide Spotted Turtle habitat.

5.2.6 Area of Interest No. 7

On some aerial photographs, there appeared to be vegetative cover consistent with wet prairies even though it is immediately adjacent to west bound Interstate 80 at 41.25405° N, 81.40297° W (Figure 11). However, it is the narrow floodplain of a small tributary to Tinker's Creek, and it provides no Spotted Turtle habitat.

5.2.7 Kirtland's Snake Habitat

This area is located at Wood Hollow Metro Park in Summit County, Hudson Township at 41.21676° N, 81.41413° W, approximately 250 feet south of the segment of the project ROW

between Structures 2188 and 2189 (Figure 12). The vegetation beyond the mowed lawn at the entrance to the Downy loop trail is a mix of forbs leading into a forested wetland. The soils at the site are Elsworth and Mahoning silt loams but there are deposits of Willette muck nearby. Muck soils provide excellent habitat for terrestrial crayfish. Kirtland's Snakes use crayfish burrows extensively for daytime refugia. The deposits of muck soil extend onto the ROW from the adjoining property to the north (Figure 13).

6.0 Discussion

The results of the desktop survey and site visit were combined to determine if the subject site provides suitable Spotted Turtle habitat. Only Area of Interest No. 5 provides potential habitat. It is not optimal as its position at the edge of a woodlot suggests that after leaf out, the canopy will make it less likely to be used. If a turtle uses the small wetland at Area of Interest No. 5, it would probably be by one that wanders away from Tinker's Creek if the stream is used as a migration corridor.

Because a Kirtland's Snake has been documented at Wood Hollow Metro Park, consideration must be given to how widely distributed the species might be in that area. Since the soil, Willette Muck, most likely to support them is north of the transmission line ROW, the individual encountered at Wood Hollow might be at the periphery of the species' distribution in the area. However, Kirtland's Snakes have very small home ranges (Gibson and Kingsbury, 2004; Wynn and Armitage, 2021). At one of my study sites in Champaign County, Ohio, the same individuals were found under the same artificial cover objects for an entire season. Therefore, the documented individual was probably not one that wandered south from more optimal habitat north of the ROW.

7.0 Recommendations

7.1 Spotted Turtle

Based on the Habitat Assessment, there is limited concern for impact to Spotted Turtles or Spotted Turtle habitat along the project ROW and that is only at Area of Interest No. 5. Consequently, I do not recommend a Presence – Absence Survey. However, because they might use Tinker's Creek as a migration corridor, I do recommend creating a barrier consisting of silt fencing buried 3 inches below grade to block turtles that might move from Tinker's Creek and wander in the direction of the wetland adjacent to Structure 7870 from entering the ROW where heavy equipment might be used. The fence should extend from Structure 7869 north to the base of the embankment upon which the east bound lane of Interstate 80 is located (at approximately 41.25364°N, 81.39592°W).

7.2 Kirtland's Snake

Summit County Metro Parks biologists were unable to find additional Kirtland's Snakes after the initial sighting. The species is nocturnal, highly secretive, and difficult to detect. The segment of the ROW between Structures 2188A and 2189A was delineated by TRC as a wetland. The locality of the Kirtland's Snake encounter in 2019 is immediately south of that segment of the ROW and a deposit of Willette muck is directly north of it. Therefore, this segment of the ROW is most likely where Kirtland's Snakes might occur. If, FirstEnergy can access Structure 2188A from Stow Road to the east, and Structure 2189A from an access point from its west, impact to potential Kirtland's Snake habitat can be avoided and a Presence – Absence Survey will not be required. If FirstEnergy cannot avoid the segment of the ROW between Structures 2188A and 2189A, I recommend a Presence – Survey on it (Figure 14).

Literature Cited

- Conant R. 1938. The Reptiles of Ohio. The American Midland Naturalist 20(1): 1-200.
- **Gibson J, Kingsbury B. 2004.** Conservation assessment for Kirtland's Snake (*Clonophis kirtlandii*). A report to the U.S. Forest Service. 29 p.
- Lipps GJ, Jr. 2013. Spotted Turtle. Pages 139-155. In: Davis, J.G., G.J. Lipps, Jr., D. Wynn, B.J. Armitage, T.O. Matson, R.A. Pfingsten, and C. Caldwell (Editors). 2021. Reptiles of Ohio. Ohio Biological Survey Bulletin New Series. Volume 20 Number 1. Part I. xiv + 402 p.
- **Ohio Department of Natural Resources. Division of Wildlife. 2019.** Publication 5356. Ohio's Listed Species Wildlife that are Considered to be Endangered, Threatened, Species of Concern, Special Interest, Extirpated, or Extinct in Ohio. Ohio Department of Natural Resources. Columbus, Ohio. 10 p.
- **Wynn DE, Moody SM. 2006.** Ohio Turtle, Lizard, and Snake Atlas. Ohio Biological Survey Miscellaneous Contributions Number 10. iv + 81 p.
- Wynn D. and Armitage B. 2021. Kirtland's Snake Pages 441-452. In: Davis J.G., G.L. Lipps, Jr., D. Wynn, B.J. Armitage, T.O. Matson, R.A. Pfingsten, and C. Caldwell (Editors). Reptiles of Ohio. Ohio Biological Survey Bulletin New Series. Volume 20 Number 1. Part I. xiv 402 p.

Table 1. The subject site is in both Summit County, Hudson Township, and Portage County, Streetsboro Township. Aurora Township is immediately north of Streetsboro Township. Twinsburg and Northampton Townships are adjacent to Hudson Township to the immediate north and southwest, respectively. More than seventy records were found in museum collections as a result of the museum search. Most of the Streetsboro Township records were confirmed as recently as 2017 and 2018.

County	Township	Museum Collection (and accession no.)	Year
Portage	Aurora	CMNH 246	1934
Portage	Brimfield	CMC HP 7056	2010
Portage		СМС НР 5694 -99, 5745-56, 5766-91	2007
	Streetsboro	CMC HP 12074, 12075, 12091, 12093, 12094, 12095, 12096 12098, 12099, 12100, 12103	2017
		CMC HP 11334, 11338, 11346, 11348, 11357, 11371-73, 11381, 11387, 11393, 11395-97, 11399, 11407, 11415	2018
Portage	Suffield	CMNH 771	1974
Summit	Green	OSM 871c	1950
Summit	Northampton	CMNH (not yet accessioned) 201	
Summit	Twinsburg	Ramsey Langford (pers. comm.) 2019	

CMC HP = Cincinnati Museum Center Herpetological Photodocumentation Collection; **CMNH** = Cleveland Museum of Natural History; **OSM** = Ohio State University Museum of Biodiversity; **Ramsey Langford** is a Biologist with Summit Metro Parks District.



Figure 1. Aerial photograph showing the location(s) of the Darrow-Hudson East 138 kV Project.

Figure 2. A Spotted Turtle from Clark County, Ohio.



Figure 3. This Kirtland's Snake was photographed at Wood Hollow Metro Park.



Figure 4. Gott Fen State Nature Preserve has a population of Spotted Turtles and is within 0.3 miles of a portion of the project right-of-way.



Figure 5. The project area is confined to Hudson and Streetsboro Townships in Summit and Portage Counties, respectively (yellow). Spotted Turtles have not been reported from Hudson Township, but they have been reported from Streetsboro Township as well as each of the townships shaded blue.



Figure 6. Area of Interest No. 1.



Figure 8. Area of Interest No. 3 and No. 4.



Figure 9. Area of Interest No. 5.



Figure 10. Area of Interest No. 6.





Figure 12. Kirtland's Snake habitat.



Figure 13. Soils near the area where the Kirtland's Snake was encountered are silt loams. Deposits of Willette Muck are located nearby, one of which is near Structure 2189. **MgA** and **MgB** – Mahoning silt loam; **Tr** – Trumbull silt loam; **ElB** – Ellsworth silt loam; **Wt** – Willette muck.



Figure 14. A Presence – Absence Survey area in the segment of the ROW near Structure 2188A is recommended unless FirstEnergy can access Structure 2188A from Stow Road to the east and Structure 2189A from an access point to its west. The white dot is the approximate location where the Kirtland's Snake was documented in 2019.





Surface Water Delineation Report

Darrow-Hudson East 138kV ROW Assurance Program Project

March 21, 2024

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Prepared For:



FirstEnergy Corporation 341 White Pond Drive, Building B3 Akron, Ohio 44320

Prepared By: **TRC Companies, Inc.** 1382 West Ninth Street, Suite 400 Cleveland, Ohio 44113

TRC Project Number: 550808.0009.0000





TABLE OF CONTENTS

1.0	INTRO	DUCTIO	ON	1
2.0	METHODOLOGY			1
	2.1 Wetland Parameters			1
		2.1.1	Hydrology	2
		2.1.2	Hydric Soils	2
		2.1.3	Hydrophytic Vegetation	2
	2.2	2.2 USACE Wetland Delineation		3
	2.3	Ohio Environmental Protection Agency's Ohio Rapid Assessment Method		
	2.4	USACE	Waterbody Identification	4
3.0	RESU	LTS		5
	3.1	Site Des	scription	5
	3.2	Surface	Water Resource Field Delineations	7
		3.2.1	Wetlands	8
		3.2.2	Waterbodies	9
4.0	PERM	ITTING	CONSIDERATIONS	10
	4.1	USACE	Verification	11
5.0	LIMIT	ATIONS		11
6.0	REFE	RENCES	S	12

TABLES

Table 1. Soils Type Summary	6
Table 2. Delineated Wetland Features Summary Table	8
Table 3. Waterbody Resource Details	.9

APPENDICES

Appendix A Figures Appendix B Photographic Record Appendix C Data Forms



ACRONYMS AND DEFINITIONS

CFR	Code of Federal Regulations	
EPA	Environmental Protection Agency	
FAC	Facultative	
FACU	Facultative Upland	
FACW	Facultative Wetland	
FirstEnergy	FirstEnergy Corporation	
GPS	Global Positioning System	
HHEI	Headwater Habitat Evaluation Index	
HUC	Hydrologic Unit Code	
NHD	National Hydrography Dataset	
NWI	National Wetlands Inventory	
OAC	Ohio Administrative Code	
OBL	Obligate Wetland	
OEPA	Ohio Environmental Protection Agency	
OHWM	Ordinary High-Water Mark	
ORAM	Ohio Rapid Assessment Method	
Project	Darrow-Hudson East 138kV ROW Assurance Program Project	
Project Study Area	53.7 acres, located in the City of Hudson, Summit County, Ohio and the	
	City of Streetsboro, Portage County, Ohio	
QHEI	Qualitative Habitat Evaluation Index	
Regional Supplement	Regional Supplement to the Corps of Engineers Wetland Delineation	
	Manual: Northcentral and Northeast Region (Version 2.0)	
Report	Surface Water Delineation Report	
TNM	The National Map	
TRC	TRC Companies, Inc.	
UPL	Obligate Upland	
USACE	United States Army Corps of Engineers	
USDA-NRCS	United States Department of Agriculture – Natural Resources	
	Conservation Service	
USFWS	United States Fish and Wildlife Service	
USGS	United States Geological Survey	
WQC	Water Quality Certification	
1987 Manual	United States Army Corps of Engineers 1987 Wetland Delineation	
	Manual	



1.0 Introduction

On behalf of FirstEnergy Corporation (FirstEnergy), TRC Companies, Inc. (TRC) performed a surface water delineation for the Darrow-Hudson East 138kV ROW Assurance Program Project (Project). The proposed Project Study Area is approximately 53.7 acres, located in the City of Hudson, Summit County, Ohio and the City of Streetsboro, Portage County, Ohio. The proposed Project involves the maintenance of the existing Darrow-Hudson East 138 kV transmission line, as part of FirstEnergy's ROW Assurance Program. On behalf of FirstEnergy, TRC has prepared this Surface Water Delineation Report (Report) for the Project. A site location map of the Project Study Area can be found in **Appendix A, Figure 1**.

TRC personnel performed field investigations between February 21, 2024, through February 24, 2024, and were completed on February 26, 2024. TRC personnel performed field investigations to evaluate and delineate surface water resources (i.e., wetlands and streams) located within the Project Study Area. The delineations were conducted by qualified wetland scientists in accordance with the United States Army Corps of Engineers (USACE) parameters. The objective was to evaluate and delineate potential surface water resources within the Project Study Area, such that the resources could be considered during each phase of the Project. This Report describes the surface water delineation methodology implemented and the existing surface water resources identified within the Project Study Area during field investigations.

The Project Study Area is located at the following approximate coordinates: 41.261213, -81.395672 (Northern Terminus), 41.202831, -81.385092 (Southern Terminus), 41.217672, -81.420962 (Western Terminus); located in the City of Hudson, Summit County, Ohio and the City of Streetsboro, Portage County, Ohio and occurs within maintained utility right-of-way surrounded by commercial, industrial, residential, and agricultural land use. **Appendix A, Figure 1** and **Figure 2**, provides further information on the location of the proposed Project Study Area.

2.0 Methodology

To complete the surface water delineation and evaluation of the Project Study Area, TRC followed the guidelines and methods outlined by the USACE and Ohio Environmental Protection Agency (OEPA), as described within this section.

2.1 Wetland Parameters

The USACE 1987 Wetland Delineation Manual (1987 Manual) (USACE, 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0) (Regional Supplement) (USACE, 2012), and the March 6, 1992 guidance memorandum (Williams, 1992) emphasize a three parameter approach to wetland boundary determination in the field. This approach involves the following:

- i. Evidence of wetland hydrology;
- ii. Presence of hydric soils; and



iii. Predominance of hydrophytic vegetation as defined by *The National Wetland Plant List:* 2020 Wetland Ratings (USACE, 2020).

Positive indicators of all three parameters are normally present in wetlands and serve to distinguish between both dry land and transitional plant communities.

2.1.1 Hydrology

The *1987 Manual* and *Regional Supplement* provides guidelines for determining the presence of wetland hydrology. Criteria for wetland hydrology are met if the area is inundated or saturated at the soil surface during the growing season for a time sufficient to develop hydric soils and to support hydrophytic vegetation.

2.1.2 Hydric Soils

Hydric soils are defined as soils "that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil" (Federal Register, 1994). Hydric soil indicators described in the *Field Indicators of Hydric Soils in the United States: A Guide for Identifying and Delineating Hydric Soils Version 8.2* (USDA, NRCS, 2018) were used to identify and document hydric soils as described in the *Regional Supplement*.

2.1.3 Hydrophytic Vegetation

To determine the presence of hydrophytic vegetation, the dominant and non-dominant species in each major vegetative stratum (e.g., tree, shrub/sapling, herbaceous, and woody vine) were identified and recorded.

Plants are placed into indicator status categories depending on their probability of occurring in a wetland in accordance with the USACE's *The National Wetland Plant List: 2020 wetland ratings* (USACE, 2020). There are five indicator status categories for plants:

- 1. Obligate wetland plants (OBL): plants that occur almost always (>99%) in wetlands in natural conditions, but which may also occur rarely (<1%) in non-wetlands;
- 2. Facultative wetland plants (FACW): plants that occur usually (>67-99%) in wetlands but also occur (1-33%) in non-wetlands;
- 3. Facultative plants (FAC): plants with a similar likelihood (33-67%) of occurring in both wetlands and non-wetlands;
- 4. Facultative upland plants (FACU): plants that occur sometimes (1-<33%) in wetlands, but occur more often (>67-99%) in non-wetlands; and
- 5. Obligate upland plants (UPL): plants that occur rarely (<1%) in wetlands but occur almost always (>99%) in non-wetlands under natural conditions.

A prevalence of dominant species that are FAC, FACW, and/or OBL indicates the presence of hydrophytic vegetation.



2.2 USACE Wetland Delineation

Qualified wetland scientists from TRC conducted surface water field investigations on February 21st, February 22nd, February 23rd, and February 26th, 2024. The surface water field investigations were conducted within the predetermined Project Study Area (**Appendix A, Figure 1**) that was developed in accordance with the Project location information provided by FirstEnergy. Surface water delineations were conducted using the Federal Routine Determination Method presented in the *1987 Manual* and *Regional Supplement*, including clarifications and interpretations provided in the March 6, 1992 guidance memorandum, and the USACE and Environmental Protection Agency (EPA) guidance on jurisdictional forms (EPA and USACE, 2007 and USACE, 2008).

Hydrology was determined based on a number of indicators that are divided into two categories, primary and secondary. The *1987 Manual* defines hydrology as present when at least one primary indicator (i.e., surface water, saturation, etc.) or two secondary indicators (i.e., geomorphic position, stunted or stressed plants, etc.) are identified. One primary indicator is sufficient to determine if hydrology is present; however, if these are absent then two or more of the secondary indicators are required to determine hydrology. If other probable hydrologic evidence was found, then this was subsequently documented on the data form.

Soils were examined in the field by using a tile spade, generally to a depth of at least 22 inches below the soil surface or until refusal, whichever was shallower. Soil coloration was identified using a *Munsell Soil Color Chart* (Munsell Color Company, 2009). Other characteristics, such as the presence of redoximorphic (Redox) concentrations and depletions and soil texture were also recorded. Redox concentrations and depletions are created when the soil is saturated and has anaerobic conditions (without oxygen gas) which leads to changes in the chemical processes in the soil that produce visible color changes in the soil. Hydric characteristics such as organic soil layers, depleted matrix, gleying, and hydrogen sulfide odor, were noted when observed. Soils at both wetland (if present) and dry land data plot locations were characterized and recorded on the data form.

The presence of hydrophytic vegetation was determined using the procedures described in the *Regional Supplement* and recorded on the data form. Vegetation in both dry land and wetland communities was characterized using a real dominance method, with a radius of 30-feet around the soil sample location for trees and woody vines, 15-foot radius for saplings and shrubs, and a 5-foot radius for herbaceous plants. Plant communities meeting the "50/20" Rule or meeting one of the other indicators set forth in the *1987 Manual, Regional Supplement,* and guidance memorandums are considered hydrophytic for the purposes of the wetland classification criteria. In areas where the vegetation was disturbed or not identifiable due to seasonal conditions, soil and hydrology characteristics, and professional judgment/experience were utilized in assessing the primary determining factors for classification as wetlands.

If the soils, hydrology, and vegetation characteristics at a survey point indicated that it was within a wetland, the boundary of the wetland was determined, and the approximate boundary was flagged using wetland flagging and recorded using a handheld Juniper Systems Geode and Trimble R1, both with sub-meter accuracy. Areas observed to have problematic or difficult



situations were delineated utilizing the procedures identified in the *Regional Supplement*, Section 5 – "Difficult Wetland Situations in the Northcentral and Northeast Region." Data from the Global Positioning System (GPS) survey was downloaded and integrated into a Geographic Information System database for the proposed work areas and used to make the accompanying figures. Identified wetlands were classified according to Cowardin et al. (Cowardin, Carter, Golet, & LaRoe, 1979). Photographs are included in **Appendix B**.

2.3 Ohio Environmental Protection Agency's Ohio Rapid Assessment Method

According to the Ohio Wetland Water Quality Standards, a wetland quality category (Category 1, Category 2, or Category 3) must be assigned for each wetland if a project will require discharge of dredged or fill material into jurisdictional wetlands. In general, Category 1 wetlands are considered to be of "low quality", Category 2 wetlands are considered to be of "moderate quality" and Category 3 wetlands are considered to be of "high quality."

The OEPA has developed the Ohio Rapid Assessment Method (ORAM), which can be utilized to evaluate wetland habitat quality based on the apparent functions and values of the wetland resource. The two primary components of the ORAM are the Narrative Rating and the Quantitative Rating. Each delineated wetland resource received a provisional category designation based on the results of the ORAM Narrative and Quantitative Ratings and review of narrative criteria in the Ohio Administrative Code (OAC) 3745-1-54(C) (Mack, 2000).

2.4 USACE Waterbody Identification

During field investigations, other waterbody features including streams, ponds, lakes, etc. were investigated. Streams within the Project Study Area were identified by the presence of an ordinary high-water mark (OHWM) and scoured channel or defined bed and banks. All streams identified in the Project Study Area that were wider than five feet were demarcated via GPS from bank-to-bank. Streams that were less than five feet wide had the centerline demarcated.

Identified streams were evaluated utilizing OEPA approved methods for stream habitat assessment which include the Qualitative Habitat Evaluation Index (QHEI) (Ohio EPA, 2006) and/or the Headwater Habitat Evaluation Index (HHEI) (Ohio EPA, 2020) assessment method. These approved assessment methods provide an empirical, quantified evaluation of streams as required by the State of Ohio for permitting and mitigation purposes. These methods assess stream habitat to provide a qualitative index (or score) to determine the level of compensatory mitigation that may be needed for impacts to waters of the U.S. (i.e., streams).

Use of the QHEI or HHEI assessment method is determined based on the size of the stream's drainage area and/or the stream's pool depths. Where coverage was available, the drainage area was calculated using automated basin characteristics from StreamStats v 4.19.4: Ohio (USGS, 2021).

Following OEPA guidance, streams with a drainage area of greater than 1.0 square mile (2.6 square kilometers) or which have pools with maximum depths over 15.8 inches (40.0 centimeters), as determined by measuring pool depth within the stream, were evaluated using



the QHEI. Data on these streams were collected on the QHEI form provided by the OEPA. The QHEI is composed of six principal metrics: substrate, instream cover, channel morphology, riparian zone and bank erosion, pool/glide and riffle-run quality, and map gradient. Each metric is scored separately and summed to obtain the total QHEI score. Using the scoring methods associated with these forms, the stream is placed into the following general narrative ranges, dependent on stream size; for smaller streams (\leq 20 sq. mi): Excellent >70, Good 55-69, Fair 43-54, Poor 30-42, and Very Poor <30; for larger streams (>20 sq. mi): Excellent >75, Good 60-74, Fair 45-59, Poor 30-44, and Very Poor <30.

The HHEI was utilized to score streams with a drainage area of <1.0 square mile (2.6 square kilometers). Data on these streams were collected on the HHEI forms, provided by the OEPA. Observational data regarding the physical nature of the stream corridor including stream flow, riparian zone land use and buffer width, and channel modification were recorded. Measurements included bankfull width, maximum pool depth and substrate composition.

Streams identified during the course of the investigation were classified as perennial, intermittent, or ephemeral waterways in accordance with the rationale defined by the USACE Buffalo District.

The Project Study Area was also investigated for areas that were considered "open water" by the USACE. According to the USACE an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of flowing or standing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" may include rivers, lakes, and ponds. Artificial "open water" features may include stormwater retention basins, fish hatchery ponds, drainage tile pump stations, etc.

3.0 Results

3.1 Site Description

The Project Study Area is approximately 53.7 acres located in the City of Hudson, Summit County, Ohio and the City of Streetsboro, Portage County, Ohio within the Headwaters Tinkers Creek watershed (12-Digit Hydrologic Unit Code [HUC]: 041100020502), Fish Creek-Cuyahoga River Watershed (HUC: 041100020305), and the Mud Brook Watershed (HUC: 041100020401) (USGS, 2022).

The Project Study Area is shown on the Twinsburg, Ohio (2019) and Hudson, Ohio (2019) United States Geological Survey (USGS) 7.5-minute series topographic quadrangles (**Appendix A**, **Figure 1**).

The United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) Web Soil Survey (USDA-NRCS, 2016) was used to identify the soil types contained within the Project Study Area (**Appendix A, Figure 3**). **Table 1** provides a summary of the soils identified within proposed Project Study Area.


Table 1. Soils Type Summary

Map Unit Symbol	Map Unit Name	Hydric Status	Acres Within Study Area	Percent Cover in Study Area
BgB	Bogart loam, 2 to 6 percent slopes	Non-Hydric	0.041	0.1%
Са	Canadice silty clay loam	Canadice silty clay loam Hydric		3.3%
CnC	Chili Ioam, 6 to 12 percent slopes	Non-Hydric	0.094	0.2%
CoC2	Chili gravelly loam, 6 to 12 percent slopes, moderately eroded	Non-Hydric	0.604	1.1%
CtD	Chili-Oshtemo complex, 12 to 18 percent slopes	Non-Hydric	0.052	0.1%
EIB	Ellsworth silt loam, 2 to 6 percent slopes	Non-Hydric with Hydric Inclusions	8.193	15.3%
EIB2	Ellsworth silt loam, 2 to 6 percent slopes, eroded	Non-Hydric with Hydric Inclusions	3.962	7.4%
EIC	Ellsworth silt loam, 6 to 12 percent slopes	Non-Hydric	1.595	3.0%
EIC2	Ellsworth silt loam, 6 to 12 percent slopes, eroded	Non-Hydric	6.942	12.9%
EID2	Ellsworth silt loam, 12 to 18 percent slopes, Non-Hydric eroded		1.414	2.6%
EIE2	Ellsworth silt loam, 12 to 25 percent slopes, eroded	Non-Hydric	0.944	1.8%
Ln	Lorain silty clay loam	Hydric	0.075	0.1%
LoD	Loudonville silt loam, 12 to 18 percent slopes	Non-Hydric	0.097	0.2%
LoD2	Loudonville silt loam, 12 to 18 percent slopes, moderately eroded	Non-Hydric	0.138	0.3%
MgA	Mahoning silt loam, 0 to 2 percent slopes	Non-Hydric with Hydric Inclusions	3.300	6.1%
MgB	Mahoning silt loam, 2 to 6 percent slopes	Non-Hydric with Hydric Inclusions	14.601	27.2%



Map Unit Symbol	Map Unit Name	Hydric Status	Acres Within Study Area	Percent Cover in Study Area
Or	Orrville silt loam	Non-Hydric with Hydric Inclusions	3.060	5.7%
RsB	Rittman silt loam, 2 to 6 percent slopes	Non-Hydric	1.834	3.4%
RsC	Rittman silt loam, 6 to 12 percent slopes	Non-Hydric	0.321	0.6%
Sb	Sebring silt loam, 0 to 2 percent slopes	Hydric	0.201	0.4%
Tr	Trumbull silt loam, 0 to 2 percent slopes	Hydric	3.477	6.5%
Ua	Udorthents	Non-Hydric	0.928	1.7%
Wt	Willette muck	Hydric	0.096	0.2%
		TOTAL	53.7	100%
Notes: Accessed online March 2024 at: <u>http:</u>	//websoilsurvey.sc.egov.usda.gov.			

Table 1. Soils Type Summary

There are fifteen (15) United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) features mapped within the Project Study Area, including nine (9) riverine features, three (3) freshwater ponds, and three (3) freshwater forest/shrub wetlands (**Appendix A**, **Figure 4**) (USFWS, 2022).

The USGS National Hydrography Dataset (NHD) (USGS, 2018) Downloadable Data Collection from The National Map (TNM) is a comprehensive set of digital spatial data that encodes information about naturally occurring and constructed bodies of surface water (e.g., lakes, ponds, and reservoirs), paths through which water flows (e.g., canals, ditches, streams, and rivers) and related entities such as point features (e.g., springs, wells, stream gages, and dams). There are nine (9) NHD streams mapped within the Project Study Area (**Appendix A, Figure 4**).

According to Federal Emergency Management Agency Flood Insurance Rate Map (39153C0135E: eff. 7/20/2009; 39153C0069F: eff. 4/19/2016; 39133C0109D: eff. 8/18/2009; 39133C0107D: eff. 8/18/2009; 39133C0019D: eff. 8/18/2009; 39055C0300D: eff. 6/16/2009; 39035C0375E; eff. 12/3/2010), portions of the proposed Project are located within a regulated 100-year floodplain (**Appendix A, Figure 4**) (FEMA, 2021).

3.2 Surface Water Resource Field Delineations

TRC performed the field investigation on February 21st, February 22nd, February 23rd, and February 26th, 2024. Weather conditions were normal for the season, with temperatures ranging between 32 degrees to 61 degrees Fahrenheit, and partly cloudy skies. Native and non-native



herbaceous vegetation was observed within the Project Study Area. The USACE maintains the final authority that determines jurisdiction; therefore, statements about jurisdiction within this Report are preliminary and subject to final determination by the USACE and OEPA.

3.2.1 Wetlands

During the field investigation, nineteen (19) wetlands were identified and delineated within the Project Study Area. The delineated wetland boundaries and sample points are shown on **Figure 5** in **Appendix A**. Representative photographs of sample points and other areas of interest are provided in **Appendix B**. Data was collected and recorded on USACE Wetland Determination Data Forms –: Northcentral and Northeast (**Appendix C**) and wetland functional assessments were completed for each delineated wetland using the ORAM (**Appendix C**). Delineated wetlands within the Project Study Area are summarized in **Table 2**.

Resource ID ¹	Cowardin Classification ²	Connection ³	Provisional Jurisdictional Status ⁴	ORAM Score	ORAM Category⁵	Approximate Delineated Area within Project Study Area ⁶ (acres)
W-EVN-1	PEM	Abutting	USACE Jurisdictional, Wetland	38	Cat. 2	0.080
W-EVN-2	PFO	Abutting	USACE Jurisdictional, Wetland	49	Cat. 2	0.993
W-EVN-3	PEM	Adjacent	USACE Jurisdictional, Wetland	20	Cat. 1	0.035
W-EVN-4	PEM	Adjacent	USACE Jurisdictional, Wetland	23	Cat. 1	0.083
W-EVN-5	PEM	Abutting	USACE Jurisdictional, Wetland	22.5	Cat. 1	0.041
W-EVN-6	PEM	Adjacent	USACE Jurisdictional, Wetland	22.5	Cat. 1	0.136
W-EVN-7	PEM	Abutting	USACE Jurisdictional, Wetland	30.5	Cat. 2	0.452
W-EVN-8	PEM	Abutting	USACE Jurisdictional, Wetland	44	Cat. 2	1.154
W-EVN-9	PEM	Abutting	USACE Jurisdictional, Wetland	28.5	Cat. 1	0.216
W-EVN-10	PEM	Abutting	USACE Jurisdictional, Wetland	20.5	Cat. 1	0.055
W-EVN-11	PEM	Adjacent	USACE Jurisdictional, Wetland	25	Cat. 1	0.685
W-EVN-12	PEM	Adjacent	USACE Jurisdictional, Wetland	26.5	Cat. 1	0.175
W-EVN-13	PEM	Adjacent	USACE Jurisdictional, Wetland	27	Cat. 1	0.280
W-EVN-14	PEM	Adjacent	USACE Jurisdictional, Wetland	29.5	Cat. 1	0.099
W-EVN-15	PEM	Adjacent	USACE Jurisdictional, Wetland	29	Cat. 1	0.093

Table 2: Delineated Wetland Features Summary Table



Resource ID ¹	Cowardin Classification ²	Connection ³	Provisional Jurisdictional Status⁴	ORAM Score	ORAM Category⁵	Approximate Delineated Area within Project Study Area ⁶ (acres)
W-EVN-16	PEM	Abutting	USACE Jurisdictional, Wetland	37	Cat. 2	3.845
W-EVN-17	PEM	Abutting	USACE Jurisdictional, Wetland	23	Cat. 1	0.162
W-EVN-18	PEM	Abutting	USACE Jurisdictional, Wetland	45	Cat. 2	2.597
W-EVN-19	PEM	Adjacent	USACE Jurisdictional, Wetland	41.5	Cat. 2	0.993
					Total	12.173

¹ TRC resource identification.

²Cowardin Wetland Classification within Study Area (approximation based upon field identification and delineation) (Cowardin, Carter, Golet, & LaRoe, 1979): PEM – Palustrine Emergent, PFO – Palustrine Forested

³Connection to a jurisdictional waterway: Isolated, Abutting, or Adjacent as determined by TRC; subject to USACE verification. Wetland connection is pending an update from OEPA and USACE based on the EPA vs. Sackett case.

⁴Jurisdiction status is based upon field observations and mapping review of apparent connectivity or adjacency of the resource to Waters of the United States and the assumption that a preliminary jurisdictional determination process will be utilized for the project.

⁵ORAM Category based on scoring breakpoints from Table 2 of the ORAM v. 5.0 Quantitative Score Calibration; scores falling within a "gray zone" or "modified" category were rounded up.

⁶Area is rounded to nearest 0.001-acre, based upon GPS data.

3.2.2 Waterbodies

During the field investigations, thirteen (13) streams and two (2) waterbodies (ponds) were delineated within the Project Study Area. A detailed summary of the waterbody resources identified is provided in **Table 3** and **Appendix A**, **Figure 5**. Data points were recorded to provide a characterization of the delineated waterbody resources located within the Project Study Area, which were recorded on the OEPA HHEI and QHEI data forms. HHEI and QHEI data forms are provided within **Appendix C**. Representative photographs of the described waterbodies identified within the Project Study Area can be found in **Appendix B**.

Waterbody ID ¹	Resource Name²	Flow Regime	OEPA Use Designation ³	Existing Use Designation⁴	HHEI Score⁵	QHEI Score ⁶	Approximate Delineated Area within Project Study Area ⁷ (linear feet/acres)
S-EVN-1	UNT to Tinkers Creek	Intermittent	NA	Modified Class I PHWH	27	-	6 feet (0.001-acre)
S-EVN-2	UNT to Tinkers Creek	Perennial	WWH	Fair	-	47.5	28 feet (0.008-acre)
S-EVN-3	UNT to Tinkers Creek	Perennial	NA	Fair	-	51.5	27 feet (0.008-acre)
S-EVN-4	UNT to Tinkers Creek	Intermittent	NA	Modified Class I PHWH	22	-	30 feet (0.001-acre)



Table 3. Waterbody Resource Details

Waterbody ID ¹	Resource Name ²	Flow Regime	OEPA Use Designation ³	Existing Use Designation⁴	HHEI Score⁵	QHEI Score ⁶	Approximate Delineated Area within Project Study Area ⁷ (linear feet/acres)
S-EVN-5	UNT to Tinkers Creek	Intermittent	NA	Modified Class II PHWH	57	-	89 feet (0.003-acre)
S-EVN-6	UNT to Tinkers Creek	Intermittent	NA	Modified Class II PHWH	32	-	136 feet (0.010-acre)
S-EVN-7	UNT to Tinkers Creek	Intermittent	NA	Modified Class II PHWH	35	-	61 feet (0.002-acre)
S-EVN-8	UNT to Tinkers Creek	Intermittent	NA	Modified Class I PHWH	25	-	115 feet (0.005-acre)
S-EVN-9	UNT to Tinkers Creek	Intermittent	NA	Modified Class II PHWH	37	-	107 feet (0.002-acre)
S-EVN-10	UNT to Tinkers Creek	Intermittent	NA	Modified Class II PHWH	56	-	107 feet (0.003-acre)
S-EVN-11	UNT to Tinkers Creek	Intermittent	NA	Modified Class II PHWH	58	-	114 feet (0.006-acre)
S-EVN-12	Powers Brook	Perennial	NA	Fair	-	46	130 feet (0.008-acre)
S-EVN-13	UNT to Powers Brook	Perennial	NA	Modified Class I PHWH	16	-	100 feet (0.004-acre)
WB-EVN-1	-	Pond	-	-	-	-	0.226-acre
WB-EVN-2	-	Pond	-	-	-	-	0.038-acre
						TOTAL	1,050 feet (0.325-acre)

Notes:

¹ TRC resource identification.

² UNT = Unnamed Tributary

³ Determined by OEPA and listed in OAC §3745-1-26 Cuyahoga River drainage basin.

⁴ Determined by TRC, subject to verification by Ohio EPA.

⁵ HHEI, for streams with drainage areas of less than 1.0 square mile and a maximum pool depth of less than 40 centimeters.

⁶ QHEI, for streams with drainage areas of greater than 1.0 square mile and a maximum pool depth greater than 40 centimeters.

7 Area is rounded to nearest 0.001-acre, based upon GPS data. Resources comprising <0.001-acre are tabulated within the total as 0.001-acre.

4.0 Permitting Considerations

It is anticipated that due to the nature of the Project, jurisdictional resources may be impacted by the proposed Project activities. As currently proposed, it is TRC's understanding that this Project would fall under Nationwide Permit (NWP) 57 - Electric Utility Line and Telecommunications Activities (USACE, 2022). This Project is located in the City of Hudson, Summit County, Ohio and the City of Streetsboro, Portage County, Ohio, which is within the USACE Buffalo Regulatory



District. The Project location is listed in Appendix 1 to Regional General Condition 5(a) (Endangered Species and Threatened Species), therefore triggering the need for a Section 404 Pre-Construction Notification (PCN).

The Project is located within an "Eligible" area according to Ohio EPA's Stream Eligibility for Nationwide Permit Program (OEPA, 2017) and therefore is eligible for coverage under the OEPA 401 Water Quality Certification (WQC) for Nationwide Permits **(Appendix A, Figure 6)**.

4.1 USACE Verification

The USACE has the authority to determine and/or verify the geographical boundaries of Waters of the United States in accordance with 33 Code of Federal Regulations (CFR) 328 and 33 CFR 329; therefore, the results of this Report are termed "preliminary" until verified and accepted by the USACE. This verification is part of the Jurisdictional Determination process, which is required for approval under Section 404 Clean Water Act, Section 401 Water Quality Certification, and/or isolated wetland permitting process through OEPA. It is the responsibility of any party that intends to discharge dredge or fill material into Waters of the United States to comply with all applicable regulations.

5.0 Limitations

This Report is limited in scope to the specific terms of the Agreement previously entered into between TRC and FirstEnergy. This Report represents the conditions within the Project Study Area identified herein, as of the inspection dates.

Should the Project change from the scope described herein, TRC should be immediately notified such that additional investigations may be conducted to amend the content of the Report herein. Human-induced and/or natural changes within the Project Study Area may occur after the date of this investigation and may result in changes to the presence, extent, and classification of the surface water resources identified within this Report.



6.0 References

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Appendix A

Figures











○ EXISTING STRUCTURE BASE MAP: GOOGLE MAPS. 8 9/16 1:2,400 1" = 200' 400 FEET 200 PROJECTFIRSTENERGY - DARROW-HUDSON EAST 138 KV PROJECT - ROW ASSURANCE PROGRAM SUMMIT & PORTAGE COUNTIES, OH TITLE: AERIAL MAP DRAWN BY: M. OPEL PROJ. NO.: 550808.0009 CHECKED BY: E. GIVEN FIGURE 2 APPROVED BY: B. FALKINBURG (PAGE 3 OF 16) MARCH 2024 DATE: 1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072 TRC WDRv2.aprx

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States 18	APPROVED BY: E. GIVEN APPROVED BY: B. FALKINBURG	FIGURE 3
	DATE: MARCH 2024	(PAGE 14 UF 16)
	TRC	1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072
	FILE:	WDRv2.aprx







Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet: Map Rotation: 0













	PRO	JECT STUDY AREA	۱.
R. A	NATI	ONAL HYDROGRA	PHY DATASET (NHD) STREAM
	NATI	ONAL WETLANDS	INVENTORY (NWI) FEATURE
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			on Nutrol E Streetsboro Rouse State Route 303
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	1:2,400		
	1" = 200'		Norton Rd
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	PROJECTFIRS	TENERGY - DAR	ROW-HUDSON EAST
	138 KV F	JMMIT & PORTA	ASSURANCE PROGRAM GE COUNTIES, OH
	TITLE:		
	NHD,	NWI AND FEM	A FLOODPLAIN MAP
	DRAWN BY:	M. OPEL	PROJ. NO.: 550808.0009
	CHECKED BY: APPROVED BY:	E. GIVEN B. FALKINBURG	FIGURE 4
	DATE:	MARCH 2024	(PAGE 3 OF 16)
		TDC	1382 WEST NINTH STREET SUITE 400
			PHONE: 216-344-3072
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AASE MAP: GOOG DATA SOURCES: V SERVICE, NATION CQUIRED FROM DATA ACQUIRED F CATA ACQUIRED F CATA ACQUIRED F	LE MAPS. VETLAND DATA ACQU AL WETLANDS INVEN USGS, NATIONAL HYI ROM FEMA, NATION/	UIRED FROM U.S. FI TORY (NWI). STRE/ DROGRAPHY DATAS AL FLOOD HAZARD	SH & WILDLIFE AM DATA SET (NHD). FLOOD LAYER (NFHL).
- 200	200	400 FEE	т
PROJECT <mark>FIRST 138 KV PF SUI TITLE: NHD, N</mark>	ENERGY - DAR ROJECT - ROW MMIT & PORTA IWI AND FEM/	ROW-HUDSO ASSURANCE GE COUNTIES A FLOODPLA	N EAST PROGRAM 5, OH AIN MAP
DRAWN BY:	M. OPEL	PROJ. NO.:	550808.0009
CHECKED BY:	E. GIVEN	FIGU	IRE 4
DATE:	MARCH 2024	(PAGE 4	4 OF 16)
\rightarrow	IRC	1382 WES CLEVE PHOI	T NINTH STREET SUITE 400 ELAND, OH 44113 NE: 216-344-3072
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PRUJ	ECT STUDY AREA	۱.
NATIC	NAL HYDROGRA	PHY DATASET (NHD) STREAM
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BASE MAP: GOOG DATA SOURCES: SERVICE, NATION ACQUIRED FROM DATA ACQUIRED	SLE MAPS. WETLAND DATA ACQUIAL WETLANDS INVEN USGS, NATIONAL HYI FROM FEMA, NATION/	UIRED FROM U.S. FISH & WILDLIFE TORY (NWI). STREAM DATA DROGRAPHY DATASET (NHD). FLOOD AL FLOOD HAZARD LAYER (NFHL).
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BASE MAP: GOOG DATA SOURCES: SERVICE, NATION ACQUIRED FROM DATA ACQUIRED 1:2,400 1" = 200' 0 PROJECTFIRST 138 KV PI SU TITLE: NHD, N DRAWN BY: CHECKED BY: APPROVED BY:	SLE MAPS. WETLAND DATA ACQU IAL WETLANDS INVEN USGS, NATIONAL HYI FROM FEMA, NATION/ FROM FEMA, NATION/ ENERGY - DAR ROJECT - ROW MMIT & PORTA NWI AND FEM/ M. OPEL E. GIVEN B. FALKINBURG	URED FROM U.S. FISH & WILDLIFE TORY (NWI). STREAM DATA DROGRAPHY DATASET (NHD). FLOOD AL FLOOD HAZARD LAYER (NFHL). 400 FEET ROW-HUDSON EAST ASSURANCE PROGRAM GE COUNTIES, OH PROJ. NO:: 550808.0009 FIGURE 4
BASE MAP: GOOG DATA SOURCES: SERVICE, NATION ACQUIRED FROM DATA ACQUIRED 1:2,400 1" = 200' 0 PROJECTFIRST 138 KV PI SU TITLE: NHD, N DRAWN BY: CHECKED BY: APPROVED BY: DATE:	SLE MAPS. WETLAND DATA ACQU IAL WETLANDS INVEN USGS, NATIONAL HYI FROM FEMA, NATION/ FROM FEMA, NATION/ ENERGY - DAR ROJECT - ROW MMIT & PORTA NWI AND FEM/ M. OPEL E. GIVEN B. FALKINBURG MARCH 2024	URED FROM U.S. FISH & WILDLIFE TORY (NWI). STREAM DATA DROGRAPHY DATASET (NHD). FLOOD AL FLOOD HAZARD LAYER (NFHL). 400 FEET ROW-HUDSON EAST ASSURANCE PROGRAM GE COUNTIES, OH PROJ. NO: 550808.0009 FIGURE 4 (PAGE 9 OF 16)
BASE MAP: GOOG DATA SOURCES: SERVICE, NATION ACQUIRED FROM DATA ACQUIRED 1:2,400 1" = 200' 0 PROJECTFIRST 138 KV PI SU TITLE: NHD, N DRAWN BY: CHECKED BY: APPROVED BY: DATE:	200 200 ENERGY - DAR ROJECT - ROW MMIT & PORTA WWI AND FEMA MWI AND FEMA MARCH 2024	URED FROM U.S. FISH & WILDLIFE TORY (NWI). STREAM DATA DROGRAPHY DATASET (NHD). FLOOD AL FLOOD HAZARD LAYER (NFHL). 400 FEET ROW-HUDSON EAST ASSURANCE PROGRAM GE COUNTIES, OH FIGURE 4 (PAGE 9 OF 16) 1382 WEST NINTH STREET SUITE 400
BASE MAP: GOOG DATA SOURCES: SERVICE, NATION ACQUIRED FROM DATA ACQUIRED 1:2,400 1" = 200' 0 PROJECTFIRST 138 KV PI SU TITLE: NHD, N DRAWN BY: CHECKED BY: APPROVED BY: DATE:	200 200 ENERGY - DAR ROJECT - ROW MMIT & PORTA NWI AND FEM, MARCH 2024	URED FROM U.S. FISH & WILDLIFE TORY (NWI). STREAM DATA DROGRAPHY DATASET (NHD). FLOOD AL FLOOD HAZARD LAYER (NFHL).



A REAL PROPERTY OF THE PROPERT	BASE MAP: GOOG DATA SOURCES: SERVICE, NATION ACQUIRED FROM DATA ACQUIRED I	LE MAPS. WETLAND DATA ACQI AL WETLANDS INVEN USGS, NATIONAL HYI FROM FEMA, NATION	JIRED FROM U.S. ITORY (NWI). STR DROGRAPHY DAT AL FLOOD HAZAR	FISH & WILDLIFE REAM DATA ASET (NHD). FLOOD D LAYER (NFHL).
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	NHD, N	IWI AND FEM	A FLOODPL	AIN MAP
	DRAWN BY:	M. OPEL	PROJ. NO.:	550808.0009
	CHECKED BY:	E. GIVEN	FIG	URE 4
	APPROVED BY:	B. FALKINBURG	(PAGE	10 OF 16)
5			1382 WE CLE PH	EST NINTH STREET SUITE 400 VELAND, OH 44113 ONE: 216-344-3072
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B/ D/ SI A(ASE MAP: GOC ATA SOURCES ERVICE, NATIC CQUIRED FRO ATA ACQUIREI	DGLE MAPS. 5: WETLAND DATA ACQU NAL WETLANDS INVEN M USGS, NATIONAL HYI D FROM FEMA, NATIONA	JIRED FROM U.S TORY (NWI). STI DROGRAPHY DA AL FLOOD HAZAF	. FISH & WILDLIFE REAM DATA TASET (NHD). FLOOD RD LAYER (NFHL).
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	DRAWN BY:	M. OPEL	PROJ. NO.:	550808.0009
	CHECKED BY:	E. GIVEN	- 14	
	APPROVED BY:	B. FALKINBURG		
	DATE:	MARCH 2024	(PAGE	11 OF 16)
	•	TRC	1382 W CLE	EST NINTH STREET SUITE 400 EVELAND, OH 44113
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	BASE MAP: GOOD DATA SOURCES: SERVICE, NATION ACQUIRED FROM DATA ACQUIRED 1:2,400 1" = 200' 0	SLE MAPS. WETLAND DATA ACQU IAL WETLANDS INVEN USGS, NATIONAL HYI FROM FEMA, NATION/ 200 200	JIRED FROM U.S. FISH & WILDLIFE TORY (NWI). STREAM DATA DROGRAPHY DATASET (NHD). FLOOD AL FLOOD HAZARD LAYER (NFHL).
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1.0.0	TITLE: NHD, I	NWI AND FEM	A FLOODPLAIN MAP
2 5 7 7	DRAWN BY:	M. OPEL	PROJ. NO.: 550808.0009
9000	CHECKED BY:	E. GIVEN	FIGURE A
and the	APPROVED BY:	B. FALKINBURG	(PAGE 12 OF 16)
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		TRC	1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072
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DRAWI CHECK APPRC	N BY: (ED BY: IVED BY: B. FA	M. OPEL E. GIVEN ALKINBURG	FIG (PAGE	URE 4 15 OF 16)
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DRAWI CHECK APPRC DATE:	N BY: EED BY: IVED BY: M M M	M. OPEL E. GIVEN ALKINBURG ARCH 2024	FIG (PAGE 1382 WE CLE PH	URE 4 15 OF 16) EST NINTH STREET SUITE 400 VELAND, OH 44113 ONE: 216-344-3072





	BASE MAP: GOOG	GLE MAPS.		
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- Alle	NHD, N	NWI AND FEM	A FLOODPL	AIN MAP
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-	CHECKED BY:	E. GIVEN	FIG	JRF 4
-	APPROVED BY: DATE:	B. FALKINBURG MARCH 2024	(PAGE	16 OF 16)
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550808.0009 FIGURE 5 (PAGE 3 OF 16) 1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072 WDRv2.aprx

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PROJECT STUDY AREA

- EXISTING STRUCTURE TO REMAIN
- PROPOSED STRUCTURE
- **X** STRUCTURE TO BE REMOVED
- STRUCTURE TO BE REPLACED
- CROSS BRACE REPLACEMENT •
- GUYING AND ANCHOR REPLACEMENT \mathbf{O}
- 0 CULVERT
- NON-JURISDICTIONAL DRAINAGE
- INTERMITTENT STREAM
- PERENNIAL STREAM
- POND
- PEM WETLAND
- PFO WETLAND
- --- WETLAND CONTINUES
- WETLAND DATA POINT
- UPLAND DATA POINT

BASE MAP: GOOGLE MAPS. DATA SOURCES: TRC WETLAND DELINEATION COMPLETED FEBRUARY 21-26, 2024.



(PAGE 4 OF 16)

1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072

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B. FALKINBURG

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- PFO WETLAND
- --- WETLAND CONTINUES
- WETLAND DATA POINT
- UPLAND DATA POINT



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CHECKED BY:	E. GIVEN	FIGURE 5	
APPROVED BY:	B. FALKINBURG		
DATE:	MARCH 2024	(PAGI	= 5 OF 10)
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- UPLAND DATA POINT



DELINEATED RESOURCES MAP

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CHECKED BY:	E. GIVEN	FIGURE 5 (PAGE 6 OF 16)	
APPROVED BY:	B. FALKINBURG		
DATE:	MARCH 2024		
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- --- WETLAND CONTINUES
- WETLAND DATA POINT
- UPLAND DATA POINT



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CHECKED BY:	E. GIVEN	FIGURE 5 (PAGE 9 OF 16)	
APPROVED BY:	B. FALKINBURG		
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- NON-JURISDICTIONAL DRAINAGE
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- PEM WETLAND
- PFO WETLAND
- --- WETLAND CONTINUES
- WETLAND DATA POINT
- UPLAND DATA POINT



 DRAWN BY:
 M. OPEL
 PROJ. NO.:
 550808.0009

 CHECKED BY:
 E. GIVEN
 FIGURE 5 (PAGE 11 OF 16)

 DATE:
 MARCH 2024
 1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072

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- PROJECT STUDY AREA
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- PROPOSED STRUCTURE
- X STRUCTURE TO BE REMOVED
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- CROSS BRACE REPLACEMENT
- GUYING AND ANCHOR REPLACEMENT
- CULVERT
- NON-JURISDICTIONAL DRAINAGE
- INTERMITTENT STREAM
- PERENNIAL STREAM
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- PEM WETLAND
- PFO WETLAND
- --- WETLAND CONTINUES
- WETLAND DATA POINT
- UPLAND DATA POINT



DRAWN BY:	M. OPEL	PROJ. NO.:	550808.0009
CHECKED BY:	E. GIVEN	FIGURE 5	
APPROVED BY:	B. FALKINBURG		
DATE:	MARCH 2024	PAGE	12 OF 10)
TRC		1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072	
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- --- WETLAND CONTINUES
- WETLAND DATA POINT
- UPLAND DATA POINT



DRAWN BY:	M. OPEL	PROJ. NO.:	550808.0009
CHECKED BY:	E. GIVEN	FIGURE 5	
APPROVED BY:	B. FALKINBURG		
DATE:	MARCH 2024	(PAGE	13 OF 10)
TRC		1382 WE CLE PH	EST NINTH STREET SUITE 400 VELAND, OH 44113 IONE: 216-344-3072
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1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072 WDRv2.aprx

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- STRUCTURE TO BE REPLACED
- CROSS BRACE REPLACEMENT
- GUYING AND ANCHOR REPLACEMENT
- CULVERT
- NON-JURISDICTIONAL DRAINAGE
- INTERMITTENT STREAM
- PERENNIAL STREAM
- POND
- PEM WETLAND
- PFO WETLAND
- --- WETLAND CONTINUES
- WETLAND DATA POINT
- UPLAND DATA POINT

BASE MAP: GOOGLE MAPS. DATA SOURCES: TRC WETLAND DELINEATION COMPLETED FEBRUARY 21-26, 2024.



 MARCH 2024
 (PAGE 15 OF 16)

 1382 WEST NINTH STREET SUITE 400 CLEVELAND, OH 44113 PHONE: 216-344-3072

 WDRV2 aprx



- INTERMITTENT STREAM PERENNIAL STREAM POND PEM WETLAND PFO WETLAND ---- WETLAND CONTINUES WETLAND DATA POINT • UPLAND DATA POINT BASE MAP: GOOGLE MAPS. DATA SOURCES: TRC WETLAND DELINEATION COMPLETED FEBRUARY 21-26, 2024. Hudson 400 FEET 200 PROJECTFIRSTENERGY - DARROW-HUDSON EAST 138 KV PROJECT - ROW ASSURANCE PROGRAM SUMMIT & PORTAGE COUNTIES, OH DELINEATED RESOURCES MAP

rost R

Street

ORAWN BY:	M. OPEL	PROJ. NO.:	550808.0009
CHECKED BY:	E. GIVEN	FIGURE 5 (PAGE 16 OF 16)	
APPROVED BY:	B. FALKINBURG		
DATE:	MARCH 2024		
•	TRC	1382 WE CLE PH	EST NINTH STREET SUITE 400 VELAND, OH 44113 IONE: 216-344-3072
EILE:			WDRv2 aprx







Appendix B

Photographic Record



Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000

Photo No. 1. Photo Date:

02/21/2024 **Description:**

Photo of Wetland W-EVN-1, facing north.





Photo Date: 02/21/2024

Description:

Photo of Wetland W-EVN-1, facing east.





Client Name:

FirstEnergy

Photo No. 3. Photo Date: 02/21/2024 Description:

Photo of Wetland W-EVN-1, facing south.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000







Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000





Photo Date: 02/21/2024

Description:

Photo of Wetland W-EVN-2, facing east.



 Photo No. 5.

 Photo Date:

 02/21/2024

Description:

Photo of Wetland W-EVN-2, facing north.



Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

550808.0009.0000

Project No.





Photo No. 7. Photo Date: 02/21/2024

Description:

Photo of Wetland W-EVN-2, facing south.



Client Name:

FirstEnergy

Photo No. 9. Photo Date: 02/21/2024 **Description:**

Photo of Wetland W-EVN-3 facing north.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000







Client Name:

FirstEnergy

Photo No. 11.

Photo Date: 02/21/2024

Description:

Photo of Wetland W-EVN-3 facing south.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 12. Photo Date: 02/21/2024 Description: Photo of Wetland W EVN-3 facing west.



Client Name:

Photo No. 13. Photo Date: 02/21/2024 Description:

Photo of Wetland W-EVN-4 facing north.

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000







Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000



Photo No. 15. Photo Date: 02/21/2024 **Description:**

Photo of Wetland W-EVN-4 facing south.

Page | 8



Client Name:

Photo No. 17. Photo Date: 02/21/2024 Description:

Photo of Wetland W-EVN-5 facing north.

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000







Client Name:

FirstEnergy

Photo Date: 02/21/2024

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000

Photo No. 19. **Description:** Photo of Wetland W-EVN-5 facing south.

Photo No. 20.

Photo Date: 02/21/2024

Description:

Photo of Wetland W-EVN-5 facing west.





Client Name:

FirstEnergy

Photo No. 21.

Photo Date: 02/21/2024

Description:

Photo of Wetland W-EVN-6 facing north.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000





Photo No. 22.





Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

550808.0009.0000

Project No.

<image>



Photo No. 23. Photo Date: 02/21/2024

Description:

Photo of Wetland W-EVN-6 facing south.



Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000





Photo No. 25. Photo Date:

02/21/2024
Description:

Photo of Wetland W-EVN-7 facing north.



Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 27. Photo Date: 02/21/2024 **Description:**

Photo of Wetland W-EVN-7 facing south.

Page | 14



Client Name:

Photo No. 29.

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000

Photo Date: 02/21/2024

Description:

Photo of Wetland W-EVN-8 facing north.

Photo No. 30.

Photo Date: 02/21/2024

Description:

Photo of Wetland W-EVN-8 facing east.





Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000







Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 33.

Photo Date: 02/22/2024 Description:

Photo of Wetland W-EVN-9 facing north.



Client Name:

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000



Photo No. 36. Photo Date: 02/22/2024 **Description:** Photo of Wetland W-EVN-9 facing west.



FirstEnergy

Photo No. 35. Photo Date: 02/22/2024 **Description:**

Photo of Wetland W-EVN-9 facing south.



Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 38.

Photo Date: 02/22/2024

Description:

Photo of Wetland W-EVN-10 facing east.





Client Name:

FirstEnergy

Photo No. 39.

Photo Date: 02/22/2024

Description:

Photo of Wetland W-EVN-10 facing south.



City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 40. Photo Date: 02/22/2024 Description: Photo of Wetland W EVN-10 facing west.





Client Name:

FirstEnergy

Photo No. 41.

Photo Date: 02/23/2024

Description:

Photo of Wetland W-EVN-11 facing north.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000







Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000







Client Name:

FirstEnergy

Photo No. 45.

Photo Date: 02/23/2024

Description:

Photo of Wetland W-EVN-12 facing north.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000





Photo Date: 02/23/2024

Description:

Photo of Wetland W-EVN-12 facing east.





Client Name:

FirstEnergy

Photo No. 47.

Photo Date: 02/23/2024

Description:

Photo of Wetland W-EVN-12 facing south.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 48.

Photo Date: 02/23/2024

Description:

Photo of Wetland W-EVN-12 facing west.





Client Name:

FirstEnergy

Photo No. 49.

Photo Date: 02/23/2024

Description:

Photo of Wetland W-EVN-13 facing north.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000



Photo No. 50. Photo Date:

02/23/2024

Description:

Photo of Wetland W-EVN-13 facing east, showing existing gravel access road.





Client Name:

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000

Photo No. 52. Photo Date:

02/23/2024

Description:

Photo of Wetland W-EVN-13 facing west, showing existing gravel access road.



FirstEnergy





Client Name:

FirstEnergy

Photo Date: 02/23/2024 Description:

Photo of Wetland W-EVN-14 facing north. Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 54.

Photo Date: 02/23/2024

Description:

Photo of Wetland W-EVN-14 facing east.





Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000



Photo No. 55. Photo Date:

02/23/2024 **Description**:

•

Photo of Wetland W-EVN-14 facing south.



Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 57. Photo Date:

02/23/2024

- Description:
- Photo of Wetland W-EVN-15 facing north.



Client Name:

FirstEnergy

Photo No. 59. Photo Date:

02/23/2024

Description:

Photo of Wetland W-EVN-15 facing south.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000





Description:

Photo of Wetland W-EVN-15 facing west.





Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000





Photo Date: 02/26/2024

Description:

Photo of Wetland W-EVN-16 facing east.





Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000

Photo No. 63.

Photo Date: 02/26/2024

Description:

Photo of Wetland W-EVN-16 facing south.



Photo No. 64.

Photo Date: 02/26/2024

Description:

Photo of Wetland W-EVN-16 facing west.




Client Name:

Photo No. 65. Photo Date: 02/26/2024 Description:

Photo of Wetland W-EVN-17 facing north.

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000

Photo No. 66.

Photo Date: 02/26/2024

Description:

Photo of Wetland W-EVN-17 facing east.





Client Name:

FirstEnergy

Photo No. 67.

Photo Date: 02/26/2024

Description:

Photo of Wetland W-EVN-17 facing south.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 68. Photo Date: 02/26/2024 Description: Photo of Wetland W EVN-17 facing west.



Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 70. Photo Date: 02/26/2024

Description:

Photo of Wetland W-EVN-18 facing east.



Photo No. 69. Photo Date:

Photo of Wetland W-EVN-18 facing north.

02/26/2024 **Description**:



Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000





Photo No. 71. Photo Date: 02/26/2024

Description:

Photo of Wetland W-EVN-18 facing south.



Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000

Photo No. 74. Photo Date:

02/26/2024

Description:

Photo of Wetland W-EVN-19 facing east.



Photo No. 73. Photo Date: 02/26/2024

Description:

Photo of Wetland W-EVN-19 facing north.



Client Name:

Photo No. 75. Photo Date: 02/26/2024 **Description:**

Photo of Wetland W-EVN-19 facing south.

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 76. Photo Date:

02/26/2024

Description:

Photo of Wetland W-EVN-19 facing west.





Client Name:

Photo No. 77. Photo Date: 02/21/2024 Description:

Photo of Stream S-EVN-1 facing upstream.

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000

Photo No. 78. Photo Date:

02/21/2024

Description:

Photo of Stream S-EVN-1 facing downstream.





Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000

Photo No. 79.

Photo Date: 02/21/2024

Description:

Photo of Stream S-EVN-1 showing the observed substrate.









Client Name:

FirstEnergy

Photo No. 81.

Photo Date: 02/21/2024

Description:

Photo of Stream S-EVN-2 facing downstream.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000



Photo No. 82.

Photo Date: 02/21/2024

Description:

Photo of Stream S-EVN-2 showing observed the substrate.





Client Name:

FirstEnergy

Photo No. 83.

Photo Date: 02/21/2024

Description:

Photo of Stream S-EVN-3 facing upstream.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 84.

Photo Date: 02/26/2024

Description: Photo of Stream S-EVN-3 facing downstream.





Client Name:

Photo No. 85. Photo Date: 02/21/2024 **Description:**

Photo of Stream S-EVN-3 showing observed the substrate.

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000

Photo No. 86. Photo Date:

02/21/2024

Description:

Photo of Stream S-EVN-4 facing downstream.





Client Name:

Photo No. 87. Photo Date: 02/21/2024 Description:

Photo of Stream S-EVN-4 facing upstream.

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 88. Photo Date:

02/21/2024

Description:

Photo of Stream S-EVN-4 showing observed the substrate.





Client Name:

FirstEnergy

Photo No. 89.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-5 facing upstream.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000



Photo No. 90.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-5 facing downstream.





Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000

Photo No. 91.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-5 showing observed the substrate.



Photo No. 92.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-6 facing upstream.





Project No.

550808.0009.0000

Client Name:

FirstEnergy

Photo No. 93.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-6 facing downstream.



City of Hudson, Summit County, Ohio and City

of Streetsboro, Portage County, Ohio

Site Location:



Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-6 showing observed the substrate.





Client Name:

FirstEnergy

Photo No. 95.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-7 facing upstream.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000



Photo No. 96.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-7 facing downstream.





Client Name:

FirstEnergy

Photo No. 97.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-7 showing observed the substrate.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000



Photo No. 98.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-8 facing upstream.





Client Name:

Photo No. 99. Photo Date: 02/22/2024 Description:

Photo of Stream S-EVN-8 facing downstream.

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000

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Photo No. 100.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-8 showing observed the substrate.





Client Name:

FirstEnergy

Photo No. 101.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-9 facing upstream.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000



Photo No. 102.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-9 facing downstream.





Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000

Photo No. 103.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-9 showing observed the substrate.



Photo No. 104.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-10 facing upstream.





Client Name:

Photo No. 105. Photo Date: 02/22/2024 Description:

Photo of Stream S-EVN-10 facing downstream.

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 106.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-10 showing observed the substrate.





Client Name:

FirstEnergy

Photo No. 107.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-11 facing upstream.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 108.

Photo Date: 02/22/2024

Description:

Photo of Stream S-EVN-11 facing downstream.





Client Name:

Photo No. 109. Photo Date: 02/22/2024 Description:

Photo of Stream S-EVN-11 showing observed the substrate.

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000

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Photo No. 110.

Photo Date: 02/26/2024

Description:

Photo of Stream S-EVN-12 facing upstream.



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Client Name:

FirstEnergy

Photo No. 111.

Photo Date: 02/26/2024

Description:

Photo of Stream S-EVN-12 facing downstream.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000



Photo No. 112.

Photo Date: 02/26/2024

Description:

Photo of Stream S-EVN-12 showing observed the substrate.





Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

550808.0009.0000

Project No.





Photo No. 113. Photo Date:

02/26/2024 **Description:**

Photo of Stream S-

EVN-13 facing upstream.



Client Name:

FirstEnergy

Photo No. 115.

Photo Date: 02/26/2024

Description:

Photo of Stream S-EVN-13 showing observed the substrate.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000



Photo No. 116.

Photo Date: 02/22/2024

Description:

Photo of Waterbody WB-EVN-1, facing north.





Client Name:

Photo No. 117. Photo Date: 02/26/2024 Description:

Photo of Waterbody WB-EVN-2, facing

east.

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000

Photo No. 118.

Photo Date: 02/26/2024

Description:

Photo of Waterbody WB-EVN-2, facing north.





Client Name:

FirstEnergy

Photo No. 119.

Photo Date: 02/21/2024

Description:

Photo showing existing access road from Hudson Aurora Road, facing south.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000





Photo Date: 02/21/2024

Description:

Photo showing existing access road from Hudson Aurora Road, facing north.





Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000

Photo No. 121.

Photo Date: 02/22/2024

Description:

Representative photo of the Project Study Area, facing north.



Photo No. 122.

Photo Date: 02/22/2024

Description:

Representative photo of the Project Study Area, facing south.





Client Name:

FirstEnergy

Photo No. 123.

Photo Date: 02/22/2024

Description:

Photo showing existing access road from OH-303, facing north.



City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000



Photo No. 124.

Photo Date: 02/22/2024

Description:

Photo showing existing access road from OH-303, facing south.





Client Name:

FirstEnergy

Photo No. 125.

Photo Date: 02/23/2024

Description:

Photo showing existing access road from Ravenna Road, facing north.

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 126.

Photo Date: 02/23/2024

Description:

Photo showing existing access road from OH-303, facing south.





Client Name:

Photo No. 127. Photo Date: 02/22/2024 Description:

Representative photo of the Project Study Area, facing west.

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No. 550808.0009.0000



Photo No. 128.

Photo Date: 02/22/2024

Description:

Representative photo of the Project Study Area, facing southeast.





Client Name:

FirstEnergy

Site Location:

City of Hudson, Summit County, Ohio and City of Streetsboro, Portage County, Ohio

Project No.

550808.0009.0000

Photo No. 129.

Photo Date: 02/22/2024

Description:

Representative photo of the Project Study Area, facing east.



Photo No. 130.

Photo Date: 02/22/2024

Description:

Representative photo of the Project Study Area, facing north.





Appendix C

Data Forms



USACE Wetland Determination Data Forms – Northcentral and Northeast Region

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Darrow-Hudson East 138 kV Project City/	County: Hudson, Summit County Sampling Date: 2024-2-21
Applicant/Owner: FirstEnergy	State: OH Sampling Point: W-EVN-01 PEM-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA
Landform (hillslope, terrace, etc): Depression	al relief (concave, convex, none): None Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 139 of LRR R Lat	: 41.259239 Long: -81.3956605 Datum: WGS84
Soil Map Unit Name: Orrville silt loam	NWI Classification: None
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	turbed? Are "Normal Circumstances" present? Yes 🗴 No
Are Vegetation, Soil, or Hydrology naturally proble	ematic? (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	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes X No
Wetland Hydrology Present? Yes 🗶 No	If ves, ontional Wetland Site ID: W-EVN-01
Remarks: (Explain alternative procedures here or in a separate report.)	
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.	
HYDROLOGY	
Watand 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 along Living Roots (C3)Saturation Visible on Aerial Imagery (C9)	
Drift Deposits (B3) Presence of Reduced Iron (C4) Stunied of Stressed Plants (D1)	
Iron Deposits (B5) Thin Muck Surface (C7) Shallow Aguitard (D3)	
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rema	(rks) X Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Ves ¥ No Denth (inches)	· · · · · · · · · · · · · · · · · · ·
Water Table Present? Ves No X Depth (inches)	
Saturation Present? Yes No X Depth (inches)	Wetland Hydrology Present? Yes 🗶 No
(includes capillary fringe)	
l Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks:	
The criterion for wetland hydrology is met.	
Sampling Point: <u>W-EVN-01_PEM-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				That Are OBL, FACW, or FAC: <u>3</u> (A)
3.				Total Number of Dominant
4.				Species Across All Strata: 3 (B)
5				Percent of Dominant Species
6				That Are OBE, FACW, OF FAC. 10070 (A/B)
	0	= Tota	Cover	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of: Multiply by:
1. Salix nigra	15	Yes	OBL	OBL species X 1 = 80
2				FACW species20 x 2 =40
4.				FAC species x 3 =
5.				FACU species $0 \times 4 = 0$
6.				UPL species $0 \times 5 = 0$
7	15			Column Totals: 100 (A) 120 (B)
Herb Stratum (Plot size: 5 ft radius)	15	= Iotal	Cover	Provolonce Index = P/A = -1.2
1. Typha angustifolia	25	Yes	OBL	
2. Juncus effusus	25	Yes	OBL	Hydrophytic Vegetation Indicators:
3. <u>Mimulus ringens</u>	15	No	OBL	1 - Rapid Test for Hydrophytic Vegetation
4. Phragmites australis		No	FACW	∑ 2 - Dominance Test is >50%
5. Lysimachia nummularia	5	No	FACW	-3 - Prevalence Index is $\leq 3.0^1$
7.				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10				¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed or problematic.
	85	= Total	Cover	Definitions of Vegetation Strata
Woody Vine Stratum (Plot size: 30 ft radius)				Tree – Woody plants 3 in (7.6 cm) or more in
1				diameter
3.				at breast height (DBH), regardless of height.
4.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	0	= Total	Cover	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 X No
Remarks: (Include photo numbers here or on a separate she The criterion for hydrophytic vegetation is met.	eet.)			

US Army Corps of Engineers 71247c10-9562-4d16-8bea-57c0bdb3d9d2 W-EVN-01_PEM-1

Profile Des	Matrix	u the dep	Redox	Feature	e indica	lor or o	confirm the a	absence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 6	2.5Y 4/1	90	10YR 5/6	10	C	М	Silty Clay Lo	
6 to 20	2.5Y 4/2	80	10YR 5/8	20	С	M/PL	Silty Clay Lo	am
				·				
				·				
							·	
¹ Type: C=Co	oncentration, D=Deple	tion, RM	Reduced Matrix, CS	S=Cover	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						I	ndicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue B	elow Su	rface (S8	3) (LRR	R, _	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	ipedon (A2) stic (A3)		Thin Dark St	s) urface (S	S9) (LRR	R. ML	- RA 149B)	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydroge	n Sulfide (A4)		Loamy Muck	ky Miner	al (F1) (I	LRR K,	L) ⁽	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5) Below Dark Surface ((A11)	Loamy Gley	ed Matri	ix (F2)		-	Polyvalue Below Surface (S8) (LRR K, L)
Thick Da	rk Surface (A12)	((11)	Redox Dark	Surface	, e (F6)		-	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy M	ucky Mineral (S1)		Depleted Da	rk Surfa	ace (F7)		-	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy G Sandy R	edox (S5)		Redox Depr	essions	(F8)		-	Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21)
Stripped	Matrix (S6)						-	Very Shallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, ML	RA 1498)				-	Other (Explain in Remarks)
³ Indicators o	of hydrophytic vegetati	on and w	etland hydrology mu	st be pr	esent, ur	nless dis	sturbed or pro	bblematic.
Restrictive	Layer (if present):							
Type: No	ot present							Hydric Soil Present? Ves X No
Deptil (illi								
Remarks:								
I ne critei	ion for hydric soll is me	t.						

Project/Site: DARROW-HUDSON EAST 138 KV PROJECT	City/County: Hudson, Summit County Sampling Date: 2024-2-21
Applicant/Owner: FE	State: OH Sampling Point: W-EVN-01 UPL-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA
Landform (hillslope, terrace, etc): Flat	Local relief (concave, convex, none): None Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.2592244 Long: -81.3955892 Datum: WGS84
Soil Map Unit Name: Orrville silt loam	NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time c	of year? Yes 🗴 No 🦳 (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significa	antly disturbed? Are "Normal Circumstances" present? Yes 🗶 No
Are Vegetation , Soil , or Hydrology naturally	y problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS — Attach site man showi	ing sampling point locations, transacts, important features, etc.
Sommart of Findings Attach site map show	ng samping point locations, transects, important leatures, etc.
Hydrophytic Vegetation Present? Yes 🗶 No	Is the Sampled Area
Hydric Soil Present? Yes No 🔀	
Wetland Hydrology Present? Yes No X	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate re	port.)
Covertype is UPL. Based on the absence of two of three parameters,	, this area is an upland.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	<u>)ly)</u> Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained L	Leaves (B9) Drainage Patterns (B10)
Aqualic Fauna (Saturation (A3)	B13) MOSS THILLINES (B10) B15) Dry-Season Water Table (C2)
Water Marks (B1)	le Odor (C1) Cravfish Burrows (C8)
Sediment Deposits (B2)	Spheres along Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3)	duced Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Recent Iron Rec	duction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)	ace (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in Sparsely Vegeteted Concerve Surface (B8)	n Remarks) Microtopographic Relief (D4)
Field Observations:	
Surface Water Present? Yes No 🗶 Depth ((inches):
Water Table Present? Yes No 🗶 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 pl	hotos, previous inspections), if available:
Remarks:	
The criterion for wetland hydrology is not met.	

Sampling Point: <u>W-EVN-01_UPL-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2				That Are OBL, FACW, or FAC: <u>2</u> (A)
3				Iotal Number of Dominant Species Across All Strata: 3 (B)
45				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 66.7% (A/B)
7.				Provalence Index worksheet:
	0	= Total	Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)	10	X 7	ODI	Iotal % Cover of: Multiply by:
1. Salix nigra		Yes	OBL	OBL species $10 \times 1 = 10$
3		105	FACW	FACW species 20 x 2 = 40
4.				FAC species $0 \times 3 = 0$
5.				FACU species $85 \times 4 = 340$
6.				UPL species $5 \times 5 = 25$
7				Column Totals: 120 (A) 415 (B)
Line Chatter (Distained Eftersting)	20	= Total	Cover	
Herb Stratum (Plot Size: <u>5 it radius</u>)	70	Ves	FACU	Prevalence Index = $B/A = 3.5$
2. Plantaao lanceolata		No	FACU	Hydrophytic Vegetation Indicators:
3. Phragmites australis	10	No	FACW	1 - Rapid Test for Hydrophytic Vegetation
4. Daucus carota	5	No	UPL	¥ 2 - Dominance Test is >50%
5.				3 - Prevalence Index is $\leq 3.0^1$
6.				4 - Mornhological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10				Lindiactors of hydric soil and watland hydrology must
11				be present, unless disturbed or problematic.
12				
Woody Vine Stratum (Plot size: 30 ft radius)	100	= Iotal	Cover	Definitions of Vegetation Strata:
1.				Tree — Woody plants 3 in. (7.6 cm) or more in
2.				at breast height (DBH), regardless of height.
3				Sapling/shrub – Woody plants less than 3 in. DBH
4				and greater than or equal to 3.28 ft (1 m) tall.
	0	= Iotal	Cover	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 X No
Remarks: (Include photo numbers here or on a separate s	sheet)			
The criterion for hydrophytic vegetation is met.	sneet.j			

Profile Description: (Describe t Matrix	o the dept	th needed to docu Redox	ment the	e indica es	tor or co	onfirm the a	absence of indicators.)
(inches) Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 5 2.5Y 5/3	100					Silt Loam	
	·						
	·						
	·						
	·						
	·						
¹ Type: C=Concentration, D=Deple	tion, RM=I	Reduced Matrix, CS	S=Cover	ed or Co	ated Sar	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:						lı	ndicators for Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue Be	elow Sur	face (S8) (LRR F	R, _	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epipedon (A2) Black Histic (A3)		MLRA 149E Thin Dark Su	5) Irfaco (S	:0) /I DD		A 1/0B)	_ Coast Prairie Redox (A16) (LRR K, L, R)
Hydrogen Sulfide (A4)		Loamv Muck	v Minera	al (F1) (L	.RR K. L	<u>, 1430)</u>	Dark Surface (S7) (LRR K. L)
Stratified Layers (A5)		Loamy Gleye	ed Matrix	x (F2)	····, –	· –	Polyvalue Below Surface (S8) (LRR K, L)
Depleted Below Dark Surface ((A11)	Depleted Ma	trix (F3)	(— -)		_	Thin Dark Surface (S9) (LRR K, L)
Thick Dark Surface (A12) Sandy Mucky Mineral (S1)		Redox Dark	Surface	(F6)		_	_ Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Eloodalain Soils (E19) (MI PA 1498)
Sandy Gleved Matrix (S4)		Redox Depre	essions	(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, ML	.RA 149B)					-	Other (Explain in Remarks)
³ Indicators of hydrophytic vegetati	on and we	tland hydrology mu	st be pre	esent, un	less dist	urbed or pro	blematic.
Restrictive Layer (if present):							
Type: <u>Gravel</u>							
Depth (inches): <u>5</u>							Hydric Soil Present? Yes No
Remarks:							
The criterion for hydric soil is not	t met.						

Project/Site: Darrow-Hudson East 138kV Project	_ City/County: <u>Hud</u>	lson, Summit C	County	Sampling Date: 2024-2-21
Applicant/Owner: <u>FE</u>		State: OH	Sampling Point	: <u>W-EVN-02_</u> PFO-1
Investigator(s): Erin Van Nort		Sectio	n, Township, Range	e: NA
Landform (hillslope, terrace, etc): <u>Depression</u>	_ Local relief (conc	ave, convex, no	ne): <u>Concave</u>	Slope (%): <u>0 to 1</u>
Subregion (LRR or MLRA): <u>MLRA 139 of LRR R</u>	Lat: <u>41.256036</u>	6 <u>1</u> L	ong: <u>-81.3975351</u>	Datum: WGS84
Soil Map Unit Name: <u>Canadice silty clay loam</u>			NWI Classificat	ion: <u>None</u>
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🗶 🛚	No (If no	, explain in Remark	s.)
Are Vegetation, Soil, or Hydrology significar	ntly disturbed?	Are "Norma	Circumstances" pr	esent? Yes 🗶 No
Are Vegetation, Soil, or Hydrology naturally	problematic?	(If needed, e	explain any answers	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map showir	ng sampling po	oint location	s, transects, in	nportant features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	Is the Sa within a v	mpled Area Wetland?	Yes X	No
	If yes, opt	tional Wetland S	ite ID: <u>W-EVIN-0</u>	2
Remarks: (Explain alternative procedures here or in a separate rep Covertype is PFO. Based on the presence of all three parameters, this	oort.) 5 area is a wetland.			
HYDROLOGY				
Wetland Hydrology Indicators:			Surface Soil Cra	rs (minimum of two required)
Surface Water (A1) Water-Stained Le	aves (B9)		Drainage Patter	rns (B10)
High Water Table (A2)	313)		Moss Trim Line	s (B16)
X Saturation (A3) Marl Deposits (B:	15)		Dry-Season Wa	iter Table (C2)
Water Marks (B1) Hydrogen Sulfide	e Odor (C1)		Crayfish Burrow	/s (C8)
Sediment Deposits (B2) Oxidized Rhizosp Drift Deposits (B3) Presence of Ped	oneres along Living	Roots (C3)	Saturation VISID	sed Plants (D1)
Algal Mat or Crust (B4)	uction in Tilled Soils	; (C6)	Geomorphic Po	sition (D2)
Iron Deposits (B5)	ce (C7)		Shallow Aquitar	d (D3)
I Inundation Visible on Aerial Imagery (B7) Other (Explain in	Remarks)		Microtopograph	ic Relief (D4)
Sparsely Vegetated Concave Surface (B8)			X FAC-Neutral le	st (D5)
Field Observations:				
Surface Water Present? Yes 🗶 No Depth (in	nches): 3			
Water Table Present? Yes No 🗶 Depth (ii	nches):			
Saturation Present? Yes X No Depth (ii	nches): <u>2</u>	Wetland Hyd	Irology Present?	Yes 🗶 No
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring well, aerial ph	otos, previous inspe	ections), if availa	ıble:	
Remarks:				
The criterion for wetland hydrology is met.				

Sampling Point: <u>W-EVN-02_PFO-1</u>

Trop Stratum (Plot cize: 30 ft radius)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1. Ouercus bicolor	<u>30 COVEL</u>	Yes	FACW	Number of Dominant Species
2. Fraxinus pennsylvanica	15	Yes	FACW	That Are OBL, FACW, or FAC: 3 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: <u>4</u> (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 75% (A/B)
7				Prevalence Index worksheet:
Conling/Chrub Stratum (Plat aiza: 15 ft radius)	45	= Total	Cover	Total % Cover of: Multiply by:
1				$\frac{1}{OBI \text{ species}} \qquad 0 \qquad \text{ y } 1 = 0$
2.				$\frac{1}{1} = \frac{1}{1} = \frac{1}{1}$
3.				$\frac{1}{100}$
4.				$\begin{array}{c} \text{FAC species} \\ \hline \\ $
5				FACU species 25 $x = 100$
6				UPL species $0 \times 5 = 0$
7				Column Totals: 100 (A) 250 (B)
	0	= Total	Cover	
Herb Stratum (Plot size: <u>5 ft radius</u>)	25	••	EL CLI	Prevalence Index = $B/A = 2.5$
1. Poa pratensis	25	Yes	FACU	Hydrophytic Vegetation Indicators:
2. Phalaris arunainacea		Yes	FACW	1 - Rapid Test for Hydrophytic Vegetation
3. Unoclea sensibilis		NO	FACW	✓ 2 - Dominance Test is >50%
5.				
6.				$\underline{\mathbf{x}}$ 3 - Prevalence index is $\leq 3.0^{4}$
7.				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sneet)
9				Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must
12				be present, unless disturbed or problematic.
12		– Total	Cover	
Woody Vine Stratum (Plot size: 30 ft radius)		- 10141	COVCI	Definitions of Vegetation Strata:
1.				Tree — Woody plants 3 in. (7.6 cm) or more in
2.				at breast beight (DBH) regardless of beight
3				Sanling/shrub — Woody plants less than 3 in DBH
4	·			and greater than or equal to 3.28 ft (1 m) tall.
	0	= Total	Cover	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 X No
Pomarks: (Include photo numbers here or on a separate she	ot)			
The criterion for hydrophytic vegetation is met.	el.)			

Profile Des	cription: (Describe t	o the dep	lepth needed to document the indicator or confirm th Redox Features				onfirm the	absen	ce of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	9	Remarks
0 to 7	10YR 3/1	90	7.5YR 5/8	10	C	PL	Silty Clay L	Joam	
7 to 20	10YR 4/1	90	10YR 6/8	10	С	M/PL	Clay Loa		
		· <u> </u>							
¹ Type: C=Co	oncentration, D=Deple	tion, RM	Reduced Matrix, C	S=Cove	red or Co	ated Sa	and Grains.	² Lo	ocation: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							Indicat	tors for Problematic Hydric Soils ³ :
Histosol ((A1)		Polyvalue B	elow Su	rface (S8	B) (LRR	R,	2 c	m Muck (A10) (LRR K, L, MLRA 149B)
Black His	tic (A3)		Thin Dark S	5) urface (\$	S9) (LRF	R, ML	RA 149B)	- Co 5 c	m Muck Peat or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Muc	ky Minei	ral (F1) (I	LRR K,	L) Í	Da	rk Surface (S7) (LRR K, L)
Stratified	Layers (A5) Below Dark Surface	(Δ11)	Loamy Gley	ed Matri	ix (F2)			Pol	lyvalue Below Surface (S8) (LRR K, L)
Thick Dar	rk Surface (A12)	(~11)	X Redox Dark	Surface) e (F6)			Iror	n-Manganese Masses (F12) (LRR K, L, R)
Sandy M	ucky Mineral (S1)		Depleted Da	ark Surfa	ace (F7)			Pie	edmont Floodplain Soils (F19) (MLRA 149B)
Sandy G	edox (S5)		Redox Depressions (F8)					Re	d Parent Material (F21)
Stripped	Matrix (S6)						Ver	ry Shallow Dark Surface (TF12)	
Dark Surf	face (S7) (LRR R, ML	.RA 149B)					Oth	ner (Explain in Remarks)
³ Indicators o	f hydrophytic vegetati	on and w	etland hydrology mu	ist be pr	esent, ur	nless dis	sturbed or p	roblema	atic.
Restrictive I	Layer (if present):								
Type: No	t present							Hydri	ic Soil Procent? Voc 🎽 No
Deptil (Inc								пуш	
Remarks:									
The criter	ion for hydric soil is me	t.							

Project/Site: Darrow-Hudson East 138kV Project	Citv/County: Hudson, Summit County Sampling Date: 2024-2-21
Applicant/Owner: FirstEnergy	State: OH Sampling Point: W-EVN-02_UPL-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA
Landform (hillslope, terrace, etc): Flat	Local relief (concave, convex, none): None Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.2556701833 Long: -81.39746925 Datum: WGS84
Soil Map Unit Name: Trumbull silt loam, 0 to 2 percent slopes	NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes 🗴 No 🤅 (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantl	y disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	a sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X	Is the Sampled Area within a Wetland? Yes No X If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate repo Covertype is UPL. Based on the absence of all three parameters, this ar	rt.) ea is an upland.
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Lea High Water Table (A2) Aquatic Fauna (B1: Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide C Sediment Deposits (B2) Oxidized Rhizosph Drift Deposits (B3) Presence of Reduct 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) Other (Explain in R	Secondary Indicators (minimum of two required). ves (B9) 3) b) Correction b) Correction Correction Correction Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) eres along Living Roots (C3) sed Iron (C4) tion in Tilled Soils (C6) (C7) semarks) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inc Water Table Present? Yes No X Depth (inc Saturation Present? Yes No X Depth (inc (includes capillary fringe) Yes No X Depth (inc	:hes): :hes): :hes): Wetland Hydrology Present? Yes No _X
Describe Recorded Data (stream dauge, monitoring well, aerial phot	os previous inspections) if available:
	os, previous inspections), il avaliable.
Remarks: The criterion for wetland hydrology is not met.	

Sampling Point: <u>W-EVN-02_UPL-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1. Pinus strobus	35	Yes	FACU	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant
4.				Percent of Dominant Species
р		·		That Are OBL, FACW, or FAC: 20% (A/B)
7.	·			
	35	= Total	Cover	Prevalence index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of: Multiply by:
1. Rosa multiflora	20	Yes	FACU	OBL species $0 \times 1 = 0$
2. Lindera benzoin		Yes	FACW	FACW species $10 \times 2 = 20$
4.				FAC species $0 \times 3 = 0$
5.				FACU species $84 \times 4 = 336$
6.				UPL species $0 \times 5 = 0$
7		·		$\begin{array}{c c} Column Totals: \underline{94} (A) \underline{356} (B) \end{array}$
Lierh Ctreture (Distainer Eftradius)	30	= Total	Cover	Drouglance index $= D/A = -\frac{2}{3}R$
<u>Herb Stratum</u> (Plot Size: <u>5 it ratius</u>)	15	Ves	FACU	$\frac{1}{2}$
2. Plantago lanceolata	14	Yes	FACU	Hydrophytic Vegetation Indicators:
3.				_ 1 - Rapid Test for Hydrophytic Vegetation
4.				2 - Dominance Test is >50%
5.	·	·		3 - Prevalence Index is ≤3.0 ¹
7.		·		4 - Morphological Adaptations ¹ (Provide supporting
8.		·		data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10				¹ Indicators of hydric soil and wetland hydrology must
11				be present, unless disturbed or problematic.
	29	= Total	Cover	Definitions of Vegetation Strata
Woody Vine Stratum (Plot size: 30 ft radius)				Tree – Woody plants 3 in (7.6 cm) or more in
1	·			diameter
3	·			at breast height (DBH), regardless of height.
4.	·			Sapling/shrub — Woody plants less than 3 in. DBH
	0	= Total	Cover	
				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 🗶
Remarks: (Include photo numbers here or on a separate she The criterion for hydrophytic vegetation is not met.	et.)			

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Profile Des	cription: (Describe Matrix	to the dep	o <mark>th needed to docu</mark> Redo>	ment th	i e indica es	tor or o	confirm the	absence of indicators.)
Depth (inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 16	10YR 5/2	100					Silty Clay L	Loam
16 to 20	10YR 5/2	50	10YR 6/8	10		М	Silty Cla	IV
16 to 20	10YR 5/1						Silty Cla	
	10110.0/1							
							·	
							·	
							·	
¹ Type: C=Co	ncentration, D=Depl	etion, RM=	Reduced Matrix, C	S=Covei	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							Indicators for Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue B	elow Su	rface (S8	8) (LRR	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	pedon (A2) tic (A3)		MLRA 1491 Thin Dark S	3) urface (9	59) (I BE		RA 149R)	Coast Prairie Redox (A16) (LRR K, L, R)
Hydrogen	n Sulfide (A4)		Loamy Mucl	ky Miner	al (F1) (RR K,	L)	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)		Loamy Gley	ed Matri	ix (F2)			Polyvalue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	(A11)	Depleted Ma Redox Dark	atrix (H3 Surface) > (E6)			Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (E12) (I RR K I, R)
Sandy Mu	ucky Mineral (S1)		Depleted Da	ark Surfa	ace (F7)			Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gl	eyed Matrix (S4)		Redox Depr	essions	(F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5) Matrix (S6)							Red Parent Material (F21) Very Shallow Dark Surface (TE12)
Dark Surf	ace (S7) (LRR R, M	LRA 149B)					Other (Explain in Remarks)
3	f la sala a la sta a sa a sa a						t all a dia an	
-Indicators of	i nydropnytic vegetai	ion and w	eliand hydrology mu	ist be pr	esent, ur	ness als	sturbed or pi	robiematic.
Restrictive L	ayer (if present):							
Depth (inc	hes):							Hydric Soil Present? Yes No 🗶
Domorko	,							
The criteri	ion for hydric soil is no	ot met.						

Project/Site: Darrow-Hudson East 138kV Project	City/County: Hudson, Summit County Sampling Date: 2024-2-21						
Applicant/Owner: FirstEnergy	State: OH Sampling Point: W-EVN-03 PEM-1						
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA						
Landform (hillslope, terrace, etc): Depression	Local relief (concave, convex, none): Concave Slope (%): 0 to 1						
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.2544052 Long: -81.3982374667 Datum: WGS84						
Soil Map Unit Name: Mahoning silt loam, 2 to 6 percent slopes	NWI Classification: None						
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🗴 No 🦳 (If no, explain in Remarks.)						
Are Vegetation , Soil , or Hydrology significantly	/ disturbed? Are "Normal Circumstances" present? Yes 🗴 No						
Are Vegetation , Soil , or Hydrology naturally pr	oblematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site man showing	sampling point locations, transects, important features, etc.						
	Is the Sampled Area						
Hydrophytic Vegetation Present? Yes X No	within a Wetland? Yes X No						
Wetland Hydrology Present? Yes X No							
	If yes, optional Wetland Site ID: <u>W-EVN-03</u>						
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.							
HYDROLOGY							
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) X Saturation (A3) Water Marks (B1) Hydrogen Sulfide C Drift Deposits (B2) X Algal Mat or Crust (B4) Presence of Reduct Iron Deposits (B5) Thin Muck Surface Inundation Visible on Aerial Imagery (B7) Other (Explain in R Sparsely Vegetated Concave Surface (B8) Sufface Water Present? Yes Kater Table Present? Yes No Depth (inc Water Table Present? Yes No Depth (inc	yes (B9) Surface Soil Cracks (B6) B) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) ed Iron (C4) Geomorphic Position (D2) (C7) Shallow Aquitard (D3) marks) Microtopographic Relief (D4) FAC-Neutral Test (D5) FAC-Neutral Test (D5)						
Saturation Present? Yes X No Depth (inc (includes capillary fringe)	hes): 12 Wetland Hydrology Present? Yes X No						
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:						
Remarks: The criterion for wetland hydrology is met.							

Sampling Point: <u>W-EVN-03_PEM-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2				That Are OBL, FACW, or FAC:(A)
3				Species Across All Strata: 2 (B)
45				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 100% (A/B)
7.				Provalence Index worksheet:
	0	= Tota	Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of: Multiply by:
1				OBL species $\frac{75}{1} \times 1 = \frac{75}{10}$
3				FACW species 20 x 2 = 40
4.				FAC species $5 \times 3 = 15$
5.				FACU species $0 \times 4 = 0$
6				UPL species $0 \times 5 = 0$
7				Column Totals: <u>100</u> (A) <u>130</u> (B)
Horb Stratum (Diot cize: 5 ft radius)		= Total	Cover	10
1 Typha anaustifolia	75	Yes	OBL	Prevalence Index = B/A = 1.3
2. Phragmites australis		Yes	FACW	Hydrophytic Vegetation Indicators:
3. Apocynum cannabinum	5	No	FAC	¥ 1 - Rapid Test for Hydrophytic Vegetation
4.				¥ 2 - Dominance Test is >50%
5				3 - Prevalence Index is ≤3.0 ¹
6.				4. Morphological Adaptational (Dravide supporting
/				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Evaluin)
10.				
11.				¹ Indicators of hydric soil and wetland hydrology must
12				
Woody Vino Stratum (Plot size: 20 ft radius)	100	= Tota	Cover	Definitions of Vegetation Strata:
1				Tree — Woody plants 3 in. (7.6 cm) or more in
2.				diameter
3.				a breast height (DBH), regardless of height
4		- Total	Covor	and greater than or equal to 3.28 ft (1 m) tall.
		- 1014	Cover	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 X No
Remarks: (Include photo numbers here or on a separate sh	eet.)			
The criterion for hydrophytic vegetation is met.				

Profile Des	cription: (Describe t Matrix	o the de	oth needed to docu Redox	ment th Featur	ie indica es	tor or c	confirm the a	absence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	- Texture	Remarks
0 to 6	10YR 2/1	80	10YR 6/8	20	C	PL	Silty Clay Lo	 Dam
6 to 20	N 2.5/	95	10YR 6/8	5	D	PL	Silty Clay	
							·	
		· ·						
¹ Type: C=Co	ncentration, D=Deple	tion, RM	=Reduced Matrix, CS	S=Cove	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						I	ndicators for Problematic Hydric Soils ³ :
Histosol (A1) podop (A2)		Polyvalue B	elow Su	rface (S8	3) (LRR	R, -	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	tic (A3)		Thin Dark S	-) urface (1	S9) (LRF	R, ML	RA 149B)	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydrogen	Sulfide (A4)		Loamy Mucl	ky Minei	ral (F1) (I	LRR K,	L)	Dark Surface (S7) (LRR K, L)
Stratified Depleted	Layers (A5) Below Dark Surface	(A11)	Loamy Gley	ed Matr atrix (F3	ix (F2))		-	Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)
Thick Dar	k Surface (A12)	()	🗶 Redox Dark	Surface	, e (F6)		-	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mu	ucky Mineral (S1)		Depleted Da	ark Surfa	ace (F7)		-	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Re	edox (S5)			63310113	(10)		-	Red Parent Material (F21)
Stripped I	Matrix (S6)		、				-	Very Shallow Dark Surface (TF12)
Dark Surf	ace (S7) (LRR R, ML	.RA 1498	5)				-	Other (Explain in Remarks)
³ Indicators of	f hydrophytic vegetati	on and w	etland hydrology mu	ist be pr	esent, ur	nless dis	sturbed or pro	oblematic.
Restrictive L	ayer (if present):							
Type: Not	t present							Hydric Soil Present? Yes 🗶 No
Remarks: The criteri	on for hydric soil is me	•t						
The enter	on for hydric son is me							

Project/Site: Darrow-Hudson East 138kV Project	City/County: <u>Hudson, Summit County</u> Sampling Date: <u>2024-2-21</u>
Applicant/Owner: FirstEnergy	State: OH Sampling Point: W-EVN-03_UPL-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: <u>NA</u>
Landform (hillslope, terrace, etc): <u>Hillslope</u>	Local relief (concave, convex, none): <u>None</u> Slope (%): <u>1 to 3</u>
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: <u>41.2544082044</u> Long: <u>-81.3985573903</u> Datum: <u>WGS84</u>
Soil Map Unit Name: Mahoning silt loam, 2 to 6 percent slopes	NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🗴 No (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significal	ntly disturbed? Are "Normal Circumstances" present? Yes 🗴 No
Are Vegetation . Soil . or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS Attach site man showin	a compling point locations, transacts, important factures, ato
SUMMART OF FINDINGS – Allach sile map showin	ig sampling point locations, transects, important leatures, etc.
Hydrophytic Vegetation Present? Yes No X	Is the Sampled Area
Hydric Soil Present? Yes No X	within a Wetland? Yes <u>No X</u>
Wetland Hydrology Present? Yes No X	If yes, ontional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate rep	port.)
Covertype is UPL. Based on the absence of all three parameters, this	area is an upland.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that appl	y) Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Le	aves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (E	13) Moss Trim Lines (B16)
Saturation (A3)Marl Deposits (B	15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide	Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rnizos	Deres along Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	uction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)	e (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 (I	nches):
Water Table Present? Yes No Depth (I	nches):
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial ph	otos, previous inspections), if available:
Remarks:	
The criterion for wetland hydrology is not met.	

Sampling Point: <u>W-EVN-03_UPL-1</u>

Trop Stratum (Plat cize: 30 ft radius)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1. Fraxinus americana	<u>% Cover</u> 5	Yes	FACU	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 0 (A)
3.				Total Number of Dominant
4				Species Across All Strata: <u>5</u> (B)
5.				That Are OBL, FACW, or FAC: 0% (A/B)
8 7				
	5	= Total	Cover	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of:Multiply by:
1				OBL species x 1 =0
2				FACW species x 2 =0
3				FAC species $15 \times 3 = 45$
5.				FACU species <u>80</u> x 4 = <u>320</u>
6.				UPL species $0 \times 5 = 0$
7.				Column Totals: <u>95</u> (A) <u>365</u> (B)
	0	= Tota	Cover	
Herb Stratum (Plot size: 5 ft radius)	20	N/	FACU	Prevalence Index = $B/A = 3.8$
Rubus allegneniensis Solidago altissima		Yes Ves	FACU FACU	Hydrophytic Vegetation Indicators:
Symphyotrichum ericoides		No	FACU	1 - Rapid Test for Hydrophytic Vegetation
4. Apocynum cannabinum		No	FAC	2 - Dominance Test is >50%
5. Solidago canadensis	10	No	FACU	\sim
6.				
7				4 - Morphological Adaptations ¹ (Provide supporting
8				
9				Problematic Hydrophytic Vegetation ⁺ (Explain)
11.				¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed or problematic.
	90	= Total	Cover	Definitions of Vegetation Strata:
Woody Vine Stratum (Plot size: <u>30 ft radius</u>)				Tree – Woody plants 3 in. (7.6 cm) or more in
1				diameter
2				at breast height (DBH), regardless of height.
4.				Sapling/shrub — Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	0	= Total	Cover	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
Remarks: (Include photo numbers here or on a separa	ate sheet.)			1
The criterion for hydrophytic vegetation is not met.				

Profile Des	cription: (Describe t Matrix	the dept	h needed to docu Redox	ment th	e indica	tor or c	onfirm the	abse	ence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
0 to 6	2.5Y 4/2	100					Silty Clay L	oam	
		·							
		·					·		
		·							
							·		
¹ Type: C=Co	ncentration, D=Deple	etion, RM=I	Reduced Matrix, CS	- G=Cover	red or Co	ated Sa	and Grains.	2	Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							Indic	ators for Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue B	elow Su	rface (S8	B) (LRR	R,	_ ²	cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	pedon (A2) tic (A3)		MLRA 149E Thin Dark Si	3) urface (9	59) (I BB		RA 149B)	- ^C ₅	Coast Prairie Redox (A16) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Mucl	ky Miner	al (F1) (I	LRR K,	L)		Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)	()	Loamy Gley	ed Matri	ix (F2)			P	Polyvalue Below Surface (S8) (LRR K, L)
Depleted Thick Dar	Below Dark Surface	(A11)	Depleted Ma	atrix (⊢3 Surface) • (E6)			— Ir	nin Dark Surface (S9) (LRR K, L) ron-Manganese Masses (E12) (LRR K, L, R)
Sandy Mi	ucky Mineral (S1)		Depleted Da	rk Surfa	ace (F7)			P	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy GI	eyed Matrix (S4)		Redox Depr	essions	(F8)			^	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5) Matrix (S6)							- ^к	Red Parent Material (F21) /erv Shallow Dark Surface (TE12)
Dark Surf	face (S7) (LRR R, ML	.RA 149B)						<u> </u>	Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetat	ion and we	tland hydrology mu	st be pr	esent, ur	nless dis	sturbed or pr	robleı	matic.
Restrictive I	_ayer (if present):								
Type: <u>Fill</u>									
Depth (inc	nes): <u>6</u>							Нус	
Remarks: The criter	ion for hydric soil is no	t met.							

Project/Site: Darrow-Hudson East 138kV Project	City/County: Hudson, Summit County Sampling Date: 2024-2-21
Applicant/Owner: FE	State: OH Sampling Point: W-EVN-04_PEM-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA
Landform (hillslope, terrace, etc): Depression	Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.2542302 Long: -81.4004834 Datum: WGS84
Soil Map Unit Name: Mahoning silt loam, 2 to 6 percent slopes	NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes 🗴 No 🤅 (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significant	ly disturbed? Are "Normal Circumstances" present? Yes 🗶 No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	a sampling point locations, transects, important features, etc.
	In the Compled Area
Hydrophytic Vegetation Present? Yes X No	within a Wetland? Yes X No
Hydric Soil Present? Yes X No	
wetland Hydrology Present? Yes _ No	If yes, optional Wetland Site ID: <u>W-EVN-04</u>
Remarks: (Explain alternative procedures here or in a separate report Covertype is PEM. Based on the presence of all three parameters, this a	rt.) area is a wetland.
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10)
High Water Table (A2)	3) Moss Trim Lines (B16)
Saturation (A3)	5) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide (Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosph	eres along Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Reduct Algal Mat or Crust (P4) Presence of Reduct	ced Iron (C4) Stunted or Stressed Plants (D1)
Iron Denosits (B5)	(C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in F	Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	¥ FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (ind	ches):
Water Table Present? Yes X No Depth (inc	ches): 5
Saturation Present? Yes 🗶 No Depth (inc	ches): 7 Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial phot	os, previous inspections), if available:
Remarks:	
The criterion for wetland hydrology is met.	

Sampling Point: <u>W-EVN-04_PEM-1</u>

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species That Are OBL_EACW_or EAC: 2 (A)
2				Total Number of Dominant
4.				Species Across All Strata: 2 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, of FAC: 10070 (A/B)
· · _	0	= Total	Cover	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of: Multiply by:
1. Cornus amomum	5	Yes	FACW	OBL species x 1 =
2				FACW species $85 \times 2 = 170$
4.				FAC species $0 \times 3 = 0$
5				FACU species $0 \times 4 = 0$
6				$\begin{array}{c} \text{OPL species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Column Totals:} 100 (\text{A}) 185 (\text{P}) \end{array}$
· ·	5	= Total	Cover	$\begin{array}{c} \text{Column rotals.} \\ \hline \end{array} \\ \begin{array}{c} 100 \\ (A) \\ \hline \end{array} \\ \begin{array}{c} 100 \\ (B) \\ \hline \end{array} \\ \begin{array}{c} (B) \\ (B) \\ \end{array} \end{array}$
Herb Stratum (Plot size: 5 ft radius)				Prevalence Index = $B/A = 1.9$
1. Phalaris arundinacea	75	Yes	FACW	Hydrophytic Vegetation Indicators
2. Typha angustifolia		No	OBL	★ 1 - Rapid Test for Hydrophytic Vegetation
3. Onoclea sensibilits 4	5	N0	FACW	
5.				
6.				
7				4 - Morphological Adaptations ⁺ (Provide supporting data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10.				1 directory of hudris coll and watered hudrelery must
11.				be present, unless disturbed or problematic.
12	95	= Total	Cover	
Woody Vine Stratum (Plot size: 30 ft radius)		- 1014	Cover	Definitions of Vegetation Strata:
1				diameter
2				at breast height (DBH), regardless of height.
4				Sapling/shrub — Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	0	= Total	Cover	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
Remarks: (Include photo numbers here or on a separate she The criterion for hydrophytic vegetation is met.	eet.)			

US Army Corps of Engineers 4b13f8a0-9528-45ca-b8c8-4523fc56cee0 W-EVN-04_PEM-1

Diaphin (includes) Color (moist) 96 Type1 Loc2 Texture Remails 0 to 4 10YR 4/2 100	Profile Des	cription: (Describe	to the dep	th needed to docu <u>Re</u> dox	ment th	e indica	tor or c	onfirm the a	bsence of indicators.)
0:0-4 10YR-4/2 109	Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
4 to 18 10YK 5/2 80 10YK 6/6 20 C MPL Clay Loum 4 10 10YK 5/2 80 10YK 6/6 20 C MPL Clay Loum 4 10	0 to 4	10YR 4/2	100					Silty Clay Lo	am
*Type: C=Concentration. D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. *Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Polyvalue Below Surface (SS) (LRR R, MLRA 149B) Cast Prairie Redux (A01) (LRR K, L, R) Histic Epipedon (A2)	4 to 18	10YR 5/2	80	10YR 6/6	20	С	M/PL	Clay Loam	<u> </u>
Image: Section of the section of th									
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. **Location: PL=Pore Lining, M=Matrix. *Hydric Soil Indicators: Pelyvalue Below Surface (S8) (LRR R, ML (A10)) (LRR K, L (MRA 1499) Indicators for Problematic Hydric Soils*, CSS (CRR K, L R) Histos (A1) Pelyvalue Below Surface (S8) (LRR R, ML (A10)) (LRR K, L (MRA 1499) Coard Muck (A10) (LRR K, L R) Straffed Laysers (A5) Loarny Gleyed Matrix (C3) Coard Muck (C3) Straffed Laysers (A5) Loarny Gleyed Matrix (C3) Pelyeled Matrix (C3) Sandy Cleyed Matrix (S4) Pelyeled Matrix (C3) Pelyeled Matrix (C3) Sandy Redox (S5) Sandy Cleyed Matrix (S4) Pelyeled Matrix (C3) Dark Surface (A2) Redox Dark Surface (F7) Pelefmant Root Carl Surface (F7) Sandy Cleyed Matrix (S6) Redox Dark Surface (F7) Pelefmant Root Carl Surface (F7) Dark Surface (S7) (LRR R, MLRA 1449, 145, 1498) Redox Dark Surface (F7) Pelefmant Root Carl Surface (F7) Dark Surface (S7) (LRR R, MLRA 1449, 145, 1498) Pelefmant Root Carl Surface (F7) Pelefmant Root Carl Surface (F7) Dark Surface (S7) (LRR R, MLRA 1449, 145, 1498) Pelefmant Root Carl Surface (F7) Pelefmant Root Carl Surface (F7) Dark Surface (S7) (LRR R, MLRA 1449, 145, 1498) Pelefmant Root Carl Surface (F7) Pelefma									
³ Type: C-Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix, RMpdrc Soil Indicators: Histosco (A1) Polyvalue Below Surface (Sb) (LRR R, HISTEGIA) mdicators for Problematic Hydric Soils ² ; 2 cm Muck (A10) (LRR K, L, MLRA 1498) Histosco (A1) Polyvalue Below Surface (Sb) (LRR R, L) Coast Prairie Redox (A10) (LRR K, L, R) Black Histic (A3) Hunch 1499) 5 cm Muck (A10) (LRR K, L, R) Stratified Layers (A5) Coast Prairie Redox (A10) (LRR K, L, R) Depleted Dark Surface (A11) Thin Dark Surface (F5) Sandy Mucky Mineral (F3) Redox Dark Surface (F6) Sandy Mucky Mineral (F3) Redox Dark Surface (F7) Sandy Alcox (Sb) Redox Dark Surface (F7) Sandy Roky Mineral (F3) Redox Depressions (F6) Sandy Roky (F5) Redox Depressions (F6) Stripped Matrix (S4) Redox Depressions (F6) Stripped Matrix (S4) Hydric Soil Present? Very Shallow Dark Surface (T7) Polytophydic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (ff present): Type: Cravel Depth (inches): 18 Hydric Soil Present? Yes X No								·	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Polyvalue Below Surface (S8) (LRR R, MLRR 1498) Indicators for Problematic Hydric Soils ³ : Histos (A1) MLRA 1498) Coast Pratic Reduced Matrix (F3) Coast Pratic Reduced (Matrix (F4)) Stratified Layer (A3) Initi Dark Surface (S9) (LRR K, L) Dark Surface (S7) (LRR K, L) Depleted Below Dark Surface (A1) Image Pratic Pratice (S7) (LRR K, L) Depleted Matrix (F3) Stratified Layer (A5) Depleted Matrix (F3) Polyvalue Below Surface (S7) (LRR K, L) Stardy Below Matrix (S4) Peleted Matrix (F3) Polyvalue Below Surface (S7) (LRR K, L) Stardy Mucky Mineral (S1) Peleted Dark Surface (F7) Polyvalue Below Surface (S7) (LRR K, L), R1 Stardy Clocky Surface (S7) Peleted Matrix (S3) Peleted Dark Surface (S7) Polyvalue Below Surface (F12) Stardy Redux (S5) Peleted Dark Surface (S7) Peleted Matrix (S4) Polyvalue Below Surface (S7) Stardy Redux (S5) Peleted Matrix (S4) Polyvalue Below Surface (S7) Peleted Below Dark Surface (S7) Stardy Elevel Matrix (S4) Peleted Dark Surface (S7) Peleted Below Surface (S7) Peleted Below Dark Surface (S7) St								·	
¹ type: C-Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Polyvalue Below Surface (S8) (LRR R, MLRA 1499) Indicators for Problematic Hydric Soils ³ : Histic Epipedin (A2) Thin Dark Surface (S9) (LRR K, L) Coast Prairie Redox (A3) (LRR K, L, R) Black Histic (A3) Loamy Mick Mineral (F2) (LRR K, L) Dark Surface (S1) (LRR K, L) Startified Layers (A5) Loamy Gleyed Matrix (F2) Dark Surface (S1) (LRR K, L) Starty Mick (A12) Redox Dark Surface (F6) Polyvalue Below Surface (S1) (LRR K, L) Sandy Mick (S1) Depleted Dark Surface (F7) Pelefnort Incode Si (LRR K, L) Sandy Mick (S3) Redox Depressions (F9) Mesic Sogi (TA6) (MLRA 1498) Sandy Rick (S5) Red Zerret Matrix (S2) Other Surface (F12) Stripped Matrix (S4) Red Parent Matriah (F21) Very Shallow Dark Surface (F12) Stripped Matrix (S4) Red Parent Matriah (F21) Very Shallow Dark Surface (F12) Stripped Matrix (S4) Red Parent Matriah (F21) Very Shallow Dark Surface (F12) Stripped Matrix (S4) Red Parent Matriah (F21) Very Shallow Dark Surface (F12) Stripped Matrix (S4) Retripped Matrix (S4) No									
¹ Type: C=Concentration. D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: — Polyvalue Below Surface (S8) (LRR R, MLRA 149B)									
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators:									
¹ Type: C-Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydroge Soli Indicators: Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Indicators for Problematic Hydric Solis ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Son Muck Peat or Peat (S3) (LRR K, L, R) Stratified Layers (A5) Loamy Wicky Mineral (1) (LRR K, L) Polyvalue Below Surface (S9) (LRR K, L) Depleted Below Dark Surface (A11) Thin Dark Surface (F7) Polyvalue Gelow Surface (S6) (LRR K, L, R) Sandy Micky Mineral (S1) Depleted Matrix (S4) Redox Dark Surface (F7) PromManganese Masses (F12) (LRR K, L) Stripped Matrix (S6) Redox Depressions (F8) Mesic Spotici (TA6) (MLRA 1448) Mesic Spotici (TA6) (MLRA 1448, 145, 1498) 3 ¹ ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (If present): Type: Gravel Type: Gravel Type: Gravel Hydric Soil Present? Yes X No No Remarks: The criterion for hydric soil is met. No No									
Hydric Soil Indicators: Polyvalue Below Surface (SB) (LRR R, MLRA 149B) Indicators for Problematic Hydric Soils ³ . Histic Epipedon (A2) MLRA 149B) Coast Praine Redox (A16) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) So m Muck Peat or Peat (S3) (LRR K, L, R) Stratified Layers (A5) Loamy Wolky Mineral (F1) Polyvalue Below Surface (S7) (LRR K, L) Depleted Below Dark Surface (A11) Coepleted Dark Surface (F6) Thin Dark Surface (F7) Sandy Gleeyed Matrix (S4) Depleted Dark Surface (F7) Pedemont Floodplain Soils (F19) (MLRA 149B) Sandy Gleeyed Matrix (S4) Redox Dark Surface (F7) Pedemont Floodplain Soils (F19) (MLRA 149B) Sandy Gleeyed Matrix (S4) Redox Depressions (F8) Mesic Spoil (TA6) (MLRA 144, 15, 149B) Sandy Redox (S5) Stripped Matrix (S4) Very Shallow Dark Surface (F12) Dark Surface (S7) (LRR R, ML44A, 145, 149B) Polytow Dark Surface (F12) Very Shallow Dark Surface (F12) Dark Surface (S7) (LRR R, ML44A, 149B) Sandy Gleeyed Matrix (S4) Hydrox Dark Surface (F12) Dark Surface (S7) (LRR R, ML44A, 145, 145, 149B) Polytow Dark Surface (F12) Very Shallow Dark Surface (F12) Dark Surface (S7) (LRR R, ML4A, 144B, 145, 149B) Polytow Dark Surface (S7) Hydrox Dark Surface (S7)	¹ Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, C	S=Cover	red or Co	bated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix .
Histic Epigedon (A2) Bitac Histic (A3) Hydrogen Sulfale (A4) Stratified Layers (A5) Sandy Gleyed Matrix (S4) Sandy Cleyed Matrix (S4) Sathy Redox (S5) Sathy Cleyed Matrix (S4) Sathy Redox (S5) Sathy Cleyed Matrix (S4) Sathy Cleyed Matrix (S4) Depleted Dark Surface (F7) Depleted Dark Surface (F7) Stripped Matrix (S4) Stripped Matrix (S4) Dark Surface (S7) (LRR K, L) Medix Dark Surface (F7) Depleted Dark Surface (F7) Stripped Matrix (S4) Depleted Dark Surface (F7) Depleted Dark Surface (F7) Deplete	Hydric Soil	Indicators:						Ir	ndicators for Problematic Hydric Soils ³ :
Histic Epipeadon (Az) MLRA 1499) Coast Praine Redox (A16) (LNR K, L, R) Bitack Histis (A3) Loamy Mucky Mineral (F1) (LRR K, L) S cm Muck Pator F Pator Redox (A16) (LRR K, L) Stratified Layers (A5) Loamy Glevel Matrix (F2) Polyvalue Below Surface (S5) (LRR K, L) Depleted Below Dark Surface (A1) X Depleted Matrix (F3) Polyvalue Below Surface (S5) (LRR K, L) Stratified Layers (A5) Depleted Matrix (F3) Trini Dark Surface (F7) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Gleved Matrix (S4) Redox Depressions (F8) Red 2000 Dark Surface (F7) Sandy Redox (S5) Redox Sisturface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3 ¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type: <u>Gravel</u> Depth (inches): <u>18</u> Hydric Soil Present? Yes <u>X</u> No Remarks: The criterion for hydric soil is met. No	Histosol	(A1)		Polyvalue B	elow Su	rface (S8	3) (LRR	R, _	_ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Thin Dark Surface (S9) (LRR K, L) Thick Dark Surface (A12) X Depleted Matrix (F2) Thin Dark Surface (S9) (LRR K, L) Sandy Mucky Mineral (S1) Redox Dark Surface (F6) PreierMont Floodplain Solis (F12) (MLRA 1498) Sandy Mucky Mineral (S1) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 1498) Stripped Matrix (S6) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 1498) Stripped Matrix (S5) Stripped Matrix (S6) Redox Surface (F7) Dark Surface (S7) (LRR R, MLRA 1498) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type: Gravel Depth (inches): 18 Hydric Soil Present? Yes X No Remarks: The criterion for hydric soil is met.	Black His	ipedon (A2) stic (A3)		MLRA 1491 Thin Dark S	3) urface (S	59) (LRF	R. ML	RA 149B)	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Straffied Layers (A5) LCRR K, L R Polyetale Below Dark Surface (A12) Thick Dark Surface (A12) Charled Matrix (F2) Too-Manganese Masses (F12) (LRR K, L R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Solis (F12) (LRR K, L R) Sandy Redox (S5) Stripped Matrix (S4) Redox Depressions (F8) Red Parent Material (F21) Viet (F21) Other (Explain in Remarks) Other (Explain in Remarks) 3 ^a ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type: <u>Gravel</u> Dept (inches): <u>18</u> No Remarks: The criterion for hydric soil is met.	Hydrogei	n Sulfide (A4)		Loamy Mucl	ky Miner	al (F1) (I	LRR K,	L)	Dark Surface (S7) (LRR K, L)
Depleted Deform Carl Sufface (ALI) Redox Dark Sufface (FS) Intro-Manganese Masses (F12) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Sandy Redox (S5) Sandy Redox (S5) Stipped Matrix (S4) Dark Surface (S7) (LRR R, MLRA 149B) Sandy Correct (FC) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Sandy Correct (FC) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Sandy Correct (FC) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) User (FC) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stipped Matrix (S6) Dark Surface (S7) (L	Stratified	Layers (A5)	(11)	Loamy Gley	ed Matri	ix (F2)		-	Polyvalue Below Surface (S8) (LRR K, L)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 1495) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 1445, 149B) Sandy Redox (S5) Red Parent Matrial (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) 3 ^a Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (If present): Type: Gravel Depth (inches): 18 Hydric Soil Present? Yes X No Remarks: The criterion for hydric soil is met.	Depleted Thick Da	rk Surface (A12)	(AII)	Redox Dark	Surface) e (F6)		-	Iron-Manganese Masses (F12) (LRR K, L, R)
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 present): Type: <u>Gravel</u> Depth (inches): <u>18</u> Hydric Soil Present? Yes <u>X</u> No Remarks: The criterion for hydric soil is met.	Sandy M	ucky Mineral (S1)		Depleted Da	ark Surfa	ace (F7)		_	Piedmont Floodplain Soils (F19) (MLRA 149B)
Strippe Redux (S5) Strippe Matrix (S6) 	Sandy G	leyed Matrix (S4)		Redox Depr	essions	(F8)		-	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Other (Explain in Remarks)	Sanuy R	Matrix (S6)						-	Verv Shallow Dark Surface (TF12)
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present):	Dark Sur	face (S7) (LRR R, M	LRA 149B)				-	Other (Explain in Remarks)
Restrictive Layer (if present): Type: Gravel Depth (inches): 18 Hydric Soil Present? Yes X No Remarks: The criterion for hydric soil is met.	³ Indicators c	of hydrophytic vegetat	tion and w	etland hydrology mu	ist be pr	esent, ur	nless dis	sturbed or pro	blematic.
Type: Gravel	Restrictive	Layer (if present):							
Depth (inches): 18 Hydric Soil Present? Yes X No Remarks: The criterion for hydric soil is met.	Type: <u>Gr</u>	avel							······································
Remarks: The criterion for hydric soil is met.	Depth (ind	ches): <u>18</u>							Hydric Soil Present? Yes 📕 No
	Remarks:	ion for hydric coil is m	ot						
	I ne criter	tion for hydric soll is m	et.						

Project/Site: Darrow-Hudson East 138kV Project	City/County: Hudson, Summit County Sampling Date: 2024-2-21
Applicant/Owner: FirstEnergy	State: OH Sampling Point: W-EVN-04_UPL-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: <u>NA</u>
Landform (hillslope, terrace, etc): Flat	Local relief (concave, convex, none): <u>None</u> Slope (%): <u>1 to 3</u>
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.2562234 Long: -81.4026713 Datum: WGS84
Soil Map Unit Name: Ellsworth silt loam, 2 to 6 percent slopes	NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of	rear? Yes 🗴 No 🦳 (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significan	ly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally r	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	a sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X	Is the Sampled Area within a Wetland? Yes No X If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate repo Covertype is UPL. Based on the absence of all three parameters, this a	rrt.) :ea is an upland.
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply Surface Water (A1) Water-Stained Lea High Water Table (A2) Aquatic Fauna (B2 Saturation (A3) Marl Deposits (B1 Water Marks (B1) Hydrogen Sulfide Sediment Deposits (B2) Oxidized Rhizosph Drift Deposits (B3) Presence of Redu Algal Mat or Crust (B4) Recent Iron Redu Iron Deposits (B5) Thin Muck Surface Inundation Visible on Aerial Imagery (B7) Other (Explain in I Sparsely Vegetated Concave Surface (B8) Other (Explain in I)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Ives (B9) 3) 5) Odor (C1) neres along Living Roots (C3) ced Iron (C4) xtion in Tilled Soils (C6) e (C7) Remarks)
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) Ves No X Depth (in	ches): Wetland Hydrology Present? Yes No X
Describe Recorded Data (stream gauge, monitoring well, aerial phc	tos, previous inspections), if available:
Remarks: The criterion for wetland hydrology is not met.	

Sampling Point: <u>W-EVN-04_UPL-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1. Fagus grandifolia	5	Yes	FACU	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: <u>1</u> (A)
3.				Species Across All Strata: 5 (B)
4 5.				Percent of Dominant Species
6.	- <u> </u>			That Are OBL, FACW, or FAC: 20% (A/B)
7				Prevalence Index worksheet:
Capling/Chrub Stratum (Dist size: 15 ft radius)	5	= Total	Cover	Total % Cover of: Multiply by:
1. Faqus grandifolia	15	Yes	FACU	$\frac{1}{OBL \text{ species}} \qquad 0 \qquad x = 0$
2.				FACW species $0 \times 2 = 0$
3				FAC species 15 x 3 = 45
4	·			FACU species 80 x 4 = 320
6.				UPL species x 5 =
7.				Column Totals: <u>95</u> (A) <u>365</u> (B)
	15	= Total	Cover	
Herb Stratum (Plot size: <u>5 ft radius</u>)	20	Vac	FACU	Prevalence Index = B/A = <u>3.8</u>
Sonaago canadensis Symphyotrichum pilosum	20	Yes	FACU	Hydrophytic Vegetation Indicators:
3. Apocynum cannabinum	15	Yes	FAC	1 - Rapid Test for Hydrophytic Vegetation
4. Rosa multiflora	10	No	FACU	2 - Dominance Test is >50%
5				3 - Prevalence Index is $\leq 3.0^1$
6				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10				¹ Indicators of hydric soil and wetland hydrology must
11		<u> </u>		be present, unless disturbed or problematic.
12.	75	= Total	Cover	Definitions of Venetation Strates
Woody Vine Stratum (Plot size: 30 ft radius)				Tree — Woody plants 3 in (7.6 cm) or more in
1				diameter
2				at breast height (DBH), regardless of height.
4.		·		Sapling/shrub — Woody plants less than 3 in. DBH
	0	= Total	Cover	Horb All horbacoous (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
Remarks: (Include photo numbers here or on a separate she	et.)			1
The criterion for hydrophytic vegetation is not met.				

US Army Corps of Engineers e807212a-428c-4683-89e3-ede1d9ae4bc1 W-EVN-04_UPL-1

Profile Des	cription: (Describe Matrix	to the dep	o <mark>th needed to docu</mark> Redo>	i ment th « Feature	i e indica es	tor or c	onfirm the a	absence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 6	10YR 4/2	100					Silt Loan	
6 to 20	10YR 4/1	40	10YR 6/6	25	С	M/PL	Silty Clay Lo	 Dam
6 to 20	10YR 6/2	35					Silty Clay Lo	
	10111 0,2						<u>only</u> only <u>D</u>	
¹ Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, C	S=Cove	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							ndicators for Problematic Hydric Soils ³ :
Histosol ((A1) Inadan (A2)		Polyvalue B	elow Su אר	rface (S8	8) (LRR	R, -	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	tic (A3)		Thin Dark S	-) urface (:	59) (LRE	R. ML	RA 149B)	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Muc	ky Miner	al (F1) (RR K,	L)	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)	(1 1 1)	Loamy Gley	ed Matr	ix (F2)		-	Polyvalue Below Surface (S8) (LRR K, L)
Thick Dar	rk Surface (A12)	(AII)	Depleted Ma	Surface) e (F6)		-	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mi	ucky Mineral (S1)		Depleted Da	ark Surfa	ace (F7)		-	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy GI	eyed Matrix (S4)		Redox Depr	ressions	(F8)		-	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5) Matrix (S6)						-	Very Shallow Dark Surface (TE12)
Dark Surf	face (S7) (LRR R, MI	LRA 149B)				-	Other (Explain in Remarks)
³ Indicators o	f hydrophytic yegetet	tion and w	etland bydrology m	ist ha nr	ocont ur	loce die	turbed or pr	ablematic
Indicators o				ist be pi	esent, ui	liess uis		obientalic.
Type: No	Layer (if present):							
Depth (inc	ches):							Hydric Soil Present? Yes No 🗶
Remarks [.]								
The criter	ion for hydric soil is no	ot met.						

Project/Site: Darrow-Hudson East 138kV Project	City/County: Hudson, S	ummit County	Sampling Date: 2024-2-21
Applicant/Owner: FirstEnergy	State:	OH Sampling Poin	t: <u>W-EVN-05_PEM-1</u>
Investigator(s): Erin Van Nort, Emma Given		Section, Township, Rang	e: NA
Landform (hillslope, terrace, etc): Depression	Local relief (concave, co	nvex, none): <u>Concave</u>	Slope (%): <u>0 to 1</u>
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: <u>41.2540512333</u>	Long: <u>-81.4031894</u>	.333 Datum: WGS84
Soil Map Unit Name: Orrville silt Ioam		NWI Classifica	tion: <u>None</u>
Are climatic / hydrologic conditions on the site typical for this time	e of year? Yes 🗶 No	(If no, explain in Remark	(S.)
Are Vegetation, Soil, or Hydrologysignifi	icantly disturbed? Are	• "Normal Circumstances" p	resent? Yes X No
Are Vegetation, Soll, or Hydrologynatura	ally problematic? (II I	needed, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	wing sampling point lo	ocations, transects, ir	nportant features, etc.
Hydrophytic Vegetation Present?YesXNoHydric Soil Present?YesXNoWetland Hydrology Present?YesXNo	Is the Sampled within a Wetlan If yes, optional V	Area Id? Yes X Vetland Site ID' W-EVN-0	No
Demotion (Evaluin alternative procedures here or in a congrete			
Covertype is PEM. Based on the presence of all three parameters,	, this area is a wetland.		
HYDROLOGY			
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that at Surface Water (A1) Water-Stained High Water Table (A2) Aquatic Fauna X Saturation (A3) Marl Deposits Sediment Deposits (B2) Oxidized Rhiz Drift Deposits (B3) Presence of F Iron Deposits (B5) Thin Muck Su Inundation Visible on Aerial Imagery (B7) Other (Explain Sparsely Vegetated Concave Surface (B8) Statuation	pply) d Leaves (B9) a (B13) ; (B15) lifide Odor (C1) zospheres along Living Roots Reduced Iron (C4) Reduction in Tilled Soils (C6) Irface (C7) n in Remarks)	Secondary Indicato Surface Soil Cr Drainage Patte Moss Trim Line Dry-Season Wa Crayfish Burrov (C3) Sturtation Visil Stunted or Stree K Geomorphic Per Shallow Aquita Microtopograph K FAC-Neutral Te	prs (minimum of two required) acks (B6) rns (B10) is (B16) ater Table (C2) ws (C8) ole on Aerial Imagery (C9) issed Plants (D1) osition (D2) rd (D3) nic Relief (D4) est (D5)
Field Observations:			
Surface Water Present? Yes No Dept	n (Inches):		
Saturation Present? Yes X No Dept (includes capillary fringe)	th (inches): <u>12</u> Wet	land Hydrology Present?	Yes 🗶 No
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections)), if available:	
Remarks: The criterion for wetland hydrology is met.			

Sampling Point: <u>W-EVN-05_PEM-1</u>

Tree Stratum (Plot size: _30 ft radius _) 1.	Absolute <u>% Cover</u>	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A) Total Number of Dominant Species Across All Strata: 3 (B) Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
7.	0	= Total	Cover	Prevalence Index worksheet:Total % Cover of:Multiply by:OBL species 20 $x 1 = 20$ FACW species 50 $x 2 = 100$
3.				FAC species 30 $x = 90$ FACU species 0 $x = 0$ UPL species 0 $x = 0$ Column Totals: 100 (A) 210
Herb Stratum (Plot size: 5 ft radius)	0	= Total	Cover	Prevalence Index = $B/A = 2.1$
1. Phalaris arundinacea	30	Yes	FACW	Hydronhytic Vegetation Indicators:
3. Solidago gigantea	20	Yes	FACW	¥ 1 - Rapid Test for Hydrophytic Vegetation
4. Euthamia graminifolia	15	No	FAC	¥ 2 - Dominance Test is >50%
5. Symphyotrichum lateriflorum	15	No	FAC	2. Provalance index is $< 2.0^{1}$
6				 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u>30 ft radius</u>) 1. 2.	100	= Total	Cover	Definitions of Vegetation Strata: Tree — Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
4.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	0	= Total	Cover	 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 X No
Remarks: (Include photo numbers here or on a separate s The criterion for hydrophytic vegetation is met.	sheet.)			

Profile Des	<u>Matrix</u>	Redox Features		mirm the absence of indicators.)				
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 8	2.5Y 3/2	95	10YR 5/6	5	C	M	Silty Clay Loa	am
8 to 20	10YR 5/1	75	10YR 6/8	25	С	М	Silty Clav	
=-								
¹ Type: C=Co	ncentration, D=Deple	tion, RM=	Reduced Matrix, CS	S=Cove	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:	_	_				In	dicators for Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue B	elow Su	rface (S8	3) (LRR	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
HISTIC Epi Black His	peaon (A2) tic (A3)		MLRA 149E Thin Dark Se	oj urface (1	59) (I PP	R. MU	RA 149B)	5 cm Muck Peat or Peat (S3) (I RR K, L, R)
Hydroger	n Sulfide (A4)		_ Loamy Much	ky Miner	ral (F1) (L	_RR K,	L)	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)		Loamy Gley	ed Matr	ix (F2)		_	Polyvalue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface ((A11)	X Depleted Ma	atrix (F3))		_	I hin Dark Surface (S9) (LRR K, L)
Sandy M	ucky Mineral (S1)		Redux Dark Depleted Dark	ark Surf	, (F0) ace (F7)		-	Piedmont Floodplain Soils (F14) (LKK K, L, R)
Sandy GI	eyed Matrix (S4)		Redox Depr	essions	(F8)		-	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5)		·				_	Red Parent Material (F21)
Stripped	Matrix (S6) face (S7) (I PP P MI		N N				_	_ Very Shallow Dark Surface (TF12)
)				_	
³ Indicators o	f hydrophytic vegetati	on and w	etland hydrology mu	st be pr	esent, un	less dis	sturbed or pro	blematic.
Restrictive I	_ayer (if present):							
Type: No	t present							Hydric Soil Present? Vos 🗶 No
Dehru (iuc	וולט <i>וו.</i>							
Remarks:								
The criter	ion for hydric soil is me	t.						

Project/Site: Darrow-Hudson East 138kV Project City/County: Huds	on, Summit County Sampling Date: 2024-2-21				
Applicant/Owner: FirstEnergy	State: OH Sampling Point: <u>W-EVN-05_UPL-1</u>				
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: <u>NA</u>				
Landform (hillslope, terrace, etc): <u>Hillslope</u> Local relief (conca	ve, convex, none): <u>None</u> Slope (%): <u>1 to 3</u>				
Subregion (LRR or MLRA): <u>MLRA 139 of LRR R</u> Lat: <u>41.2540183</u>	333 Long: <u>-81.4037058833</u> Datum: <u>WGS84</u>				
Soil Map Unit Name: <u>Mahoning silt loam, 2 to 6 percent slopes</u>	NWI Classification: None				
Are climatic / hydrologic conditions on the site typical for this time of year? Yes 🔀 N	o(If no, explain in Remarks.)				
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes 🗶 No				
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS — Attach site map showing sampling poi	nt locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes No X Is the Sam within a W Hydric Soil Present? Yes No X If yes, optimized Wetland Hydrology Present? Yes No X If yes, optimized	Inpled Area /etland? Yes No X onal Wetland Site ID:				
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is UPL. Based on the absence of all three parameters, this area is an upland.					
HYDROLOGY					
Wetland Hydrology Indicators: Secondary Indicators (minimum of two red Surface Water (A1) Water Stained Leaves (B9) Surface Soil Cracks (B6) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizospheres along Living Roots (C3) Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C6) Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)					
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) Ves Depth (inches): Depth (inches):	Wetland Hydrology Present? Yes No 🗶				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	ctions), if available:				
Remarks: The criterion for wetland hydrology is not met.					

Sampling Point: <u>W-EVN-05_UPL-1</u>

Trop Stratum (Dict cize: 30 ft radius)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1 (Plot Size:)	% Cover	<u>species?</u>	Status	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 0 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: <u>4</u> (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 0% (A/B)
7				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)	0	= Iotal	Cover	Total % Cover of: Multiply by:
1.				OBL species $0 \times 1 = 0$
2.				EACW species $0 \times 2 = 0$
3.				$EAC \text{ species } 0 \qquad x = 0$
4				$\frac{100}{100} \times 4 = \frac{100}{100}$
5				FACU species $100 \times 4 = 400$
6				$\begin{array}{c} \text{UPL species} \underline{0} x \text{ 5} = \underline{0} \\ 100 \text{(1)} \underline{100} \text{(2)} \end{array}$
/				$\begin{array}{c c} Column Totals: 100 (A) 400 (B) \end{array}$
Herb Stratum (Plot size: 5 ft radius)	0	= 10tal	Cover	
1. Andropogon virginicus	25	Yes	FACU	Prevalence Index = B/A = 4
2. Poa compressa	25	Yes	FACU	Hydrophytic Vegetation Indicators:
3. Rubus caesius	20	Yes	FACU	1 - Rapid Test for Hydrophytic Vegetation
4. Solidago altissima	20	Yes	FACU	2 - Dominance Test is >50%
5. Cornus florida	10	No	FACU	\sim 2. Provalance index is <2.0 ¹
6.				
7				4 - Morphological Adaptations ¹ (Provide supporting
8				uala in Remarks of on a separate sheet
9				Problematic Hydrophytic Vegetation ⁺ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed or problematic.
	100	= Tota	Cover	Definitions of Variation Strates
Woody Vine Stratum (Plot size: 30 ft radius)				Definitions of vegetation Strata:
1				diameter
2				at breast height (DBH), regardless of height.
3				Sapling/shrub – Woody plants less than 3 in. DBH
4.				and greater than or equal to 3.28 ft (1 m) tall.
		= 10tai	Cover	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
Remarks: (Include photo numbers here or on a separate sh	eet.)			
The criterion for hydrophytic vegetation is not met.				

Profile Des	ofile Description: (Describe to the depth needed to document the indicator or confirm the Matrix Redox Features					onfirm the a	osence of indicators.)	
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 8	2.5Y 4/3	100					Silty Clay Loa	
8 to 20	2.5Y 5/3	80	2.5Y 6/6	20	D	М	Silty Clay	
							·	
¹ Type: C=Co	ncentration, D=Depl	etion, RM=	Reduced Matrix, CS	S=Covei	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Ir	dicators for Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue B	elow Su	rface (S8	8) (LRR	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	tic (A3)		Thin Dark S	5) urface (\$	59) (LRR	R, MLI	RA 149B)	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydrogen	n Sulfide (A4)		Loamy Mucl	<y miner<="" td=""><td>al (F1) (I</td><td>_RRK,</td><td>L) _</td><td>Dark Surface (S7) (LRR K, L)</td></y>	al (F1) (I	_RRK,	L) _	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5) Below Dark Surface	(A11)	Loamy Gley	ed Matri atrix (E3	ix (F2)		_	Polyvalue Below Surface (S8) (LRR K, L)
Thick Dar	k Surface (A12)	(АШ)	Redox Dark	Surface	, e (F6)		_	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mu	ucky Mineral (S1)		Depleted Da	ark Surfa	ace (F7)		_	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy G	edox (S5)		Redox Depr	essions	(F8)		_	Red Parent Material (F21)
Stripped I	Matrix (S6)						_	Very Shallow Dark Surface (TF12)
Dark Surf	ace (S7) (LRR R, M	LRA 149B)				_	Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegeta	tion and we	etland hydrology mu	ist be pr	esent, ur	iless dis	sturbed or pro	plematic.
Restrictive L	_ayer (if present):							
Type: No	t present							Judria Sail Present? Vas 💦 Na 🎽
Deptil (Inc								
Remarks:	ion for hydric soil is no	ot mot						
The criteri		Ji mei.						

a, Summit County Sampling Date: 2024-2-21
ate: OH Sampling Point: W-EVN-06_PEM-1
Section, Township, Range: NA
, convex, none): None Slope (%): 0 to 1
67 Long: -81.4046122333 Datum: WGS84
NWI Classification: None
(If no, explain in Remarks.)
Are "Normal Circumstances" present? Yes X No
(If needed, explain any answers in Remarks.)
t locations transects important features etc
led Area tland2 Ves X No
al Wetland Site ID: <u>W-EVN-06</u>
Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) ots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) 6) Geomorphic Position (D2) Shallow Aquitard (D3) X Microtopographic Relief (D4) FAC-Neutral Test (D5)
Wetland Hydrology Present? Yes 🗶 No
ons), if available:

Sampling Point: <u>W-EVN-06_PEM-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1.		Species:	Status	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: <u>3</u> (A)
3.				Total Number of Dominant
4				Species Across All Strata: <u>3</u> (B)
5				Percent of Dominant Species
6				
/				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)		= 101a	Cover	Total % Cover of: Multiply by:
1				OBL species $25 \times 1 = 25$
2.				FACW species $75 \times 2 = 150$
3				EAC species $0 \times 3 = 0$
4				$= \frac{1}{2} \times \frac{1}{2} = \frac{1}{2}$
5.				$\frac{1}{1} = \frac{1}{1} = \frac{1}$
6				$\begin{array}{c} \text{OPL species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Oclustry Tatalat} 100 (a) \underline{175} (b) \end{array}$
/		- Tota	Cover	$\begin{bmatrix} \text{Column lotals:} & 100 \\ \end{bmatrix} (A) & 173 \\ \end{bmatrix} (B)$
Herb Stratum (Plot size: 5 ft radius)		– 10ta	Cover	Dravalance index = $D/A = -\frac{1}{2}$
1. Phalaris arundinacea	35	Yes	FACW	Prevalence Index = B/A = 1.0
2. Juncus effusus	25	Yes	OBL	Hydrophytic Vegetation Indicators:
3. Solidago gigantea	20	Yes	FACW	¥ 1 - Rapid Test for Hydrophytic Vegetation
4. Cornus alba	15	No	FACW	¥ 2 - Dominance Test is >50%
5. Symphyotrichum lanceolatum	5	No	FACW	\sim 2. Provalance index is <2.0 ¹
6.				
7				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks of on a separate sheet)
9				Problematic Hydrophytic Vegetation ¹ (Explain)
11				¹ Indicators of hydric soil and wetland hydrology must
12				be present, unless disturbed or problematic.
	100	= Tota	Cover	
Woody Vine Stratum (Plot size: 30 ft radius)		10101	00101	Definitions of Vegetation Strata:
1				Tree – Woody plants 3 in. (7.6 cm) or more in
2				at breast height (DBH), regardless of height.
3				Sanling/shruh — Woody plants less than 3 in DBH
4				and greater than or equal to 3.28 ft (1 m) tall.
	0	= Tota	Cover	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
				Hydrophytic Vegetation
				Present? Yes 🗶 No
Remarks: (Include photo numbers here or on a separate sh	eet.)			
The criterion for hydrophytic vegetation is met.				

Profile Des	Profile Description: (Describe to the depth needed to document the indicator or confirm the Matrix Redox Features			confirm the	absence of indicators.)			
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 6	2.5Y 4/2	95	2.5Y 5/6	5	C	М	Silty Clay L	oam
6 to 20	10YR 5/1	75	10YR 6/8	25	D	М	Silty Cla	y
							·	
							·	
							·	
¹ Type: C=Co	oncentration, D=Deple	etion, RM:	=Reduced Matrix, C	G=Cover	red or Co	bated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							Indicators for Problematic Hydric Soils ³ :
Histosol ((A1)		Polyvalue B	elow Su	rface (S8	3) (LRR	R, .	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	tic (A3)		Thin Dark S) urface (\$	59) (LRF	R, ML	RA 149B)	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Mucl	ky Miner	al (F1) (I	LRR K,	L)	Dark Surface (S7) (LRR K, L)
Stratified Depleted	Layers (A5) Below Dark Surface	(A11)	Loamy Gley	ed Matri atrix (E3	ix (F2))			Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)
Thick Da	rk Surface (A12)	(/ ()	Redox Dark	Surface	, e (F6)		•	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy M	ucky Mineral (S1)		Depleted Da	urk Surfa	ace (F7)			Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Re	edox (S5)			00010	(10)		•	Red Parent Material (F21)
Stripped	Matrix (S6)	DA 4400						Very Shallow Dark Surface (TF12)
Dark Sur	race (S7) (LRR R, MI	_RA 149E	5)					Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetat	ion and w	etland hydrology mu	st be pr	esent, ur	nless dis	sturbed or pr	oblematic.
Restrictive I	Layer (if present):							
Type: No	t present							Hydric Soil Present? Yes 🗶 No
Remarks: The criter	ion for hydric soil is m	-t						
The effect								

Project/Site: Darrow-Hudson East 138kV Project	City/County: Hudson, Summit County Sampling Date: 2024-2-21
Applicant/Owner: FirstEnergy	State: OH Sampling Point: W-EVN-06_UPL-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA
Landform (hillslope, terrace, etc): Terrace	Local relief (concave, convex, none): None Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.2539319667 Long: -81.40496355 Datum: WGS84
Soil Map Unit Name: Ellsworth silt loam, 2 to 6 percent slopes	NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of	vear? Yes X No (If no, explain in Remarks,)
Are Vegetation . Soil . or Hydrology significar	ntly disturbed? Are "Normal Circumstances" present? Yes 🗴 No
Are Vegetation . Soil . or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS Attach site man showin	a compling point locations, transports, important features, ato
Sommart of Findings – Attach site map shown	iy sampling point locations, transects, important leatures, etc.
Hydrophytic Vegetation Present? Yes No 🗴	Is the Sampled Area
Hydric Soil Present? Yes No 🗴	within a Wetland? Yes <u>No </u>
Wetland Hydrology Present? Yes No 🗴	If yes, ontional Wetland Site ID
Remarks: (Explain alternative procedures here or in a separate rep	vort.)
Covertype is UPL. Based on the absence of all three parameters, this	area is an upland.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that appl	y) Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Le	eaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B	13) Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B.	15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide	Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosp	pheres along Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Red	uced Iron (C4) Stunted or Stressed Plants (D1)
Algai Mai or Crusi (B4) Recent Iron Redu	Clion in Tilled Solls (C6) Geomorphic Position (D2)
I In Indeposits (B5) In Internet Muck Surface	Pemarke) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (i	nches):
Water Table Present? Yes No X Depth (i	nches):
Saturation Present? Yes No X Depth (i	nches): Wetland Hydrology Present? Yes No X
(Includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial ph	otos, previous inspections), if available:
Remarks:	
The criterion for wetland hydrology is not met.	

Sampling Point: <u>W-EVN-06_UPL-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1.	<u></u>	opecies:		Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 0 (A)
3.				Total Number of Dominant
4				Species Across All Strata: 1 (B)
5				Percent of Dominant Species
6.				
/			Cover	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)		- 10la	Cover	Total % Cover of: Multiply by:
1.				$\frac{1}{OBI \text{ species}} \qquad 0 \qquad \text{x1} = 0$
2.				EACW species 0 x 2 = 0
3.				$= \frac{1}{10000000000000000000000000000000000$
4				$\frac{100}{100} \times 100$
5				FACU species $100 \times 4 = 400$
6				$\begin{array}{c} \text{UPL species} \underline{0} x = \underline{0} \\ 100 \underline{100} \end{array}$
/				$\begin{bmatrix} Column Totals: & 100 \\ \end{bmatrix} (A) & 400 \\ \end{bmatrix} (B)$
Herb Stratum (Plot size: 5 ft radius)		= lotal	Cover	
1 Poa pratensis	80	Yes	FACU	Prevalence Index = B/A = 4
2. Poa annua	10	No	FACU	Hydrophytic Vegetation Indicators:
3. Trifolium repens	5	No	FACU	1 - Rapid Test for Hydrophytic Vegetation
4. Taraxacum officinale	5	No	FACU	2 - Dominance Test is >50%
5.				-
6				
7				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks of on a separate sheet)
9				Problematic Hydrophytic Vegetation ¹ (Explain)
10				¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed or problematic.
	100	= Tota	Cover	
Woody Vine Stratum (Plot size: 30 ft radius)				Definitions of vegetation Strata:
1				diameter
2				at breast height (DBH), regardless of height.
3				Sapling/shrub — Woody plants less than 3 in. DBH
4				and greater than or equal to 3.28 ft (1 m) tall.
		= 10ta	Cover	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
				Present? Yes No X
Remarks: (Include photo numbers here or on a senarate sh	eet)			1
The criterion for hydrophytic vegetation is not met.	eel.)			

Profile Des	cription: (Describe t Matrix	to the de	lepth needed to document the indicator or confirm the Redox Features			tor or o	onfirm the at	sence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 4	10YR 4/3	100					Silty Clay Loa	 m
							·	
							·	
							·	
1 <u> </u>								2
⁺ Type: C=Co	oncentration, D=Deple	etion, RM:	=Reduced Matrix, CS	S=Cove	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						In	dicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue B	elow Su	rface (S8	3) (LRR	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	ipedon (A2) stic (A3)		MLRA 1495 Thin Dark Si	s) Jirface (3	59) (I BE	R. MI	RA 149B)	Coast Prairie Redox (A16) (LRR K, L, R)
Hydroge	n Sulfide (A4)		Loamy Much	ky Miner	al (F1) (I	_RR K,	L)	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)	(Loamy Gley	ed Matr	ix (F2)		_	Polyvalue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	(A11)	Depleted Ma	atrix (F3 Surface)) (E6)		_	Thin Dark Surface (S9) (LRR K, L)
Sandy M	ucky Mineral (S1)		Depleted Da	rk Surfa	ace (F7)			Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy G	leyed Matrix (S4)		Redox Depr	essions	(F8)		_	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy R	edox (S5) Matrix (S6)						_	Red Parent Material (F21)
Dark Sur	face (S7) (LRR R, MI	_RA 149E	3)					Other (Explain in Remarks)
³ Indicators o	of hydrophytic vegetat	ion and w	etland hydrology mu	st he nr	esent ur	iless dis	sturbed or prof	
Restrictive	l aver (if present):			or be pr				incinate.
Type: fill								
Depth (in	ches): <u>4</u>						H	lydric Soil Present? Yes No 🗶
Remarks: The criter	ion for hydric soil is no	t met.						
	5							

Project/Site: Darrow-Hudson East 138kV Project City/Cou	Inty: Hudson, Summit County Sampling Date: 2024-2-21					
Applicant/Owner: FirstEnergy	State: OH Sampling Point: W-EVN-07 PEM-1					
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA					
Landform (hillslope, terrace, etc): Depression Local re	lief (concave, convex, none): Concave Slope (%): 0 to 1					
Subregion (LRR or MLRA): MLRA 139 of LRR R Lat: 4	1.2492088333 Long: -81.3930910667 Datum: WGS84					
Soil Map Unit Name: Ellsworth silt loam, 12 to 25 percent slopes, eroded	NWI Classification: None					
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	s X No (If no, explain in Remarks.)					
Are Vegetation , Soil , or Hydrology significantly disturb	Ded? Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problema	tic? (If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing same	oling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	Is the Sampled Area within a Wetland? Yes <u>X</u> No					
Wetland Hydrology Present? Yes X No	If yes, optional Wetland Site ID: W-EVN-07					
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.						
HYDROLOGY						
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) X Saturation (A3) Water Marks (B1) X Hydrogen Sulfide Odor (C1 Sediment Deposits (B2) Oxidized Rhizospheres alo Drift Deposits (B3) Presence of Reduced Iron Algal Mat or Crust (B4) Recent Iron Reduction in T Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) (C4) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes X No Depth (inches):	1					
Water lable Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe)	0 Wetland Hydrology Present? Yes X No					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
Remarks: The criterion for wetland hydrology is met.						
Sampling Point: W-EVN-07_PEM-1

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2				Total Number of Deminent
3.				Species Across All Strata: 3 (B)
4 5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
7				Prevalence Index worksheet:
Conling/Chruh Stratum (Distaire) 15 ft radius	0	= Total	Cover	Total % Cover of: Multiply by:
<u>Saping/Sinub Stratum</u> (Plot Size: <u>15 it fautus</u>)	15	Yes	FACW	$\frac{1}{1} \frac{1}{1} \frac{1}$
2.				EACW species $55 \times 2 = 110$
3.				FAC species $15 \times 3 = 45$
4				$\frac{1}{1} = \frac{1}{1} + \frac{1}{1} = \frac{1}$
5.				UPL species $0 \times 5 = 0$
7.				Column Totals: 100 (A) 185 (B)
···	15	= Total	Cover	
Herb Stratum (Plot size: <u>5 ft radius</u>)				Prevalence Index = $B/A = 1.9$
1. Phragmites australis	40	Yes	FACW	Hydrophytic Vagatation Indicators
2. Typha angustifolia	25	Yes	OBL	1 Papid Tast for Hydrophytic Vagetation
3. Persicaria perfoliata		No	FAC	2 Dominando Test in >50%
4. Symptocarpus joettaus	5	10	UBL	
6.				$_$ 3 - Prevalence Index is ≤3.0 [⊥]
7.				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation ¹ (Explain)
10				¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed or problematic.
	85	= Total	Cover	Definitions of Vegetation Strata:
Woody Vine Stratum (Plot size: <u>30 ft radius</u>)				Tree – Woody plants 3 in. (7.6 cm) or more in
1 2.				diameter
3.				at breast height (DBH), regardless of height.
4.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	0	= Total	Cover	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 X No
Remarks: (Include photo numbers here or on a separate sl The criterion for hydrophytic vegetation is met.	neet.)			1

(inches) 0 to 20	Color (moist)	0/6							
0 to 20		70	Color (moist)	<u>%</u>	<u>Typ</u> e ¹	Loc ²	Texture	<u>)</u>	Remarks
	10BG 4/1	95	10YR 6/8	5	С	М	Silty Clay L	loam	
¹ Type: C=Cor	centration, D=Deple	tion, RM=	Reduced Matrix, CS	S=Cove	red or Co	ated Sa	and Grains.	2	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Ir Histosol (A Histic Epip Black Histi Hydrogen Stratified L Depleted R Thick Dark Sandy Mu Sandy Gle Sandy Rei Stripped M Dark Surfa	dicators: A1) redon (A2) c (A3) Sulfide (A4) .ayers (A5) Below Dark Surface (A5) Below Dark Surface (A12) cky Mineral (S1) yed Matrix (S4) dox (S5) latrix (S6) ace (S7) (LRR R, ML	(A11) RA 149B	Polyvalue Ba MLRA 149E Thin Dark St Loamy Muck X Loamy Gleye Depleted Ma Redox Dark Depleted Da Redox Depre	elow Su 3) urface ((y Mine ed Matr atrix (F3 Surface rk Surfa essions	urface (S8 S9) (LRR ral (F1) (l ix (F2) b) e (F6) ace (F7) (F8)) (LRR R, MLI .RR K,	R, RA 149B) L)		cators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Muck Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) Fhin Dark Surface (S9) (LRR K, L) ron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dther (Explain in Remarks)
Indicators of	hydrophytic vegetati	on and w	etland hydrology mu	st be pr	esent, un	less dis	sturbed or pi	roble	matic.
Restrictive La Type: <u>Not</u> Depth (inch	ayer (if present): present nes):							Ну	dric Soil Present? Yes 📕 No
Remarks:								1	
The criterie	on for hydric soil is me	t.							
	0								

Project/Site: Darrow-Hudson East 138kV Project C	ity/County: Hudson, Summit County Sampling Date: 2024-2-21
Applicant/Owner: FirstEnergy	State: OH Sampling Point: W-EVN-07_UPL-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA
Landform (hillslope, terrace, etc): Hillslope	.ocal relief (concave, convex, none): <u>None</u> Slope (%): <u>1 to 3</u>
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.2493121667 Long: -81.3935367333 Datum: WGS84
Soil Map Unit Name: Ellsworth silt loam, 12 to 25 percent slopes, e	eroded NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year	ar? Yes 🗴 No 🛛 (If no, explain in Remarks.)
Are Vegetation , Soil , or Hydrology significantly	disturbed? Are "Normal Circumstances" present? Yes 🗴 No
Are Vegetation , Soil , or Hydrology naturally pro	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site man showing	sampling point locations transacts important features atc
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X	Is the Sampled Area within a Wetland? Yes No
	If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report Covertype is UPL. Based on the absence of all three parameters, this area	.) a is an upland.
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leave High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Oc Sediment Deposits (B2) Oxidized Rhizosphe Drift Deposits (B3) Presence of Reduce Algal Mat or Crust (B4) Recent Iron Reducti Iron Deposits (B5) Thin Muck Surface (Inundation Visible on Aerial Imagery (B7) Other (Explain in Response)	Secondary Indicators (minimum of two required) es (B9) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) crayfish Burrows (C8) res along Living Roots (C3) ed Iron (C4) on in Tilled Soils (C6) (C7) emarks) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inch	ies):
Water Table Present? Yes No X Depth (inch Saturation Present? Yes No X Depth (inch (includes capillary fringe) Ves No X Depth (inch	les): Wetland Hydrology Present? Yes No _X
Describe Recorded Data (stream gauge, monitoring well, aerial photo	s, previous inspections), if available:
Remarks: The criterion for wetland hydrology is not met.	

Sampling Point: <u>W-EVN-07_UPL-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2				That Are OBL, FACW, or FAC: 0 (A)
3				Total Number of Dominant
4				Dereast of Deminant Species
5				That Are OBL, FACW, or FAC: 0% (A/B)
7.				
	0	= Tota	Cover	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of: Multiply by:
1				OBL species x 1 =0
2				FACW species x 2 =0
3				FAC species $0 \times 3 = 0$
45				FACU species <u>85</u> x 4 = <u>340</u>
6.				UPL species $15 \times 5 = 75$
7.				Column Totals: 100 (A) 415 (B)
	0	= Total	Cover	
Herb Stratum (Plot size: 5 ft radius)	25	V	FACU	Prevalence Index = B/A = <u>4.2</u>
1. Poa compressa		Yes Voc	FACU	Hydrophytic Vegetation Indicators:
2. Symphyotrichum aricoides		Voc	FACU	1 - Rapid Test for Hydrophytic Vegetation
3. Symphyoti icitam ericoides		No		2 Dominanco Tost is >50%
5 Phleum pratense		No	FACU	
6.				-3 - Prevalence Index is ≤3.0 [⊥]
7.				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9.	_			Problematic Hydrophytic Vegetation ¹ (Explain)
10				¹ Indicators of hydric soil and wotland hydrology must
11				be present, unless disturbed or problematic.
12				
Weady Vina Stratum (Plat cize: 20 ft radius)	100	= Total	Cover	Definitions of Vegetation Strata:
1				Tree — Woody plants 3 in. (7.6 cm) or more in
2.				diameter
3.				at breast height (DBH), regardless of height.
4.				Sapling/shrub – Woody plants less than 3 in. DBH
	0	= Total	Cover	Horb All horbassous (non woody) planta 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
Remarks: (Include photo numbers here or on a separate sh	eet.)			•
The criterion for hydrophytic vegetation is not met.	,			

US Army Corps of Engineers a0849660-560e-42bd-972d-3b712549ade8 W-EVN-07_UPL-1

Profile Des	cription: (Describe t	to the dep	oth needed to docu Redox	ment th Feature	e indica	tor or c	onfirm the a	absence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	_Loc ²	Texture	Remarks
0 to 8	10YR 4/3	100					Silty Clay Lo	oam
				·			·	
							·	
							·	
				·				
¹ Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, CS	S=Cover	ed or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:		Doba/oluo Pr		rfaca (SS		Р	Indicators for Problematic Hydric Soils ³ :
Histic Ep	ipedon (A2)		MLRA 149E	3) B	nace (So		к, ₋	Coast Prairie Redox (A16) (LRR K, L, MLRA 149B)
Black His	stic (A3) n Sulfide (A4)		Thin Dark Su	urface (S v Miner	59) (LRR al (E1) (I	R, MLI	RA 149B) _	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Stratified	Layers (A5)		Loamy Gleye	ed Matri	x (F2)		-, -	Polyvalue Below Surface (S8) (LRR K, L)
Depleted Thick Da	rk Surface (A12)	(A11)	Redox Dark	surface) • (F6)		-	Inin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy M	ucky Mineral (S1) leved Matrix (S4)		Depleted Da	rk Surfa	ice (F7)		-	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy G	edox (S5)			25510115	(го)		-	Red Parent Material (F21)
Stripped	Matrix (S6) face (S7) (I BB B , MI	RA 149B	1				-	Very Shallow Dark Surface (TF12)
³ Indicators of	of hydrophytic vegetat	ion and w	, etland hydrology mu	st be pr	esent. ur	less dis	- sturbed or pro	oblematic.
Restrictive	Laver (if present):							
Type: <u>Fil</u>								
	cnes): <u>8</u>							
Remarks: The criter	rion for hydric soil is no	t met.						

Project/Site: <u>Darrow-Hudson East 138kV Project</u> City/County: <u>Huds</u> Applicant/Owner: <u>FE</u> Investigator(s): <u>Erin Van Nort, Emma Given</u> Landform (hillslope, terrace, etc.): Depression Local relief (conca	son, Summit County Sampling Date: 2024-2-21 State: OH Sampling Point: W-EVN-08_PEM-1 Section, Township, Range: NA ve. convex, none): Concave Slope (%): 1 to 10
Subregion (LRR or MLRA): <u>MLRA 139 of LRR R</u> Lat: <u>41.2521836</u> Soil Map Unit Name: <u>Ellsworth silt loam, 6 to 12 percent slopes, eroded</u> Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> N Are Vegetation, Soil, or Hydrology significantly disturbed?	S Long: -81.395302 Datum: WGS84 NWI Classification: None o (If no, explain in Remarks.) Are "Normal Circumstances" present? Yes ✗ No
Are Vegetation, Soil, or Hydrology naturally problematic? SUMMARY OF FINDINGS — Attach site map showing sampling po	(If needed, explain any answers in Remarks.) int locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No Is the Sar Hydric Soil Present? Yes X No within a V Wetland Hydrology Present? Yes X No If yes, option	npled Area /etland? Yes X No onal Wetland Site ID: <u>W-EVN-08</u>
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.	
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) X High Water Table (A2) Aquatic Fauna (B13) X Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) X Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Iron Deposits (B5) Thin Muck Surface (C7) Other (Explain in Remarks) Other (Explain in Remarks)	Secondary Indicators (minimum of two required). Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes X Depth (inches): 2 Saturation Present? Yes X No Depth (inches): 6 (includes capillary fringe) Ves X No Depth (inches): 6	Wetland Hydrology Present? Yes 🗶 No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	ctions), if available:
Remarks: The criterion for wetland hydrology is met.	

Sampling Point: <u>W-EVN-08_PEM-1</u>

Tree Charter (Distainer, 20 ft radius,)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1. Quercus palustris	<u>% Cover</u> 10	Yes	FACW	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 3 (A)
3				Total Number of Dominant
4				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 100% (A/B)
7.				Prevalence Index worksheet:
	10	= Total	Cover	
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)	10	Vec	EACM	
2.		105	FAC.W	$\begin{array}{c} \text{OBL species} \\ \text{CACW species} \\ \begin{array}{c} 95 \\ 95 \\ \end{array} \\ \text{x 2 = 190} \\ \end{array}$
3.				FACW species $33 \times 2 = 130$
4.				EACLE species $0 \times 4 = 0$
5				$\begin{array}{c} 1 \text{ Not species} \\ 1 \text{ IPI species} \\ 0 \text{ x 5 = } 0 \end{array}$
6 7				Column Totals: 110 (A) 205 (B)
···	10	= Total	Cover	
Herb Stratum (Plot size: 5 ft radius)				Prevalence Index = $B/A = 1.9$
1. Phalaris arundinacea	75	Yes	FACW	Hydrophytic Vegetation Indicators:
2. Typha angustifolia	15	No	OBL	★ 1 - Rapid Test for Hydrophytic Vegetation
4.				\mathbf{X} 2 - Dominance Test is >50%
5.				$\frac{1}{2}$ - Prevalence Index is <3.0 ¹
6				
7				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Evplain)
10.				
11				be present, unless disturbed or problematic.
12	90			
Woody Vine Stratum (Plot size: 30 ft radius)	50	= 10181	Cover	Definitions of Vegetation Strata:
1.				Tree — Woody plants 3 in. (7.6 cm) or more in
2				at breast height (DBH), regardless of height.
3.				Sapling/shrub — Woody plants less than 3 in. DBH
4	0	= Total	Cover	and greater than or equal to 3.28 ft (1 m) tall.
		Total		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 X No
Remarks: (Include photo numbers here or on a separate she The criterion for hydrophytic vegetation is met.	et.)			

US Army Corps of Engineers 8c71ca86-b70d-4024-b5c3-7ffb117b0b1a W-EVN-08_PEM-1

Profile Description: (Describe to Matrix	the dep	oth needed to docu Redox	nent th Feature	e indica es	tor or co	onfirm the al	osence of indicators.)
Depth Color (moist)		Color (moist)	%	Tvpe ¹	Loc ²	Texture	Remarks
0 to 18 10YR 4/2	85	10YR 4/6	15	<u> </u>	M/PL	Clav Loam	Kemano
			·				
			·				
			·				
			·				
¹ Type: C=Concentration, D=Depletion	on, RM=	Reduced Matrix, CS	=Cover	ed or Co	ated Sa	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:						In	dicators for Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue Be	elow Su	rface (S8) (LRR I	२,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black Histic (A3)		Thin Dark Su	r) Irface (S	69) (LRR	R, MLR	A 149B)	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4)		Loamy Muck	y Miner	al (F1) (L	.RR K, L	_)	Dark Surface (S7) (LRR K, L)
Stratified Layers (A5) Depleted Below Dark Surface (A	.11)	Loamy Gleye	ed Matri trix (E3)	x (F2)		_	Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)
Thick Dark Surface (A12)	(11)	Redox Dark	Surface	(F6)		_	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1)		Depleted Da	rk Surfa	.ce (F7)		_	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gleyed Matrix (S4)		Redox Depre	essions	(F8)			Red Parent Material (F21)
Stripped Matrix (S6)						_	Very Shallow Dark Surface (TF12)
Dark Surface (S7) (LRR R, MLR	A 149B)				_	Other (Explain in Remarks)
³ Indicators of hydrophytic vegetation	n and w	etland hydrology mu	st be pre	esent, un	less dist	urbed or prol	plematic.
Restrictive Layer (if present):							
Type: <u>Gravel</u>							lydric Soil Bresent? Ves 🗶 No
Deptil (inclies): <u>10</u>						ſ	
Remarks:							
The criterion for hydric son is met.							

Project/Site: Darrow-Hudson East 138kV Project City/County: Hud	dson Summit County Sampling Date: 2024-2-21
Applicant/Owner: FirstEnergy	State: OH Sampling Point: W-EVN-08 UPL-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA
Landform (hillslope, terrace, etc): Hillslope Local relief (conc	cave, convex, none): None Slope (%): 10 to 20
Subregion (LRR or MLRA): MLRA 139 of LRR R Lat: 41.252306	5 Long: -81.395239 Datum: WGS84
Soil Map Unit Name: Ellsworth silt loam, 6 to 12 percent slopes, eroded	NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? YesX	No (If no, explain in Remarks.)
Are Vegetation , Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes 🗶 No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS — Attach site map showing sampling p	oint locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Is the Sa within a within	umpled Area Wetland? Yes No X
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is UPL. Based on the absence of two of three parameters, this area is an upland	
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizospheres along Living Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) s (C6) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes No X Depth (inches): Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Yes No X Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	ections). if available:
Remarks: The criterion for wetland hydrology is not met.	

Sampling Point: <u>W-EVN-08_UPL-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1. Fagus grandifolia	5	Yes	FACU	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: <u>2</u> (A)
3				Iotal Number of Dominant Species Across All Strata: 5 (B)
4				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 40% (A/B)
7.				Prevalence Index worksheet:
	5	= Total	Cover	Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)	5	Voc	FAC	
Frangula antus Frangula antus Frangula antus Frangula antus Frangula antus		Yes	FACU	$\begin{array}{c} \text{OBL species} 0 \text{xi} = 0 \\ \text{EACW species} 20 \text{xi} = 40 \end{array}$
3.				FAC species $5 \times 3 = 15$
4.				$\frac{1}{100} = \frac{1}{100}$ EACLI species 75 x 4 = 300
5				$1700 \text{ species} \qquad 15 \qquad x = 75$
6				Column Totals: 115 (A) 430 (B)
··		= Total	Cover	
Herb Stratum (Plot size: <u>5 ft radius</u>)		Total	00101	Prevalence Index = $B/A = 3.7$
1. Poa annua	60	Yes	FACU	
2. Phalaris arundinacea	20	Yes	FACW	1 Danid Test for Lludronbutic Vegetation
3. <u>Apocynum androsaemifolium</u>		No	UPL	
4. <u>Trifolium repens</u> 5.	5	No	FACU	2 = 2 = Dominance less is >50%
6.				
7				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10.				¹ Indicators of hydric soil and wetland hydrology must
11				be present, unless disturbed or problematic.
12		= Total	Cover	Definitions of Venetation Other
Woody Vine Stratum (Plot size: _30 ft radius)		Total	00101	Tree Woody plants 2 in (7.6 cm) or more in
1				diameter
2				at breast height (DBH), regardless of height.
3. 4.				Sapling/shrub — Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall
	0	= Total	Cover	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
Remarks: (Include photo numbers here or on a separate sh	eet.)			t
The criterion for hydrophytic vegetation is not met.	,			

Profile Des	cription: (Describe t Matrix	o the dep	o <mark>th needed to docu</mark> Redox	ment th	n e indica es	tor or c	onfirm the a	bsence of indicators.)
Depth (inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 6	10YR 3/1	100					Silty Clay Lo	am
6 to 18	10YR 3/2	60	10YR 5/6	40	С	M/PL	Clay Loam	
		·						
		·					·	
							·	
		·					·	
¹ Type: C=Co		tion, RM=	Reduced Matrix, CS	- G=Cove	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	indicators:						Ir	ndicators for Problematic Hydric Soils ³ :
Histosol ((A1)		Polyvalue B	elow Su	rface (S8	B) (LRR	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	ipedon (A2) itic (A3)		MLRA 1498 Thin Dark S	3) urface (1	S9) (LRF	R. MLI	RA 149B)	_ Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Mucl	ky Minei	ral (F1) (I	LRR K,	L) ´_	Dark Surface (S7) (LRR K, L)
Stratified Depleted	Layers (A5) Below Dark Surface	(A11)	Loamy Gley	ed Matri atrix (E3	ix (F2))		-	Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)
Thick Da	rk Surface (A12)	(,)	X Redox Dark	Surface	, e (F6)		_	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy M	ucky Mineral (S1) leved Matrix (S4)		Depleted Da Redox Depr	ark Surfa essions	ace (F7) (F8)		_	Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5)			coolone	(10)		_	Red Parent Material (F21)
Stripped	Matrix (S6) face (S7) (LRP P. MI	RA 1498	N				_	Very Shallow Dark Surface (TF12)
³ Indicators of	f hydronhytic vegetet	on and w	, atland bydrology mu	et ha nr	esent ur	aloee die		
Bootrictivo	aver (if present):		ettand hydrology mu	st be pi	esent, ui	liess uis		biennauc.
Type: fill	Layer (if present):							
Depth (ind	ches): <u>18</u>							Hydric Soil Present? Yes 🗶 No
Remarks:								
The criter	ion for hydric soil is me	et.						

Project/Site: Darrow-Hudson East 138kV Project City/County: Street	tsboro, Portage County Sampling Date: 2024-2-22					
Applicant/Owner: FirstEnergy S	State: <u>OH</u> Sampling Point: <u>W-EVIN-09_PEIM-1</u>					
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: <u>NA</u>					
Landform (hillslope, terrace, etc): <u>Hillslope</u> Local relief (concav	/e, convex, none): <u>Concave</u> Slope (%): <u>1 to 3</u>					
Subregion (LRR or MLRA): MLRA 139 of LRR R Lat: 41.2292500	<u>333</u> Long: <u>-81.3825735333</u> Datum: <u>WGS84</u>					
Soil Map Unit Name: Ellsworth silt loam, 2 to 6 percent slopes, eroded	NWI Classification: None					
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X	o (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes 🗶 No					
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling poi	nt locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No Is the Sam within a W Hydric Soil Present? Yes X No If yes, optic Wetland Hydrology Present? Yes X No If yes, optic	pled Area etland? Yes ≭ No onal Wetland Site ID: <u>W-EVN-09</u>					
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.						
HYDROLOGY						
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) X Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) X Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (Fin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations:	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) X					
Surface Water Present? Yes No X Depth (inches):						
Water Table Present? Yes No X Depth (inches): Saturation Present? Yes X No Depth (inches): 2 (includes capillary fringe) Yes X No Depth (inches): 2	Wetland Hydrology Present? Yes 🗶 No					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:					
Remarks: The criterion for wetland hydrology is met.						

Sampling Point: <u>W-EVN-09_PEM-1</u>

Tree Stratum (Plot cize: 30 ft radius)	Absolute	Dominant	Indicator Status	Dominance Test worksheet:
1.	70 COVEL	Species:	Status	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: <u>3</u> (A)
3.				Total Number of Dominant
4				Species Across All Strata: <u>3</u> (B)
5				Percent of Dominant Species
6				
/				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)		= 10ta	Cover	Total % Cover of: Multiply by:
1.				OBL species $35 \times 1 = 35$
2.				EACW species $45 \times 2 = 90$
3.				EAC species $20 \times 3 = 60$
4				$\frac{1}{20} \times 4 = 0$
5				FACU species $0 \times 4 = 0$
6				$\begin{array}{c} \text{UPL species} \underline{0} x \text{ 5} = \underline{0} \\ 100 \text{(1)} \underline{105} (5) \end{array}$
/				$\begin{array}{c c} Column Totals: 100 (A) 185 (B) \end{array}$
Horb Stratum (Diot cize: 5 ft radius)		= Iotal	Cover	10
1 Dichanthelium clandestinum	35	Ves	FACW	Prevalence Index = B/A = 1.9
2. Glyceria striata		Yes	OBL	Hydrophytic Vegetation Indicators:
3. Apocvnum cannabinum		Yes	FAC	1 - Rapid Test for Hydrophytic Vegetation
4. Juncus effusus	15	No	OBL	∠ 2 - Dominance Test is >50%
5. Onoclea sensibilis	10	No	FACW	
6.				$3 - \text{Prevalence index is } \le 3.0^{-1}$
7.				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must
12				be present, unless disturbed or problematic.
14	100	= Tota	Cover	
Woody Vine Stratum (Plot size: 30 ft radius)				Definitions of vegetation Strata:
1				liree – Woody plants 3 in. (7.6 cm) or more in
2				at breast height (DBH), regardless of height.
3.				Sapling/shrub – Woody plants less than 3 in. DBH
4			Cover	and greater than or equal to 3.28 ft (1 m) tall.
		– 10181	Cover	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 X No
Remarks: (Include photo numbers here or on a senarate sh	eet)			
The criterion for hydrophytic vegetation is met.	501.)			

Profile Des	cription: (Describe t	ption: (Describe to the depth needed to document the indicator or confirm the a Matrix Redox Features					e absence of indicators.)			
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	e Remarks		
0 to 6	10YR 5/2	80	10YR 6/8	20	C	PL	Silty Clay L	Loam		
6 to 20	10YR 6/1	75	10YR 6/8	20	D	М	Silty Clay L	Loam		
							·			
							·			
							·			
							·			
¹ Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, CS	G=Cover	red or Co	bated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil I	ndicators:							Indicators for Problematic Hydric Soils ³ :		
Histosol ((A1)		Polyvalue B	elow Su	rface (S8	3) (LRR	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)		
Black His	tic (A3)		Thin Dark S	5) urface (S	59) (LRF	R, ML	RA 149B)	5 cm Muck Peat or Peat (S3) (LRR K, L, R)		
Hydroger	n Sulfide (A4)		Loamy Mucl	ky Miner	al (F1) (I	LRR K,	L)	Dark Surface (S7) (LRR K, L)		
Stratified	Layers (A5) Below Dark Surface	(Δ11)	Loamy Gley	ed Matri	ix (F2)			Polyvalue Below Surface (S8) (LRR K, L)		
Thick Dar	rk Surface (A12)	(/(11))	Redox Dark	Surface	, e (F6)		Iron-Manganese Masses (F12) (LRR K, L,			
Sandy Mu	ucky Mineral (S1)		Depleted Da	urk Surfa	ace (F7)			Piedmont Floodplain Soils (F19) (MLRA 149		
Sandy G	edox (S5)			63310113	(го)			Red Parent Material (F21)		
Stripped I	Matrix (S6)							Very Shallow Dark Surface (TF12)		
Dark Surf	tace (S7) (LRR R, MI	_RA 149B)					Other (Explain in Remarks)		
³ Indicators o	f hydrophytic vegetat	ion and w	etland hydrology mu	st be pr	esent, ur	nless dis	sturbed or p	problematic.		
Restrictive I	Layer (if present):									
Type: No	t present							Hydric Soil Present? Ves X No		
Deptil (inc										
Remarks:	ion for hydric soil is m	ət								
The criter.	ion for hydric son is me									

Project/Site: Darrow-Hudson East 138kV Project	City/County: Streetsboro, Portage County Sampling Date: 2024-2-22
Applicant/Owner: FE	State: OH Sampling Point: W-EVN-09 UPL-1
Investigator(s): Emma Given	Section, Township, Range: NA
Landform (hillslope, terrace, etc): Foot slope	Local relief (concave, convex, none): None Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.229689 Long: -81.382486 Datum: WGS84
Soil Map Unit Name: Ellsworth silt loam, 12 to 18 percent slop	ves, eroded NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes X No (If no, explain in Remarks.)
Are Vegetation . Soil . or Hydrology significa	antiv disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation . Soil . or Hydrology natural	ly problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS Attach site man show	ing compling point locations, transports, important features, ato
Sommart of Findings – Attach site map show	ing sampling point locations, transects, important leatures, etc.
Hydrophytic Vegetation Present? Yes No 🗴	Is the Sampled Area
Hydric Soil Present? Yes X No	within a Wetland? Yes <u>No</u> No
Wetland Hydrology Present? Yes No 🗶	If yes, ontional Wetland Site ID
Remarks: (Explain alternative procedures here or in a separate re	eport.)
Covertype is UPL. Based on the absence of two of three parameters	s, this area is an upland.
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	ply) Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained L	Leaves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna ((B13) MOSS Trim Lines (B16) B15) Dry-Season Water Table (C2)
Saturation (A3) Man Deposits (i Water Marks (B1) Hydrogen Sulfic	de Odor (C1) Cravfish Burrows (C8)
Sediment Deposits (B2)	spheres along Living Poots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Denosits (B3)	educed Iron (C4) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4)	duction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5)	ace (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain i	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 💥
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial p	hotos, previous inspections), if available:
Romarke:	
The criterion for wetland hydrology is not met.	

Sampling Point: <u>W-EVN-09_UPL-1</u>

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				That Are OBL, FACW, or FAC: 0 (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>4</u> (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 0% (A/B)
7.				Provalence Index worksheet:
	0	= Tota	Cover	Frevalence index worksheet.
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)				Total % Cover of:Multiply by:
1. Malus sp.	10	Yes	NI	OBL species x 1 =0
2				FACW species $5 \times 2 = 10$
3				FAC species x 3 =0
4				FACU species $95 \times 4 = 380$
5				UPL species $0 \times 5 = 0$
7.			·	Column Totals: 100 (A) 390 (B)
Link Otentions (Distring) 5 ft redius	10	= Total	Cover	
Herb Stratum (Plot size: 5 ft radius)	20	Voc	FACU	Prevalence Index = B/A = <u>3.9</u>
2 Rosa multiflora		Vos	FACU	Hydrophytic Vegetation Indicators:
2. Solidado canadensis		Vos	FACU	1 - Rapid Test for Hydrophytic Vegetation
A Blenhilia hirsuta		 No	FACU	2 - Dominance Test is >50%
5 Onoclea sensibilis	5	No	FACW	
6.				-3 - Prevalence Index is $\leq 3.0^{4}$
7.				4 - Morphological Adaptations ¹ (Provide supporting
8				uala in Remarks of on a separate sheet)
9	<u> </u>		. <u> </u>	Problematic Hydrophytic Vegetation ⁺ (Explain)
11			. <u> </u>	¹ Indicators of hydric soil and wetland hydrology must
12				be present, unless disturbed or problematic.
	100	= Tota	Cover	Definitions of Manatation Churches
Woody Vine Stratum (Plot size: 30 ft radius)		10104	0010	Definitions of vegetation Strata:
1				diameter
2				at breast height (DBH), regardless of height.
3				Sapling/shrub — Woody plants less than 3 in. DBH
4				and greater than or equal to 3.28 ft (1 m) tall.
	0	= Total	Cover	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
The criterion for hydrophytic vegetation is not met	leet.)			
The effection for hydrophytic regetation is not met				

Profile Des	escription: (Describe to the depth needed to document the indicator or confirm the Matrix Redox Features						onfirm the ab	sence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 8	10YR 4/3	100					Silty Clay Loa	
8 to 15	10YR 4/1	70	10YR 6/6	30	С	M/PL	Clay Loam	
							·	
¹ Type: C=Co	ncentration, D=Depl	etion, RM=	Reduced Matrix, C	S=Cover	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Inc	licators for Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue B	elow Su אר	rface (S8	B) (LRR	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	tic (A3)		Thin Dark S	5) urface (\$	59) (LRF	R, MLI	RA 149B)	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydrogen	n Sulfide (A4)		Loamy Muc	ky Miner	al (F1) (LRR K,	L) ´	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5) Below Dark Surface	(Δ11)	Loamy Gley	ed Matri	ix (F2)			Polyvalue Below Surface (S8) (LRR K, L)
Thick Dar	k Surface (A12)	(/(11)	Redox Dark	Surface	, e (F6)		_	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mu	ucky Mineral (S1)		Depleted Da	ark Surfa	ace (F7)			Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Re	edox (S5)		Redux Depr	62210112	(го)			Red Parent Material (F21)
Stripped I	Matrix (S6)						_	Very Shallow Dark Surface (TF12)
Dark Surf	ace (S7) (LRR R, M I	LRA 149B)					Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetat	tion and w	etland hydrology mu	ist be pr	esent, ur	nless dis	sturbed or prob	lematic.
Restrictive L	_ayer (if present):							
Type: <u>fill</u>	(hoc)(15)							vdric Soil Present? Ves 🗶 No
	<u>15</u>							
Remarks: The criteri	ion for hydric soil is m	et						
The enter								

Project/Site: Darrow-Hudson East 138kV Project City/County: Street	tsboro, Portage County Sampling Date: 2024-2-22
Applicant/Owner: FirstEnergy	State: OH Sampling Point: W-EVIN-10_PEIVI-1
Investigator(s): Erin van Nort, Emma Given	Section, Iownship, Range: <u>INA</u>
Landform (hillslope, terrace, etc): <u>Unannel</u> Local reliei (concav	Ve, convex, none): <u>INONE</u> Stope (%): <u>I to 5</u>
Subregion (LRR or MLRA): MLKA 139 OI LKK K Lat: 41.2502055	833 Long: -81.382566316/ Datum: WG504
Soil Map Unit Name: Elisworth silt loam, 2 to 6 percent slopes	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes 🔺 No	o (lf no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly disturbed?	Are "Normal Circumstances" present? Yes 👗 No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS — Attach site map showing sampling poi	nt locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No Is the Sam within a W Hydric Soil Present? Yes X No If yes, optic Wetland Hydrology Present? Yes X No If yes, optic	lpled Area /etland? Yes ★ No onal Wetland Site ID: W-EVN-10
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.	
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) X Saturation (A3) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizospheres along Living R Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Soots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) C6) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) X FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes Water Table Present? Yes Yes No Depth (inches): 1 No X Depth (inches): Yes Yes Yes No Depth (inches): 12	Wetland Hydrology Present? Yes 🗶 No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks: The criterion for wetland hydrology is met.	

Sampling Point: <u>W-EVN-10_PEM-1</u>

Tree Stratum (Dist size, 20 ft radius)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1.	% Cover	<u>species?</u>	Status	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 1 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: 1 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 100% (A/B)
7				Prevalence Index worksheet:
Conling/Chrub Stratum (Diataiza: 15 ft radius)		= Total	Cover	Total % Cover of Multiply by
<u>Saping/Shrub Stratum</u> (Plot Size. <u>13 ft faulus</u>)				$\frac{1}{OR} = \frac{1}{OR} $
2.				$\frac{0}{10} = \frac{100}{100}$
3.				FACW species $35 \times 2 = 190$
4.				FAC species $5 \times 3 = 15$
5				FACU species $0 \times 4 = 0$
6				UPL species $0 \times 5 = 0$
7				Column Totals: <u>100</u> (A) <u>205</u> (B)
	0	= Total	Cover	
Herb Stratum (Plot size: 5 ft radius)	90	Vac	EACW	Prevalence Index = $B/A = 2.1$
Phragmites dustrains Onoclea sensibilis		No	FACW	Hydrophytic Vegetation Indicators:
2. Symphyotrichum lateriflorum	5	No	FAC	★ 1 - Rapid Test for Hydrophytic Vegetation
4		110	TAC	\mathbf{X} 2 - Dominance Test is >50%
5.				
6.				$3 - Prevalence Index is < 3.0^+$
7				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must
12				be present, unless disturbed or problematic.
<u> </u>	100	= Total	Cover	
Woody Vine Stratum (Plot size: 30 ft radius)		10104	0010	Definitions of Vegetation Strata:
1				Tree — Woody plants 3 in. (7.6 cm) or more in
2				at breast beight (DBH) regardless of beight
3				Sonling/ohruh Woody plants loss than 2 in DBH
4				and greater than or equal to 3.28 ft (1 m) tall.
	0	= Total	Cover	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 beingt
				Hydrophytic Vegetation
				Present? Yes X No
Remarks: (Include photo numbers here or on a separate sh	eet.)			
The criterion for hydrophytic vegetation is met.				

US Army Corps of Engineers 92ff8a38-c9c2-49a3-b7e1-a43616111137 W-EVN-10_PEM-1

Fioline Des	Matrix	n: (Describe to the depth needed to document the indicator or confirm the Matrix Redox Features					absence of indicators.)	
Depth (inches)	Color (moist)	 %	Color (moist)	%	Tvpe ¹	Loc ²	Texture	Remarks
0 to 6	10YR 5/2	90	10YR 5/6	10	<u> </u>	M	Silty Clay L	oam
6 to 20	10YR 6/2	85	10YR 6/8	15		M	Silty Clay L	oam
				·			·	
				·				
				·				
1 Turno: C=Ca		tion DM-	Boducod Matrix CS				and Crains	² Location: DL-Doro Liping, M-Matrix
	ncentration, D-Deple	uon, Rivi-	Reduced Mainx, Ca	-Cover	eu or Co	aleu Sa	anu Grains.	Location. PL-Pore Lining, M-Matrix.
Hydric Soil (Histosol (Histic Epi Black His Hydroger Stratified Depleted Thick Dar Sandy Mi Sandy Gl Sandy Re Stripped Dark Surf	Soil Indicators: Polyvalue Below Surface (S8) (LRR R, MLRA 149B) vic Epipedon (A2) MLRA 149B) vic Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) lrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) utified Layers (A5) Loamy Gleyed Matrix (F2) bleted Below Dark Surface (A11) X vic Dark Surface (A12) Redox Dark Surface (F6) udy Mucky Mineral (S1) Depleted Dark Surface (F7) udy Redox (S5) Redox Depressions (F8) pped Matrix (S6) K Surface (S7) (LRR R, MLRA 149B)						R, RA 149B) L)	Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Muck Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) 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) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetati	on and we	etland hydrology mu	st be pr	esent, ur	less dis	sturbed or pr	oblematic.
Restrictive I Type: No	L ayer (if present): t present							
Depth (inc	ches):							Hydric Soil Present? Yes 🗶 No
Remarks: The criter	ion for hydric soil is me	t.						

Project/Site: Darrow-Hudson East 138kV Project	City/County: Street	sboro, Portag	e County	Sampling Date	e: 2024-2-22
Applicant/Owner: FirstEnergy	S	State: OH	Sampling Po	int: W- <u>EVN-10</u>	UPL-1
Investigator(s): Erin Van Nort, Emma Given		Sectio	n, Township, Rar	nge: NA	
Landform (hillslope, terrace, etc): Hillslope	Local relief (concav	/e, convex, nor	e): None	Slop	e (%): 1 to 3
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.2303883	333 Lo	ong: -81.382518	31833 Da	atum: WGS84
Soil Map Unit Name: Ellsworth silt loam, 2 to 6 percent slopes			NWI Classific	cation: None	
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🗶 No	o (If no,	explain in Rema	arks.)	
Are Vegetation , Soil , or Hydrology significan	ntly disturbed?	Are "Normal	Circumstances"	present? Yes	🗶 No
Are Vegetation , Soil , or Hydrology naturally	problematic?	(If needed, e	xplain any answ	ers in Remarks.)	· · · · · · · · · · · · · · · · · · ·
SUMMARY OF FINDINGS – Attach site man showin	ng sampling poi	nt location	s transects	important fe	atures etc
	Is the Sam	pled Area	<i>5, transcoto,</i>		
Hydrophytic Vegetation Present? Yes No X	within a W	etland?	Yes	No 🗶	
Wetland Hydrology Present? Yes No X	I				
	If yes, optio	onal Wetland S	te ID:		
Remarks: (Explain alternative procedures here or in a separate rep Covertype is UPL. Based on the absence of all three parameters, this a	oort.) area is an upland.				
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indica	ators (minimum c	of two required)
Primary Indicators (minimum of one is required; check all that apply	y)		Surface Soil	Cracks (B6)	
Surface Water (A1) Water-Stained Le	eaves (B9)	-	Drainage Pat	terns (B10)	
High Water Table (A2) Aquatic ⊢auna (B Marl Deposits (B1	313) 15)	-	MOSS TIM LI	Nes (B16) Mater Table (C2)	
Water Marks (B1) Hvdrogen Sulfide	• Odor (C1)	-	Cravfish Burr	ows (C8)	
Sediment Deposits (B2) — Oxidized Rhizosp	pheres along Living R	oots (C3)	Saturation Vi	sible on Aerial Im	nagery (C9)
Drift Deposits (B3)	uced Iron (C4)	•	Stunted or St	ressed Plants (D	01)
Algal Mat or Crust (B4) Recent Iron Redu	uction in Tilled Soils (C6)	Geomorphic	Position (D2)	
Iron Deposits (B5) Ihin Muck Surface (B7) Ihin Muck Surface (B7)	ce (C7)	-	Shallow Aquir Microtopogra	tard (D3) India Relief (D4)	
Sparselv Vegetated Concave Surface (B8)	Remarks	-	FAC-Neutral	Test (D5)	
		-	_		
Field Observations:					
Surface Water Present? Yes No X Depth (Ir	nches):				
Water lable Present? Yes No A Depth (Ir	nches):	Wetland Hvd	rology Present	2 Vac	No ¥
(includes capillarv fringe)	nches)	Wegana nya	Tology Fresence	· · · · · · · · · · · · · · · · · · ·	NO
		tione) if evenile	hla.		
Describe Recorded Data (stream gauge, monitoring well, aerial pro	otos, previous inspec	tions), ir avalla	DIE:		
Remarks:					
The criterion for wetland hydrology is not met.					

Sampling Point: <u>W-EVN-10_UPL-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 0 (A)
3				Total Number of Dominant
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0% (A/B)
7.				
	0	= Total	Cover	Prevalence index worksneet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of: Multiply by:
1. Rubus allegheniensis	20	Yes	FACU	OBL species x 1 =0
2				FACW species x 2 =0
3.				FAC species $0 \times 3 = 0$
4				FACU species <u>85</u> x 4 = <u>340</u>
6.				UPL species10 x 5 =50
7.	_			Column Totals: 95 (A) 390 (B)
	20	= Total	Cover	
Herb Stratum (Plot size: 5 ft radius)				Prevalence Index = $B/A = 4.1$
1. Solidago canadensis		Yes	FACU	Hydrophytic Vegetation Indicators:
2. Solidago altissima		Yes	FACU	1 - Ranid Test for Hydronhytic Vegetation
3. Poa annua		Yes No		2 Dominance Test is >50%
4. Duucus carota		No	FACU	
6.		110		3 - Prevalence Index is ≤3.0 [⊥]
7.				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10				¹ Indicators of hydric soil and wetland hydrology must
			. <u> </u>	be present, unless disturbed or problematic.
12.		– Total	Cover	
Woody Vine Stratum (Plot size: 30 ft radius)		- 10101	COVE	Definitions of Vegetation Strata:
1				Tree – Woody plants 3 in. (7.6 cm) or more in
2				at breast height (DBH), regardless of height.
3				Sapling/shrub – Woody plants less than 3 in. DBH
4				and greater than or equal to 3.28 ft (1 m) tall.
	0	= Iotal	Cover	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
Remarks: (Include photo numbers here or on a separate she The criterion for hydrophytic vegetation is not met.	eet.)			
The effection for hydrophydre vegetation is not met.				

Profile Des	cription: (Describe Matrix	to the dep	th needed to document the indicator or confirm the Redox Features					abse	ence of indicators.)
Depth (inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	è	Remarks
0 to 10	10YR 4/2	100	(Silty Clay L	oam	
10 to 20	10YR 4/4	90	10YR 4/6	10	С	М	Silty Clay L	oam	
				·					
				·					
¹ Type: C=Co	ncentration, D=Depl	etion, RM=	Reduced Matrix, CS	S=Cover	red or Co	ated Sa	and Grains.	2	2 Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							Indic	cators for Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue Be	elow Su	rface (S8	3) (LRR	R,	$-\frac{2}{2}$	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	tic (A3)		Thin Dark Su	9) urface (\$	59) (LRR	R, ML	RA 149B)	- 5	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydrogen	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) (I	LRR K,	L)	<u> </u>	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5) Below Dark Surface	(A11)	Loamy Gleye	ed Matri trix (E3	ix (F2)			— F	Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L)
Thick Dar	k Surface (A12)	(/(±±))	Redox Dark	Surface	, e (F6)			Ξi	ron-Manganese Masses (F12) (LRR K, L, F
Sandy Mu	ucky Mineral (S1)		Depleted Da	rk Surfa	ace (F7)			— ^F	Piedmont Floodplain Soils (F19) (MLRA 149
Sandy Re	edox (S5)		Redox Depi	23510115	(го)			— "F	Red Parent Material (F21)
Stripped I	Matrix (S6)							<u> </u>	/ery Shallow Dark Surface (TF12)
Dark Surf	ace (S7) (LRR R, M	LRA 149B)					_ (Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetat	tion and w	etland hydrology mu	st be pr	esent, ur	nless dis	sturbed or p	roble	matic.
Restrictive L	_ayer (if present):								
Type: No	t present								drie Seil Dresent? Vas No ¥
Depth (Inc	ines):							нус	
Remarks: The criteri	ion for hydric soil is no	ot met							
The entern	ion for hydric son is ne	n met.							

Project/Site: Darrow-Hudson East 138kV Project	City/County: Streetsboro, Portage County Sampling Date: 2024-2-23
Applicant/Owner: FE	State: OH Sampling Point: W-EVN-11_PEM-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA
Landform (hillslope, terrace, etc): Flat	Local relief (concave, convex, none): Concave Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.210073 Long: -81.382704 Datum: WGS84
Soil Map Unit Name: Mahoning silt loam, 2 to 6 percent slopes	NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🗶 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Normal Circumstances" present? Yes 🗶 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	a sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No
Wetland Hydrology Present? Yes X No	If ves, optional Wetland Site ID: W-EVN-11
Covertype is PEM. Based on the presence of all three parameters, this HYDROLOGY	area is a wetland.
Wetland Hydrology Indicators:	Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Le	aves (B9) Drainage Patterns (B10)
High Water Table (A2) Aquatic Fauna (B	13) Moss Trim Lines (B16)
Saturation (A3) Marl Deposits (B1	Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide	Odor (C1) Crayfish Burrows (C8)
Sealment Deposits (B2) Oxidized Rnizosp Drift Deposits (B3) Presence of Redu	neres along Living Roots (C3) Saturation visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	iction in Tilled Soils (C6) Geomorphic Position (D2)
Iron Deposits (B5) Thin Muck Surfac	e (C7) Shallow Aquitard (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in	Remarks) Microtopographic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	AC-Neutral lest (D5)
Field Observations:	
Surface Water Present? Yes 🗶 No Depth (ir	iches): 1
Water Table Present? Yes 🗶 No Depth (ir	iches): 3
Saturation Present? Yes X No Depth (ir	iches): 5 Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspections), if available:
Remarks:	
The criterion for wetland hydrology is met.	

Sampling Point: <u>W-EVN-11_PEM-1</u>

Troc	• Stratum (Distaire) 20 ft radius	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>1.</u>	Stratum (Flot size. <u>50 it radius</u>)		Species?	Status	Number of Dominant Species
2.					That Are OBL, FACW, or FAC: <u>2</u> (A)
3.					Total Number of Dominant Species Across All Strata: 2 (B)
4. 5					Percent of Dominant Species
6.					That Are OBL, FACW, or FAC: 100% (A/B)
7.					Prevalence Index worksheet:
		0	= Total	Cover	
<u>Sap</u> ₄	ling/Shrub Stratum (Plot size: <u>15 ft radius</u>)	F	Vec	EACM	Total % Cover of: Multiply by:
1. 2	Cornus amonium		res	FACW	$\begin{array}{c} \text{OBL species} \\ \text{OBL species} \\$
3.					FACW species $30 \times 2 = 180$
4.					FAC species $0 \times 3 = 0$
5.					FACU species $0 \times 4 = 0$
6.					$\begin{array}{c} \text{OPL species} \\ \text{Column Totals} \\ \end{array} \begin{array}{c} 100 \\ \text{(A)} \\ \end{array} \begin{array}{c} 190 \\ \text{(B)} \\ \end{array}$
′.		5	– Total	Cover	$\begin{bmatrix} \text{Column rotals.} & 100 \\ \hline & \text{(A)} & 150 \\ \hline & \text{(B)} \end{bmatrix}$
Herl	<u>o Stratum</u> (Plot size: 5 ft radius)		- 10141	Cover	Prevalence Index = $B/A = 1.9$
1.	Phalaris arundinacea	75	Yes	FACW	
2.	Symphyotrichum novae-angliae	10	No	FACW	Hydrophytic Vegetation Indicators:
3.	Juncus effusus	10	No	OBL	1 - Rapid Test for Hydrophytic Vegetation
4.					2 - Dominance Test is >50%
5. 6		·			_ 3 - Prevalence Index is $\leq 3.0^1$
7.					4 - Morphological Adaptations ¹ (Provide supporting
8.					data in Remarks or on a separate sheet)
9.					Problematic Hydrophytic Vegetation ¹ (Explain)
10.					¹ Indicators of hydric soil and wetland hydrology must
12					be present, unless disturbed or problematic.
12.		95	= Tota	Cover	
<u>Woo</u>	ody Vine Stratum (Plot size: <u>30 ft radius</u>)				Definitions of Vegetation Strata:
1.					diameter
2.		- <u> </u>			at breast height (DBH), regardless of height.
3. 4.		·			Sapling/shrub — Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
		0	= Total	Cover	Herb – All herbaceous (non-woody) plants, regardless
					Woody vines — All woody vines greater than 3.28 ft in
					Hydrophytic Vegetation
					Present? Yes No
Rer	narks: (Include photo numbers here or on a separate she	et.)			
	The criterion for hydrophytic vegetation is met.				

Profile Description: (Describe to the d			oth needed to docu Redox	ment the Feature	e indicat	or or co	bsence of indicators.)	
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 7	2.5Y 5/2	100					Clay Loan	<u> </u>
7 to 20	10Y 2.5/1	60	2.5Y 7/6	40	С	M/PL	Clay Loan	1
					·			
				·	·			
¹ Type: C=Co	oncentration, D=Deple	tion, RM:	=Reduced Matrix, CS	S=Cover	ed or Co	ated Sa	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	indicators:						li	ndicators for Problematic Hydric Soils ³ :
Histosol ((A1)		Polyvalue Be	elow Sur	face (S8) (LRR F	२, _	2 cm Muck (A10) (LRR K, Ĺ, MLRA 149B)
Histic Epi Black His	ipedon (A2) tic (A3)		MLRA 149E Thin Dark Si)) Irface (S			Δ 149B)	_ Coast Prairie Redox (A16) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Muck	y Minera	al (F1) (L	.RR K, L	.) _	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)	A 4 4 \	Loamy Gley	ed Matrix	x (F2)		_	Polyvalue Below Surface (S8) (LRR K, L)
Thick Da	rk Surface (A12)	AII)	Redox Dark	Surface	(F6)		_	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy M	ucky Mineral (S1)		Depleted Da	rk Surfa	ce (F7)		_	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gl	leyed Matrix (S4) edox (S5)		Redox Depre	essions	(F8)		_	Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (E21)
Stripped	Matrix (S6)						-	Very Shallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, ML	RA 149E	5)				_	Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetatio	on and w	etland hydrology mu	st be pre	esent, un	less dist	urbed or pro	blematic.
Restrictive I	Layer (if present):							
Type: No	t present							
Depth (inc	ches):							Hydric Soil Present? Yes _ X No
Remarks:								
I ne criter	ion for hydric soll is me							

Project/Site: Darrow-Hudson East 138kV Project	City/County: Streetsboro, Portage County Sampling Date: 2024-2-23
Applicant/Owner: FirstEnergy	State: OH Sampling Point: W-EVN-11_UPL-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA
Landform (hillslope, terrace, etc): Flat	Local relief (concave, convex, none): <u>None</u> Slope (%): <u>0 to 1</u>
Subregion (LRR or MLRA): <u>MLRA 139 of LRR R</u>	Lat: <u>41.210641</u> Long: <u>-81.382663</u> Datum: <u>WGS84</u>
Soil Map Unit Name: <u>Mahoning silt loam, 2 to 6 percent slopes</u>	NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🗶 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significar	ntly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS — Attach site map showir	ng sampling point locations, transects, important features, etc.
Hvdrophytic Vegetation Present? Yes No 🗴	Is the Sampled Area
Hydric Soil Present? Yes No	within a Wetland? Yes No
Wetland Hydrology Present? Yes No	If ves. optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate rep	port.)
Covertype is Or L. Dased on the absence of an uncerparameters, this	area is an upianu.
HYDROLOGY	
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply	y) Surface Soil Cracks (B6)
Surface Water (A1) Water-Stained Le	Aves (B9) Drainage Patterns (B10)
Saturation (A3)	15) Dry-Season Water Table (C2)
Water Marks (B1) Hydrogen Sulfide	e Odor (C1) Crayfish Burrows (C8)
Sediment Deposits (B2) Oxidized Rhizosp	bheres along Living Roots (C3) Saturation Visible on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Redu	uced Iron (C4) Stunted or Stressed Plants (D1)
Iron Denosits (B5)	(C7) Shallow Aguitard (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 🗶 Depth (in	nches):
Water Table Present? Yes No X Depth (ii	nches):
Saturation Present? Yes No X Depth (in	nches): Wetland Hydrology Present? Yes No X
(includes capillary minge)	
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspections), if available:
Remarks:	
The criterion for wetland hydrology is not met.	

Sampling Point: <u>W-EVN-11_UPL-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute	Dominant	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 0 (A)
3				Iotal Number of Dominant Species Across All Strata: 1 (B)
45				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 0% (A/B)
7.				Prevalence Index worksheet:
	0	= Tota	Cover	
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)				Total % Cover of: Multiply by:
2.				$\begin{array}{c} \text{OBL species} \\ \text{STATULE} \\ \text{STATULE} \\ \text{OBL species} \\ \text{STATULE} \\ S$
3.				FACW species $10 \times 2 = 20$
4.				FAC species $0 \times 3 = 0$
5.				FACU species $60 \times 4 = 240$
6				UPL species x 5 =0
7				Column Totals: <u>75</u> (A) <u>265</u> (B)
	0	= Tota	Cover	
Herb Stratum (Plot Size: 5 it radius)	50	Vos	FACU	Prevalence Index = $B/A = 3.5$
2 Phalaris arundinacea		No	FACW	Hydrophytic Vegetation Indicators:
3. Solidaao canadensis		No	FACU	1 - Rapid Test for Hydrophytic Vegetation
4. Juncus effusus	5	No	OBL	2 - Dominance Test is >50%
5.				\sim 2. Provalance Index is <2.0 ¹
6.				
7				4 - Morphological Adaptations ¹ (Provide supporting
8.				
9 10				Problematic Hydrophytic Vegetation ⁺ (Explain)
11.				¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed or problematic.
	75	= Total	Cover	Definitions of Vegetation Strata:
Woody Vine Stratum (Plot size: <u>30 ft radius</u>)				Tree — Woody plants 3 in. (7.6 cm) or more in
1				diameter
3.				at breast height (DBH), regardless of height.
4.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
		= Total	Cover	Herb – All herbaceous (non-woody) plants, regardless
				Woody vines — All woody vines greater than 3.28 ft in
				height.
				Hydrophytic Vegetation
				Present? Yes No 🗶
Remarks: (Include photo numbers here or on a separate she	eet.)			
The criterion for hydrophytic vegetation is not met.				

Profile Description: (Describe to the depth needed to document Matrix Redox Feat		ment th	t he indicator or confirm tures			absence of indicators.)		
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		Remarks
0 to 7	2.5Y 5/3	100	\$ <i>\$</i>				Clay Loan	<u> </u>
7 to 20	2.5Y 5/2	50	2.5Y 5/6	50	С	M/PL	Clay Loan	<u>n</u>
¹ Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, C	S=Cover	ed or Co	ated Sa	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	indicators:							ndicators for Problematic Hydric Soils ³ :
Histosol ((A1)		Polyvalue B	elow Su	rface (S8) (LRR F	٦,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Ep	ipedon (A2)		MLRA 1498 Thin Dark S	3) urfaco (S	30) (I DD		A 1/0R)	_ Coast Prairie Redox (A16) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Mucl	ky Miner	al (F1) (L	.RR K, L	.)	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)		Loamy Gley	ed Matri	x (F2)		-	Polyvalue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	(A11)	Depleted Ma Redox Dark	atrix (F3) Surface	(F6)		-	_ Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (E12) (I RR K, L, R)
Sandy M	ucky Mineral (S1)		Depleted Da	ark Surfa	.ce (F7)		_	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy G	eyed Matrix (S4)		Redox Depr	essions	(F8)		_	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5) Matrix (S6)						-	Red Parent Material (F21) Very Shallow Dark Surface (TE12)
Dark Sur	face (S7) (LRR R, MI	_RA 149B)				-	Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetat	ion and w	etland hydrology mu	ist be pre	esent, un	less dist	urbed or pro	oblematic.
Restrictive	Layer (if present):							
Type: No	t present							
Depth (ind	ches):							Hydric Soil Present? Yes No X
Remarks:								
The criter	ion for hydric soil is no	t met.						

Project/Site: Darrow-Hudson East 138kV Project City/County:	: Streetsboro, Portage County Sampling Date: 2024-2-23					
Applicant/Owner: FirstEnergy	State: OH Sampling Point: W-EVN-12_PEM-1					
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA					
Landform (hillslope, terrace, etc): Depression Local relief	(concave, convex, none): None Slope (%): 0 to 1					
Subregion (LRR or MLRA): MLRA 139 of LRR R Lat: 41.21	L57679667 Long: -81.38255665 Datum: WGS84					
Soil Map Unit Name: Mahoning silt loam, 2 to 6 percent slopes	NWI Classification: PUBG					
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	X No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes X No					
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS — Attach site map showing samplin	no point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes X No Is the standard	he Sampled Area hin a Wetland? Yes X No es, optional Wetland Site ID:					
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.						
HYDROLOGY						
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ✗ Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) ✗ Oxidized Rhizospheres along I Drift Deposits (B3) Presence of Reduced Iron (C4 Algal Mat or Crust (B4) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Presence of Reduced Iron Remarks)	Secondary Indicators (minimum of two required), Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)					
Field Observations:						
Surface Water Present? Yes 🗶 No Depth (inches): 1						
Water Table Present? Yes No 🗶 Depth (inches):						
Saturation Present? Yes No X Depth (inches):	Wetland Hydrology Present? Yes X No					
(includes capillary minge)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous	s inspections), if available:					
Remarks: The criterion for wetland hydrology is met.						

Sampling Point: <u>W-EVN-12_PEM-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2.				That Are OBL, FACW, or FAC: <u>1</u> (A)
3				Total Number of Dominant
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
7.				
	0	= Total	Cover	Prevalence index worksneet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of:Multiply by:
1				OBL species x 1 =
3				FACW species $85 \times 2 = 170$
4.				FAC species $15 \times 3 = 45$
5.				FACU species x 4 =
6				UPL species $0 \times 5 = 0$
7				Column Totals:(A)(A)(B)
Herb Stratum (Plot size: 5 ft radius)		= Total	Cover	
1. Phalaris arundinacea	70	Yes	FACW	$\frac{2.2}{2.2}$
2. Apocynum cannabinum	15	No	FAC	Hydrophytic Vegetation Indicators:
3. Solidago gigantea	15	No	FACW	▲ 1 - Rapid Test for Hydrophytic Vegetation
4				¥ 2 - Dominance Test is >50%
5.				3 - Prevalence Index is ≤3.0 ¹
7.				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10				¹ Indicators of bydric soil and wetland bydrology must
12				be present, unless disturbed or problematic.
121	100	= Tota	Cover	
Woody Vine Stratum (Plot size: <u>30 ft radius</u>)		10104	0010.	Definitions of Vegetation Strata:
1				Tree – Woody plants 3 in. (7.6 cm) or more in
2.				at breast height (DBH), regardless of height.
3				Sapling/shrub — Woody plants less than 3 in. DBH
	0	= Tota	Cover	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 X No
Demarke: (Include photo numbers here or on a consiste sh	oot)			1
The criterion for hydrophytic vegetation is met.	eel.)			

Deptitive Color (moist) % Color (moist) % Type1 Loc2 Texture Remarks 0 uo 0 10YR 21 90 10YR 68 10 C PL Silty Clay Leam 6 to 20 N 5' 90 10YR 68 10 C PL Silty Clay Leam	Profile Description: (Describe to the d Matrix			oth needed to docui Redox	nent th Feature	i e indica es	tor or c	confirm the absence of indicators.)			
0 to 6 10YR 271 90 10YR 648 10 C PL Sitty Clay Leam 6 to 20 N 5' 90 10YR 648 10 C PL Sitty Clay Leam	Depth (inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks		
6 in 20 N 5/ 90 10YR 6/8 10 C PL Sitty Clay Learn Image: Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. PLocation: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: — — — — — Hydric Soil Indicators: — — — — … … Hydric Soil Indicators: — — — …	0 to 6	10YR 2/1	90	10YR 6/8	10	C	PL	Silty Clay L			
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Costed Sand Grains. **Location: PL=Pore Lining, M=Matrix, Hydric Soil Indicators: Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Indicators for Problematic Hydric Soils ⁵ :	6 to 20	N 5/	90	10YR 6/8	10	С	PL	Silty Clay L	.oam		
**Type: C-Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. *Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Polyvalue Below Surface (S8) (LRR R, MLRA 1498) Indicators for Problematic Hydric Soils ² ; Coast Prairies Redox (A10) (LRR K, L, MLRA 1498) Histus (A1) Polyvalue Below Surface (S9) (LRR R, MLRA 1498) Indicators for Problematic Hydric Soils ² ; Coast Prairies Redox (A10) (LRR K, L, MLRA 1498) Stratified Layers (A5) Coamy Gleyd Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L) Depleted Below Dark Surface (S1) VL coamy Gleyd Matrix (F2) Polyvalue Below Surface (S8) (LRR K, L) Stratified Layers (A5) Sandy Gleyd Matrix (F3) Polyvalue Below Surface (S8) (LRR K, L) Sandy Gleyd Matrix (S4) Depleted Dark Surface (F7) Pelefmont Ploodplain Soils (F19) (MLRA 1449, 145, 1499) Sandy Gleyd Matrix (S4) Redox Depressions (F6) Worth-Manganese Massec (F12) (WLR K, LS) Dark Surface (S7) (LRR R, MLRA 1449) Very Shallow Dark Surface (T12) Other Capitain in Remarks) Singled Matrix (S4) Redox Resonance (S4) (URR R, MLRA 1449, 153) Very Shallow Dark Surface (T12) Dark Surface (S7) (URR R, MLRA 1449) Very Shallow Dark Surface (T12) Other Capitain in Remarks) "Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. <											
** ** <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>											
¹ Type: C-Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix, Pdric Soil Microscope (SB) (LRR R, Histic Episodi (A1) Histics Episodi (A2) Polyvalue Below Surface (SB) (LRR R, Histic (A3) Indicators for Problematic Hydric Soils ² ; 2 cm MucR 1499) Histics Episodi (A2) Polyvalue Below Surface (SB) (LRR R, L) Coast Prairie Redox (A10) (LRR K, L, R) Stratified Layers (A5) Depleted Matrix (F2) Depleted Matrix (F2) Depleted Matrix (F3) Depleted Matrix (F3) Depleted Matrix (F2) Sandy Microsci (S1) Redox Dark Surface (F6) Polyvalue Below Surface (F6) (LRR K, L) Sandy Microsci (S1) Redox Dark Surface (F7) Pielemont Floodplain Soil (F13) (MRR A, L498) Sandy Redox (S5) Redox Dapressions (F8) Meeis CSoil (F12) (LRR K, L) Sandy Redox (S5) Depleted Dark Surface (T12) Other (CSpalin in Remarks) Sindicators of hydrophydic vegetation and wettand hydrology must be present, unless disturbed or problematic. Restrictive Layer (If present): Type: Not present Microsci (S5) Hydric Soil Present? Yes X No Retrictive Layer (If present): Hydric Soil Present? Yes No The criterion for hydric soil is met. No											
Image: Soli Indicators: Polyvalue Below Surface (S9) (LRR R, MLRR 1498) Histosol (A1) Polyvalue Below Surface (S9) (LRR R, MLRR 1498) Histosol (A2) MLRA 1498) Hydrogen Sulfide (A4) Coast Pract (S1) (LRR K, L, R) Depleted Below Dark Surface (A3) MLRA 1498) Stradge (Lay ref (A5)) MLRA 1498) Stradge (Lay ref (A5)) MLRA 1498) Stradge (A2) MLRA LA98) Stradge (A2) MLRA 1498) Stradge (A2) Medix Carbo (F7) Stradge (A2) Redox Dark Surface (F7) Dark Surface (S7) (LRR R, MLRA 1498) Redox Dark Surface (F7) Dark Surface (S7) (LRR R, MLRA 1498) Redox Dark Surface (F7) Dark Surf								·			
¹ type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators:											
¹ Type: C-Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix, Pdfv5 Soli Indicators: Histosol (A1) Histosol (A2) Polyvalue Below Surface (S9) (LRR R, MLRA 149B) Coast Praire Redox (A15) (LRR K, L, R) Black Histo (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Coast Praire Redox (A15) (LRR K, L, R) Stratified Layers (A4) Loarny Mucky Mineral (F1) (LRR K, L) Dark Surface (S9) (LRR K, L, R) Depleted Below Surface (A2) Loarny Mucky Mineral (F1) Dark Surface (S9) (LRR K, L, R) Stratified Layers (A5) Loarny Gregord Matrix (F3) Thin Dark Surface (S9) (LRR K, L, R) Stratified Layers (A5) Redox Depressions (F6) Thin Chark Surface (F1) Stratified Layers (A5) Redox Depressions (F6) Thior Manganese Masses (F12) (LRR K, L, R) Stratiged Layers (A5) Redox Depressions (F6) Peletent Material (F21) Stratiged Layers (A5) Redox Depressions (F6) Peletent Material (F21) Stratiged Layers (A5) Redox CS1) Very Shallow Onth Surface (T12) Dark Surface (S7) (LRR N, MLRA 149B) Other (Explain in Remarks) 3 ¹ Andicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (ft present): Type Sint (F12) Hydric Soil								·			
Introper: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hdric Soil Indicators: Histosol (A) Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A) (LRR K, L, R) Histosol (A) MLRA 149B) Coantrom Wucky Mineral (F1) (LRR K, L) Indicators for Problematic Hydric Soils ³ : 2 cm Muck (A) (LRR K, L, R) Stratified Layers (AS) Thin Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L, R) Stratified Layers (AS) X Loarny Gleyed Matrix (F2) Polyvalue Below Surface (S9) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Matrix (F3) Thin Dark Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Matrix (S4) Redox Dark Surface (F6) Torn Muck (A) Sandy Mucky GS) Redox Depressions (F8) Redox Dark Surface (S7) (LRR K, L, R) Medicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (If present): Type: Not present Polyvalue Below Surface (S0) ICR K, L) Hydric Soil Present? Yes _K_ No								·			
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydros Soli Indicators: Polyvalue Below Surface (S8) (LRR R, Histic Epipedon (A2) Indicators for Problematic Hydric Solis ³ : 2 cm Muck (A10) (LRR K, L, R) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Son Muck Peat or Peat (S3) (LRR K, L, R) Staffied Layers (A5) Loamy Gleyed Matrix (F2) Depleted Below Dark Surface (S1) (LRR K, L) Sandy Mucky Mineral (S1) Sandy Rudky Mineral (S1) Depleted Dark Surface (F7) Sandy Audvy Mineral (S1) Depleted Dark Surface (S7) (LRR K, L) Predox Dark Surface (S7) (LRR K, L) Sandy Kudky Mineral (S1) Sandy Rudky Mineral (S1) Redox Depressions (F8) Mesi Spodic (TA6) (MLRA 1448) Sandy Kudky Mineral (S1) Sandy Rudky Mineral (S1) Polytaulue Below Surface (S7) (LRR K, L) Piedmont Naterial (F21) Sandy Rudky Mineral (S1) Sandy Rudky Mineral (S1) Redox Depressions (F8) Mesi Spodic (TA6) (MLRA 1448) Sandy Rudky Mineral (S1) Sandy Rudky (F7) Redox Dark Surface (S7) (LRR K, L) Very Shallow Dark Surface (S7) (LRR K, L) Sandy Rudky (S6) Mineral (S1) Hydrogen Very Shallow Dark Surface (S7) (LRR K, L) Very Shallow Dark Surface (S7) (LRR K, L) The criterion for hydric soil is m											
Hydric Soli Indicators: Indicators for Problematic Hydric Solis ³ : Histos (A1) Polyvalue Below Surface (S3) (LRR R, Histos Epideon (A2) Indicators for Problematic Hydric Solis ³ : Black Histis (A3) Thin Dark Surface (S3) (LRR R, MLRA 149B) Coast Praine Redox (A16) (LRR K, L, R) Stratified Layers (A5) Istantied Layers (A5) Istantied Layers (A5) Depleted Below Dark Surface (S1) (LRR K, L) Stratified Layers (A5) Istantie Gelow And Surface (F7) Polyvalue Below Surface (S3) (LRR K, L) Sandy Mudxy Mineral (S1) Depleted Dark Surface (F7) Piedmont Foodplain Solis (F19) (MLRA 1449B) Sandy Mudxy Mineral (S1) Depleted Dark Surface (F7) Piedmont Foodplain Solis (F19) (MLRA 1449B) Sandy Actor (S5) Redox Dark Surface (F7) Piedmont Foodplain Solis (F19) (MLRA 1449B) Sandy Mudxy Mineral (S1) Depleted Dark Surface (F7) Piedmont Foodplain Solis (F19) (MLRA 1449B) Sandy Actor (S5) (LRR R, MLRA 149B) Redox Cast Solic (TA6) (MLRA 1444, 145, 149B) Redox Cast Solic (TA6) (MLRA 1444, 145, 149B) Bark Surface (S7) (LRR R, MLRA 149B) Depleted Dark Surface (S7) (LRR R, MLRA 149B) Remarks: Type: Not present Popy present Popy present Popy present Depleted Dark Surface (S7) (LRR R, MLRA 149B) Hydric Soil Present? Yes X No	¹ Type: C=Co	ncentration, D=Deple	tion, RM=	Reduced Matrix, CS	=Cove	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.		
Histic Epigedon (A2) Polyvalue Below Surface (S9) (LRR R, MLRA 149B) 2 cm Muck (A10) (LRR K, L, R) Histic Epigedon (A2) MLRA 149B) Coast Prairie Redox (A10) (LRR K, L, R) Hydrogen Sulfale (A4) Laamy Mucky Mineral (F1) (LRR K, L) Depleted Below Dark Surface (A11) Depleted Matrix (F2) Depleted Below Surface (S1) X Redox Dark Surface (F6) Train Redox (MLRR 148B) Depleted Matrix (F3) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Redox Arface (F7) Piedmont Floodplain Soils (F2) (MLRR 144A, 145, 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Wesic Scolic (TA6) (MLRA 144B, 149B) Stripped Matrix (S5) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F2) (MLRA 149B) Stripped Matrix (S6) Depleted Artix (S7) Wesic Scolic (TA6) (MLRA 144B, 149B) Stripped Matrix (S6) Other (Explain in Remarks) Very Shallow Dark Surface (F7) 3 ¹ ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Persent? Yes X No	Hydric Soil I	ndicators:							Indicators for Problematic Hydric Soils ³ :		
Histic Epipedon (A2) Hydrogen Sulfide (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thin Dark Surface (A12) Sandy Gleyed Matrix (F3) Sandy Gleyed Matrix (F3) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S5) Sandy Gleyed Matrix (S4) Sandy Gleyet (ff present): Type: Not present Depth (inches): The criterion for hydric soil is met.	Histosol (A1)		Polyvalue Be	elow Su	rface (S8	3) (LRR	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)		
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (LRR K, L) Stratified Layers (A5) Loamy Gleyed Matrix (F2) Polyvalue Below Surface (S3) (LRR K, L) Depleted Below Dark Surface (A12) Redox Dark Surface (F6) Trihn Dark Surface (S9) (LRR K, L, R) Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Pielwont Floodplain Solis (F12) (MLRA 1498) Sandy Mucky S5) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 1498) Stripped Matrix (S6) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 1498) 3 ¹ ndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Remarks: Type: Not present Depleted Green Surface (S7) (LRR K, L) Model Surface (S7) Remarks: The criterion for hydric soil is met. No	Black His	pedon (A2) tic (A3)		MLRA 149B Thin Dark Su) Irface (3	59) (LRE	R. ML	RA 149B)	Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Muck Peat or Peat (S3) (LRR K, L, R)		
	Hydroger	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) (LRR K,	L)	Dark Surface (S7) (LRR K, L)		
Completed below bark Suitace (F12) (LRR K, L, R) Sinday Mucky Mineral (S1) Depleted Dark Suitace (F6) Inter-Manganee Masses (F12) (LRR K, L, R) Sandy Cleved Matrix (S4) Redox Dark Suitace (F7) Redox Dark Suitace (F7) Stipped Matrix (S6) Redox Depressions (F8) Redox Parent Material (F21) Uvery Shallow Dark Suitace (T12) (LRR R, MLRA 149B) Thick Dark activates (S7) (LRR R, MLRA 149B) Thick Dark activates (S7) (LRR R, MLRA 149B) Thick Dark Suitace (S7) (LRR R, MLRA 149B) The criterion for hydric soil is met.	Stratified	Layers (A5) Rolow Dark Surface	(A11)	Loamy Gleye	ed Matri	ix (F2)			Polyvalue Below Surface (S8) (LRR K, L)		
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 1448, 145, 149B) Sandy Gleyed Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6) (MLRA 1448, 145, 149B) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) 9 ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present): Type: Not present Depth (inches): Hydric Soil Present? Yes X no Remarks: The criterion for hydric soil is met.	Thick Dar	k Surface (A12)	(AII)	Redox Dark	Surface) e (F6)			Iron-Manganese Masses (F12) (LRR K, L, R)		
Sandy Geyed Matrix (S4) Hedox Depressions (-3) Mesic Spool: (1A6) (MLRA 144A, 145, 149B)Sandy Red Parent Material (F21)Sdeparent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) No	Sandy Mu	ucky Mineral (S1)		Depleted Da	rk Surfa	ace (F7)			Piedmont Floodplain Soils (F19) (MLRA 149B)		
Stripped Matrix (\$6)	Sandy GI	eyed Matrix (S4) edox (S5)		Redox Depre	essions	(F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21)		
	Stripped I	Matrix (S6)							Very Shallow Dark Surface (TF12)		
^a Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Restrictive Layer (if present):	Dark Surf	ace (S7) (LRR R, ML	.RA 149B)					Other (Explain in Remarks)		
Restrictive Layer (if present): Type: Not present Depth (inches): Hydric Soil Present? Yes X No Remarks: The criterion for hydric soil is met.	³ Indicators o	f hydrophytic vegetati	on and w	etland hydrology mus	st be pr	esent, ur	nless dis	sturbed or pr	roblematic.		
Type: Not present Depth (inches):	Restrictive I	_ayer (if present):									
Remarks: The criterion for hydric soil is met.	Type: No	t present									
Remarks: The criterion for hydric soil is met.	Depth (inc	:nes):							Hydric Soll Present? Yes _ No		
The criterion for hydric soil is met.	Remarks:										
	The criter	ion for hydric soil is me	et.								

Project/Site: Darrow-Hudson East 138kV Project City/County: Streets	sboro, Portage County Sampling Date: 2024-2-23
Applicant/Owner: <u>FirstEnergy</u> 5	tate: OH Sampling Point: W-EVIN-12_UPL-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: <u>NA</u>
Landform (hillslope, terrace, etc): Low Hill Local relief (concave	e, convex, none): <u>None</u> Slope (%): <u>0 to 1</u>
Subregion (LRR or MLRA): MLRA 139 of LRR R Lat: 41.2156631	Long: <u>-81.3825162167</u> Datum: <u>WGS84</u>
Soil Map Unit Name: <u>Mahoning silt loam, 2 to 6 percent slopes</u>	NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes 🗶 No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes 🗶 No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS — Attach site map showing sampling poir	t locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X	bled Area etland? Yes No X nal Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is UPL. Based on the absence of two of three parameters, this area is an upland.	
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizospheres along Living Ro Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Soils (C Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🗶 Depth (inches):	
Water Table Present? Yes No X Depth (inches): Saturation Present? Yes No X Depth (inches): (includes capillary fringe) Ves Ves Ves	Wetland Hydrology Present? Yes No 🗶
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspecti	ions), if available:
Remarks: The criterion for wetland hydrology is not met.	

Sampling Point: <u>W-EVN-12_UPL-1</u>

Tree Stratum (Plot size: _ 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2				That Are OBL, FACW, of FAC. U (A)
3				Species Across All Strata: 4 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0% (A/B)
7				
···	0	= Total	Cover	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)		10101	0010	Total % Cover of: Multiply by:
1. Rubus allegheniensis	25	Yes	FACU	$\frac{1}{OBL \text{ species}} \qquad 0 \qquad x \text{ 1} = 0$
2.				FACW species $10 \times 2 = 20$
3.				EAC species $0 \times 3 = 0$
4				$\frac{1}{1} = \frac{1}{1} = \frac{1}$
5				$\frac{10}{10} \times 5 = 50$
6				$\begin{array}{c} \text{OPL species} & \underline{10} & x 5 = \underline{50} \\ \text{OPL species} & \underline{105} & (x) & \underline{410} & (z) \end{array}$
/	25	= Total	Cover	$\begin{bmatrix} \text{Column lotals:} & 105 \\ \end{bmatrix} (A) & 410 \\ \end{bmatrix} (B)$
Herb Stratum (Plot size: 5 ft radius)				Prevalence Index = $B/A = -3.9$
1. Solidago canadensis	20	Yes	FACU	
2. Solidago altissima	15	Yes	FACU	Hydrophytic Vegetation Indicators:
3. Symphyotrichum ericoides	15	Yes	FACU	1 - Rapid Test for Hydrophytic Vegetation
4. Daucus carota	10	No	UPL	2 - Dominance Test is >50%
5. Dipsacus fullonum	10	No	FACU	3 - Prevalence Index is $\leq 3.0^1$
6. <i>Phalaris arundinacea</i>	10	No	FACW	
7				data in Remarks or on a separate sheet)
8			<u> </u>	
9				- Problematic Hydrophytic Vegetation ⁻ (Explain)
10				¹ Indicators of hydric soil and wetland hydrology must
12.			·	be present, unless disturbed or problematic.
	80	= Total	Cover	Definitions of Vegetation Strata:
Woody Vine Stratum (Plot size: <u>30 ft radius</u>)				Tree – Woody plants 3 in. (7.6 cm) or more in
1			<u> </u>	diameter
2				at breast height (DBH), regardless of height.
4.				Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	0	= Total	Cover	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
Remarks: (Include photo numbers here or on a separate she	eet.)			
The criterion for hydrophytic vegetation is not met.				

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Profile Des	cription: (Describe t Matrix	o the dep	oth needed to docu Redox	ment th Feature	e indica	tor or c	onfirm the a	bsence of indicators.)
Depth (inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 10	2.5Y 5/2	100					Silty Clay Lo	am
10 to 16	2.5Y 5/1	75	2.5Y 6/6	25	С	М	Silty Clay Lo	am
		· ·					·	
		·						
¹ Type: C=Co	ncentration, D=Deple	tion, RM=	Reduced Matrix, C	S=Cover	ed or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						1	ndicators for Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue B	elow Su	rface (S8	3) (LRR	R, _	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	pedon (A2) tic (A3)		MLRA 1498 Thin Dark S	3) urface (9	39) (I RR		RA 149B)	_ Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydrogen	sulfide (A4)		Loamy Mucl	ky Miner	al (F1) (I	LRR K,	L) _	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5) Balaw Dark Surface	(\ 1 1)	Loamy Gley	ed Matri	x (F2)		-	Polyvalue Below Surface (S8) (LRR K, L)
Thick Dar	k Surface (A12)	(AII)	Redox Dark	Surface) : (F6)		-	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mu	ucky Mineral (S1)		Depleted Da	rk Surfa	ice (F7)		-	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gl	eyed Matrix (S4) edox (S5)		Redox Depr	essions	(F8)		-	Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (E21)
Stripped I	Matrix (S6)						-	Very Shallow Dark Surface (TF12)
Dark Surf	ace (S7) (LRR R, ML	.RA 149B)				-	_ Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetati	on and w	etland hydrology mu	st be pr	esent, ur	nless dis	sturbed or pro	blematic.
Restrictive L	.ayer (if present):							
Type: Fill								
Depth (Inc	nes): <u>16</u>							
Remarks:	ion for hydric soil is me	,t						
The criteri		: 						

Project/Site: Darrow-Hudson East 138kV Project	City/County: Streetsboro, Portage County Sampling Date: 2024-2-23						
Applicant/Owner: FE	State: OH Sampling Point: W-EVN-13_PEM-1						
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA						
Landform (hillslope, terrace, etc): Depression	Local relief (concave, convex, none): Concave Slope (%): 1 to 10						
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.2164679 Long: -81.3826546 Datum: WGS84						
Soil Map Unit Name: Ellsworth silt loam, 2 to 6 percent slopes,	eroded NWI Classification: None						
Are climatic / hydrologic conditions on the site typical for this time of	of year? Yes 🗶 No 🛛 (If no, explain in Remarks.)						
Are Vegetation , Soil , or Hydrology significa	antly disturbed? Are "Normal Circumstances" present? Yes 🗶 No						
Are Vegetation, Soil, or Hydrology naturall	y problematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF FINDINGS – Attach site man showi	ing sampling point locations, transects, important features, etc.						
	Is the Sampled Area						
Hydrophytic Vegetation Present? Yes X No	within a Wetland? Yes X No						
Hydric Soil Present? Yes X No							
wetiand Hydrology Present? Yes _ No	If yes, optional Wetland Site ID: <u>W-EVN-13</u>						
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.							
HYDROLOGY							
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that app X Surface Water (A1) High Water Table (A2) Aquatic Fauna (Saturation (A3) Marl Deposits (I Water Marks (B1) Hydrogen Sulfice	Secondary Indicators (minimum of two required)						
Sediment Deposits (B2) Oxidized Rhizos Drift Deposits (B3) Presence of Regence of Regnce of Regence of Regence of Regence of Regnce of Regence of Regence of Regence of Regnce of Regence of Regence of Regence of Regence of Regence of Re	ipheres along Living Roots (C3) Saturation Visible on Aerial Imagery (C9) duced Iron (C4) Stunted or Stressed Plants (D1) duction in Tilled Soils (C6) Geomorphic Position (D2) ace (C7) Shallow Aquitard (D3) n Remarks) Microtopographic Relief (D4) X FAC-Neutral Test (D5)						
Field Observations:							
Surface Water Present? Yes X No Depth	(inches): <u>2</u>						
Water Table Present? Yes No X Depth	(inches):						
Saturation Present? Yes No X Depth ((inches): Wetland Hydrology Present? Yes No						
Describe Recorded Data (stream gauge, monitoring well, aerial p	hotos, previous inspections), if available:						
Remarks:							
The criterion for wetland hydrology is met.							
Sampling Point: <u>W-EVN-13_PEM-1</u>

Trop Stratum (Plot cize: 30 ft radius)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1.	% COVEL	<u>Sheries</u> :	Status	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 1 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: 1 (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, of FAC: 100% (A/B)
/				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)		= 10tal	Cover	Total % Cover of: Multiply by:
1.				OBL species $10 \times 1 = 10$
2.				EACW species $85 \times 2 = 170$
3.				$EAC \text{ species } 0 \qquad x = 0$
4				$\frac{1}{1} = \frac{1}{1} = \frac{1}$
5				FACU species $3 \times 4 = 20$
6.				$\begin{array}{c} \text{OPL species} \underline{0} x \text{ 5} = \underline{0} \\ \text{OPL species} \underline{100} (x) \underline{200} (x) \end{array}$
/				$\begin{array}{c c} Column Iotals: 100 (A) 200 (B) \end{array}$
Horb Stratum (Plot size: 5 ft radius)		= Iotal	Cover	
1 Phalaris arundinacea	80	Yes	FACW	$Prevalence Index = B/A = \underline{2}$
2. Glyceria striata		No	OBL	Hydrophytic Vegetation Indicators:
3. Rosa multiflora	5	No	FACU	¥ 1 - Rapid Test for Hydrophytic Vegetation
4 Solidago gigantea	5	No	FACW	∠ 2 - Dominance Test is >50%
5.				\sim Drovolongo Index is <2.0 ¹
6				5 - Prevalence Index is ≤5.0
7				4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
o				Drohlomatia Hydrophytia Vagatatian ¹ (Evplain)
10.				
11.				¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed of problematic.
	100	= Tota	Cover	Definitions of Vegetation Strata:
Woody Vine Stratum (Plot size: <u>30 ft radius</u>)				Tree – Woody plants 3 in. (7.6 cm) or more in
1				diameter
3				at breast height (DBH), regardless of height.
4.				Sapling/shrub — Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	0	= Tota	Cover	Herb – All herbaceous (non-woody) plants, regardless
				of size, and woody plants less than 3.28 ft tall.
				height.
				Hydrophytic
				Vegetation Present? Yes X No
Remarks: (Include photo numbers here or on a separate she	eet.)			I
The criterion for hydrophytic vegetation is met.	,			

Profile Desc	ription: (Describe t Matrix	to the de	oth needed to docun Redox	nent the Feature	e indicat es	tor or co	onfirm the a	bsence of indicators.)
Depth ⁻ (inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0 to 18	10YR 4/1	90	10YR 5/6	10	<u> </u>	M/PL	Clav	Remarks
				·				
				·				
				·				
				·				
					- <u> </u>	·		2
Type: C=Cor	ncentration, D=Deple	etion, RM	Reduced Matrix, CS	=Cover	ed or Co	ated Sar	id Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil Ir	ndicators:						Ir	ndicators for Problematic Hydric Soils ³ :
Histosol (A	A1)		Polyvalue Be	low Sur	face (S8) (LRR F	R,	_ 2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black Hist	ic (A3)		MLRA 1498 Thin Dark Su	5) Irface (S	() (I PP		Δ 149B)	Coast Prairie Redox (A16) (LRR K, L, R)
Hvdrogen	Sulfide (A4)		Loamy Muck	v Minera	al (F1) (L	.RR K. L)	Dark Surface (S7) (LRR K, L)
Stratified I	Layers (À5)		Loamy Gleye	ed Matri	x (F2)	,	′ <u> </u>	Polyvalue Below Surface (S8) (LRR K, L)
Depleted I	Below Dark Surface	(A11)	X Depleted Ma	trix (F3)	(= 0)		_	_ Thin Dark Surface (S9) (LRR K, L)
Thick Darl	k Surface (A12) Jocky Mineral (S1)		Redox Dark	Surface	(F6) ce (F7)		_	_ Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Eloodalain Soils (F19) (MI DA 1/08)
Sandy Ma	eyed Matrix (S4)		Redox Depre	essions	(F8)		-	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	dox (S5)		·		()		_	Red Parent Material (F21)
Stripped N	Aatrix (S6)	DA 4405					_	Very Shallow Dark Surface (TF12)
Dark Surfa	ace (S7) (LRR R, ML	.RA 149E	5)				-	Other (Explain in Remarks)
³ Indicators of	hydrophytic vegetati	ion and w	etland hydrology mu	st be pre	esent, un	less dist	urbed or pro	blematic.
Restrictive L	ayer (if present):							
Type: <u>Gra</u>	vel							
Depth (Incl	nes): <u>18</u>							Hydric Soll Present? Yes _ X _ No
Remarks:								
The criterie	on for hydric soil is me	et.						

Project/Site: Darrow-Hudson East 138kV Project	City/County: <u>Street</u>	sboro, Portage	e County	Sampling Date: 2024-2-23
Applicant/Owner: FE	S	state: OH	Sampling Point	:: <u>W-EVN-13_UP</u> L-1
Investigator(s): Erin Van Nort, Emma Given		Section	n, Township, Range	e: <u>NA</u>
Landform (hillslope, terrace, etc): <u>Flat</u>	Local relief (concav	/e, convex, non	e): <u>None</u>	Slope (%): <u>0 to 1</u>
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: <u>41.2164647</u>	Lo	ng: <u>-81.3826552</u>	Datum: WGS84
Soil Map Unit Name: Ellsworth silt loam, 2 to 6 percent slopes,	eroded		NWI Classificat	ion: <u>None</u>
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes 🗶 No) (If no,	explain in Remark	s.)
Are Vegetation, Soil, or Hydrology significa	ntly disturbed?	Are "Normal	Circumstances" pr	esent? Yes X No
Are Vegetation, Soil, or Hydrology naturally	/ problematic?	(If needed, e	xplain any answers	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	ng sampling poi	nt locations	s, transects, in	nportant features, etc.
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X	Is the Sam within a W	pled Area etland?	Yes	No 🗶
	If yes, optio	nal Wetland Si	te ID:	
Remarks: (Explain alternative procedures here or in a separate rep Covertype is UPL. Based on the absence of all three parameters, this	port.) ; area is an upland.			
HYDROLOGY				
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that app Surface Water (A1) Water-Stained Li High Water Table (A2) Aquatic Fauna (E Saturation (A3) Marl Deposits (B Water Marks (B1) Hydrogen Sulfide Sediment Deposits (B2) Oxidized Rhizos Drift Deposits (B3) Presence of Rec Iron Deposits (B5) Thin Muck Surfa Inundation Visible on Aerial Imagery (B7) Other (Explain in Sparsely Vegetated Concave Surface (B8) Surface Water Present?	ly) eaves (B9) 313) 315) e Odor (C1) pheres along Living R duced Iron (C4) luction in Tilled Soils (ice (C7) n Remarks)	oots (C3)	Secondary Indicato Surface Soil Cra Drainage Patter Moss Trim Line Dry-Season Wa Crayfish Burrow Saturation Visib Stunted or Stres Geomorphic Po Shallow Aquitar Microtopograph FAC-Neutral Te	rs (minimum of two required) acks (B6) rns (B10) s (B16) atter Table (C2) vs (C8) ole on Aerial Imagery (C9) ssed Plants (D1) sistion (D2) d (D3) ic Relief (D4) st (D5)
Water Table Present? Yes No X Depth (i	inches):			
Saturation Present? Yes No X Depth (i	inches):	Wetland Hydi	rology Present?	Yes No 🗶
Describe Recorded Data (stream gauge, monitoring well, aerial ph Remarks:	notos, previous inspec	tions), if availat	ble:	
The criterion for wetland hydrology is not met.				

Sampling Point: <u>W-EVN-13_UPL-1</u>

Trop Stratum (Plat cize: 30 ft radius)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1. Quercus palustris	<u>5 5</u>	Yes	FACW	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 1 (A)
3.				Total Number of Dominant
4				Derectes Across All Strata. <u>2</u> (B)
5.				That Are OBL, FACW, or FAC: 50% (A/B)
7.				
	5	= Tota	Cover	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of: Multiply by:
1				OBL species x 1 =0
2.				FACW species <u>5</u> x 2 = <u>10</u>
4.				FAC species x 3 =
5.				FACU species95 x 4 =380
6.	_			UPL species x 5 =0
7				Column Totals: <u>100</u> (A) <u>390</u> (B)
	0	= Tota	Cover	
Herb Stratum (Plot size: 5 ft radius)	70	Voc	EACU	Prevalence Index = $B/A = 3.9$
Pou pratensis Trifolium renens		No	FACU	Hydrophytic Vegetation Indicators:
3 Glechoma hederacea		No	FACU	1 - Rapid Test for Hydrophytic Vegetation
4. Cardamine hirsuta	5	No	FACU	2 - Dominance Test is >50%
5.				\sim 3 - Prevalence Index is <3.0 ¹
6				
7				4 - Morphological Adaptations ⁺ (Provide supporting data in Remarks or on a separate sheet)
8				Drohlematic Lludrophytic) (agatation 1 (Evaluin)
10.				
11.				¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed of problematic.
	95	= Total	Cover	Definitions of Vegetation Strata:
Woody Vine Stratum (Plot size: <u>30 ft radius</u>)				Tree — Woody plants 3 in. (7.6 cm) or more in
2				diameter
3.				at breast height (DBH), regardless of height.
4.				Sapling/shrub — Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	0	= Total	Cover	Herb – All herbaceous (non-woody) plants, regardless
				Woody vines — All woody vines greater than 3.28 ft in
				height.
				Hydrophytic
				Present? Yes No X
Demori/o: (Include photo numbero haro er en e conorato el	veet)			
The criterion for hydrophytic vegetation is not met.	leet.)			

US Army Corps of Engineers bc2d1381-eba0-45f6-999a-c87659ff5ac2 W-EVN-13_UPL-1

Profile Des	cription: (Describe t	to the dep	oth needed to docui Redox	nent th Feature	e indica es	tor or co	onfirm the a	absence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 7	10VR 2/2				<u>- Type</u>		Loam	
0.07	1011 2/2						Loam	
				·				
1			Dealessed Matrix 00		- <u> </u>			21
Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, CS	=Cover	ed or Co	ated Sar	nd Grains.	-Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						I	ndicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Be	low Su	face (S8) (LRR F	۶, <u>-</u>	2 cm Muck (A10) (LRR K, L, MLRA 149B)
HISTIC Ep Black His	ipedon (A2) stic (A3)		MLRA 1498 Thin Dark Su) Irface (S	(1 P		Δ 149B)	Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Muck Peat or Peat (S3) (I RR K, L, R)
Hvdroge	n Sulfide (A4)		Loamv Muck	v Miner	al (F1) (L	.RR K. L	, 149D) .)	Dark Surface (S7) (LRR K. L)
Stratified	Layers (A5)		Loamy Gleye	ed Matri	x (F2)	,	· ·	Polyvalue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	(A11)	Depleted Ma	trix (F3)			-	Thin Dark Surface (S9) (LRR K, L)
Thick Da	rk Surface (A12)		Redox Dark	Surface	(F6)		-	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy M	leved Matrix (S1)		Depieteu Da	rk Suria essions	(F8)		-	Mesic Spodic (TA6) (MI RA 144A, 145, 149B)
Sandy R	edox (S5)			,5510115	(10)		-	Red Parent Material (F21)
Stripped	Matrix (S6)						-	Very Shallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, ML	_RA 149B)				-	Other (Explain in Remarks)
³ Indicators o	of hydrophytic vegetat	ion and w	etland hydrology mus	st be pre	esent, un	less dist	urbed or pr	oblematic.
Restrictive	Layer (if present):							
Type: <u>Gr</u>	avel 7							
Depth (in	ches): /							Hydric Soil Present? Yes No
Remarks:								
The criter	ion for hydric soil is no	t met.						

Proiect/Site: Darrow-Hudson East 138kV Project	Citv/County: Streetsboro. Portage County Sampling Date: 2024-2-23
Applicant/Owner: FE	State: OH Sampling Point: W-EVN-14_PEM-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA
Landform (hillslope, terrace, etc): Depression	Local relief (concave, convex, none): Concave Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.2182082167 _Long: -81.3826587 Datum: WGS84
Soil Map Unit Name: Ellsworth silt loam, 2 to 6 percent slopes, en	roded NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of y	year? Yes X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	ily disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	a sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	Is the Sampled Area within a Wetland? Yes X No If yes, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report Covertype is PEM. Based on the presence of all three parameters, this	ort.) area is a wetland.
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply X Surface Water (A1) High Water Table (A2) Aquatic Fauna (B1 Saturation (A3) Marl Deposits (B1 Water Marks (B1) Hydrogen Sulfide Sediment Deposits (B2) Oxidized Rhizospl Drift Deposits (B3) Presence of Redu Algal Mat or Crust (B4) Recent Iron Redu Inundation Visible on Aerial Imagery (B7) Other (Explain in F Sparsely Vegetated Concave Surface (B8) State (B8)) Secondary Indicators (minimum of two required)) Surface Soil Cracks (B6)) Drainage Patterns (B10) (13) Moss Trim Lines (B16) (5) Dry-Season Water Table (C2) (C1) Crayfish Burrows (C8) heres along Living Roots (C3) Saturation Visible on Aerial Imagery (C9) (C4) Stunted or Stressed Plants (D1) (C7) Geomorphic Position (D2) (C7) Shallow Aquitard (D3) Remarks) Microtopographic Relief (D4)
Field Observations:	
Surface Water Present? Yes X No Depth (in	ches): <u>1</u>
Water Table Present? Yes No X Depth (in Saturation Present? Yes No X Depth (in (includes capillary fringe) Ves No X Depth (in	ches): Wetland Hydrology Present? Yes ★ No
Describe Recorded Data (stream gauge, monitoring well, aerial pho	tos, previous inspections), if available:
Remarks: The criterion for wetland hydrology is met.	

Sampling Point: <u>W-EVN-14_PEM-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2				That Are OBL, FACW, or FAC: <u>4</u> (A)
3				Iotal Number of Dominant Species Across All Strata: 4 (B)
4			·	Percent of Dominant Species
6				That Are OBL, FACW, or FAC: 100% (A/B)
7				
	0	= Tota	Cover	Prevalence index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of: Multiply by:
1. Rubus hispidus	25	Yes	FACW	OBL species45 x 1 =45
2				FACW species <u>50</u> x 2 = <u>100</u>
3				FAC species $20 \times 3 = 60$
5.				FACU species x 4 =0
6.				UPL species x 5 =0
7.				Column Totals: <u>115</u> (A) <u>205</u> (B)
	25	= Tota	Cover	
Herb Stratum (Plot size: 5 ft radius)				Prevalence Index = $B/A = 1.8$
1. Juncus effusus	25	Yes	OBL	Hydrophytic Vegetation Indicators:
2. Carex vulpinoidea		Yes	OBL	1 - Ranid Test for Hydrophytic Vegetation
3. Symphyotrichum lateriflorum		Yes No.	FAC	2 Dominance Tect is >50%
4. Solidago giganica		No	FACW	
6				3 - Prevalence Index is ≤3.0 [⊥]
7.	_			4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation ¹ (Explain)
10				¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed or problematic.
	90	= Tota	Cover	Definitions of Vegetation Strates
Woody Vine Stratum (Plot size: <u>30 ft radius</u>)				Trop Woody plants 2 in (7.6 cm) or more in
1				diameter
2				at breast height (DBH), regardless of height.
3 4.				Sapling/shrub — Woody plants less than 3 in. DBH
	0	= Total	Cover	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 Brecont? Yes X No
Remarks: (Include photo numbers here or on a separate she	eet.)			
The criterion for hydrophytic vegetation is met.				

Profile Des	Matrix	u the dep	Redox	Feature	e indica	ior or (confirm the a	usence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 8	10YR 4/2	95	10YR 6/6	5	C	М	Silty Clay Lo	am
8 to 16	10YR 6/1	65	10YR 6/8	35	С	М	Silty Clay Lo	am
		<u> </u>		·				
							·	
							·	
							·	
¹ Type: C=Co	oncentration, D=Deple	tion, RM=	Reduced Matrix, CS	=Cove	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						l	ndicators for Problematic Hydric Soils ³ :
Histosol ((A1)		Polyvalue Be	elow Su	rface (S8	8) (LRR	R, _	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epi Black His	pedon (A2) itic (A3)		MLRA 149E Thin Dark Su	5) urface (S	59) (LRR	R. ML	RA 149B)	_ Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) (I	RR K,	L) _	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)	A11)	Loamy Gleye	ed Matri	ix (F2)		-	Polyvalue Below Surface (S8) (LRR K, L)
Thick Da	rk Surface (A12)	AII)	Redox Dark	Surface	, e (F6)		-	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mi	ucky Mineral (S1)		Depleted Da	rk Surfa	ace (F7)		-	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy GI	eyed Matrix (S4) edox (S5)		Redox Depre	essions	(⊢8)		-	_ Mesic Spodic (1A6) (MLRA 144A, 145, 149B) Red Parent Material (F21)
Stripped	Matrix (S6)						-	Very Shallow Dark Surface (TF12)
Dark Surf	face (S7) (LRR R, ML	RA 149B)				-	Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetati	on and w	etland hydrology mu	st be pr	esent, ur	less di	sturbed or pro	blematic.
Restrictive I	Layer (if present):							
Type: <u>Fil</u>								Hydric Soil Present? Ves X No
Deptil (inc	nes). <u>10</u>							
Remarks:	ion for hydric soil is mo	t						
The criter	ion for flyaric son is me	ι.						
			-					

Proiect/Site: Darrow-Hudson East 138 kV Project	Citv/County: Str	eetsboro, Porta	ge County	Sampling Date:	2024-2-23
Applicant/Owner: FirstEnergy		State: OH	Sampling Po		JPL-1
Investigator(s): Erin Van Nort, Emma Given		Sect	on, Township, Rai	nge: NA	
Landform (hillslope, terrace, etc): Flat	Local relief (con	cave, convex, n	one): None	Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.21827	52	_ong: -81.38251	01 Datur	n: WGS84
Soil Map Unit Name: Ellsworth silt loam, 2 to 6 percent slopes,	, eroded		NWI Classifi	cation: None	
Are climatic / hydrologic conditions on the site typical for this time c	of year? Yes 🛛 🗙	No(If n	o, explain in Rema	arks.)	
Are Vegetation, Soil, or Hydrology significa	antly disturbed?	Are "Norm	al Circumstances"	present? Yes X	No
Are Vegetation , Soil , or Hydrology natural	ly problematic?	(If needed,	explain any answ	vers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showi	ing sampling p	oint locatio	ns, transects.	important feat	ures. etc.
Hydrophytic Vegetation Present? Yes No X Hydric Soil Present? Yes No X Wetland Hydrology Present? Yes No X	Is the Swithin a	ampled Area Wetland?	Yes	No	
	ii yee, oj	ptional weband			
Remarks: (Explain alternative procedures nere or in a separate re Covertype is UPL. Based on the absence of two of three parameters	eport.) s, this area is an upland	d.			
HYDROLOGY					
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that app	ply)		Secondary Indica	ators (minimum of tw Cracks (B6)	<u>vo required)</u>
Surface Water (A1) Water-Stained L	Leaves (B9)		Drainage Pat	tterns (B10)	
High Water Table (A2) Aqualic Fauna (Saturation (A3) Marl Deposits (F	(B13) R15)		Drv-Season	Mes (B10) Water Table (C2)	
Water Marks (B1)	de Odor (C1)		Crayfish Burr	rows (C8)	
Sediment Deposits (B2) Oxidized Rhizos	spheres along Living	g Roots (C3)	Saturation Vi	sible on Aerial Imag	ery (C9)
Drift Deposits (B3) Presence of Re	duced Iron (C4)		Stunted or St	tressed Plants (D1)	
Algal Mat or Crust (B4) Recent from Rec	duction in Tillea Soli	IS (C6)	Shallow Aqui	Position (D2)	
Inundation Visible on Aerial Imagery (B7) Other (Explain i	in Remarks)		Microtopogra	aphic Relief (D4)	
Sparsely Vegetated Concave Surface (B8)			FAC-Neutral	Test (D5)	
Eield Observations:					
Surface Water Present? Yes No 🗶 Depth	(inches):				
Water Table Present? Yes No X Depth	(inches):				
Saturation Present? Yes No 🗶 Depth	(inches):	Wetland Hy	drology Present	? Yes N	o 🗶 📉
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial p	hotos, previous insp	pections), if avai	able:		
Remarks:					
The criterion for wetland hydrology is not met.					

Sampling Point: <u>W-EVN-14_UPL-1</u>

Trop Stratum (Plot cize: 30 ft radius)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1. Prunus serotina	10	Yes	FACU	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 0 (A)
3				Total Number of Dominant
4.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 0% (A/B)
7.				Provalence Index worksheet:
	10	= Total	Cover	
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)				Multiply by:
2				$\begin{array}{c} OBL \text{ species} \\ \hline \\ $
3.				FAC species $3 \times 2 = 10$
4.				FACt species $105 \times 4 = 420$
5				$\begin{array}{c} \text{FACO species} \\ \text{LIPL species} \\ 0 \\ \text{x} \\ \text{x}$
6				Column Totals: 110 (A) 430 (B)
··	0	= Total	Cover	
Herb Stratum (Plot size: 5 ft radius)				Prevalence Index = $B/A = 3.9$
1. Poa pratensis	80	Yes	FACU	
2. Poa annua	10	No	FACU	1 David Test for Lludrophytic Vegetation
3. Rubus allegheniensis	5	<u>No</u>	FACU	
4. <u>Pychaninemum virginianum</u> 5.		INO	FACW	
6.				3 - Prevalence Index is $\leq 3.0^{\perp}$
7.				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks of on a separate sheet)
9				Problematic Hydrophytic Vegetation ⁺ (Explain)
11.				¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed or problematic.
	100	= Total	Cover	Definitions of Vegetation Strata:
Woody Vine Stratum (Plot size: <u>30 ft radius</u>)				Tree — Woody plants 3 in. (7.6 cm) or more in
2.				diameter
3.				Continue (DBH), regardless of height.
4.				and greater than or equal to 3.28 ft (1 m) tall.
	0	= Total	Cover	Herb – All herbaceous (non-woody) plants, regardless
				Woody vines — All woody vines greater than 3.28 ft in
				height.
				Hydrophytic Vegetation
				Present? Yes No X
Remarks: (Include photo numbers here or on a separate she	et.)			1
The criterion for hydrophytic vegetation is not met.				

Profile Des	cription: (Describe Matrix	to the dep	hth needed to docu Redox	ment th Feature	e indica t es	or or co	onfirm the	absence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 8	10YR 4/2	100	x //				Clay Loa	n
8 to 18	10YR 4/1	70	10YR 5/6	30	С	M/PL	Clay Loa	
1								2
¹ Type: C=Co	ncentration, D=Deple	etion, RM=	Reduced Matrix, CS	S=Cover	ed or Co	ated Sa	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							Indicators for Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue Be	elow Su	rface (S8) (LRR F	२, .	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epi Black His	pedon (A2) tic (A3)		MLRA 149E Thin Dark Si	3) urface (S	() (I BB		A 149B)	Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Muck Peat or Peat (S3) (I RR K I R)
Hydroger	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) (L	.RR K, L	.)	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)		Loamy Gley	ed Matri	x (F2)			Polyvalue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	(A11)	X Depleted Ma	atrix (F3)				Thin Dark Surface (S9) (LRR K, L)
Sandy Mi	icky Mineral (S1)		Redox Dark	surface	(F6) ce (E7)			Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Eloodolain Soils (E19) (MI RA 1498)
Sandy Gl	eyed Matrix (S4)		Redox Depre	essions	(F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5)							Red Parent Material (F21)
Stripped	Matrix (S6)	DA 1400	,					Very Shallow Dark Surface (TF12)
	ace (57) (LKK K, MI	_KA 149D)					Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetat	ion and w	etland hydrology mu	st be pre	esent, un	less dist	urbed or pr	oblematic.
Restrictive I	_ayer (if present):							
Type: Gra	avel							
Depth (inc	:hes): <u>18</u>							Hydric Soil Present? Yes X No
Remarks:								
The criter	ion for hydric soil is m	et.						

Project/Site: Darrow-Hudson East 138kV Project	Citv/County: Streetsboro, Portage County	Sampling Date: 2024-2-23
Applicant/Owner: FE	State: OHSampling Point:	W-EVN-15_PEM-1
Investigator(s): Erin Van <u>Nort, Emma Given</u>	Section, Township, Range	. NA
Landform (hillslope, terrace, etc): Depression	Local relief (concave, convex, none): <u>Concave</u>	Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 139 of LRR R	_Lat: <u>41.218791</u> Long: <u>-81.382606</u>	Datum: WGS84
Soil Map Unit Name: <u>Ellsworth silt loam, 2 to 6 percent slopes, e</u>	oded NWI Classificati	on: None
Are climatic / hydrologic conditions on the site typical for this time of	/ear? Yes 🗶 No (If no, explain in Remarks	5.)
Are Vegetation, Soil, or Hydrology significar	ly disturbed? Are "Normal Circumstances" pre	esent? Yes 🗶 No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers	in Remarks.)
SUMMARY OF FINDINGS — Attach site map showing	g sampling point locations, transects, im	portant features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	Is the Sampled Area within a Wetland? Yes X	No
	If yes, optional Wetland Site ID: <u>W-EVIN-15</u>	
Remarks: (Explain alternative procedures here or in a separate rep Covertype is PEM. Based on the presence of all three parameters, this	rrt.) area is a wetland.	
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indicator	<u>rs (minimum of two required)</u>
Primary Indicators (minimum of one is required; check all that appl) Surface Soil Cra	icks (B6)
Surface Water (A1) Water-Stained Le	aves (B9) X Drainage Pattern	ns (B10)
High Water Table (A2) Aqualic Fauna (E Saturation (A3) Marl Deposits (B	5) IVIUSS THILLENES 5) Dry-Season Wat	ter Table (C2)
Water Marks (B1)	Odor (C1) Crayfish Burrow	s (C8)
Sediment Deposits (B2)	neres along Living Roots (C3) Saturation Visibl	e on Aerial Imagery (C9)
Drift Deposits (B3) Presence of Rea Recent Iron Red	ced Iron (C4) Stuffled or Sires	sed Plants (D1) sition (D2)
Iron Deposits (B5)	e (C7)	d (D3)
Inundation Visible on Aerial Imagery (B7) Other (Explain in	Remarks) Microtopographi	c Relief (D4)
Sparsely Vegetated Concave Surface (B8)		st (D5)
Field Observations:		
Surface Water Present? Yes No 🗶 Depth (i	ches):	
Water Table Present? Yes No X Depth (i	ches):	v M
Saturation Present? Yes _ No Deptn (I	ches): <u>3</u> wettand Hydrology Present? 1	/es 🗶 NO
	· · · · · · · · · · · · · · · · · · ·	
Describe Recorded Data (stream gauge, monitoring weil, aenai pri	tos, previous inspections), ir available:	
Remarks:		
The criterion for wetland hydrology is met.		

Sampling Point: <u>W-EVN-15_PEM-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2.				That Are OBL, FACW, or FAC: <u>2</u> (A)
3				Total Number of Dominant
4		·		Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC: 100% (A/B)
7.				
	0	= Total	Cover	Prevalence index worksneet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of: Multiply by:
1				OBL species20 x 1 =20
2				FACW species <u>80</u> x 2 = <u>160</u>
4.		·		FAC species $0 \times 3 = 0$
5.				FACU species x 4 =0
6.				UPL species $0 \times 5 = 0$
7				Column Totals: <u>100</u> (A) <u>180</u> (B)
	0	= Total	Cover	
<u>Herb Stratum</u> (Plot size: <u>5 ft radius</u>) <u>1</u> . <i>Phalaris arundinacea</i>	70	Yes	FACW	Prevalence Index = B/A = <u>1.8</u>
2. Juncus effusus	20	Yes	OBL	Hydrophytic Vegetation Indicators:
3. Solidago gigantea	10	No	FACW	▲ 1 - Rapid Test for Hydrophytic Vegetation
4.				¥ 2 - Dominance Test is >50%
5.				3 - Prevalence Index is ≤3.0 ¹
7.				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10				¹ Indicators of hydric soil and wetland hydrology must
11				be present, unless disturbed or problematic.
	100	= Tota	Cover	
Woody Vine Stratum (Plot size: 30 ft radius)				Definitions of Vegetation Strata:
1				liree – Woody plants 3 in. (7.6 cm) or more in
2				at breast height (DBH), regardless of height.
3. 4.				Sapling/shrub – Woody plants less than 3 in. DBH
	0	= Total	Cover	Herb — All berbaceous (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
				Present? Yes X No
Remarks: (Include photo numbers here or on a separate sh	eet.)			1
The criterion for hydrophytic vegetation is met.	,			

Prome Des	Matrix		Redox	Feature			ommin the a	absence of mulcators.
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 5	10YR 5/1	95	10YR 6/8	5	C	PL	Clay Loan	n
5 to 20	10YR 4/2	80	10YR 6/2	20	С	M/PL	Clay Loan	n
		·						
				·				
1 <u> </u>								2
Type: C=Co	oncentration, D=Deple	etion, RM:	Reduced Matrix, CS	=Cover	ed or Co	ated Sai	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						I	ndicators for Problematic Hydric Soils ³ :
Histosol ((A1)		Polyvalue Be	low Su	rface (S8) (LRR F	२, _	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	ipedon (A2) stic (A3)		MLRA 149B Thin Dark Su) Irface (S	59) (I RR	R. MIR	A 149B)	_ Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) (L	RR K, L	.)	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)		Loamy Gleye	ed Matri	x (F2)		-	Polyvalue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	(A11)	X Depleted Ma	trix (F3)			-	Thin Dark Surface (S9) (LRR K, L)
Sandy M	ucky Mineral (S1)		Redox Dark	Sunace rk Surfa	(F6) ce (E7)		-	Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Eloodolain Soils (E19) (MI RA 1498)
Sandy G	leyed Matrix (S4)		Redox Depre	essions	(F8)		-	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5)						_	Red Parent Material (F21)
Stripped	Matrix (S6)	DA 1400					-	Very Shallow Dark Surface (TF12)
	iace (57) (LRR R, MI	_KA 1490)				-	Other (Explain In Remarks)
³ Indicators o	f hydrophytic vegetat	ion and w	etland hydrology mus	st be pre	esent, un	less dist	urbed or pro	bblematic.
Restrictive	Layer (if present):							
Type: No	ot present							
Depth (ind	ches):							Hydric Soil Present? Yes No
Remarks:								
No soil co	omments.							

Project/Site: Darrow-Hudson East 138kV Project	City/County: Streetsbord	o, Portage County	Sampling Date: 2024-2-23
Applicant/Owner: FE	State:	OH Sampling Po	int: W-EVN-15_UPL-1
Investigator(s): Erin Van Nort, Emma Given		Section, Township, Rar	nge: NA
Landform (hillslope, terrace, etc): Hilltop	Local relief (concave, co	nvex, none): None	Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.2190683	Long: -81.382733	Datum: WGS84
Soil Map Unit Name: Ellsworth silt loam, 2 to 6 percent slop	es, eroded	NWI Classific	ation: None
Are climatic / hydrologic conditions on the site typical for this tim	ie of year? Yes 🗶 No	(If no, explain in Rema	urks.)
Are Vegetation , Soil , or Hydrology signi	ficantly disturbed? Are		present? Yes 🗶 No
Are Vegetation . Soil . or Hydrology natu	rally problematic? (If r	needed. explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS — Attach site man sho	wing compling point lo	cations transacts	important features atc
Sommart of Findings – Attach site map sho			important leatures, etc.
Hydrophytic Vegetation Present? Yes No 🗴	Is the Sampled	Area	
Hydric Soil Present? Yes No 🗴	within a wetian	id? Yes	NO
Wetland Hydrology Present? Yes No 🗶	If ves_optional W	Vetland Site ID	
Remarks: (Explain alternative procedures here or in a separate	e report.)		
Covertype is UPL. Based on the absence of all three parameters,	this area is an upland.		
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-Staine	d Leaves (B9)	Drainage Pat	terns (B10)
High Water Table (A2) Aquatic Faur	ia (B13)	Moss Trim Lir	nes (B16)
Saturation (A3) Marl Deposit	s (B15)	Dry-Season V	Vater Table (C2)
Water Marks (B1) Hydrogen Su	ılfide Odor (C1)	Crayfish Burr	ows (C8)
Sediment Deposits (B2) Oxidized Rhi	zospheres along Living Roots ((C3) Saturation Vis	sible on Aerial Imagery (C9)
Drift Deposits (B3)Presence ofPresence of	Reduced Iron (C4)	Stunted or Sti	ressed Plants (D1) Desition (D2)
Algar Mai of Crust (B4) Recent Iron This Music C	veface (CZ)	Geomorphic P	(D2)
Include the position of the	in in Remarks)	Shallow Aquit Microtopogra	nhic Relief (D4)
Sparsely Vegetated Concave Surface (B8)	in in Remarks)	FAC-Neutral	Test (D5)
			、 <i>`</i> ,
Field Observations:			
Surface Water Present? Yes No X Dep	th (inches):		
Water Table Present? Yes No X Dep	th (inches):		
Saturation Present? Yes No X Dep	th (inches): Wetl	land Hydrology Present?	? Yes No _X
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aeria	I photos, previous inspections)), if available:	
Remarks:			
The criterion for wetland hydrology is not met.			

Sampling Point: <u>W-EVN-15_UPL-1</u>

Trop Stratum (Plot cize: 30 ft radius)	Absolute	Dominant	Indicator	Dominance Test worksheet:
1. Acer saccharum	10	Yes	FACU	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 0 (A)
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)
7.				
	10	= Total	Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of: Multiply by:
1				OBL species $0 \times 1 = 0$
3.				FACW species $0 \times 2 = 0$
4.				FAC species $0 \times 3 = 0$
5.				FACU species 110 x 4 = 440
6				$\begin{array}{c} \text{UPL species} \underline{0} x \text{ 5} = \underline{0} \\ \text{Output the species} \underline{110} (x) \underline{140} (z) \end{array}$
7				$\begin{bmatrix} Column Totals: \\ 110 \\ (A) \\ 440 \\ (B) \\ (B)$
Herb Stratum (Plot size: 5 ft radius)		= Total	Cover	Provalance Index - R/A - 4
1. Poa pratensis	80	Yes	FACU	
2. Rosa multiflora	10	No	FACU	Hydrophytic Vegetation Indicators:
3. Solidago canadensis	10	No	FACU	- ^{1 - Rapid Test for Hydrophytic Vegetation}
4				_ 2 - Dominance Test is >50%
5				3 - Prevalence Index is ≤3.0 ¹
7.				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10				¹ Indicators of hydric soil and wetland hydrology must
11				be present, unless disturbed or problematic.
12.	100	= Tota	Cover	
Woody Vine Stratum (Plot size: 30 ft radius)		Total	00101	Definitions of Vegetation Strata:
1				diameter
2.				at breast height (DBH), regardless of height.
3				Sapling/shrub — Woody plants less than 3 in. DBH
т	0	= Tota	Cover	and greater than or equal to 3.28 ft (1 m) tall.
		Total	00001	Herb — All herbaceous (non-woody) plants, regardless
				Weedwainee All weedwainee greater then 2.20 ft in
				height.
				Hydrophytic
				Vegetation
				Present? Yes No
Remarks: (Include photo numbers here or on a separate she	et.)			
The criterion for hydrophytic vegetation is not met.	,			

Profile Des	cription: (Describe t	to the dep	oth needed to docur Redox	ment th Feature	e indica es	tor or co	onfirm the a	absence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 5	10VR 4/3	- <u> </u>					Loam	
0.000				·			Louin	
				·				
				·				
1 								21
*Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, CS	=Cover	ed or Co	ated Sar	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							ndicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Polyvalue Be	low Su	rface (S8) (LRR F	R, <u>-</u>	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Ep	ipedon (A2)		MLRA 149B	5) urfago (S	0) (I DD		A 140P)	Coast Prairie Redox (A16) (LRR K, L, R)
Hydrode	n Sulfide (A4)			v Miner	ээ) (ЕКК al (E1) (I		A 149D))	Dark Surface (S7) (LRR K L)
Stratified	Layers (A5)		Loamy Gleye	ed Matri	x (F2)		·) -	Polyvalue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	(A11)	Depleted Ma	trix (F3)			-	Thin Dark Surface (S9) (LRR K, L)
Thick Da	rk Surface (A12)		Redox Dark	Surface	(F6)		-	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy M	ucky Mineral (S1) loved Matrix (S4)		Depleted Da	rk Surfa	.ce (⊢7) /⊑8)		-	Pleamont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLBA 144A, 145, 149B)
Sandy G	edox (S5)			5310113	(10)		-	Red Parent Material (F21)
Stripped	Matrix (S6)						-	Very Shallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, ML	_RA 149B)				-	Other (Explain in Remarks)
³ Indicators c	f hydrophytic vegetat	ion and w	etland hydrology mus	st be pre	esent, un	less dist	urbed or pr	oblematic.
Restrictive	Layer (if present):							
Type: <u>Gr</u>	avel							
Depth (ind	cnes): <u>5</u>							Hydric Soil Present? Yes No
Remarks:								
The criter	ion for hydric soil is no	t met.						

Project/Site: Darrow-Hudson East 138kV Project City/County	: <u>Hudson, Summit County</u> Sampling Date: <u>2024-2-26</u>
Applicant/Owner: FE	State: OHSampling Point: W-EVN-16_PEM-1
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: <u>NA</u>
Landform (hillslope, terrace, etc): Depression Local relief	(concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 139 of LRR R Lat: 41.2	1//8 Long: -81.411/24 Datum: WGS84
Soil Map Unit Name: <u>Mahoning silt Ioam, 0 to 2 percent slopes</u>	NWI Classification: <u>None</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	X No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly disturbed	? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS — Attach site map showing sampling	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No wit Hydric Soil Present? Yes X No wit Wetland Hydrology Present? Yes X No If yes	the Sampled Area hin a Wetland? Yes <u>★</u> No es, optional Wetland Site ID: <u>W-EVN-16</u>
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is PEM. Based on the presence of all three parameters, this area is a wetl	and.
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) X Oxidized Rhizospheres along Drift Deposits (B3) Presence of Reduced Iron (C4 Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Presence of Reduced Iron Reduction in Remarks)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) 4) d Soils (C6) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes No X Depth (inches):	
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous Remarks:	s inspections), if available:
The criterion for wetland hydrology is met.	

Sampling Point: W-EVN-16_PEM-1

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Iree Stratum</u> (Plot size: <u>30 ft radius</u>)	% Cover	Species?	Status	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 5 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: <u>5</u> (B)
5				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
7				Prevalence Index worksheet:
Carlier (Church Charthanny (Dict single 15 ft radius)	0	= Tota	Cover	Total % Cover of Multiply by
Sapiing/Shrub Stratum (Plot Size: 15 it radius)	15	Voc	FACW	$\frac{1}{1000} = \frac{15}{1000} = \frac{15}{1000}$
2 Francula alpus		Ves	FAC	$\begin{array}{c} \text{OBL species} \\ \hline 15 \\ \hline 70 \\ \hline 70 \\ \hline 140 \\ \hline 140 \\ \hline \end{array}$
3 Fagus grandifolia		 	FACU	FACW species 70 x 2 = 140
4.				FAC species $10 \times 3 = 30$
5.				FACU species $5 \times 4 = 20$
6.				UPL species x 5 =0
7				Column Totals: <u>100</u> (A) <u>205</u> (B)
	30	= Total	Cover	
Herb Stratum (Plot size: <u>5 ft radius</u>)				Prevalence Index = $B/A = 2.1$
1. Phalaris arundinacea	40	Yes	FACW	Hydronhytic Vegetation Indicators:
2. Solidago gigantea	15	Yes	FACW	1 Danid Test for Hydrophytic Vegetation
3. Juncus effusus	15	Yes	OBL	
4				2 - Dominance Test is >50%
5.				X 3 - Prevalence Index is $\leq 3.0^1$
7				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10.				
11.				Indicators of hydric soil and wetland hydrology must
12				
	70	= Total	Cover	Definitions of Vegetation Strata:
<u>Woody Vine Stratum</u> (Plot size: <u>30 ft radius</u>)				Tree – Woody plants 3 in. (7.6 cm) or more in
1				diameter
3				at breast height (DBH), regardless of height.
4.				Sapling/shrub — Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
	0	= Total	Cover	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 X No
Remarks: (Include photo numbers here or on a separate The criterion for hydrophytic vegetation is met.	sheet.)			

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Profile Des	Cription: (Describe to Matrix	the dep	tn needed to docur Redox	nent th Feature	e indicat es	or or co	onfirm the a	osence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 5	10YR 4/1	95	10YR 5/6	5	C	PL	Clay Loam	
5 to 20	10YR 5/1	70	10YR 5/6	30	C	M/PL	Clav Loam	
0.0010			1011(0)0				City Louin	
¹ Type: C=Co	oncentration, D=Deplet	ion, RM=	Reduced Matrix, CS	=Cover	ed or Co	ated Sa	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
Histosol (Histic Ep Black His Hydroger Stratified Depleted Thick Da Sandy M Sandy G Sandy R Sandy R Sandy R Sandy R Bark Sur ³ Indicators c Restrictive Depth (inc	(A1) ipedon (A2) stic (A3) n Sulfide (A4) Layers (A5) Below Dark Surface (A rk Surface (A12) ucky Mineral (S1) leyed Matrix (S4) edox (S5) Matrix (S6) face (S7) (LRR R, MLF f hydrophytic vegetatic Layer (if present): t present ches):	411) RA 149B) on and we	Polyvalue Be MLRA 149B Thin Dark Su Loamy Muck Loamy Gleye Depleted Ma Redox Dark 3 Depleted Dar Redox Depresent etland hydrology mus	low Sur) rface (S y Minera d Matrix trix (F3) Surface 'k Surfa essions st be pre-	face (S8) (LRR al (F1) (L (F2) (F6) (F6) (F6) (F8) esent, un) (LRR I R, MLR RR K, L	R, A 149B) .) urbed or pro	2 cm Muck (A10) (LRR K, L, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Muck Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L) Polyvalue Below Surface (S8) (LRR K, L) 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) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) blematic.
Remarks: The criter	ion for hydric soil is met							

Project/Site: Darrow-Hudson East 138kV Project City/County:	Hudson, Summit County Sampling Date: 2024-2-26
Applicant/Owner: FE	State: <u>OH</u> Sampling Point: <u>W-EVN-16_UPL-1</u>
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: <u>NA</u>
Landform (hillslope, terrace, etc): <u>Flat</u> Local relief	(concave, convex, none): <u>None</u> Slope (%): <u>0 to 1</u>
Subregion (LRR or MLRA): MLRA 139 of LRR R Lat: 41.21	Long: <u>-81.411/18</u> Datum: <u>WGS84</u>
Soil Map Unit Name: <u>Mahoning silt Ioam, U to 2 percent slopes</u>	NWI Classification: <u>None</u>
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrologysignificantly disturbed?	? Are "Normal Circumstances" present? Yes X No
Are vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS — Attach site map showing samplin	ng point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No X with Hydric Soil Present? Yes X No Vith Wetland Hydrology Present? Yes No X If yet	he Sampled Area hin a Wetland? Yes No ★ es, optional Wetland Site ID:
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is UPL. Based on the absence of two of three parameters, this area is an u	ıpland.
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Oxidized Rhizospheres along I Drift Deposits (B3) Presence of Reduced Iron (C4 Algal Mat or Crust (B4) Recent Iron Reduction in Tilled Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Field Observations:	Secondary Indicators (minimum of two required). Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Living Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Surface Water Present? Yes No 🗶 Depth (inches):	
Water Table Present?YesNoXDepth (inches):Saturation Present?YesNoXDepth (inches):(includes capillary fringe)	Wetland Hydrology Present? Yes No 🗶
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous	s inspections), if available:
Remarks: The criterion for wetland hydrology is not met.	

Sampling Point: W-EVN-16_UPL-1

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2				That Are OBL, FACW, or FAC: 1 (A)
3				Total Number of Dominant
4.		. <u> </u>		Species Across All Strata. <u>4</u> (B)
5.				That Are OBL_EACW_or EAC: 25% (A/B)
7				
· · ·	0	= Total	Cover	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)		Total	00101	Total % Cover of: Multiply by:
1. Frangula alnus	15	Yes	FAC	OBL species x 1 =0
2				FACW species $0 x 2 = 0$
3				FAC species $15 \times 3 = 45$
4.				FACU species $30 \times 4 = 120$
5.				$\frac{112}{112} \text{ species} \qquad \frac{20}{112} spec$
0				$\begin{array}{c} \text{Column Totals:} 65 (\Lambda) 265 (B) \end{array}$
1		- Total	Covor	$\frac{1}{200}$
Herb Stratum (Plot size: 5 ft radius)		- 10lai	Cover	$Prevalence Index = R/A = -\frac{4}{2}$
1. Poa pratensis	20	Yes	FACU	
2. Artemisia vulgaris	20	Yes	UPL	Hydrophytic Vegetation Indicators:
3. Dipsacus laciniatus	10	Yes	FACU	1 - Rapid Test for Hydrophytic Vegetation
4.				2 - Dominance Test is >50%
5.				3 - Prevalence Index is < 3.01
6				4 Marshelenical Adaptational (Dravida currenting
7				4 - Morphological Adaptations ² (Provide supporting data in Remarks or on a senarate sheet)
8				
9 10				Problematic Hydrophytic Vegetation ⁺ (Explain)
11.				¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed or problematic.
	50	= Total	Cover	Definitions of Vagatation Strata
Woody Vine Stratum (Plot size: 30 ft radius)				Tree Weath plants 2 in (7.6 cm) or more in
1				diameter
2				at breast height (DBH), regardless of height.
3			<u> </u>	Sapling/shrub – Woody plants less than 3 in. DBH
4			Cover	and greater than or equal to 3.28 ft (1 m) tall.
		= 101ai	Cover	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
				neight.
				Hydrophytic Vegetation
Remarks: (Include photo numbers here or on a separate she The criterion for hydrophytic vegetation is not met.	eet.)			

Profile Des	cription: (Describe to Matrix	o the dep	oth needed to docu Redox	<mark>ment th</mark> Feature	e indica es	tor or c	onfirm the	absence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 7	10YR 4/2	85	10YR 5/6	15	C	M/PL	Clay Loa	n
7 to 20	10YR 7/1	70	10YR 6/8	30	С	M/PL	Clay Loa	n
		<u> </u>				·		
		<u> </u>		·		·		
				·				
1Turnet C=Cc		tion DM	-Doduced Metrix CC				nd Craina	² Location: DL-Doro Liping M-Matrix
Type: C=Co	oncentration, D=Deple	tion, RM=	Reduced Matrix, CS	=Cover	ed or Co	ated Sa	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						I	Indicators for Problematic Hydric Soils ³ :
Histosol ((A1) ipodon (A2)		Polyvalue Be	elow Sur	rtace (S8	3) (LRR	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	itic (A3)		Thin Dark Su	r) Irface (S	69) (LRR	R. MLF	RA 149B)	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) (I	_RR K, I	_)	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)		Loamy Gleye	d Matri	x (F2)		-	Polyvalue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface (rk Surface (A12)	A11)	Depleted Ma Redox Dark	trix (F3) Surface	(E6)		-	Ihin Dark Surface (S9) (LRR K, L)
Sandy M	ucky Mineral (S1)		Depleted Da	rk Surfa	.ce (F7)		-	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gl	eyed Matrix (S4)		Redox Depre	essions	(F8)		-	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5)						-	Red Parent Material (F21)
Stripped Dark Sur	Matrix (S6) face (S7) (I RR R. MI	RA 1498)				-	Very Shallow Dark Sufface (TF12) Other (Explain in Remarks)
		117 1402	,				-	
³ Indicators o	f hydrophytic vegetati	on and w	etland hydrology mu	st be pre	esent, ur	less dis	turbed or pr	oblematic.
Restrictive I	Layer (if present):							
Type: No	t present							Hydric Soil Present? Yes X No
Deptil (Int								
Remarks:								
The criter	ion for hydric soil is me	t.						

lson, Summit County Sampling Date: 2024-2-26
State: OH Sampling Point: W-EVN-17 PEM-1
Section, Township, Range: NA
ave, convex, none): None Slope (%): 0 to 1
.85 Long: -81.4109900167 Datum: WGS84
NWI Classification: None
No (If no, explain in Remarks.)
Are "Normal Circumstances" present? Yes 🗶 No
(If needed, explain any answers in Remarks.)
oint locations transects important features etc
mpled Area
Wetland? Yes X No
tional Wetland Site ID: W-FVN-17
Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Roots (C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Wetland Hydrology Present? Yes X No
ections), if available:

Sampling Point: <u>W-EVN-17_PEM-1</u>

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				That Are OBL, FACW, or FAC: 1 (A)
3.	·			Total Number of Dominant
4.				Species Across All Strata: <u>1</u> (B)
5.				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
7				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)	0	= Iotal	Cover	Total % Cover of: Multiply by:
1.				$\frac{1}{OBI \text{ species}} \qquad 0 \qquad \text{y 1 - 0}$
2.				$\frac{1}{100} = \frac{1}{100} = \frac{1}$
3.				EAC species $0 \times 3 = 0$
4		. <u> </u>		$\frac{1}{10000000000000000000000000000000000$
5.				$\frac{1}{1} = \frac{1}{1} = \frac{1}$
7.	·			Column Totals: 100 (A) 200 (B)
	0	= Total	Cover	
Herb Stratum (Plot size: 5 ft radius)				Prevalence Index = $B/A = 2$
1. Phragmites australis	100	Yes	FACW	
2				Hydrophytic Vegetation Indicators:
3.				1 - Rapid Test for Hydrophytic Vegetation
4 5.	·			2 - Dominance Test is >50%
6.				_ 3 - Prevalence Index is $\leq 3.0^1$
7.				4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation ¹ (Explain)
10	·			¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed or problematic.
	100	= Total	Cover	
Woody Vine Stratum (Plot size: 30 ft radius)				Definitions of Vegetation Strata:
1	·			diameter
2				at breast height (DBH), regardless of height.
4.				Sapling/shrub — Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall
	0	= Total	Cover	Herb – All herbaceous (non-woody) plants, regardless
				of size, and woody plants less than 3.28 ft tall.
				height.
				Hydrophytic
				Vegetation Present? Yes X No
Remarks: (Include photo numbers here or on a separate s	heet.)			

Deptil			Redox	Feature	es			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 12	10YR 2/1	90	10YR 6/8	10	С	М	Silty Clay L	oam
12 to 20	10YR 6/1	80	10YR 6/8	20	D	М	Silty Clay L	0am
·								
·								
1 								21 anation DL Dave Lining M Matrix
-Type: C=Co	ncentration, D=Deple	tion, RM=	Reduced Matrix, CS	S=Cove	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil II	ndicators:							Indicators for Problematic Hydric Soils ³ :
Histosol (A	A1) podop (A2)		Polyvalue B	elow Su	rtace (S8) (LRR	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black Hist	tic (A3)		Thin Dark S	5) urface (\$	S9) (LRR	R. ML	RA 149B)	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydrogen	Sulfide (A4)		Loamy Muck	ky Miner	ral (F1) (.RR K,	L)	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)		Loamy Gley	ed Matr	ix (F2)			Polyvalue Below Surface (S8) (LRR K, L)
Depleted Thick Dar	Below Dark Surface (k Surface (A12)	(A11)	Depleted Ma Redox Dark	atrix (F3 Surface) > (E6)			Inin Dark Surface (S9) (LRR K, L)
Sandy ML	icky Mineral (S1)		Depleted Da	rk Surfa	ace (F7)			Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gle	eyed Matrix (S4)		Redox Depr	essions	(F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	dox (S5)							Red Parent Material (F21)
Surpped M Dark Surf	viatrix (S6) ace (S7) (LRR R. ML	RA 149B)					Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
			,					
°Indicators of	f hydrophytic vegetati	on and w	etland hydrology mu	st be pr	esent, un	less dis	sturbed or pr	roblematic.
Restrictive L	ayer (if present):							
Depth (inc	t present hes):							Hydric Soil Present? Yes 🗴 No
Deptil (inc								
Remarks:	on for hydric coil is mo							
I ne criteri	on for hydric soll is me	τ.						

ummit County Sampling Date: 2024-2-26 OH Sampling Point: W-EVN-17_UPL-1 Section, Township, Range: NA Nampling Date: 0 to 1 Long: -81.4109729333 Datum: WGS84 NVI Classification: None No (If no, explain in Remarks.) No "Normal Circumstances" present? Yes X No No teeded, explain any answers in Remarks.)
OH Sampling Point: W-EVN-17_UPL-1 Section, Township, Range: NA
Section, Township, Range: <u>NA</u> nvex, none): <u>None</u> Slope (%): <u>0 to 1</u> Long: <u>-81.4109729333</u> Datum: <u>WGS84</u> (If no, explain in Remarks.)
None Slope (%): 0 to 1 Long: -81.4109729333 Datum: WGS84 NWI Classification: None (If no, explain in Remarks.) No "Normal Circumstances" present? Yes X No needed, explain any answers in Remarks.) K No cations, transects, important features, etc. Area d? Yes No X /etland Site ID:
Long: -81.4109729333 Datum: WGS84 NWI Classification: None (If no, explain in Remarks.) No
"Normal Circumstances" present? Yes X No
needed, explain any answers in Remarks.) ncations, transects, important features, etc. Area d? Yes NoX /etland Site ID:
Area d? Yes No _X /etland Site ID:
Area d? Yes No _X /etland Site ID: /etland Site ID: Surface Soil Cracks (B6) Surface Soil Cracks (B6)
Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8)
C3) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
and Hydrology Present? Yes No _
, if available:
-

Sampling Point: <u>W-EVN-17_UPL-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2.				Total Number of Dominant
4.				Species Across All Strata: <u>1</u> (B)
5.				Percent of Dominant Species
6				That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1	0	= Total	Cover	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)		- 1014	00101	Total % Cover of: Multiply by:
1				OBL species x 1 =0
2		. <u> </u>		FACW species x 2 =0
4.				FAC species x 3 =0
5.	_			FACU species 100 x 4 = 400
6.	_			UPL species $0 \times 5 = 0$
7				Column Totals: <u>100</u> (A) <u>400</u> (B)
Lieth Strature (Distaire) Eftradius	0	= Total	Cover	
<u>Hero Stratum</u> (Plot Size: <u>5 it fattus</u>)	100	Yes	FACU	Prevalence Index = B/A =
2.				Hydrophytic Vegetation Indicators:
3.				1 - Rapid Test for Hydrophytic Vegetation
4				2 - Dominance Test is >50%
5				3 - Prevalence Index is $\leq 3.0^1$
7.				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9				Problematic Hydrophytic Vegetation ¹ (Explain)
10				¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed or problematic.
	100	= Total	Cover	
Woody Vine Stratum (Plot size: 30 ft radius)				Definitions of Vegetation Strata:
1				diameter
3.				at breast height (DBH), regardless of height.
4.				Sapling/shrub — Woody plants less than 3 in. DBH
	0	= Total	Cover	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
Remarks: (Include photo numbers here or on a separate she	eet.)			1
The criterion for hydrophytic vegetation is not met.				

Profile Des	cription: (Describe t	o the dep	oth needed to docu Redox	ment th Feature	e indica	tor or o	confirm the abs	sence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 12	10YR 4/2	80	10YR 6/6	20	C	М	Silty Clay Loan	1
12 to 20	10YR 5/1	85	10YR 6/6	15	С	М	Silty Clay Loan	1
				·				
		·						
		·						
				·				
		·		·				
				·				
¹ Type: C=Co	oncentration, D=Deple	tion, RM=	Reduced Matrix, CS	S=Cover	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Ind	icators for Problematic Hydric Soils ³ :
Histosol ((A1)		Polyvalue Be	elow Su	rface (S8	3) (LRR	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	ipedon (A2) itic (A3)		MLRA 149E Thin Dark Su	s) Jurface (S	59) (LRR	R. ML	RA 149B)	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Muck	y Miner	al (F1) (I	LRR K,	L)	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)		Loamy Gleye	ed Matri	ix (F2)		_	Polyvalue Below Surface (S8) (LRR K, L)
Depleted Thick Da	Below Dark Sufface (rk Surface (A12)	(A11)	Redox Dark	ttrix (⊢3, Surface) e (F6)			Inin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy M	ucky Mineral (S1)		Depleted Da	rk Surfa	ace (F7)			Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy Gl	eyed Matrix (S4)		Redox Depre	Redox Depressions (F8)				Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Ded Derept Material (E21)
Sanuy Re	Matrix (S6)						—	Verv Shallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, ML	.RA 149B)				_	Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetati	on and w	etland hydrology mu	st be pr	esent, ur	nless dis	sturbed or probl	ematic.
Restrictive I	Layer (if present):							
Type: No	t present							
Depth (ind	cnes):						Hy	/dric Soil Present? Yes 👗 No
Remarks:								
The criter	ion for hydric soil is me	et.						

Project/Site: Darrow-Hudson East 138kV Project	Citv/County: Hudson, Summit (County Sampling Date: 20)24-2-26
Applicant/Owner: FirstEnergy	State: OH	Sampling Point: W-EVN-18_PE	M-1
Investigator(s): Erin Van Nort, Emma Given	Sectio	 on, Township, Range: NA	
Landform (hillslope, terrace, etc): Depression	Local relief (concave, convex, no	ne): Concave Slope (%)): 0 to 1
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.217645	.ong: -81.408486 Datum:	WGS84
Soil Map Unit Name: Trumbull silt loam. 0 to 2 percent slopes		NWI Classification: None	
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes 🗶 No 🤅 (If no) explain in Remarks)	
Are Vegetation Soil or Hydrology significant	v disturbed? Are "Norma	l Circumstances" present? Ves	No
Are Vegetation, Soil, or Hydrology organization	roblamatic? (If needed	avalain any answers in Remarks)	NO
SUMMARY OF FINDINGS – Attach site map snowing	sampling point location	is, transects, important featur	res, etc.
Hvdrophvtic Vegetation Present? Yes 🗴 No	Is the Sampled Area	M	
Hydric Soil Present? Yes X No	within a Wetland?	Yes 👗 No	
Wetland Hydrology Present? Yes X No	If ves ontional Wetland S	Site UD: W-EVN-18	
Remarks: (Explain alternative procedures here or in a separate repo	rt.)		
Covertype is PEM. Based on the presence of all three parameters, this	irea is a wetland.		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two	<u>required)</u>
Primary Indicators (minimum of one is required; check an that apply,		SUITACE SOIL CLACKS (BD)	
Sufface Water (A1) Water-Stanley Lea	S) Ves (RA)	Drainaye Fallenis (D10) Moss Trim Lines (B16)	
High Water Table (A∠)Aquatic Fauna (B1)	3) =\	Dry-Season Water Table (C2)	
Mater Marks (R1) Hvdrogen Sulfide)) Ddor (C1)	Cravfish Burrows (C8)	
Sediment Denosits (B2)	eres along Living Roots (C3)	Saturation Visible on Aerial Imager	rv (C9)
Drift Deposits (B3)	red Iron (C4)	Stunted or Stressed Plants (D1)) (00)
Algal Mat or Crust (B4)	tion in Tilled Soils (C6)	K Geomorphic Position (D2)	l
Iron Deposits (B5) Thin Muck Surface	(C7)	Shallow Aquitard (D3)	l
Inundation Visible on Aerial Imagery (B7) Other (Explain in F	emarks)	Microtopographic Relief (D4)	
Sparsely Vegetated Concave Surface (B8)		FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present? Yes No 🗶 Depth (in	ches):		l
Water Table Present? Yes No 🗴 Depth (in	ches):		l
Saturation Present? Yes X No Depth (in	ches): 3 Wetland Hyd	drology Present? Yes 🗶 No	
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial pho	os, previous inspections), if availa	able:	
Remarks:			
The criterion for wetland hydrology is met.			
·			

Sampling Point: W-EVN-18_PEM-1

Tree Stratum (Plot size: _30 ft radius) 1.	Absolute % Cover	Dominant Species?	Indicator 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 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
7	0	= Total	Cover	Prevalence Index worksheet: Total % Cover of: Multiply by:
3.	0		Cover	OBL species 20 $x 1 = 20$ FACW species 70 $x 2 = 140$ FAC species 0 $x 3 = 0$ FAC species 10 $x 4 = 40$ UPL species 0 $x 5 = 0$ Column Totals: 100 (A) 200 Prevalence Index = B/A = 2
1. Phalaris arundinacea	70	Yes	FACW	
2. Typha angustifolia	20	Yes	OBL	Hydrophytic Vegetation Indicators:
3. <u>Rosa multiflora</u>	10	No	FACU	1 - Rapid Test for Hydrophytic Vegetation
4				∑ 2 - Dominance Test is >50%
5				3 - Prevalence Index is $\leq 3.0^1$
7.				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10.				
11.				¹ Indicators of hydric soil and wetland hydrology must
12.				be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u>30 ft radius</u>) 1	100	= Total	Cover	Definitions of Vegetation Strata: Tree — Woody plants 3 in. (7.6 cm) or more in diameter
3.				at breast height (DBH), regardless of height.
4.		- Totol	Cover	Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
		- 10141	Cover	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 X No
Remarks: (Include photo numbers here or on a separate s The criterion for hydrophytic vegetation is met.	heet.)			

	Matrix		<u>Re</u> dox	Feature			minin the a	ausence of mulcalors.
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 5	10YR 3/1	90	10YR 4/6	10	C	PL	Clay Loar	n
5 to 20	10YR 3/2	80	10YR 4/6	20	С	M/PL	Clay	
				·			5	
		·		·				
. <u> </u>		·						
				·				
				·				
				·				
¹ Type: C=Co	ncentration, D=Deple	tion, RM=	Reduced Matrix, CS	=Cover	ed or Co	ated Sar	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:							ndicators for Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue Be	elow Su	rface (S8) (LRR F	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epi	pedon (A2)		MLRA 149B	5)) (1 BB	-		Coast Prairie Redox (A16) (LRR K, L, R)
Black HIS Hydrogen	uc (A3) Sulfide (A4)		Loamy Muck	v Miner	59) (LRR al (F1) (I	R, MLR	A 149B))	5 cm muck Peal of Peal (S3) (LRR K, L, R) Dark Surface (S7) (I RR K, L)
Stratified	Layers (A5)		Loamy Gleye	ed Matri	x (F2)		·) _	Polyvalue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface ((A11)	Depleted Ma	trix (F3)			-	Thin Dark Surface (S9) (LRR K, L)
Thick Dar	k Surface (A12)		X Redox Dark	Surface	(F6)		-	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mit	eved Matrix (S1)		Depieted Da	rk Suria Sssions	(E8)		-	Mesic Spodic (TA6) (MI RA 144A, 145, 149B)
Sandy Re	edox (S5)			,5510115	(10)		-	Red Parent Material (F21)
Stripped I	Matrix (S6)						-	Very Shallow Dark Surface (TF12)
Dark Surf	ace (S7) (LRR R, ML	RA 149B)					-	Other (Explain in Remarks)
³ Indicators of	f hydrophytic vegetati	on and we	etland hydrology mu	st be pre	esent, un	less dist	urbed or pr	oblematic.
Restrictive L	ayer (if present):							
Type: No	t present							
Depth (inc	hes):							Hydric Soil Present? Yes X No
Remarks:								
The criteri	on for hydric soil is me	t.						

Project/Site: Darrow-Hudson East 138kV Project	_City/County: <u>Hudson, Summit County</u> Sampling Date: <u>2024-2-26</u>						
Applicant/Owner: FE	State: OHSampling Point: W-EVN-18_UPL-1						
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: <u>NA</u>						
Landform (hillslope, terrace, etc): Flat	Local relief (concave, convex, none): <u>None</u> Slope (%): <u>0 to 1</u>						
Subregion (LRR or MLRA): <u>MLRA 139 of LRR R</u>	Lat: 41.217509 Long: -81.409653 Datum: WGS84						
Soil Map Unit Name: <u>Mahoning silt loam, 2 to 6 percent slopes</u>	NWI Classification: None						
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🗶 No (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology significan	ntly disturbed? Are "Normal Circumstances" present? Yes X No						
Are Vegetation , Soil , or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)						
SUMMARY OF EINDINGS - Attach site man showin	na sampling point locations transacts important features atc						
Hydronhytic Vegetation Present? Ves No	Is the Sampled Area						
Hydric Soil Present? Yes No X	within a Wetland? Yes No						
Wetland Hydrology Present? Yes No 🗴	I Muse antianal Wedend Cite ID:						
	It yes, optional wetland Site ID:						
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is UPL. Based on the absence of all three parameters, this area is an upland.							
HYDROLOGY							
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all that apply	y) Surface Soil Cracks (B6)						
Surface Water (A1)Water-Stained Le	aves (B9) Drainage Patterns (B10)						
High Water Table (A2) Aquatic Fauna (B	13) Moss Trim Lines (B16)						
Saturation (A3) Mari Deposits (BJ	Div-Season water Table (C2)						
Sediment Denosits (B2)	oberes along Living Roots (C3) Saturation Visible on Aerial Imagery (C9)						
Drift Deposits (B3)	uced Iron (C4) Stunted or Stressed Plants (D1)						
Algal Mat or Crust (B4) Recent Iron Redu	uction in Tilled Soils (C6) Geomorphic Position (D2)						
Iron Deposits (B5) Thin Muck Surfac	ce (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 🗶 Depth (ir	nches):						
Water Table Present? Yes No 🗴 Depth (ir	nches):						
Saturation Present? Yes No 🗶 Depth (ir	nches): Wetland Hydrology Present? Yes No _ X						
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspections), if available:						
Demosilor							
The criterion for wetland hydrology is not met							
The effection for wedding hydrology is not met.							

Sampling Point: <u>W-EVN-18_UPL-1</u>

Trop Stratum (Diat aiza) 20 ft m	dius	Dominant	Indicator	Dominance Test worksheet:
1. Ouercus palustris	<u>% Cove</u> 15	Yes	FACW	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 1 (A)
3.				Total Number of Dominant
4.				Species Across All Strata: <u>2</u> (B)
5				Percent of Dominant Species
6				
/				Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size	: 15 ft radius)	_ = 10tai	Cover	Total % Cover of: Multiply by:
1.				OBL species x 1 =0
2				FACW species 15 x 2 = 30
3				FAC species $0 \times 3 = 0$
4.				FACU species $100 \times 4 = 400$
5. 				UPL species $0 \times 5 = 0$
7.				Column Totals: 115 (A) 430 (B)
	0	= Tota	Cover	
Herb Stratum (Plot size: <u>5 ft rad</u>	lius)	-		Prevalence Index = $B/A = 3.7$
1. Poa pratensis	80	Yes	FACU	
2. Glechoma hederacea	10	No	FACU	Hydrophytic Vegetation Indicators:
3. Cardamine hirsuta	5	No	FACU	1 - Rapid Test for Hydrophytic Vegetation
4. Plantago lanceolata	5	No	FACU	2 - Dominance Test is >50%
5.				_ 3 - Prevalence Index is $\leq 3.0^1$
6				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10.				
11				be present, unless disturbed or problematic.
12				
Woody Vino Stratym (Plot size:	20 ft radius	= Total	Cover	Definitions of Vegetation Strata:
1	So it faulus j			Tree — Woody plants 3 in. (7.6 cm) or more in
2.				diameter
3.				Sapling/chrub Woody plants loss than 2 in DPH
4				and greater than or equal to 3.28 ft (1 m) tall.
	0	_ = lotal	Cover	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
Domarke: (Include photo pumber:	hara ar an a constate cheet)			1
The criterion for hydrophytic ver	s nere of on a separate sneet.)			
	5			

Profile Des	cription: (Describe t Matrix	o the dep	oth needed to docur Redox	nent the Feature	e indica es	tor or co	onfirm the a	bsence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 7	10YR 4/3	90	10YR 5/6	10	C	M/PL	Clay Loam	
		· ·						
		· ·						
		· ·						
¹ Type: C=Co	ncentration, D=Deple	tion, RM=	Reduced Matrix, CS	=Cover	ed or Co	ated Sa	nd Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						li	ndicators for Problematic Hydric Soils ³ :
Histosol (A1)		Polyvalue Be	low Sur	face (S8) (LRR F	२, _	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Histic Epi Black His	pedon (A2) tic (A3)		MLRA 149B Thin Dark Su) rfaco (S	:0) /I DD		A 1/0B)	Coast Prairie Redox (A16) (LRR K, L, R)
Hvdroger	n Sulfide (A4)		Loamv Muck	v Minera	al (F1) (L	.RR K. L	_)	Dark Surface (S7) (LRR K. L)
Stratified	Layers (A5)		Loamy Gleye	d Matri	x (F2)	, -	· _	Polyvalue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface	(A11)	Depleted Ma	trix (F3)	(= 0)		_	_ Thin Dark Surface (S9) (LRR K, L)
Thick Dar Sandy Mi	'k Sufface (A12) Joky Mineral (S1)		Redox Dark : Depleted Dark	Surface	(F6) ce (F7)		-	_ Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MI RA 1498)
Sandy Gl	eyed Matrix (S4)		Redox Depre	ssions	(F8)		_	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5)				. ,		_	Red Parent Material (F21)
Stripped I	Matrix (S6)	DA 440D	、				-	Very Shallow Dark Surface (TF12)
Dark Surf	ace (S7) (LRR R, ML	.RA 149B)				-	Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetati	on and w	etland hydrology mus	st be pre	esent, un	less dist	urbed or pro	blematic.
Restrictive L	_ayer (if present):							
Type: <u>fill</u>								
Depth (inc	:nes): /							Hydric Soil Present? Yes No
Remarks:								
The criter	ion for hydric soil is no	t met.						
L								

Project/Site: Darrow-Hudson East 138kV Project City/County: Ht	Idson, Summit County Sampling Date: 2024-2-26					
Applicant/Owner: FirstEnergy	State: OH Sampling Point: W-EVN-19_PEM-1					
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA					
Landform (hillslope, terrace, etc): Depression Local relief (cor	icave, convex, none): None Slope (%): 0 to 1					
Subregion (LRR or MLRA): MLRA 139 of LRR R Lat: 41.21773	397 Long: -81.4043714 Datum: WGS84					
Soil Map Unit Name: Mahoning silt loam, 2 to 6 percent slopes	NWI Classification: None					
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	No (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significantly disturbed?	Are "Normal Circumstances" present? Yes 🗶 No					
Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling p	point locations, transects, important features, etc.					
Hudranbutia Vagatatian Dresent? Vac Y No. Is the S	Sampled Area					
Hydric Soil Present? Yes X No within a	a Wetland? Yes 🗶 No					
Wetland Hydrology Present? Yes X No	C DATE DE MENN 10					
If yes, c	ptional Wetland Site ID: <u>W-EVIN-19</u>					
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.						
HYDROLOGY						
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ✓ Surface Water (A1) Water-Stained Leaves (B9) High Water Table (A2) Aquatic Fauna (B13) ✓ Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) ✓ Oxidized Rhizospheres along Livin Drift Deposits (B3) Presence of Reduced Iron (C4) Algal Mat or Crust (B4) Recent Iron Reduction in Tilled So Iron Deposits (B5) Thin Muck Surface (C7) Inundation Visible on Aerial Imagery (B7) Other (Explain in Remarks) Sparsely Vegetated Concave Surface (B8) Other (Explain in Remarks)	Secondary Indicators (minimum of two required)					
Field Observations:						
Surface Water Present? Yes X No Depth (inches): 1	-					
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes 🗶 No					
(includes capillary fringe)						
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous ins	pections), if available:					
Remarks: The criterion for wetland hydrology is met.						
The enterior for wedding hydrology is men						
Sampling Point: <u>W-EVN-19_PEM-1</u>

Tree Stratum (Plot size: <u>30 ft radius</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1				Number of Dominant Species
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
5.				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 100% (A/B)
7				Prevalence Index worksheet:
	0	= Total	Cover	
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)				
2				$\begin{array}{c c} OBL \text{ species} & 25 & x1 = 25 \\ \hline $
3.				FACW species $\frac{70}{10}$ x 2 = $\frac{140}{15}$
4.				FAC species $5 \times 3 = 15$
5				FACU species $0 \times 4 = 0$
6				UPL species $0 \times 5 = 0$
<i>I</i>				Column Totals: 100 (A) 180 (B)
Herb Stratum (Plot size: 5 ft radius)	0	= Iotal	Cover	
1. Phalaris arundinacea	60	Yes	FACW	$Prevalence Index = B/A = _1.8$
2. Typha angustifolia	25	Yes	OBL	Hydrophytic Vegetation Indicators:
3. Solidago gigantea	10	No	FACW	▲ 1 - Rapid Test for Hydrophytic Vegetation
4. Apocynum cannabinum	5	No	FAC	∑ 2 - Dominance Test is >50%
5				3 - Prevalence Index is ≤3.0 ¹
6				4 Marphalasiaal Adaptational (Dravida supporting
7				data in Remarks or on a separate sheet)
9.			. <u> </u>	Problematic Hydrophytic Vegetation ¹ (Explain)
10.				
11				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
12				
Woody Vino Stratum (Plot cizo: 20 ft radius)	100	= Total	Cover	Definitions of Vegetation Strata:
1				Tree — Woody plants 3 in. (7.6 cm) or more in
2.				diameter
3.				Conling (church Weady plants loss than 2 in DDU
4				and greater than or equal to 3.28 ft (1 m) tall.
	0	= Total	Cover	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 X No
Remarks: (Include photo numbers here or on a separate s	sheet.)			
The criterion for hydrophytic vegetation is met.				

Profile Des	Matrix	o the dep	Redox	Feature	es	lor or o	confirm the a	insence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 8	10YR 2/1	90	10YR 6/6	10	C	PL	Silty Clay Lo	am
8 to 20	10YR 6/1	80	10YR 6/6	20	D	M/PL	Silty Clay Lo	am
							·	
				·			·	
							·	
		<u> </u>					·	
				·			·	
1								2
¹ Type: C=Co	oncentration, D=Deplet	tion, RM=	Reduced Matrix, CS	=Cove	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Ir	ndicators for Problematic Hydric Soils ³ :
Histosol ((A1)		Polyvalue Be	elow Su	rface (S8	3) (LRR	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	ipedon (A2) itic (A3)		MLRA 149E	irface (59) (I P P		RA 140R)	_ Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Muck	y Miner	ral (F1) (I	LRR K,	L)	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)		Loamy Gley	ed Matri	ix (F2)	,	· _	Polyvalue Below Surface (S8) (LRR K, L)
Depleted	Below Dark Surface (A11)	Depleted Ma	trix (F3))) (EC)		_	Thin Dark Surface (S9) (LRR K, L)
Sandy M	rk Sufface (A12) ucky Mineral (S1)		Redox Dark	Surface	e (F0) Ace (F7)		_	_ Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodnlain Soils (F19) (MI RA 1498)
Sandy G	leyed Matrix (S4)		Redox Depr	essions	(F8)		_	Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
Sandy Re	edox (S5)						_	Red Parent Material (F21)
Stripped	Matrix (S6)						_	_ Very Shallow Dark Surface (TF12)
Dark Sur	lace (57) (LKK K, ML	RA 1496)				_	_ Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetatio	on and we	etland hydrology mu	st be pr	esent, ur	nless dis	sturbed or pro	blematic.
Restrictive I	Layer (if present):							
Type: No	t present							Undrig Spil Dresont? Vac. Y No.
Depth (inc								Hydric Soll Present? Yes _ A NO
Remarks:								
The criter	ion for hydric soil is met							

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

			Northeast Region	
Project/Site: Darrow-Hudson East 138kV Project	City/County: Huc	lson, Summit Co	<u>unty</u> Sampling	J Date: 2024-2-26
Applicant/Owner: <u>FirstEnergy</u>		State: <u>OH</u>	Sampling Point: <u>W-EV</u>	N-19_UPL-1
Investigator(s): Erin Van Nort, Emma Given		Section	, Township, Range: <u>NA</u>	
Landform (hillslope, terrace, etc): Flat	Local relief (conc	ave, convex, none	e): <u>None</u>	Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: <u>41.217733</u>	<u>Lor</u>	ıg: <u>-81.404274</u>	Datum: WGS84
Soil Map Unit Name: Mahoning silt loam, 2 to 6 percent slo	opes		NWI Classification: Non	1e
Are climatic / hydrologic conditions on the site typical for this ti	me of year? Yes 🔀	No (If no, e	explain in Remarks.)	
Are Vegetation , Soil , or Hydrology sig	nificantly disturbed?	Are "Normal C	Circumstances" present? Ye	es 🗶 No
Are Vegetation , Soil , or Hydrology nat	urally problematic?	(If needed, ex	plain any answers in Rema	arks.)
SUMMARY OF EINDINGS - Attach site man sh	owing sampling no	oint locations	transacts importar	at features etc
SUMMART OF FINDINGS – Attach site map sit	owing sampling po	JIII IOCALIONS	, transects, importai	it leatures, etc.
Hydrophytic Vegetation Present? Yes No 🗴	Is the Sa	mpled Area		
Hydric Soil Present? Yes No 🗴	within a	Wetland?	Yes No 👗	·
Wetland Hydrology Present? Yes No 🗴		tional Wotland Site		
	n yes, op		- ID	
Remarks: (Explain alternative procedures here or in a separa Covertype is UPL. Based on the absence of all three parameter	tte report.) s, this area is an upland.			
HYDROLOGY				
Watland Hydrology Indicators:		S	ocondany Indicators (minim	num of two roquirod)
Primary Indicators (minimum of one is required: check all tha	t apply)	<u> </u>	Surface Soil Cracks (B6)	<u>ium or two requireu)</u>
Surface Water (A1) Water-Stair	red Leaves (B9)		Drainage Patterns (B10)	
High Water Table (A2) Aquatic Fat	una (B13)	_	Moss Trim Lines (B16)	
Saturation (A3)	sits (B15)		Dry-Season Water Table	(C2)
Water Marks (B1) Hydrogen S	Sulfide Odor (C1)		Crayfish Burrows (C8)	
Sediment Deposits (B2)Oxidized R	hizospheres along Living	Roots (C3)	Saturation Visible on Aer	ial Imagery (C9)
Drift Deposits (B3)Presence o	f Reduced Iron (C4)		_ Stunted or Stressed Plan	its (D1)
Algal Mat or Crust (B4)Recent Iror	Reduction in Tilled Soils	s (C6)	_ Geomorphic Position (D2	2)
Iron Deposits (B5) Inin Muck	Sufface (C7)	_	_ Shallow Aquitaru (D3) Microtopographic Pelief	(D4)
Inditidation visible on Aerial Intagery (B7) Other (Expl	ann in Remarks)	_	EAC-Neutral Test (D5)	(04)
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	epth (inches):	Wetland Hydro	ology Present? Yes	No 🗶
(includes capillary fringe)				
Describe Recorded Data (stream gauge, monitoring well, aer	ial photos, previous inspe	ections), if availab	le:	
Romarke:				
The criterion for wetland hydrology is not met				
The chierion for wetand hydrology is not met.				

Sampling Point: <u>W-EVN-19_UPL-1</u>

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant	Indicator Status	Dominance Test worksheet:
1	70 00101		Olulus	Number of Dominant Species
2.				That Are OBL, FACW, or FAC: 0 (A)
3				Iotal Number of Dominant Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC: 0% (A/B)
7.				
	0	= Total	Cover	Prevalence index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of: Multiply by:
1				OBL species x 1 =0
2.		·		FACW species x 2 =0
4.		·		FAC species $0 \times 3 = 0$
5.		·		FACU species 100 x 4 = 400
6.				UPL species x 5 =0
7				Column Totals: <u>100</u> (A) <u>400</u> (B)
	0	= Total	Cover	
Herb Stratum (Plot size: <u>5 ft radius</u>)	65	37	TACI	Prevalence Index = $B/A = 4$
1. Poa compressa	25	Yes Voc	FACU	Hydrophytic Vegetation Indicators:
2. Kubus cuestus 2. Fragaria virginiang	10	No	FACU	1 - Rapid Test for Hydrophytic Vegetation
4.	10		1/100	2 - Dominance Test is >50%
5.		·		
6.				$3 - Prevalence Index is \leq 3.0^{-1}$
7		·		4 - Morphological Adaptations ¹ (Provide supporting
8				data in Remarks or on a separate sneet)
9		·	. <u> </u>	Problematic Hydrophytic Vegetation ¹ (Explain)
11.	<u> </u>	·	·	¹ Indicators of hydric soil and wetland hydrology must
12.	-			be present, unless disturbed or problematic.
	100	= Total	Cover	Definitions of Vagatation Strata
Woody Vine Stratum (Plot size: 30 ft radius)				Trop – Woody plants 2 in (7.6 cm) or more in
1		·	<u> </u>	diameter
2		·		at breast height (DBH), regardless of height.
4.				Sapling/shrub – Woody plants less than 3 in. DBH
	0	= Total	Cover	and greater than or equal to $3.28 \text{ ft} (1 \text{ m})$ tail.
				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
Remarks: (Include photo numbers here or on a separate she The criterion for hydrophytic vegetation is not met.	et.)			1

Profile Des	cription: (Describe 1	to the dep	th needed to docu Redox	ment th	ne indica	tor or c	onfirm the abs	ence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 8	2.5Y 5/2	100	· · ·				Silty Clay Loam	
8 to 20	2.5Y 6/3	100					Silty Clay Loam	
				·				
				. <u> </u>				
				- <u> </u>				
				·				
				·				
¹ Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, CS	S=Cove	red or Co	ated Sa	and Grains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indi	cators for Problematic Hydric Soils ³ :
Histosol ((A1)		Polyvalue B	elow Su	rface (S8	B) (LRR	R,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Black His	ipedon (A2) stic (A3)		MLRA 149E Thin Dark Si	3) Jirface (3	59) (LRR	R. ML	RA 149B)	Coast Prairie Redox (A16) (LRR K, L, R) 5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydroger	n Sulfide (A4)		Loamy Muck	ky Miner	ral (F1) (I	RR K,	L)	Dark Surface (S7) (LRR K, L)
Stratified	Layers (A5)	(11)	Loamy Gley	ed Matri	ix (F2)		—	Polyvalue Below Surface (S8) (LRR K, L)
Thick Da	rk Surface (A12)	(AII)	Redox Dark	Surface) e (F6)		—	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy M	ucky Mineral (S1)		Depleted Da	rk Surfa	ace (F7)		_	Piedmont Floodplain Soils (F19) (MLRA 149B)
Sandy GI	eyed Matrix (S4) edox (S5)		Redox Depr	essions	(F8)		—	Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21)
Stripped	Matrix (S6)						_	Very Shallow Dark Surface (TF12)
Dark Sur	face (S7) (LRR R, ML	RA 149B)					_	Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetat	ion and we	etland hydrology mu	st be pr	esent, ur	less dis	sturbed or proble	ematic.
Restrictive I	Layer (if present):							
Type: No	t present						L.	rdric Soil Prosent? Voc No 🎽
Deptil (int							пу	
Remarks: The criter	ion for hydric soil is no	t met.						

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Darrow-Hudson East 138kV Project	City/County: <u>Hudson, Summit County</u> Sampling Date: <u>2024-2-21</u>
Applicant/Owner: FirstEnergy	State: OH Sampling Point: ROP-EVN-01
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: <u>NA</u>
Landform (hillslope, terrace, etc): <u>Terrace</u>	Local relief (concave, convex, none): <u>None</u> Slope (%): <u>1 to 3</u>
Subregion (LRR or MLRA): MLRA 139 of LRR R	_Lat: <u>41.2541192584</u> Long: <u>-81.4021209162</u> Datum: <u>WGS84</u>
Soil Map Unit Name: <u>Mahoning silt loam, 2 to 6 percent slopes</u>	NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes 🗶 No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	a sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes No X	Is the Sampled Area within a Wetland? Yes No X
	If yes, optional wetland Site ID:
Covertype is UPL. Based on the absence of the wetland hydrology par	rameter, this area is an upland.
HYDROLOGY	
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply Surface Water (A1) Water-Stained Le High Water Table (A2) Aquatic Fauna (B. Saturation (A3) Marl Deposits (B1 Water Marks (B1) Hydrogen Sulfide Sediment Deposits (B2) Oxidized Rhizosp Drift Deposits (B3) Presence of Redu Algal Mat or Crust (B4) Recent Iron Redu Iron Deposits (B5) Thin Muck Surface Inundation Visible on Aerial Imagery (B7) Other (Explain in Sparsely Vegetated Concave Surface (B8) Depth (ir Saturation Present? Yes No Saturation Present? Yes Depth (ir Saturation Present? Yes Depth (ir Saturation Present? Yes Depth (ir	')
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspections), if available:
Remarks: The criterion for wetland hydrology is not met.	

Sampling Point: ROP-EVN-01

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. Cornus alba	15	Yes	FACW	That Are OBL, FACW, or FAC: 4 (A)
3				Total Number of Dominant
4.				Species Across All Strata: <u>4</u> (B)
5			·	Percent of Dominant Species That Are OBL_EACW_or_EAC: 100% (A/B)
6 7				
	15	= Total	Cover	Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size: 15 ft radius)				Total % Cover of: Multiply by:
1. Cornus alba	35	Yes	FACW	OBL species x 1 =0
2				FACW species <u>80</u> x 2 = <u>160</u>
3			·	FAC species <u>15</u> x 3 = <u>45</u>
5.				FACU species x 4 =0
6.				UPL species x 5 =0
7				Column Totals: <u>95</u> (A) <u>205</u> (B)
	35	= Total	Cover	
Herb Stratum (Plot size: 5 ft radius)	25	Voc	FACW	Prevalence Index = B/A = 2.2
Apocynum cannabinum		Yes	FAC	Hydrophytic Vegetation Indicators:
3. Onoclea sensibilis	5	No	FACW	1 - Rapid Test for Hydrophytic Vegetation
4.	_			¥ 2 - Dominance Test is >50%
5				3 - Prevalence Index is $≤3.0^1$
6				4 Morphological Adaptations ¹ (Provide supporting
/				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10.				
11				be present, unless disturbed or problematic.
12				
Woody Vine Stratum (Plot size: 30 ft radius)	45	= 10181	Cover	Definitions of Vegetation Strata:
1.				Tree – Woody plants 3 in. (7.6 cm) or more in
2.				at breast height (DBH), regardless of height.
3.		·	. <u> </u>	Sapling/shrub – Woody plants less than 3 in. DBH
4	0	= Total	Cover	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 X No
Remarks: (Include photo numbers here or on a separate she	eet.)			•
The criterion for hydrophytic vegetation is met.				

Profile Des	cription: (Describe t Matrix	o the dep	he depth needed to document the indicator or confirm the Redox Features			onfirm the ab	sence of indicators.)	
Depth (inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0 to 6	2.5Y 4/1	100					Silty Clay Loan	n
6 to 20	10YR 5/2	85	10YR 6/8	15	С	М		
<u> </u>		·						
		·						
					·			
		·						
					·			
		tion DM-	-Poducod Matrix C		ed or Co	atod Sa	and Grains	² Location: PL-Pore Liping M-Matrix
	ndicatora			5-COVE		aleu Sa	anu Grains.	
Hydric Soll I	ndicators:		Polyvaluo P	olow Su	rfaca (Sa		Ind	licators for Problematic Hydric Soils ³ :
Histic Epi	pedon (A2)		MLRA 149E	3)	11000 (30			Coast Prairie Redox (A16) (LRR K, L, R)
Black His	tic (A3)		Thin Dark S	urface (S	59) (LRR	R, ML	RA 149B)	5 cm Muck Peat or Peat (S3) (LRR K, L, R)
Hydrogen	1 Sulfide (A4)		Loamy Mucl	ky Miner	al (F1) (L	.RR K,	L)	Dark Surface (S7) (LRR K, L)
Stratilieu Depleted	Below Dark Surface	(A11)	X Depleted Ma	atrix (F3))		_	Thin Dark Surface (S9) (LRR K, L)
Thick Dar	k Surface (A12)		Redox Dark	Surface	(F6)		_	Iron-Manganese Masses (F12) (LRR K, L, R)
Sandy Mu	ucky Mineral (S1)		Depleted Da	ark Surfa	ace (F7)			Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spedic (TA6) (MLRA 144A 145 149B)
Sandy Re	eyed Matrix (34) edox (S5)			63310113	(10)			Red Parent Material (F21)
Stripped I	Matrix (S6)						_	Very Shallow Dark Surface (TF12)
Dark Surf	ace (S7) (LRR R, ML	.RA 149B)					Other (Explain in Remarks)
³ Indicators o	f hydrophytic vegetati	on and w	etland hydrology mu	st be pr	esent, un	less dis	sturbed or prob	ematic.
Restrictive L	_ayer (if present):							
Type: No	t present							
Depth (inc	:nes):						H	ydric Soil Present? Yes <u>No</u> No
Remarks:								
The criter	ion for hydric soil is me	et.						

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Darrow-Hudson East 138kV Project City.	County: Streetsboro. Portage County Sampling Date: 2024-2-23			
Applicant/Owner: FirstEnergy	State: OH Sampling Point: ROP-EVN-02			
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA			
Landform (hillslope, terrace, etc): Back slope	al relief (concave, convex, none): None Slope (%): 1 to 3			
Subregion (LRR or MLRA): MLRA 139 of LRR R La	t: 41.2203322333 Long: -81.3826438333 Datum: WGS84			
Soil Map Unit Name: Ellsworth silt loam, 6 to 12 percent slopes, erod	ed NWI Classification: None			
Are climatic / hydrologic conditions on the site typical for this time of year'	? Yes 🗴 No 🛛 (If no, explain in Remarks.)			
Are Vegetation, Soil, or Hydrology significantly dis	sturbed? Are "Normal Circumstances" present? Yes X No			
Are Vegetation, Soil, or Hydrology naturally probl	ematic? (If needed, explain any answers in Remarks.)			
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 Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No X			
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is PEM. Based on the absence of the hydric soil parameter, this area is an upland.				
HYDROLOGY				
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) X Surface Water (A1) High Water Table (A2) Aquatic Fauna (B13) X Saturation (A3) Marl Deposits (B15) Water Marks (B1) Hydrogen Sulfide Odo Drift Deposits (B3) Presence of Reduced Algal Mat or Crust (B4) Recent Iron Reduction Iron Deposits (B5) Thin Muck Surface (C7)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) s along Living Roots (C3) in Tilled Soils (C6) geomorphic Position (D2) y Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7) Other (Explain in Rem Sparsely Vegetated Concave Surface (B8)	arks) Microtopographic Relief (D4) X FAC-Neutral Test (D5)			
Field Observations: Surface Water Present? Yes No Depth (inchest Vest Vest Vest Vest Vest Vest Vest V	i): <u>1</u> j: j: _12 Wetland Hydrology Present? Yes ≭ No			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:				
Remarks: The criterion for wetland hydrology is met.				

Sampling Point: <u>ROP-EVN-02</u>

Tree Stratum (Plot size: <u>30 ft radius</u>) 1	Absolute <u>% Cover</u>	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species
2.				That Are OBL, FACW, or FAC: _2(A)
3.				Species Across All Strata: 2 (B)
45				Percent of Dominant Species
6.				That Are OBL, FACW, or FAC: 100% (A/B)
7.				Prevalence Index worksheet
	0	= Total	Cover	
Sapling/Shrub Stratum (Plot size: <u>15 ft radius</u>)				Total % Cover of: Multiply by:
2				OBL species $40 \times 1 = 40$
3.				FACW species $45 \times 2 = 90$
4.				FAC species $15 \times 3 = 45$
5				FACU species $0 \times 4 = 0$
6				UPL species $0 \times 5 = 0$
/				Column Totals: 100 (A) $1/5$ (B)
Herb Stratum (Plot size: 5 ft radius)		= 10181	Cover	$Drevelence Index = D/A = -\frac{1.8}{2}$
1. Phalaris arundinacea	45	Yes	FACW	
2. Juncus effusus	30	Yes	OBL	Hydrophytic Vegetation Indicators:
3. Symphyotrichum lateriflorum	15	No	FAC	▲ 1 - Rapid Test for Hydrophytic Vegetation
4. <u>Epilobium coloratum</u>	10	No	OBL	¥ 2 - Dominance Test is >50%
5.				3 - Prevalence Index is ≤3.0 ¹
67				4 - Morphological Adaptations ¹ (Provide supporting
8.				data in Remarks or on a separate sheet)
9.				Problematic Hydrophytic Vegetation ¹ (Explain)
10				1 Indiantors of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
12			Cover	
Woody Vine Stratum (Plot size: 30 ft radius)		- 10tai	Cover	Definitions of Vegetation Strata:
1.				Tree — Woody plants 3 in. (7.6 cm) or more in
2				at breast height (DBH), regardless of height.
3				Sapling/shrub — Woody plants less than 3 in, DBH
4			Cover	and greater than or equal to 3.28 ft (1 m) tall.
		- 10141	Cover	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 X No
Remarks: (Include photo numbers here or on a separate s The criterion for hydrophytic vegetation is met.	sheet.)			

Depth (inches) Color (moist) % Type ¹ Loc ² Texture F 0 to 13 10YR 4/2 100 Silty Clay Loam	emarks
0 to 13 10YR 4/2 100 Silty Clay Loam 13 to 20 10YR 5/2 85 10YR 6/6 15 C M Silty Clay Loam	
13 to 20 10YR 5/2 85 10YR 6/6 15 C M Silty Clay Loam	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ² Location: PL=Pore	Lining, M=Matrix.
Hydric Soil Indicators: Indicators for Problem	atic Hydric Soils ³ :
Histosol (A1)Polyvalue Below Surface (S8) (LRR R,2 cm Muck (A10) (LF R)	RR K, L, MLRA 149B)
Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) 5 cm Muck Peat or F	Peat (S3) (LRR K, L, R)
Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) (LRR K, L) Dark Surface (S7) (L	
Depleted Below Dark Surface (A11) Depleted Matrix (F2) Polyvalue Below Surface (S	59) (LRR K, L)
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Ma	sses (F12) (LRR K, L, R)
Sandy Mucky Mineral (S1) Depleted Dark Surface (F7) Piedmont Floodplain Sandy Gleved Matrix (S4) Redox Depressions (F8) Mesic Spodic (TA6)	i Soils (F19) (MLRA 149B) (MLRA 144A, 145, 149B)
Sandy Redox (S5)	(F21)
Stripped Matrix (S6)Very Shallow Dark S	Surface (TF12)
	marksj
³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.	
Restrictive Layer (if present):	
Type: Not present Hydric Soil Present?	Ves No 🗶
Remarks:	

WETLAND DETERMINATION DATA FORM - Northcentral and Northeast Region

Project/Site: Darrow-Hudson East 138kV Project	City/County: Hudson, Summit County Sampling Date: 2024-2-26			
Applicant/Owner: FirstEnergy	State: OH Sampling Point: ROP-EVN-3			
Investigator(s): Erin Van Nort, Emma Given	Section, Township, Range: NA			
Landform (hillslope, terrace, etc): Depression	Local relief (concave, convex, none): Concave Slope (%): 0 to 1			
Subregion (LRR or MLRA): MLRA 139 of LRR R	Lat: 41.2148809 Long: -81.4205109 Datum: WGS84			
Soil Map Unit Name: Mahoning silt loam, 2 to 6 percent slopes	NWI Classification: None			
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes 🗴 No 🛛 (If no, explain in Remarks.)			
Are Vegetation, Soil, or Hydrology significar	ntly disturbed? Are "Normal Circumstances" present? Yes X No			
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point locations, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	Is the Sampled Area within a Wetland? Yes No			
	If yes, optional Wetland Site ID:			
Remarks: (Explain alternative procedures here or in a separate report.) Covertype is UPL. Based on the absence of the hydric soil parameter, this area is an upland.				
HYDROLOGY				
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply X Surface Water (A1) Water-Stained Letter X High Water Table (A2) X High Water Table (A2) X Marl Deposits (B2) Water Marks (B1) Hydrogen Sulfide Sediment Deposits (B2) Oxidized Rhizosp Drift Deposits (B3) Presence of Reduce Algal Mat or Crust (B4) Recent Iron Reduce Iron Deposits (B5) Thin Muck Surface Inundation Visible on Aerial Imagery (B7) Other (Explain in Sparsely Vegetated Concave Surface (B8) Field Observations: Surface Water Present? Yes Sutration Present? Yes X No Depth (in Saturation Present? Yes Yes X No Depth (in Saturation Present? fringe)	y) Secondary Indicators (minimum of two required) eaves (B9) Surface Soil Cracks (B6) 313) Drainage Patterns (B10) 15) Moss Trim Lines (B16) 2 Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Juced Iron (C4) Saturation Visible on Aerial Imagery (C9) uction in Tilled Soils (C6) Geomorphic Position (D2) ce (C7) Shallow Aquitard (D3) nemarks) Microtopographic Relief (D4) x FAC-Neutral Test (D5)			
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspections), if available:			
Remarks: The criterion for wetland hydrology is met.				

Sampling Point: ROP-EVN-3

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:		
1				Number of Dominant Species		
2.			-	That Are OBL, FACW, or FAC: _1(A)		
3.		·		Species Across All Strata: 1 (B)		
4 5.				Percent of Dominant Species		
6				That Are OBL, FACW, or FAC: 100% (A/B)		
7.				Prevalence Index worksheet:		
	0	= Tota	Cover	Total % Cover of: Multiply by:		
Sapling/Shrub Stratum (Plot size: 15 it radius)						
2.				$\begin{array}{c c} OBL Species \\ \hline \\ $		
3				FACW species $5 \times 2 = 15$		
4.				$\begin{array}{c c} FAC \text{ species} & \underline{5} & \underline{5} & \underline{5} & \underline{10} \\ \hline $		
5				$\begin{array}{c c} FACU \text{ species} & 10 & x 4 - \frac{1}{70} \\ FACU \text{ species} & 0 & x 5 - 0 \\ \hline \end{array}$		
67				$\begin{array}{c c} \text{OPL Species} & \underline{0} & \underline{100} \\ \text{Column Totals} & \underline{100} & \underline{(A)} & \underline{225} & \underline{(B)} \end{array}$		
··	0	= Tota	Cover			
Herb Stratum (Plot size: <u>5 ft radius</u>)			0010.	Prevalence Index = $B/A = 2.3$		
1. Phragmites australis	85	Yes	FACW			
2. Dipsacus laciniatus	10	No	FACU	Hydrophytic Vegetation Indicators:		
3. Rumex crispus	5	No	FAC	1 - Rapid Test for Hydrophytic Vegetation		
4				\mathbf{X} 2 - Dominance Test is >50%		
5. 6				3 - Prevalence Index is $\leq 3.0^1$		
7				4 - Morphological Adaptations ¹ (Provide supporting		
8.				data in Remarks or on a separate sheet)		
9				Problematic Hydrophytic Vegetation ¹ (Explain)		
10				¹ Indicators of hydric soil and wetland hydrology must		
11 12.				be present, unless disturbed or problematic.		
	100	= Total	Cover	D. Fulling of Venetation Chucker		
Woody Vine Stratum (Plot size: <u>30 ft radius</u>)				Definitions of vegetation Strata:		
1				diameter		
2		,		at breast height (DBH), regardless of height.		
3. 4.				Sapling/shrub – Woody plants less than 3 in. DBH		
	0	= Tota	Cover	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 X No		
Remarks: (Include photo numbers here or on a separate s	heet.)					
The Citerion for nyurophytic vegetation is net.						

M=Matrix.	
dric Soils ³ :	
, MLRA 1498	3)
LRR K, L, R)	D)
) (LKK K, L, _)	r.j
-, B) (LRR K, L)
R K, L)	
L2) (LRR K, I 10) (ML BA	L, R)
144A. 145. 1	49B)
, ,	,
TF12)	
No	×
No	<u>×</u>
No	×
No	×
No	<u>×</u>
No	×
No	*
No	<u>×</u>
No	×
No	×
No	×
	M=Matrix. dric Soils ³ : , MLRA 149E LRR K, L, R)) (LRR K, L, 2) (LRR K, L 2) (LRR K, L 12) (LRR K, I 144A, 145, 1 TF12)



OEPA ORAM Field Forms

Background Information

Name: Erin Van Nort	
Date:	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number:	
216-347-3342 e-mail address:	
evannort@trccompanies.com	
Name of Wetland: W-EVN-1	
Vegetation Communit(ies): PEM	
HGM Class(es): Depression (I)	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
	41.259267 -81.39568
USGS Quad Name	Twinsburg
County	Summit
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020502
Site Visit	02/21/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report

Name of Wetland: W-EVN-1		
Wetland Size (acres, hectares):		~9-acres
Sketch: Include north arrow, relationship with other surface waters, vegetation zones	, etc.	
See Report		
Comments Narrative Discussion Justification of Category Changes		
_	•	
Final score : 38	Category:	2

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

щ	Question	Circle erec	
#	QUESTION	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical	YES Wetland should be	NO Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	GO IO QUESIION Z
	Note: as of January 1, 2001, of the federally listed endangered or	Category 3 status	
	threatened species which can be found in Ohio, the Indiana Bat has had critical babitat designated (50 CER 17 95(a)) and the pining ployer	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
		3 wetland.	
		Go to Question 3	
3	Documented High Quality Wetland. Is the wetland on record in	YES	NO
	Natural Heritage Database as a high quality wetland?	Wetland is a Category	Go to Question 4
		3 wetland	OU to Question 4
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		o wolland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by <i>Phalaris arundinacea, Lythrum salicaria,</i> or <i>Phragmites australis</i> , or	1 wetland	
	no vegetation?	Go to Question 6	_
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no	YES	NO
	significant inflows or outflows, 2) supports acidophilic mosses,	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	OU TO QUESTION I
	cover of invasive species (see Table 1) is <25%?	Co to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YFS	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 wetland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	\mathbb{N}
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	or numan-caused understory disturbance during the past 80 to 100 vears; an all-aded structure and multilavered canopies; addredations of	Go to Question 8b	
	canopy trees interspersed with canopy gaps; and significant numbers		
	of standing dead snags and downed logs?		

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEC	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 welland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

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

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





Modified Category 2

End of Quantitative Rating. Complete Categorization Worksheets.

38

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	3	
0	Metric 2. Buffers and surrounding land use	9	
	Metric 3. Hydrology	13	
	Metric 4. Habitat	9	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	4	
	TOTAL SCORE	38	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet.

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

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date:	
TRC Companies, Inc.	
Address:	
1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
216-347-3342	
e-mail address:	
Name of Wetland: W-EVN-2	
Vegetation Communit(ies):	
PFO	
HGM Class(es): Depression (I)	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Lang or LITM Coordinate	
	41.256029 -81.397537
	Twinsburg
County	Summit
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020502
Site Visit	02/21/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	
	See Report
	See Report
Delineation report/map	See Report

Name of Wetland: W-EVN-2		
Wetland Size (acres, hectares):		~9-acres
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc		1
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc See Report	-	
Comments. Narrative Discussion. Justification of Category Changes:		
Final score : 49Cat	egory:	2

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	·······	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
0.5	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 welland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

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

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





Modified Category 2

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	3	
-	Metric 2. Buffers and surrounding land use	12	
	Metric 3. Hydrology	16	
	Metric 4. Habitat	9	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	9	
	TOTAL SCORE	49	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet.

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

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort		
Date:		
TRC Companies, Inc.		
Address: 1382 West Ninth Street Suite 400 Cleveland OH 44113		
Phone Number:		
216-347-3342		
e-mail address: evannort@trccompanies.com		
Name of Wetland: W-EVN-3		
Vegetation Communit(ies): PEM		
HGM Class(es): Depression (I)		
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.		
See Report		
Lat/Lang or LITM Coordinate		
	41.254384 -81.398396	
	Twinsburg	
County	Summit	
Township	N/A	
Section and Subsection	N/A	
Hydrologic Unit Code	041100020502	
Site Visit	02/21/2024	
National Wetland Inventory Map	See Report	
Ohio Wetland Inventory Map	See Report	
Soil Survey	See Report	
Delineation report/map	See Report	
Name of Wetland: W-EVN-3		
--	---------	-----------
Wetland Size (acres, hectares):		~0.3-acre
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc See Report	2.	
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 20 Cat	tegory:	1

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	·······	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	e steget, e otatao	
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

|--|

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

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





End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
-	Metric 2. Buffers and surrounding land use	7	
	Metric 3. Hydrology	7	
	Metric 4. Habitat	8	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-3	
	TOTAL SCORE	20	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

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

Final Category

Choose one Category 1 Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date:	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number:	
216-347-3342 e-mail address:	
evannort@trccompanies.com	
Name of Wetland: W-EVN-4	
Vegetation Communit(ies): PEM	
HGM Class(es): Depression (I)	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
	1
Lat/Long or UTM Coordinate	41.25428 -81.400257
USGS Quad Name	Twinsburg
County	Summit
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020502
Site Visit	02/21/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report

Name of Wetland: W-EVN-4		
Wetland Size (acres, hectares):		~0.26-acre
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		1
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Report		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 23 Cate	gory:	1

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	······································	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
0.5	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEC	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 welland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

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

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





Category 1

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	9	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	1	
	TOTAL SCORE	23	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

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

Final Category

Choose one Category 1 Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date:	
02/21/2024	
Affiliation: TRC Companies, Inc.	
Address:	
1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
216-347-3342	
e-mail address: evannort@trccompanies.com	
Name of Wetland: W-EVN-5	
Vegetation Communit(ies): PFM	
HGM Class(es):	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Long or UTM Coordinate	41.254029 -81.403217
USGS Quad Name	Twinsburg
County	Summit
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020502
Site Visit	02/21/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report

Name of Wetland: W-EVN-5		
Wetland Size (acres, hectares):		~0.26-acre
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Report		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 22.5 Catego	ry:	1

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	······································	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 welland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	e steget, e otatao	
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

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

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





22.5 Category 1

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
J	Metric 2. Buffers and surrounding land use	4	
	Metric 3. Hydrology	10	
	Metric 4. Habitat	7.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	0	
	TOTAL SCORE	22.5	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

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

Final Category

Choose one Category 1 Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date:	
02/21/2024	
Affiliation: TRC Companies, Inc.	
Address:	
1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number: 216-347-3342	
e-mail address:	
evannort@trccompanies.com	
Name of Wetland: W-EVN-6	
Vegetation Communit(ies): PEM	
HGM Class(es): Depression (I)	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Long or UTM Coordinate	41 253075 81 404532
USGS Quad Name	41.233973 -01.404332
	Twinsburg
County	Summit
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020502
Site Visit	02/21/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	Soo Ponort
	See Report

Name of Wetland: W-EVN-6		
Wetland Size (acres, hectares):		~0.24-acre
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		1
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Report		
Commente Nerretive Discussion Justification of Category Changes		
Final approximation of the second s		
Final score : 22.5 Cate	jory:	1

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	······································	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 welland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

|--|

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

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




22.5

Category 1

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
J	Metric 2. Buffers and surrounding land use	4	
	Metric 3. Hydrology	10	
	Metric 4. Habitat	7.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	0	
	TOTAL SCORE	22.5	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

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

Final Category

Choose one Category 1 Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date:	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, Obio 44113	
Phone Number:	
216-347-3342	
e-mail address: evannort@trccompanies.com	
Name of Wetland: W-EVN-7	
Vegetation Communit(ies): PEM, PSS	
HGM Class(es): Depression (I)	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Long or UTM Coordinate	41.249103 -81.39332
USGS Quad Name	Hudson
County	Summit
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020502
Site Visit	02/21/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report

retard Size (acres, hectares): -0.79-acre etch: Include north arrow, relationship with other surface waters, vegetation zones, etc. -0.79-acre se Report -0.79-acre
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5 ,,
nal score : 30.5 Category: 2

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	······································	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
0.5	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	e steget, e otatao	
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

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

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





30.5

Category 2

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
J	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	16	
	Metric 4. Habitat	8.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-1	
	TOTAL SCORE	30.5	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet.

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

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date:	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number:	
evannort@trccompanies.com	
Name of Wetland: W-EVN-8	
Vegetation Communit(ies): PEM, PFO	
HGM Class(es): Depression (I)	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Long or UTM Coordinate	
USGS Quad Name	41.252622 -81.395594
	Twinsburg
	Summit
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020502
Site Visit	02/21/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report

Name of Wetland: W-EVN-8		
Wetland Size (acres, hectares):		~8.64-acres
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		1
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Report		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 44 Categ	gory:	2

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	·······	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 welland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

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

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





Modified Category 2

End of Quantitative Rating. Complete Categorization Worksheets.

44

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	3	
-	Metric 2. Buffers and surrounding land use	8	
	Metric 3. Hydrology	20	
	Metric 4. Habitat	10	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	3	
	TOTAL SCORE	44	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet.

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you onewer "Yee" to any	VES		La quantitative rating pages loss than the Category 2 seering
of the following questions:	vetland is		is quantitative rating score less than the Category 2 scoring threshold (excluding gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Due $2745 \pm 54(\text{C})$ and high science and for the product of the science of the s
Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	Categorized as a Category 3 wetland		assessments to determine if the wetland has been over- categorized by the ORAM
Did you answer "Yes" to any of the following questions:	YES Wetland should be	NO	Evaluate the wetland using the 1) narrative criteria in OAC Rule 3745-1-54(C) and 2) the quantitative rating score. If the wetland is determined to be a Category 3 wetland using
Narrative Rating Nos. 1, 8b, 9b, 9e, 11	evaluated for possible Category 3 status		either of these, it should be categorized as a Category 3 wetland. Detailed biological and/or functional assessments may also be used to determine the wetland's category.
Did you answer "Yes" to	YES	NO	Is quantitative rating score greater than the Category 2
Narrative Rating No. 5	Wetland is categorized as a Category 1 wetland		scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional assessments to determine if the wetland has been under-categorized by the ORAM
Does the quantitative score fall within the scoring range of a Category 1, 2, or 3 wetland?	Wetland is assigned to the appropriate category based on the scoring range	NO	If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the <i>"gray zone"</i> for Category 1 or 2 or Category 2 or 3 wetlands?	YES Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria		Rater has the option of assigning the wetland to the higher of the two categories or to assign a category based on the results of a nonrapid wetland assessment method, e.g. functional assessment, biological assessment, etc, and a consideration of the narrative criteria in OAC rule 3745-1- 54(C).
Does the wetland otherwise exhibit <i>moderate OR superior</i> hydrologic OR habitat, OR recreational functions AND the wetland was <i>not</i> categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date:	
TRC Companies, Inc.	
Address:	
Phone Number:	
216-347-3342	
e-mail address: evannort@trccompanies.com	
Name of Wetland: W-EVN-9	
Vegetation Communit(ies): PEM	
HGM Class(es):	
Riverine Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Long or UTM Coordinate	41.229582 -81.382605
USGS Quad Name	Hudson
County	Portage
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020502
Site Visit	02/22/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report

Name of Wetland: W-EVN-9	
Wetland Size (acres, hectares):	~0.33-acre
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
See Report	
Commanda Namativa Discussion, Justification of Catagony Changes	
comments, Narrauve Discussion, Justification of Category Changes:	
Final score : 28.5 Catego	ry: 1

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	······································	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 welland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

|--|

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

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





28.5 Category 1

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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	circle		
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
-	Metric 2. Buffers and surrounding land use	4	
	Metric 3. Hydrology	15	
	Metric 4. Habitat	7.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	1	
	TOTAL SCORE	28.5	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

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

Final Category



End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date: 02/22/2024	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number:	
216-347-3342	
e-mail address: evannort@trccompanies.com	
Name of Wetland: W-EVN-10	
Vegetation Communit(ies): PEM	
HGM Class(es): Riverine	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Long or UTM Coordinate	41.230247 -81.382564
USGS Quad Name	Hudson
County	Portage
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020502
Site Visit	02/22/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report

Name of Wetland: W-EVN-10		
Wetland Size (acres, hectares):		~0.07-acre
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		I
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Report		
Comments, Narraive Discussion, Justification of Category Changes.		
Final score : 20.5 Categ	ory:	1

Scoring Boundary Worksheet

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

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

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

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	······································	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	e steget, e otatao	
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

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

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





End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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	circle			
		answer or		
		insert	Result	
		score		
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.	
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.	
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.	
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.	
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.	
	Question 6. Bogs	YES NO	If yes, Category 3.	
	Question 7. Fens	YES NO	If yes, Category 3.	
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.	
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.	
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.	
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3	
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.	
	Question 10. Oak Openings	YES NO	If yes, Category 3	
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	0		
-	Metric 2. Buffers and surrounding land use	4		
	Metric 3. Hydrology	14		
	Metric 4. Habitat	6.5		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	-4		
	TOTAL SCORE	20.5	Category based on score breakpoints 1	

Complete Wetland Categorization Worksheet.

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

Final Category



End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date: 02/22/2024	
02/25/2024	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number:	
216-347-3342	
evannort@trccompanies.com	
Name of Wetland: W-EVN-11	
Vegetation Communit(ies): PEM	
HGM Class(es): Depression	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Long or UTM Coordinate	41.21189 -81.382458
USGS Quad Name	Hudson
County	Portage
Township	
	N/A
	N/A
Hydrologic Unit Code	041100020502
Site Visit	02/23/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report

Name of Wetland: W-EVN-11		
Wetland Size (acres, hectares):		~2.54-acres
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Report		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 25 Catego	ry:	1

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	······································	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 welland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

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

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





End of Quantitative Rating. Complete Categorization Worksheets.

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

Complete Wetland Categorization Worksheet.

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

Final Category



End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date: 02/02/024	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number:	
216-347-3342 e-mail address:	
evannort@trccompanies.com	
Name of Wetland: W-EVN-12	
Vegetation Communit(ies): PEM	
HGM Class(es): Depression	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Long or UTM Coordinate	41.215887 -81.382487
USGS Quad Name	Hudson
County	Portage
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020502
Site Visit	041100020302
National Wetland Inventory Man	02/23/2024
	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report

Name of Wetland: W-EVN-12		
Wetland Size (acres, hectares):		~1.00-acre
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Report		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 26.5 Catego	ory:	1

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	·······	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 welland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

|--|

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

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





26.5 Category 1

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
-	Metric 2. Buffers and surrounding land use	11	
	Metric 3. Hydrology	12	
	Metric 4. Habitat	6.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-4	
	TOTAL SCORE	26.5	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

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

Final Category



End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date: 02/22/2024	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number:	
216-347-3342	
evannort@trccompanies.com	
Name of Wetland: W-EVN-13	
Vegetation Communit(ies): PEM, PFO	
HGM Class(es):	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Long or UTM Coordinate	41.216856 -81.382741
USGS Quad Name	Hudson
County	Portage
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020502
Site Visit	02/23/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	
	See Report

Name of Wetland: W-FVN-13		
Wetland Size (acres, hectares):		~1.68-acres
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc	-	I
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc See Report		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 27 Cat	egory:	1

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	·······	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
0.5	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 welland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

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

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





End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
-	Metric 2. Buffers and surrounding land use	12	
	Metric 3. Hydrology	9	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-3	
	TOTAL SCORE	27	Category based on score breakpoints 1

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

Final Category



End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date: 02/22/2024	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number:	
216-347-3342	
evannort@trccompanies.com	
Name of Wetland: W-EVN-14	
Vegetation Communit(ies): PEM	
HGM Class(es): Depression	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Long or UTM Coordinate	41.218241 -81.382625
USGS Quad Name	Hudeop
County	
	Portage
	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020502
Site Visit	02/23/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report

Name of Wetland: W-EVN-14		
Wetland Size (acres, hectares):	1	0.099
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Report		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 29.5Categ	ory:	1

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	······································	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 welland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

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

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





29.5

Category 1

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	0	
-	Metric 2. Buffers and surrounding land use	12	
	Metric 3. Hydrology	10	
	Metric 4. Habitat	7.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	0	
	TOTAL SCORE	29.5	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

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

Final Category



End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date: 02/22/2024	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number:	
210-347-3342	
evannort@trccompanies.com	
Name of Wetland: W-EVN-15	
Vegetation Communit(ies): PEM, PFO	
HGM Class(es): Depression	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Long or UTM Coordinate	41.218764 -81.382605
USGS Quad Name	Hudson
County	Portage
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020502
Site Visit	02/23/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report

Name of Wetland: W-EVN-15		
Wetland Size (acres, hectares):		~0.24-acre
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Report		
Community Nametica Discussion, Justification of Ostanom, Changes,		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 29 Catego	ory:	1

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	······································	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 welland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	e steget, e otatao	
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

|--|

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

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





Category 1

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and surrounding land use	12	
	Metric 3. Hydrology	8	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	1	
	TOTAL SCORE	29	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

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

Final Category



End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date: 02/26/2024	
02/20/2024	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH, 44113	
Phone Number: 216-347-3342	
e-mail address:	
evannort@trccompanies.com	
Name of Wetland: W-EVN-16	
Vegetation Communit(ies): PEM, PFO, PSS	
HGM Class(es): Depression	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
	41 217705 -81 416339
USGS Quad Name	
County	Hudson
	Hudson
Township	Hudson Summit N/A
Township Section and Subsection	Hudson Summit N/A N/A
Township Section and Subsection Hydrologic Unit Code	Hudson Summit N/A N/A 041100020401
Township Section and Subsection Hydrologic Unit Code Site Visit	Hudson Summit N/A N/A 041100020401 02/26/2024
Township Section and Subsection Hydrologic Unit Code Site Visit National Wetland Inventory Map	Hudson Summit N/A N/A 041100020401 02/26/2024 See Report
Township Section and Subsection Hydrologic Unit Code Site Visit National Wetland Inventory Map Ohio Wetland Inventory Map	Hudson Summit N/A N/A 041100020401 02/26/2024 See Report See Report
Township Section and Subsection Hydrologic Unit Code Site Visit National Wetland Inventory Map Ohio Wetland Inventory Map Soil Survey	Hudson Summit N/A N/A 041100020401 02/26/2024 See Report See Report See Report

Name of Wetland: W-EVN-16	
Wetland Size (acres, hectares):	~13.10-acres
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Report	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 27 Categor	V : 2

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
2	Decumented High Quality Wetland Is the wetland on record in	Go to Question 3	NO
5	Natural Heritage Database as a high guality wetland?		
	······································	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 wettand	
		Go to Question 5	\sim
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	NO
0	significant inflows or outflows, 2) supports acidophilic mosses,		
	particularly Sphagnum spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table T) is <23%?	Go to Question 7	
<u>7</u>	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	(NO)
	is saturated during most of the year, primarily by a discharge of free	Watland is a Catagorie	Co to Ouestian Or
	nowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	3 wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	o wolland	
		Go to Question 8a	\sim
8a	" Old Growth Forest. " Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Categorv	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100	Co to Question Ob	
	canopy trees interspersed with canopy daps: and significant numbers	GO TO QUESTION OD	
	of standing dead snags and downed logs?		

Bb Mature forested wetlands. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters a breast height (dbh), generally diameters greater than 45cm (17.7in) dbh? YES NO 9a Lake Erie coastal and tributary wetlands. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish? YES NO Go to Question 9a 9b Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls? YES NO Go to Question 10 9c Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegleation. YES NO 9d Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities, although non-native or disturbance tolerant native plant species within its vegetation communities? YES NO 9d Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities? YES				
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9d Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present? YES NO Go to Question 10 Wetland is a Category 3 wetland Go to Question 10 9e Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities? YES NO 9e Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities? YES NO 10 Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas. Fulton Henry, or Wood Counties and can the wetland he YES NO		wetlands, or those dominated by submersed aquatic vegetation.		
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10 Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas Fulton Henry or Wood Counties and can the wetland be YES NO	36	tolerant native plant species within its vegetation communities?		NO
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10 Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas Fulton Henry or Wood Counties and can the wetland be YES NO			evaluated for possible	
Go to Question 10 10 Lake Plain Sand Prairies (Oak Openings) Is the wetland located in Lucas Fulton Henry or Wood Counties and can the wetland be YES NO			Calegory 5 status	
10 Lake Plain Sand Prairies (Oak Openings) Is the wetland located in YES NO			Go to Question 10	
LUCAS FUITON HANN/ OF WOODD COUNTIES and can the Wetland he	10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
characterized by the following description: the wetland has a sandy. Wetland is a Category Go to Question 11		Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
substrate with interspersed organic matter, a water table often within 3 wetland.		substrate with interspersed organic matter, a water table often within	3 wetland.	
several inches of the surface, and often with a dominance of the		several inches of the surface, and often with a dominance of the		
gramineous vegetation listed in Table 1 (woody species may also be Go to Question 11		gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
Natural Areas and Preserves can provide assistance in confirming this		Natural Areas and Preserves can provide assistance in confirming this		
type of wetland and its quality.		type of wetland and its quality.		
11 Relict Wet Prairies. Is the wetland a relict wet prairie community YES NO	11	Relict Wet Prairies. Is the wetland a relict wet prairie community	YES	NO
aominated by some or all of the species in Lable 1. Extensive prairies		cominated by some or all of the species in Table 1. Extensive prairies	Wetland should be	Complete
Counties), Sandusky Plains (Wyandot, Crawford, and Marion evaluated for possible Quantitative		Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties), Category 3 status Rating		Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,		and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	Complete Courtiert	
wongomery, van wert etc.).		wongomery, van wert etc.).	Complete Quantitative	

Table 1. Characteristic plant species.
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invasive/exotic spp	fen species	bog species	0ak Opening species	wet prairie species
Lythrum salicaria	Zygadenus elegans var. glaucus	Calla palustris	Carex cryptolepis	Calamagrostis canadensis
Myriophyllum spicatum	Cacalia plantaginea	Carex atlantica var. capillacea	Carex lasiocarpa	Calamogrostis stricta
Najas minor	Carex flava	Carex echinata	Carex stricta	Carex atherodes
Phalaris arundinacea	Carex sterilis	Carex oligosperma	Cladium mariscoides	Carex buxbaumii
Phragmites australis	Carex stricta	Carex trisperma	Calamagrostis stricta	Carex pellita
Potamogeton crispus	Deschampsia caespitosa	Chamaedaphne calyculata	Calamagrostis canadensis	Carex sartwellii
Ranunculus ficaria	Eleocharis rostellata	Decodon verticillatus	Quercus palustris	Gentiana andrewsii
Rhamnus frangula	Eriophorum viridicarinatum	Eriophorum virginicum		Helianthus grosseserratus
Typha angustifolia	Gentianopsis spp.	Larix laricina		Liatris spicata
Typha xglauca	Lobelia kalmii	Nemopanthus mucronatus		Lysimachia quadriflora
	Parnassia glauca	Schechzeria palustris		Lythrum alatum
	Potentilla fruticosa	Sphagnum spp.		Pycnanthemum virginianum
	Rhamnus alnifolia	Vaccinium macrocarpon		Silphium terebinthinaceum
	Rhynchospora capillacea	Vaccinium corymbosum		Sorghastrum nutans
	Salix candida	Vaccinium oxycoccos		Spartina pectinata
	Salix myricoides	Woodwardia virginica		Solidago riddellii
	Salix serissima	Xyris difformis		
	Solidago ohioensis			
	Tofieldia glutinosa			
	Triglochin maritimum			
	Triglochin palustre			

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





Modified Category 2

End of Quantitative Rating. Complete Categorization Worksheets.

37

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	4	
	Metric 2. Buffers and surrounding land use	8	
	Metric 3. Hydrology	9	
	Metric 4. Habitat	9	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	7	
	TOTAL SCORE	37	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet.

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any	YES	NO	Is quantitative rating score less than the Category 2 scoring
of the following questions:		\smile	threshold (<i>excluding</i> gray zone)? If yes, reevaluate the
Narrative Rating Nos 2 3	Wetland is categorized as a		category of the wetland using the narrative criteria in OAC Rule 3745-1-54(C) and biological and/or functional
4, 6, 7, 8a, 9d, 10	Category 3 wetland		assessments to determine if the wetland has been over-
			categorized by the ORAM
of the following questions:	YES	NO	Rule 3745-1-54(C) and 2) the quantitative rating score. If
	Wetland should be		the wetland is determined to be a Category 3 wetland using
Narrative Rating Nos. 1, 8b,	evaluated for		either of these, it should be categorized as a Category 3
00, 00, 11	3 status	\frown	may also be used to determine the wetland's category.
Did you answer "Yes" to	YES	NO	Is quantitative rating score greater than the Category 2
Narrative Rating No 5	Wetland is		scoring threshold (<i>including</i> any gray zone)? If yes, reevaluate the category of the wetland using the narrative
	categorized as a		criteria in OAC Rule 3745-1-54(C) and biological and/or
	Category 1 wetland		functional assessments to determine if the wetland has
Does the quantitative score	YES	NO	If the score of the wetland is located within the scoring
fall within the scoring range		\smile	range for a particular category, the wetland should be
of a Category 1, 2, or 3 wetland?	Wetland is assigned to the		assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can
	appropriate		be used to clarify or change a categorization based on a
	category based on		quantitative score.
Does the quantitative score	(YES)	NO	Rater has the option of assigning the wetland to the higher
fall with the "gray zone" for			of the two categories or to assign a category based on the
2 or 3 wetlands?	assigned to the		functional assessment, biological assessment, etc. and a
	higher of the two		consideration of the narrative criteria in OAC rule 3745-1-
	categories or assigned to a		54(C).
	category based on		
	detailed		
	the narrative		
	criteria		
Does the wetland otherwise exhibit moderate OR superior	YES	NO	A wetland may be undercategorized using this method, but still exhibit one or more superior functions e.g. a wetland's
hydrologic OR habitat, OR	Wetland was	Wetland is	biotic communities may be degraded by human activities,
recreational functions AND	undercategorized	assigned to	but the wetland may still exhibit superior hydrologic
categorized as a Category 2	written justification	determined	or regional significance, etc. In this circumstance, the
wetland (in the case of	for recategorization	by the	narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are
Category 3 wetland (in the	on Background	URAIVI.	corrected. A written justification with supporting reasons or
case of superior functions) by	Information Form		information for this determination should be provided.
this method?			

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date: 02/26/2024	
02/20/2024	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number:	
2 10-347-3342	
evannort@trccompanies.com	
Name of Wetland: W-EVN-17	
Vegetation Communit(ies): PEM, PFO, PSS	
HGM Class(es): Depression	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
	1
Lat/Long or UTM Coordinate	41.217568 -81.410878
USGS Quad Name	Hudson
County	Summit
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020401
Site Visit	02/26/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	See Report
	See ropen

Name of Wetland: W-EVN-17		
Wetland Size (acres, hectares):		~0.26-acre
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		1
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Report		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 23 Cate	gory:	1

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	·······	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Cata Quastian Ob	Cata Overstien 10
9h	Does the wetland's hydrology result from measures designed to		
55	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Category 3 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland	Co to Question Od	Co to Question 10
	"estuarine" wetland with lake and river influenced hydrology. These	Go to Question 90	Go to Question To
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
	wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Co to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	120	
		Wetland should be	Go to Question 10
		evaluated for possible	
		Calegory 5 status	
		Go to Question 10	\sim
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within	3 wetland.	
	several inches of the surface, and often with a dominance of the		
	gramineous vegetation listed in Table 1 (woody species may also be present). The Obio Department of Natural Resources Division of	Go to Question 11	
	Natural Areas and Preserves can provide assistance in confirming this		
	type of wetland and its quality.		\sim
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plains (Wyandot, Crawford, and Marion	evaluated for possible	Quantitative
	Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties),	Category 3 status	Rating
	and portions of western Onio Counties (e.g. Darke, Mercer, Miami, Montgomery, Van Wert etc.)	Complete Quantitative	
	wongomory, van wort die.j.	Rating	
--			

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

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





End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
	Metric 2. Buffers and surrounding land use	4	
	Metric 3. Hydrology	7	
	Metric 4. Habitat	8	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	2	
	TOTAL SCORE	23	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

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

Final Category

Choose one Category 1 Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date: 02/26/2024	
Affiliation:	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number:	
216-347-3342	
evannort@trccompanies.com	
Name of Wetland: W-EVN-18	
Vegetation Communit(ies): PEM, POW, PFO	
HGM Class(es):	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Long or UTM Coordinate	41.217665 -81.408207
USGS Quad Name	Hudson
County	Summit
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020401
Site Visit	02/26/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	See Report
Soil Survey	See Report
Delineation report/map	Soo Poport
	See Report

Name of Wetland: W-EVN-18		
Wetland Size (acres, hectares):		~8.94-acres
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, et	с.	L
See Report		
Comments, Narrative Discussion, Justification of Category Changes:		
rinal score : 45 Ca	liegory:	2

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	······································	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Ob	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	e steget, e otatao	
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

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

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





End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	3	
	Metric 2. Buffers and surrounding land use	9	
	Metric 3. Hydrology	17	
	Metric 4. Habitat	8	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	8	
	TOTAL SCORE	45	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet.

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

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name: Erin Van Nort	
Date: 02/26/2024	
02/20/2024	
TRC Companies, Inc.	
Address: 1382 West Ninth Street, Suite 400, Cleveland, OH 44113	
Phone Number:	
216-347-3342	
evannort@trccompanies.com	
Name of Wetland: W-EVN-19	
Vegetation Communit(ies): PEM, PFO	
HGM Class(es): Depression	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
See Report	
Lat/Long or UTM Coordinate	41.21723 -81.40345
USGS Quad Name	Hudson
County	Summit
Township	N/A
Section and Subsection	N/A
Hydrologic Unit Code	041100020401
Site Visit	02/26/2024
National Wetland Inventory Map	See Report
Ohio Wetland Inventory Map	Soo Poport
Soil Survey	
	See Report
Delineation report/map	See Report

Name of Wetland: W-EVN-19		
Wetland Size (acres, hectares):		~2.28-acres
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.		1
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc. See Report		
Comments, Narrative Discussion, Justification of Category Changes:		
Final score : 41.5 Cates	gory:	2

Scoring Boundary Worksheet

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

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

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

Narrative Rating

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

#	Question	Circle one	
1	Critical Habitat Is the wetland in a township section or subsection of	YES	NO
•	a United States Geological Survey 7.5 minute Quadrangle that has	120	
	been designated by the U.S. Fish and Wildlife Service as "critical	Wetland should be	Go to Question 2
	habitat" for any threatened or endangered plant or animal species?	evaluated for possible	
	threatened species which can be found in Ohio, the Indiana Bat has	Category 3 status	
	had critical habitat designated (50 CFR 17.95(a)) and the piping plover	Go to Question 2	
	has had critical habitat proposed (65 FR 41812 July 6, 2000).		\sim
2	Threatened or Endangered Species. Is the wetland known to contain	YES	NO
	threatened or endangered plant or animal species?	Wetland is a Category	Go to Question 3
	anoatorioù or oriaangoroù plant or animar oposioo.	3 wetland.	
	Description of the August Matterial is the wetland on record in	Go to Question 3	
3	Natural Heritage Database as a high quality wetland?	TEO	
	······································	Wetland is a Category	Go to Question 4
		3 wetland	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland	YES	NO
	contain documented regionally significant breeding or nonbreeding		
	waterfowl, neotropical songbird, or shorebird concentration areas?	Wetland is a Category	Go to Question 5
		5 welland	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre)	YES	NO
	vegetation that is dominated (greater than eighty per cent areal cover)	Wetland is a Category	Go to Question 6
	by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis, or	1 wetland	
	2) an acidic pond created or excavated on mined lands that has little or		
6	no vegetation?	Go to Question 6	
0	significant inflows or outflows. 2) supports acidophilic mosses.	TES	
	particularly <i>Sphagnum</i> spp., 3) the acidophilic mosses have >30%	Wetland is a Category	Go to Question 7
	cover, 4) at least one species from Table 1 is present, and 5) the	3 wetland	
	cover of invasive species (see Table 1) IS <25%?	Go to Question 7	
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that	YES	NO
-	is saturated during most of the year, primarily by a discharge of free		
	flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0)	Wetland is a Category	Go to Question 8a
	invasive species listed in Table 1 is <25%?	5 welland	
		Go to Question 8a	\sim
8a	"Old Growth Forest." Is the wetland a forested wetland and is the	YES	NO
	overstory canopy trees of great age (exceeding at least 50% of a	Wetland is a Category	Go to Question 8b
	projected maximum attainable age for a species); little or no evidence	3 wetland.	
	of human-caused understory disturbance during the past 80 to 100		
	years; an all-aged structure and multilayered canopies; aggregations of	Go to Question 8b	
	of standing dead snags and downed logs?		
	JJ	I Contraction of the second	1

			\frown
8b	Mature forested wetlands . Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of	YES	NO
	deciduous trees with large diameters at breast height (dbh), generally	Wetland should be	Go to Question 9a
	diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
		Category 3 status.	
		Go to Question 9a	_
9a	Lake Erie coastal and tributary wetlands. Is the wetland located at	YES	(NO)
	an elevation less than 575 feet on the USGS map, adjacent to this	Co to Outostion Oh	Ca to Outstian 10
9b	Does the wetland's hydrology result from measures designed to	YES	
•	prevent erosion and the loss of aquatic plants, i.e. the wetland is	120	
	partially hydrologically restricted from Lake Erie due to lakeward or	Wetland should be	Go to Question 9c
	landward dikes or other hydrological controls?	evaluated for possible	
		Calegory 5 status	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary hydrological influence,	YES	NO
	i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations) or the wetland can be characterized as an	Go to Question 9d	Co to Ouestion 10
	"estuarine" wetland with lake and river influenced hydrology. These	Co to Question Su	
	include sandbar deposition wetlands, estuarine wetlands, river mouth		
04	wetlands, or those dominated by submersed aquatic vegetation.	VEO	NO
90	vegetation communities, although non-native or disturbance tolerant	YES	NO
	native species can also be present?	Wetland is a Category	Go to Question 9e
		3 wetland	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance	YES	NO
	tolerant native plant species within its vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status	
		Co to Question 10	
10	Lake Plain Sand Prairies (Oak Openings) Is the wetland located in	YES	NO
-	Lucas, Fulton, Henry, or Wood Counties and can the wetland be		\sim
	characterized by the following description: the wetland has a sandy	Wetland is a Category	Go to Question 11
	substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the	3 wetland.	
	gramineous vegetation listed in Table 1 (woody species may also be	Go to Question 11	
	present). The Ohio Department of Natural Resources Division of		
	Natural Areas and Preserves can provide assistance in confirming this		
11	Relict Wet Prairies . Is the wetland a relict wet prairie community	YES	NO
	dominated by some or all of the species in Table 1. Extensive prairies		
	were formerly located in the Darby Plains (Madison and Union	Wetland should be	Complete
	Counties), Sandusky Plans (wyandol, Crawlord, and Marion Counties), northwest Ohio (e.g. Erie, Huron, Lucas, Wood Counties)	Category 3 status	Rating
	and portions of western Ohio Counties (e.g. Darke, Mercer, Miami,	e steget, e otatao	
	Montgomery, Van Wert etc.).	Complete Quantitative	
		Rating	1

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

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





41.5 Modified Category 2

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM	Summary	Worksheet
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		circle	
		answer or	
		insert	Result
		score	
Narrative Rating	Question 1 Critical Habitat	YES NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES NO	If yes, Category 1.
	Question 6. Bogs	YES NO	If yes, Category 3.
	Question 7. Fens	YES NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
-	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	18.5	
	Metric 4. Habitat	11	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	5	
	TOTAL SCORE	41.5	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet.

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

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.



Stream Forms

E NAME	LOCATIONS-EVN-01, First	Energy - Darrow-	Hudson East	138kV Project.			
E NUMB		RIVER BASIN	DRAINAGE	AREA (mi ²)0.004			
GTH OF	STREAM REACH (ft) _ 200	LAT. 41.2588	878_LONG.		MILE		
E202	4-02-21 SCORER EVN	COMMENTS					
DTE: C	omplete All Items On This	Form - Refer t	to "Field Ev	aluation Manual for O	hio's PHWH S	Streams" for Instru	ction
							~
DIFIC	ATIONS: NONE/N	ATURAL CHANN	VEL REC	OVERED . RECOVER	RING RECE	ENT OR NO RECOVE	RY
eui	PETRATE: Entimate percent	f over three of	oubstrata pro	ant Chack ONLY two pr	odominant cubs	trata TVRE hoves	-
(Ma	ix of 32). Add total number of s	ignificant substra	te types found	(Max of 8). Final metric s	core is sum of b	ioxes A & B.	HI
PE		PERCENT	TYPE			PERCENT	Me
8.1	BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts]			SILT [3 pts]	FREIS [3 nts]	<u>15</u> 10	POL
	BEDROCK [16 pts]		×	FINE DETRITUS [3 pt	s]	25	Subs
10.1	COBBLE (65-256 mm) [12 pts	1	10.50	CLAY or HARDPAN [0	pts]	=	Max
5.6	GRAVEL (2-64 mm) [9 pts]		~	MUCK [0 pts]			7
H . 2	SAND (<2 mm) [6 pts]		100 100	ARTIFICIAL [3 pts]		-	1
DI.	Total of Percentages of		(A)			(B)	A +
BIO	TWO MOST PREDOMINATE	DCK U	DES: 3			TYPES 4	
12.12							
Max	kimum Pool Depth Measure t	he maximum po	ool depth with	in the 61 meter (200 ft)	evaluation reach	n at the time of	Pool
-	Insting And alunga analy for	as we also a stress of a	waterne liteter	ningel (Charle OMIN an	a hard.		D.A.m.h.c
eva > 30	luation. Avoid plunge pools from centimeters [20 pts]	m road culverts o	or storm water	pipes) (Check ONLY or > 5 cm - 10 cm [15 pt	ie box): sl		Max
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ADDITIONAL STREAM INFORMATION (This Information Mus	st Also be Completed):		
QHEI PERFORMED? Yes Vo QHEI Score	e (If Yes, Attach Completed QHEI Form)		
DOWNSTREAM DESIGNATED USE(S)			
WWH Name: <u>Tinkers Creek</u>	Distance from Evaluated Stream <u>24 meters</u>		
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: <u>Twinsburg</u>	NRCS Soil Map Page: _ NRCS Soil Map Stream Order _		
County: <u>Summit</u>	Township / City: <u>Hudson</u>		
MISCELLANEOUS			
Base Flow Conditions? (Y/N): <u>yes</u> Date of last precipitation:	<u>2024-02-17</u> Quantity: <u>.14</u>		
Photo-documentation Notes:			
Elevated Turbidity? (Y/N): <u>no</u> Canopy (% open): <u>75</u>			
Were samples collected for water chemistry? (Y/N): <u>no</u> Lab Sample # or ID (attach results): _			
Field Measures: Temp (°C) <u>6.1</u> Dissolved Oxygen (mg/l) _ p	oH (S.U.) 7.52 Conductivity (µmhos/cm) _		
Is the sampling reach representative of the stream (Y/N) \underline{yes}	If not, please explain:		

Additional comments/description of pollution impacts:

BIOLOGICAL OBSERVATIONS (Record all observations below) N/A

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

FLOW -

SEE PAGE 3

SKETCH OF STREAM REACH: S-EVN-01



OhieEPA	Qualitative Habita	at Evaluation Index ment Field Sheet	QHEI Score: (47.50)
Stream & Location: S-EVN-2 (UN	T to Tinkers Creek) north of I-80) in the City of Hudson, Ohio	<i>M</i> : 0.2 <i>Date</i> : 2 / 21 / 24
FE Darrow-Hudson East 138kV ROW A	ssurance Project Scorers	s Full Name & Affiliation <u>: E.</u>	Given & E. Van Nort, TRC
River Code:	_STORET #:	Lat./ Long.: 41 256849	/8_1397514 Office verified location □
1] SUBSTRATE Check ONLY Two sestimate % or note BEST TYPES POOL RIFFL	Bubstrate TYPE BOXES; every type present OTHER TYPES POOI HARDPAN [4] DETRITUS [3] DETRITUS [3] MUCK [2] SILT [2] SILT [2] SCORE natural substrate 4 or more [2] Sudge from point 3 or less [0]	Check ONI ORIGIN LIMESTONE [1] OTILLS [1] OHARDPAN [0] SANDSTONE [0] CHORN INTERNATION CHORN INTERNAT	COR 2 & average) QUALITY HEAVY [-2] SILT MODERATE [-1] FREE [1] DEON MODERATE [-1] EXTENSIVE [-2] MODERATE [-1] MODERATE [-1] MAXIMUM 20 MAXIMUM 20
2] INSTREAM COVER Indicate pr quality; 2-N quality; 3-Highest quality in moderate o diameter log that is stable, well develop 2 UNDERCUT BANKS [1] 0VERHANGING VEGETATION [SHALLOWS (IN SLOW WATER) ROOTMATS [1]	esence 0 to 3: 0-Absent; 1-Very Moderate amounts, but not of his r greater amounts (e.g., very lar ed rootwad in deep / fast water, POOLS > 70cm [2] 1] ROOTWADS [1] [1] BOULDERS [1]	v small amounts or if more common of ghest quality or in small amounts of ge boulders in deep or fast water, la or deep, well-defined, functional po OXBOWS, BACKWATERS AQUATIC MACROPHYTE 1 LOGS OR WOODY DEBR	of marginal highest rge Check ONE (Or 2 & average) ols. □ EXTENSIVE >75% [11] 5 [1] □ MODERATE 25-75% [7] 5 [1] □ SPARSE 5-<25% [3] IS [1] □ NEARLY ABSENT <5% [1] Cover
Comments			Maximum 6.00 20
3] CHANNEL MORPHOLOGY C SINUOSITY DEVELOPMEN HIGH [4] EXCELLENT [MODERATE [3] GOOD [5] LOW [2] FAIR [3] NONE [1] POOR [1] Comments 4] BANK EROSION AND RIPAH River right looking downstream RIP River right looking downstream NONE / LITTLE [3] MODE MODERATE [2] NAR HEAVY / SEVERE [1] VER NONE Comments	heck ONE in each category (Or NT CHANNELIZATIO 7] NONE [6] □ RECOVERED [4] □ RECOVERING [3] □ RECOVERING [3] □ RECENT OR NO REC RIAN ZONE Check ONE in e ARIAN WIDTH Image: Comparison of the part	2 & average) DN STABILITY HIGH [3] MODERATE [2] Image: Construction of the second seco	Channel Maximum 20 12.00 12.00 12.00 12.00 12.00 12.00 20 12.00 12.00 12.00 20 12.00 12.00 20 10 10 10 10 10 10 10 10 10 1
5] <i>POOL / GLIDE AND RIFFLE .</i> MAXIMUM DEPTH CH Check ONE (<i>ONLY</i> !) Check □ > 1m [6] □ POOL WI □ 0.7-<1m [4] □ POOL WI □ 0.4-<0.7m [2] □ POOL WI □ 0.2-<0.4m [1] □ < 0.2m [0] Comments	/ RUN QUALITY IANNEL WIDTH ONE (Or 2 & average) DTH > RIFFLE WIDTH [2] DTH = RIFFLE WIDTH [1] DTH > RIFFLE WIDTH [1] DTH > RIFFLE WIDTH [0]	CURRENT VELOCITY Check ALL that apply TORRENTIAL [-1] SLOW [1] VERY FAST [1] INTERSTITIA FAST [1] INTERMITTE MODERATE [1] EDDIES [1] Indicate for reach - pools and riffle	LL [-1] NT [-2] s.
Indicate for functional riffle of riffle-obligate species: RIFFLE DEPTH RUN BEST AREAS > 10cm [2] MAXIN BEST AREAS 5-10cm [1] MAXIN BEST AREAS < 5cm [metric=0] Comments	es; Best areas must be I Check ONE (N DEPTH RIFFLE / IUM > 50cm [2] STABLE (e IUM < 50cm [1] MOD. STAB UNSTABLE	arge enough to support a p Or 2 & average). RUN SUBSTRATE RIFFL .g., Cobble, Boulder) [2] BLE (e.g., Large Gravel) [1] E (e.g., Fine Gravel, Sand) [0]	Image: None of the state o
6] <i>GRADIENT</i> (20.1 ft/mi) □ DRAINAGE AREA (4.83 mi ²) ☑	VERY LOW - LOW [2-4] MODERATE [6-10] HIGH - VERY HIGH [10-6]	%POOL: 25 % %RUN: 75 %	GLIDE: 0 Gradient RIFFLE: 0 Maximum 10

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



ph: 8.19; Temperature: 9.5 C; no fish observed

PUBLIC / PRVATE / BOTH / NA ACTIVE / HISTORIC / BOTH / NA FLOOD CONTROL / DRAINAGE MODIFIED / DIPPED OUT / NA MONNG-BED OAD-STABLE IMPOUNDED / DESICCATED YOUNG-SUCCESSION-OLD SPRAY / SNAG / REMOVED **RELOCATED / CUTOFFS DI MAINTENANCE ÅRMOURED / SLUMPS LEVEED / ONE SIDED ISLANDS / SCOURED**

HARDENED / URBAN / DIRT&GRIME LOGGING / IRRIGATION / COOLING FALSE BANK / MANURE / LAGOON BMPs-CONSTRUCTION-SEDIMENT NATURAL / WETLAND / STAGNANT WWTP / CSO / NPDES / INDUSTRY ACID / MINE / QUARRY / FLOW WASH H₂0 / TILE / H₂0 TABLE BANK / EROSION / SURFACE **CONTAMINATED / LANDFILL** El ISSUES Circle some & COMMENT

ATMOSPHERE / DATA PAUCITY

PARK / GOLF / LAWN / HOME

x bankfull width 5.8 bankfull max. depth floodprone x2 width max. depth 2.4m bankfull x depth entrench. ratio X width 4.5m Legacy Tree: x depth 2m W/D ratio

FI MEASUREMENTS

Stream Drawing



ChicEPA	Qualitative Habitat I and Use Assessme	Evaluation Index ent Field Sheet	QHEI Score: 51.00
Stream & Location: S-EVN-3 (UN	to Tinkers Creek) north of I-80 in t	he City of Hudson, Ohio	l: Date: _2 _/ _21 _/ 24
FE Darrow-Hudson East 138kV ROW A	ssurance Project Scorers Fu	Ill Name & Affiliation: E. G	iven & E. Van Nort, TRC
River Code:	_STORET #:L	<i>at./ Long.:</i> 41. 2540762	/8_1 . <u>4029179</u> Office verified <i>location</i> □
1] SUBSTRATE Check ONLY Two s estimate % or note BEST TYPES POOL RIFFLE BLDR /SLABS [10] BOULDER [9] 10 COBBLE [8] 22 GRAVEL [7] 10 BEDROCK [5] NUMBER OF BEST TYPES: 4 Comments	Ubstrate TYPE BOXES; every type present OTHER TYPES HARDPAN [4] DETRITUS [3] 10 DETRITUS [3] 10 11 12 13 14 15 16 17 18 19 10 110 111 112 113 113 114 115 115 115 115 115 116 116 117 118 118 119 1110 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 1111 11111 1111 </td <td>Check ONE (ORIGIN FFLE LIMESTONE [1] TILLS [1] WETLANDS [0] HARDPAN [0] SANDSTONE [0] COAL FINES [-2]</td> <td>Or 2 & average) QUALITY A HEAVY [-2] SILT MODERATE [-1] DEONE MODERATE [-1] MODERATE [-1] MODERATE [-1] MODERATE [-1] MAXIMUM 20</td>	Check ONE (ORIGIN FFLE LIMESTONE [1] TILLS [1] WETLANDS [0] HARDPAN [0] SANDSTONE [0] COAL FINES [-2]	Or 2 & average) QUALITY A HEAVY [-2] SILT MODERATE [-1] DEONE MODERATE [-1] MODERATE [-1] MODERATE [-1] MODERATE [-1] MAXIMUM 20
2] INSTREAM COVER Indicate pre quality; 2-N quality; 3-Highest quality in moderate or diameter log that is stable, well develop 1 UNDERCUT BANKS [1] 1 OVERHANGING VEGETATION [7 SHALLOWS (IN SLOW WATER) ROOTMATS [1]	esence 0 to 3: 0-Absent; 1-Very small loderate amounts, but not of highes greater amounts (e.g., very large b ed rootwad in deep / fast water, or d POOLS > 70cm [2] BOOLDERS [1]	all amounts or if more common of it t quality or in small amounts of hig oulders in deep or fast water, larg leep, well-defined, functional pool OXBOWS, BACKWATERS [AQUATIC MACROPHYTES LOGS OR WOODY DEBRIS	marginal ghest ghest AMOUNT Check ONE (Or 2 & average) Check ONE (Or 2 & average) S. EXTENSIVE >75% [11] 1] ✓ MODERATE 25-75% [7] [1] ✓ SPARSE 5-<25% [3]
Comments			Maximum 20
3] CHANNEL MORPHOLOGY CHANNEL MORPHOLOGY CHANNEL SINUOSITY DEVELOPMEN HIGH [4] EXCELLENT [7] MODERATE [3] GOOD [5] LOW [2] FAIR [3] NONE [1] POOR [1] Comments FAIR [3]	IECK ONE in each category (<i>Or 2 &</i> IT CHANNELIZATION [] ONONE [6] CRECOVERED [4] RECOVERING [3] RECENT OR NO RECOVE	STABILITY STABILITY HIGH [3] MODERATE [2] LOW [1] SRY [1]	Channel Maximum 20
4] BANK EROSION AND RIPAR River right looking downstream EROSION IN IN IN INC. NONE / LITTLE [3] INC. MODERATE [2] INC. HEAVY / SEVERE [1] INC. Comments	RIAN ZONE Check ONE in each of ARIAN WIDTH > 50m [4] Image: Check ONE in each of ARIAN WIDTH > 50m [4] Image: Check ONE in each of ARIAN WIDTH ERATE 10-50m [3] Image: Check ONE in each of ARIAN WIDTH ROW 5-10m [2] Image: Check ONE in each of ARIAN WIDTH C NARROW < 5m [1]	Category for EACH BANK (Or 2 per FLOOD PLAIN QUALITY ST, SWAMP [3] [B OR OLD FIELD [2] [ENTIAL, PARK, NEW FIELD [1] [ED PASTURE [1] [PASTURE, ROWCROP [0] [er bank & average) CONSERVATION TILLAGE [1] URBAN OR INDUSTRIAL [0] MINING / CONSTRUCTION [0] ndicate predominant land use(s) nast 100m riparian. Riparian Maximum 10 9.00
5] POOL / GLIDE AND RIFFLE / MAXIMUM DEPTH CH Check ONE (ONLY!) Check 0.7-<1m [4] POOL WI 0.4-<0.7m [2] POOL WI 0.2-<0.4m [1] < 0.2m [0] Comments	RUN QUALITY ANNEL WIDTH ONE (Or 2 & average) DTH > RIFFLE WIDTH [2] TH = RIFFLE WIDTH [1] OTH = RIFFLE WIDTH [1] OTH > RIFFLE WIDTH [0] FAS Image: State of the state of t	CURRENT VELOCITY Check ALL that apply RENTIAL [-1] SLOW [1] Y FAST [1] INTERSTITIAL T [1] INTERMITTENT DERATE [1] EDDIES [1] licate for reach - pools and riffles.	[-1] [-2] Recreation Potential <i>Primary Contact</i> <i>Secondary Contact</i> (circle one and comment on back) <i>Pool /</i> <i>Current</i> <i>Maximum</i>
Indicate for functional riffle of riffle-obligate species: RIFFLE DEPTH RUN BEST AREAS > 10cm [2] MAXIM BEST AREAS 5-10cm [1] MAXIM BEST AREAS < 5cm [metric=0] Comments	s; Best areas must be larg Check ONE (Or 2 DEPTH RIFFLE / RU UM > 50cm [2] STABLE (e.g., 0 UM < 50cm [1] MOD. STABLE UNSTABLE (e.g.	e enough to support a po & average). N SUBSTRATE RIFFLE Cobble, Boulder) [2] (e.g., Large Gravel) [1] J., Fine Gravel, Sand) [0]	Image: None of the second s
6] $GRADIENT$ (42.4 ft/mi) DRAINAGE AREA (1.94 mi ²) (1.94 mi2)	/ERY LOW - LOW [2-4] /IODERATE [6-10] IIGH - VERY HIGH [10-6]	%POOL: 0 %0 %RUN: 100 %RI	GLIDE: 0 Gradient FFLE: 0 Maximum 10

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



FI MEASUREMENTS

max. depth 0.5m

X depth 0.20m x width 4.2m

HARDENED / URBAN / DIRT&GRIME

CONTAMINATED / LANDFILL

WWTP / CSO / NPDES / INDUSTRY

El ISSUES

Circle some & COMMENT

Channel within utility

PUBLIC / PRIVATE / BOTH / NA ACTIVE / HISTORIC / BOTH / NA

DI MAINTENANCE

YOUNG-SUCCESSION-OLD SPRAY / SNAG / REMOVED

ROW, logged, primitive log bridge, decent

substrate under silt.

MODIFIED / DIPPED OUT / NA

MOVING-BEDLOAD-STABLE

ARMOURED / SLUMPS

RELOCATED / CUTOFFS

LEVEED / ONE SIDED

bankfull x depth x bankfull width

LOGGING / IRRIGATION / COOLING **BMPs-CONSTRUCTION-SEDIMENT**

BANK / EROSION / SURFACE

W/D ratio

FALSE BANK / MANURE / LAGOON

bankfull max. depth floodprone x2 width

entrench. ratio

NATURAL / WETLAND / STAGNANT

PARK / GOLF / LAWN / HOME

ATMOSPHERE / DATA PAUCITY

FLOOD CONTROL / DRAINAGE

IMPOUNDED / DESICCATED

ISLANDS / SCOURED

ACID / MINE / QUARRY / FLOW

WASH H₂0 / TILE / H₂0 TABLE

Legacy Tree:

none

Stream Drawing:





Flat (0.5 ft/100 ft)

None

STREAM GRADIENT ESTIMATE

Flat to Moderate

0.5

COMMENTS __small stream draining wetland complex

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

Moderate (2 ft/100 ft)

1.0

15

2.0

2.5

Moderate to Severe

3.0

>3

Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):			
QHEI PERFORMED? Yes Vo QHEI Score (If	Yes, Attach Completed QHEI Form)		
DOWNSTREAM DESIGNATED USE(S)			
WWH Name:	Distance from Evaluated Stream <u>300 meters</u>		
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: <u>Hudson</u> NRC	S Soil Map Page: _ NRCS Soil Map Stream Order _		
County: <u>Summit</u> Townshi	County: <u>Summit</u> Township / City: <u>Hudson</u>		
MISCELLANEOUS			
Base Flow Conditions? (Y/N): <u>yes</u> Date of last precipitation: <u>2024-02-17</u> Quantity: <u>.14</u>			
Photo-documentation Notes:			
Elevated Turbidity? (Y/N): <u>no</u> Canopy (% open): <u>50</u>			
Were samples collected for water chemistry? (Y/N): <u>no</u> Lab Sample # or ID (attach results): _			
Field Measures: Temp (°C) <u>9.6</u> Dissolved Oxygen (mg/l) _ pH (S.U.)	8.13 Conductivity (µmhos/cm) _		
Is the sampling reach representative of the stream (Y/N) <u>yes</u> If not, please explain:			

Additional comments/description of pollution impacts:

BIOLOGICAL OBSERVATIONS

(Record all observations below) N/A 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

FLOW -

SEE PAGE 3

SKETCH OF STREAM REACH: S-EVN-04


ChieEPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

57

TE NUMBER	RIVER CODE RIVER	R BASIN	DRAINAGE A	REA (mi ²) <u>0.0</u> 37			
NGTH OF S	TREAM REACH (ft) 200 LAT.	41.2467693	_LONG8	1.3920614 RIVER MIL	E		
TE	2-22 SCORER EVN CON	MMENTS	Small tributary	running through woods in	nto ROW, decent	t substrate, human	impacts eviden
OTE: Com	plete All Items On This For	rm - Refer t	o "Field Eva	luation Manual for O	hio's PHWH S	Streams" for Inst	ructions
INDIFICAT	ANNEL NONE/NATU ONS:	IRAL CHANN	EL 🕈 REC	OVERED RECOVE	RING RECE	ENT OR NO RECO	VERY
SUBS (Max o	TRATE: Estimate percent of ev of 32). Add total number of signif	very type of s	substrate pres te types found	ent. Check ONLY two pr (Max of 8). Final metric s	edominant subs	strate TYPE boxes	1 HHEI
YPE		PERCENT	TYPE	Contract of the second second		PERCENT	Metric
BL	DP SLABS [16 pts]	10		SILT [3 pts]			Points
BC	DEOCK [16 pts]		1.000	EINE DETRITUS 13 nt	el		Substrate
	BBLE (65-256 mm) [12 pts]	30	1.00	CLAY of HAPDPAN 10	pts]		Max = 40
✓ GF	AVEL (2-64 mm) [9 pts]	25	10.00	MUCK [0 pts]	1.01		27
SA	ND (<2 mm) [6 pts]	10	10.15	ARTIFICIAL [3 pts]		-	21
Dide C	Total of Percentages of	40	(A)			(B)	A+B
ORE OF TW	IO MOST PREDOMINATE SUB	STRATE TYP	PES: 21	TOTAL NUMBER	OF SUBSTRATE	E TYPES: 6	1.1
Maxim	tion Avoid plunce pools from ro	maximum po	ol depth with	in the 61 meter (200 ft)	evaluation reach	n at the time of	Pool Depth
> 30 ce	ntimeters [20 pts]	au cuiverta o	Storn water	> 5 cm - 10 cm [15 pt	s]		Index = 30
> 225							
- 22.5	- 30 cm [30 pts]			< 5 cm [5 pts]		1.14	05
> 10 -	- 30 cm [30 pts] 22.5 cm [25 pts]			< 5 cm [5 pts] NO WATER OR MOIS	T CHANNEL [0	pts]	25
> 10 -	- 30 cm [30 pts] 22:5 cm [25 pts] IENTS			< 5 cm [5 pts] NO WATER OR MOIS MAXIMUM POC	<u>ST CHANNEL [0</u> DL DEPTH (cent	pts) timeters): 15	25
> 10 - COMM BANK	- 30 cm [30 pts] 22.5 cm [25 pts] IENTS FULL WIDTH (Measured as th	ne average of	f 3-4 measure	< 5 cm [5 pts] NO WATER OR MOIS MAXIMUM POO ments) (Check (ST CHANNEL [0 DL DEPTH (cent ONLY one box)	pts] timeters): 15	25 Bankfull
> 10 - COMM BANK > 4.0 m > 3.0 m	- 30 cm [30 pts] 22.5 cm [25 pts] HENTS FULL WIDTH (Measured as the eters (> 13") [30 pts] - 4.0 m (> 9" 7" - 13") [25 pts] - 3.0 m (> 9" 7" - 418") [20 pts]	ne average of	f 3-4 measure	< 5 cm [5 pts] NO WATER OR MOIS MAXIMUM POO MAXIMUM POO > 1 0 m - 1 5 m (> 3' 3' ≤ 1 0 m (≤ 3' 3') [5 pts]	ST CHANNEL [0 DL DEPTH (cent ONLY one box) '- 4' 8") [15 pts] s]	timeters): 15	25 Bankfull Width Max=30
> 10 - COMM > 4.0 m > 3.0 m > 1.5 m	- 30 cm [30 pts] 22.5 cm [25 pts] IENTS FULL WIDTH (Measured as the eters (> 13") [30 pts] - 4.0 m (> 9"7" - 13") [25 pts] - 3.0 m (> 9"7" - 4"8") [20 pts] IENTS	ne average of	f 3-4 measure	< 5 cm [5 pts] NO WATER OR MOIS MAXIMUM POO Ments) (Check (> 1 0 m - 1 5 m (> 3' 3' ≤ 1 0 m (≤ 3' 3') [5 pts	ST CHANNEL [0 DL DEPTH (cent ONLY one box) '- 4' 8") [15 pts] s]	pts] timeters): 15 :	25 Bankfull Width Max=30
> 10 - COMM > 4.0 m > 3.0 m > 1,5 m COMM	- 30 cm [30 pts] 22.5 cm [25 pts] IENTS FULL WIDTH (Measured as the eters (> 13') [30 pts] - 4.0 m (> 9' 7" - 13') [25 pts] - 3.0 m (> 9' 7" - 4' 8") [20 pts] IENTS	ne average of	f 3-4 measure	< 5 cm [5 pts] NO WATER OR MOIS MAXIMUM POO (Check 0 > 10 m - 15 m (> 3' 3' ≤ 10 m (≤3' 3') [5 pts) AVERAGE BAN	ST CHANNEL [0 DL DEPTH (cent ONLY one box) - 4' 8") [15 pts] s] WKFULL WIDTH	pts] timeters): 15 : (meters): 0.9	25 Bankfull Width Max=30 5
> 10 - COMM = 4.0 m > 3.0 m > 1.5 m COMM	- 30 cm [30 pts] 22.5 cm [25 pts] IENTS FULL WIDTH (Measured as th eters (> 13') [30 pts] - 4.0 m (> 9' 7" + 13') [25 pts] - 3.0 m (> 9' 7" + 4' 8") [20 pts] IENTS	ne average of	f 3-4 measure	< 5 cm [5 pts] <u>NO WATER OR MOIS</u> MAXIMUM POO ments) (Check (> 1 0 m - 15 m (> 3' 3' ≤ 1 0 m (≤3' 3') [5 pt: AVERAGE BAN n must also be complet	ST CHANNEL [0 DL DEPTH (cent ONLY one box) '- 4' 8") [15 pts] s] WKFULL WIDTH ed	timeters): 15	25 Bankfull Width Max=30 5
> 10 - COMM = 4.0 m > 3.0 m > 1.5 m COMM	- 30 cm [30 pts] 22.5 cm [25 pts] IENTS FULL WIDTH (Measured as the eters (> 13') [30 pts] - 4.0 m (> 9' 7" - 13') [25 pts] - 3.0 m (> 9' 7" - 4' 8") [20 pts] IENTS RIPARIAN ZONE AND FLOOD	ne average of Th DPLAIN QUA	f 3-4 measure f 3is informatio LITY ☆No	< 5 cm [5 pts] <u>NO WATER OR MOIS</u> MAXIMUM POO ments) (Check (> 1 0 m - 1 5 m (> 3' 3' ≤ 1 0 m (≤3' 3'') [5 pts AVERAGE BAN n <u>must</u> also be complet DTE: River Left (L) and R	CHANNEL [0 DL DEPTH (cent ONLY one box) - 4' 8") [15 pts] s] KFULL WIDTH ed ight (R) as looki	pts] timeters): 15 : (meters): 0.9	25 Bankfull Width Max=30 5
> 10 - COMM > 4.0 m > 3.0 m > 1.5 m COMM	- 30 cm [30 pts] 22.5 cm [25 pts] IENTS FULL WIDTH (Measured as the eters (> 13') [30 pts] - 4.0 m (> 9' 7" - 13') [25 pts] - 3.0 m (> 9' 7" - 4' 8") [20 pts] IENTS RIPARIAN ZONE AND FLOOD RIPARIAN WIDTH (Por Bonlo	ne average of The DPLAIN QUAI FLOOD	f 3-4 measure f 3-4	< 5 cm [5 pts] NO WATER OR MOIS MAXIMUM POO ments) (Check (> 10 m - 15 m (> 3' 3' ≤ 10 m (≤3' 3') [5 pt: AVERAGE BAN n must also be complet DTE: River Left (L) and R M	ET CHANNEL [0 DL DEPTH (cent ONLY one box) '- 4' 8") [15 pts] s] NKFULL WIDTH ed ight (R) as lookin	pts] timeters): 15 : (meters): 0.9	25 Bankfull Width Max=30 5
> 10 - COMM > 4.0 m > 3.0 m > 1.5 m COMM	- 30 cm [30 pts] 22.5 cm [25 pts] IENTS FULL WIDTH (Measured as the erers (> 13') [30 pts] - 4.0 m (> 9' 7" - 13') [25 pts] - 3.0 m (> 9' 7" - 4' 8") [20 pts] IENTS RIPARIAN ZONE AND FLOOD RIPARIAN WIDTH (Per Bank) Wide >10m	ne average of PLAIN QUAI <u>FLOOD</u> L R	f 3-4 measure nis informatio LITY ☆NO PLAIN OUALI (Most Predo Mature Fore	< 5 cm [5 pts] NO WATER OR MOIS MAXIMUM POO ments) (Check (> 1 0 m - 1 5 m (> 3' 3' ≤ 1 0 m (≤3' 3'') [5 pt: AVERAGE BAN n must also be complet DTE: River Left (L) and R LY minant per Bank) st, Wetland	ET CHANNEL [0 DL DEPTH (cent ONLY one box): - 4' 8") [15 pts] s] WKFULL WIDTH ed ight (P) as lookin L R Co	timeters): 15 : (meters): 0.9	25 Bankfull Width Max=30 5
2223 >10 - COMM >4.0 m >1.5 m COMM	- 30 cm [30 pts] 22:5 cm [25 pts] IENTS FULL WIDTH (Measured as the eters (> 13') [30 pts] - 4.0 m (> 9' 7" - 13') [25 pts] - 3.0 m (> 9' 7" - 4' 8") [20 pts] IENTS RIPARIAN ZONE AND FLOOD <u>RIPARIAN WIDTH</u> (Per Bank) Wide >10m Moderate 5-10m	ne average of Th OPLAIN QUAI <u>FLOOD</u> L R	f 3-4 measure f 3-4 measure nis informatio LITY ☆No PLAIN QUALI (Most Predo Mature Fore Immature Fore	< 5 cm [5 pts] NO WATER OR MOIS MAXIMUM POO Ments) (Check (> 10 m - 15 m (> 3' 3' ≤ 10 m (≤3' 3') [5 pts AVERAGE BAN N must also be complet DTE: River Left (L) and R DTE: River Left (L) and R DTE: River Left (L) and R Minant per Bank) st, Wetland orest, Shrub or Old Field	ST CHANNEL [0 DL DEPTH (cent ONLY one box) - 4' 8") [15 pts] s] NKFULL WIDTH ed ight (R) as lookin L R Co	pts] timeters): 15 : (meters): 0.9 ng downstream≯ onservation Tillage	25 Bankfull Width Max=30 5
> 10 - COMM > 4.0 m > 3.0 m > 1.5 m COMM	- 30 cm [30 pts] 22:5 cm [25 pts] IENTS FULL WIDTH (Measured as the eters (> 13') [30 pts] - 4.0 m (> 9' 7" - 13') [25 pts] - 3.0 m (> 9' 7" - 4' 8") [20 pts] IENTS RIPARIAN ZONE AND FLOOD <u>RIPARIAN WIDTH</u> (Per Bank) Wide >10m Moderate 5-10m Narrow <5m	ne average of Th OPLAIN QUAI <u>FLOOD</u> L R	f 3-4 measure f	< 5 cm [5 pts] NO WATER OR MOIS MAXIMUM POO ments) (Check (> 1 0 m - 1 5 m (> 3' 3' ≤ 1 0 m (≤3' 3'') [5 pts AVERAGE BAN N must also be complet DTE: River Left (L) and R DTE: River Left (L) and R Minant per Bank) st, Wetland orest, Shrub or Old Field Park, New Field	ST CHANNEL [0 DL DEPTH (cent ONLY one box) - 4' 8") [15 pts] s] KFULL WIDTH ed ight (R) as lookin L R Co Uri Op	pts] timeters): 15 : (meters): 0.9 ng downstream☆ onservation Tillage ban or Industrial pen Pasture, Row C	25 Bankfull Width Max=30 5
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> 10 - COMM > 4.0 m > 3.0 m > 1.5 m COMM	- 30 cm [30 pts] 22:5 cm [25 pts] IENTS FULL WIDTH (Measured as the eters (> 13') [30 pts] - 4.0 m (> 9' 7'' - 13') [25 pts] - 3.0 m (> 9' 7'' - 4' 8'') [20 pts] IENTS RIPARIAN ZONE AND FLOOD RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS	ne average of Th OPLAIN QUAN <u>FLOOD</u> L R	f 3-4 measure f 3-4	< 5 cm [5 pts] NO WATER OR MOIS MAXIMUM POO Ments) (Check 0 > 1 0 m - 1 5 m (> 3' 3' ≤ 1 0 m (≤3' 3') [5 pt: AVERAGE BAN AVERAGE BAN n <u>must</u> also be complet DTE: River Left (L) and R LY minant per Bank) st, Wetland orest, Shrub or Old Field Park, New Field ture	ST CHANNEL [0 DL DEPTH (cent ONLY one box): '- 4' 3") [15 pts] s] WKFULL WIDTH ed ight (P) as looki L R Co Uri Op Min	timeters): 15 : : (meters): 0.9 ng downstream≯ onservation Tillage ban or Industrial ben Pasture, Row Coning or Construction	25 Bankfull Width Max=30 5
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> 10 - COMN > 4.0 m > 3.0 m > 1.5 m COMN	- 30 cm [30 pts] 22:5 cm [25 pts] IENTS FULL WIDTH (Measured as the eters (> 13') [30 pts] - 4.0 m (> 9' 7" - 13') [25 pts] - 3.0 m (> 9' 7" - 4' 8") [20 pts] IENTS RIPARIAN ZONE AND FLOOD RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Ew Stream Flowing Subsurface flow with isolated po COMMENTS	ne average of PPLAIN QUAI FLOOD L R valuation) (C pools (Interstitia	f 3-4 measure f 3-4	< 5 cm [5 pts] NO WATER OR MOIS MAXIMUM POO ments) (Check (> 1 0 m - 1 5 m (> 3'3' ≤ 1 0 m (≤3'3'') [5 pts AVERAGE BAN n must also be complet DTE: River Left (L) and R DTE: River Left (L) and R DTE: River Left (L) and R DTE: River Left (L) and R Park, New Field ture he box): Moist Channel Dry channel, n	ST CHANNEL [0 DL DEPTH (cent ONLY one box) - 4' 8") [15 pts] s] NKFULL WIDTH ed ight (P) as lookin L R Co Uri Op Min , isolated pools, o water (Ephem	timeters): 15 (meters): 0.9 (meters): 0.9 ng downstream onservation Tillage ban or Industrial pen Pasture, Row C ning or Construction no flow (Intermitter peral)	25 Bankfull Width Max=30 5
222.3 >10 - COMM >4.0 m >3.0 m >1.5 m COMM	- 30 cm [30 pts] 22:5 cm [25 pts] IENTS FULL WIDTH (Measured as the sters (> 13') [30 pts] - 4.0 m (> 9' 7'' - 13') [25 pts] - 3.0 m (> 9' 7'' - 4' 8'') [20 pts] IENTS RIPARIAN ZONE AND FLOOD RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Ex Stream Flowing Subsurface flow with isolated por COMMENTS SINUOSITY (Number of bends	The average of The PLAIN QUAR FLOOD L R valuation) (C	f 3-4 measure f 3-4 measure f 3-4 measure f 3-4 measure f 3-4 measure f 3-4 measure his informatio LITY ☆NO PLAIN QUALIT (Most Predo Mature Fore Immature Fore	< 5 cm [5 pts] NO WATER OR MOIS MAXIMUM POO ments) (Check 0 > 10 m - 15 m (> 3' 3' ≤ 10 m (≤3' 3') [5 pts AVERAGE BAN AVERAGE BAN AVERAGE BAN No must also be complet DTE: River Left (L) and R DTE: River Left (L) and R DTE: River Left (L) and R Minant per Bank) st, Wetland orest, Shrub or Old Field Park, New Field ture he box): Moist Channel Dry channel, n	ST CHANNEL [0 DL DEPTH (cent ONLY one box) - 4' 8") [15 pts] s] NKFULL WIDTH ed ight (P) as lookin L R Co Uri Op Min , isolated pools, o water (Ephem	pts] timeters): 15 :	25 Bankfull Width Max=30 5
> 10 - COMM > 4.0 m > 3.0 m > 1.5 m COMM	- 30 cm [30 pts] 22.5 cm [25 pts] IENTS FULL WIDTH (Measured as the eters (> 13') [30 pts] - 4.0 m (> 9' 7'' - 13') [25 pts] - 3.0 m (> 9' 7'' - 4' 8'') [20 pts] IENTS RIPARIAN ZONE AND FLOOD RIPARIAN WIDTH (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of Ev Stream Flowing Subsurface flow with isolated po COMMENTS SINUOSITY (Number of bends None	ne average of PPLAIN QUAI <u>FLOOD</u> L R valuation) (C pols (Interstitian per 61 m (20 1.0	f 3-4 measure f 3-4 measure his informatio LITY \$NO PLAIN QUALIT (Most Predo Mature Fore Immature Fore	< 5 cm [5 pts] NO WATER OR MOIS MAXIMUM POO Ments) (Check O > 1 0 m - 1 5 m (> 3' 3' ≤ 1 0 m (≤3' 3'') [5 pts AVERAGE BAN AVERAGE BAN No must also be complete DTE: River Left (L) and R DTE: R R DTE:	ST CHANNEL [0 DL DEPTH (cent ONLY one box): - 4' 8") [15 pts] s] WKFULL WIDTH ed ight (P) as lookin L R Co Uri Op Min , isolated pools, o water (Ephem x):	timeters): 15 : (meters): 0.9 ng downstream onservation Tillage ban or Industrial ben Pasture, Row C ning or Construction no flow (Intermitter leral) 3.0	25 Bankfull Width Max=30 5

ADDITIONAL STREAM INFORMATION (This Information M	ust Also be Completed).	
QHEI PERFORMED? Ves Vo QHEI Sco	re (If Yes, Attach Completed	QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: Tinkers Creek CWH Name: EWH Name:	Dist Dist	ance from Evaluated Stream <u>0.29 mile</u> ance from Evaluated Stream ance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING	THE ENTIRE WATERSHED AREA	. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: <u>Hudson</u>	NRCS Soil Map Page: _	NRCS Soil Map Stream Order _
County: <u>Summit and Portage</u>	Township / City: <u>Hudson and S</u>	Streetsboro
MISCELLANEOUS		
Base Flow Conditions? (Y/N): <u>yes</u> Date of last precipitation	: <u>2024-02-22</u> Quantity: <u>.53</u>	
Photo-documentation Notes:		
Elevated Turbidity? (Y/N): <u>no</u> Canopy (% open): <u>90</u>		
Were samples collected for water chemistry? (Y/N): <u>no</u> Lab S	Sample # or ID (attach results): _	
Field Measures: Temp (°C) <u>6.3</u> Dissolved Oxygen (mg/l) _	pH (S.U.) 8.31 Conductivity (µ	imhos/cm) _
Is the sampling reach representative of the stream (Y/N) $\underline{\mbox{yes}}$	If not, please explain:	

BIOLOGICAL OBSERVATIONS

(Record all observations below) N/A 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:

DDITIONAL STREAM INFORMATION (This Information Must Also be Completed)

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

FLOW -



LENGTH OF STREAM REACH (ft)200_LAT. _____LONG. __-81.3849128_ RIVER MILE ____

DATE 2024-02-22 SCORER EVN COMMENTS Small agricultural drainage through field

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED RECOVERING * RECENT OR NO RECOVERY MODIFICATIONS:

TIPE	()	DEDOENT		(Max of 6). Final metric s	core is sum	DEDOCHT	Me
	BLDP SLABS [16 nte]	PERCENT	TYPE	SILT [3 nte]		20	Poi
0.0	BOULDER (>256 mm) [16 pts]	-		LEAF PACK/WOODY D	EBRIS [3 p	ts]	23
	BEDROCK [16 pts]		10.10	FINE DETRITUS [3 pts	s]		Subs
11.14	COBBLE (65-256 mm) [12 pts]		1	CLAY or HAP.DPAN [0	pts]	_70	Max
0.6	GRAVEL (2-64 mm) [9 pts]	5	10.00	MUCK [0 pts]			7
6.6	SAND (<2 mm) [6 pts]	5	10.15	ARTIFICIAL [3 pts]			1
CORF	Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedroc OF TWO MOST PREDOMINATE SU	k_0_	(A) PES: 3			(B)	A +
_	Maximum Pool Depth Measure the	maximum no	ol denth with	in the 61 meter (200 ft)	evaluation re	each at the time of	Pool
	evaluation. Avoid plunge pools from	road culverts o	or storm water	pipes) (Check ONLY on	ie box):		Max
1 :	> 30 centimeters [20 pts]			> 5 cm - 10 cm [15 pts	s]		
	> 22.5 - 30 cm [30 pts]		-	< 5 cm [5 pts]	TOUM	10	~
	> 10 - 22.5 cm [25 pts]			NO WATER OR MOIS	T CHANNEI	0 ptsj	2
	COMMENTS			MAXIMUM POC	DL DEPTH (centimeters): 40	1
	COMMENTS				IKEULI WIR	TH (meters): 0.8	5
	COMMENTS		his informatic LITY ☆N	AVERAGE BAN on <u>must</u> also be complete OTE: River Left (L) and Ri	IKFULL WIE ed ight (R) as lo	DTH (meters): 0.8	5
	COMMENTS RIPARIAN ZONE AND FLOO <u>RIPARIAN WIDTH</u> L R (Per Bank)	TI DDPLAIN QUA FLOOD I R	his informatic LITY ☆N PLAIN QUALI	AVERAGE BAN on <u>must</u> also be complete OTE: River Left (L) and Ri TY ominant per Bank)	ed ight (R) as lo	DTH (meters): 0.8	5
	COMMENTS RIPARIAN ZONE AND FLOO <u>RIPARIAN WIDTH</u> L R (Per Bank) Wide >10m	TI DDPLAIN QUA FLOOD L R	his informatio LITY ☆ N PLAIN QUALI (Most Predo Mature Fore	AVERAGE BAN on <u>must</u> also be complete OTE: River Left (L) and Ri <u>TY</u> ominant per Bank) est, Wetland	IKFULL WIE ed ight (R) as lo L R	DTH (meters): 0.8	5
	COMMENTS RIPARIAN ZONE AND FLOO <u>RIPARIAN WIDTH</u> L R (Per Bank) Wide >10m Moderate 5-10m	TI D DPLAIN QUA <u>FLOOD</u> L R	his informatio LITY ☆N PLAIN OUALI (Most Predo Mature Fore Immature Fo	AVERAGE BAN on <u>must also be complet</u> OTE: River Left (L) and Ri <u>TY</u> ominant per Bank) est, Wetland orest, Shrub or Old Field	IKFULL WIE ed ight (R) as lo L R	DTH (meters): 0.8	5
	COMMENTS RIPARIAN ZONE AND FLOO RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m	Ti DDPLAIN QUA FLOOD L R	his informatio LITY ☆N PLAIN OUALI (Most Predo Mature Fore Immature Fore Registration	AVERAGE BAN on <u>must also be complet</u> OTE: River Left (L) and Ri <u>TY</u> ominant per Bank) est, Wetland orest, Shrub or Old Field	IKFULL WIE ed ight (R) as lo	DTH (meters): 0.8	5
	COMMENTS RIPARIAN ZONE AND FLOO <u>RIPARIAN WIDTH</u> L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m	TI D DPLAIN QUA <u>FLOOD</u> L R	his informatio LITY ☆N PLAIN OUALI (Most Predo Mature Fore Immature Fi Residential,	AVERAGE BAN on <u>must also be complet</u> OTE: River Left (L) and Ri <u>TY</u> ominant per Bank) est, Wetland orest, Shrub or Old Field Park, New Field	IKFULL WIE ed ight (R) as lo	DTH (meters): 0.8	5
	COMMENTS RIPARIAN ZONE AND FLOO RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS	Ti DDPLAIN QUA FLOOD L R	his informatic LITY ☆N PLAIN QUALI (Most Predo Mature Fore Immature Fore Residential, Fenced Pas	AVERAGE BAN on <u>must also be complete</u> OTE: River Left (L) and Ri TY ominant per Bank) est, Wetland orest, Shrub or Old Field Park, New Field sture	IKFULL WIE ed ight (R) as lo	DTH (meters): 0.8	5
	COMMENTS RIPARIAN ZONE AND FLOO RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of a Stream Flowing Subsurface flow with isolated COMMENTS	Ti DDPLAIN QUA FLOOD L R Evaluation) (O pools (Interstiti	his informatic LITY ☆N PLAIN OUALI (Most Predo Mature Fore Immature Fore Residential, Fenced Pas Check ONLY of ial)	AVERAGE BAN on <u>must also be complete</u> OTE: River Left (L) and Ri <u>TY</u> ominant per Bank) est, Wetland orest, Shrub or Old Field Park, New Field sture ne box): Moist Channel, Dry channel, n	IKFULL WIE ed ight (R) as lo L R	DTH (meters): 0.8	5
	COMMENTS RIPARIAN ZONE AND FLOO <u>RIPARIAN WIDTH</u> L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of I Stream Flowing Subsurface flow with isolated COMMENTS SINUOSITY (Number of bene	TI DDPLAIN QUA FLOOD L R Evaluation) (C pools (Interstiti	his informatic LITY ☆N PLAIN QUALI (Most Predo Mature Fore Immature Fore Residential, Fenced Pas Check <i>ONLY</i> or ial)	AVERAGE BAN on <u>must</u> also be complete OTE: River Left (L) and Ri <u>TY</u> ominant per Bank) est, Wetland orest, Shrub or Old Field wetland orest, Shrub or Old Field wetland orest, Shrub or Old Field sture ne box): Moist Channel, Dry channel, ne	ed ight (R) as lo L R , isolated po o water (Eph x):	DTH (meters): 0.8	5
	COMMENTS RIPARIAN ZONE AND FLOO RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of A Stream Flowing Subsurface flow with isolated COMMENTS SINUOSITY (Number of beneficial	Ti DDPLAIN QUA <u>FLOOD</u> L R Evaluation) (C pools (Interstiti ds per 61 m (2) 1,0	his informatio LITY ☆N PLAIN QUALI (Most Predo Mature Fore Immature Fore Residential, Fenced Pas Check ONLY of ial)	AVERAGE BAN on <u>must</u> also be complete OTE: River Left (L) and Ri <u>TY</u> ominant per Bank) est, Wetland orest, Shrub or Old Field Park, New Field sture ne box): Moist Channel, n Dry channel, n 2.0	ikFULL WIE ed ight (R) as lo L R , isolated po o water (Eph x):	DTH (meters): 0.8 Doking downstream☆ Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction Dols, no flow (Intermittent) termeral) 3.0	5
	COMMENTS RIPARIAN ZONE AND FLOO RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of a Stream Flowing Subsurface flow with isolated COMMENTS SINUOSITY (Number of bener None 0,5	Ti DDPLAIN QUA FLOOD L R Evaluation) (C pools (Interstiti ds per 61 m (2) ✓ 1.0 1.5	his informatic LITY ☆N)PLAIN OUALI (Most Predo Mature Fore Immature Fore Residential, Fenced Pas Check ONLY of ial)	AVERAGE BAN on <u>must</u> also be complete OTE: River Left (L) and Ri TY ominant per Bank) est, Wetland orest, Shrub or Old Field Park, New Field sture ne box): Moist Channel, Dry channel, ne el) (Check ONLY one box 2.0 2.5	ed ight (R) as lo L R , isolated po o water (Eph x):	DTH (meters): 0.8	5
	COMMENTS RIPARIAN ZONE AND FLOO RIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of I Stream Flowing Subsurface flow with isolated COMMENTS SINUOSITY (Number of bene None 0.5 STREAM GRADIENT ESTIMATE	Ti DDPLAIN QUA FLOOD L R Evaluation) (C pools (Interstiti ds per 61 m (2 1.0 1.5	his informatic LITY ☆N PLAIN QUALI (Most Predo Mature Fore Immature Fore Residential, Fenced Pas Check ONLY or ial)	AVERAGE BAN on <u>must also be complete</u> OTE: River Left (L) and Ri <u>TY</u> ominant per Bank) est, Wetland orest, Shrub or Old Field Park, New Field sture ne box): Moist Channel, Dry channel, ne el) (Check ONLY one box 2.0 2.5	ikFULL WIE ed ight (R) as lo L R , isolated po o water (Eph x):	DTH (meters): 0.8	5

ust Also be Completed):
ore (If Yes, Attach Completed QHEI Form)
Distance from Evaluated Stream <u>0.54 miles</u> Distance from Evaluated Stream <u></u> Distance from Evaluated Stream <u></u>
THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
NRCS Soil Map Page: _ NRCS Soil Map Stream Order _
Township / City: <u>Streetsboro</u>
n: <u>2024-02-22</u> Quantity: <u>0.53</u>
Sample # or ID (attach results): _
pH (S.U.) 8.33 Conductivity (µmhos/cm) _
If not, please explain:

Additional comments/description of pollution impacts: <u>Agriculture</u>

BIOLOGICAL OBSERVATIONS (Record all observations below) N/A

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

 $_{\text{FLOW}} \rightarrow$



ChieFPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3):

	ER RIVER CODE RIVE	R BASIN	DRAINAGE A	REA (mi ²) 0.083			
ENGTH OF	STREAM REACH (#)200 LAT	41 2269405	LONG -8	1 3826843 PIVER MILE			
ATE 202	102.22 SCORER EVAL CO	MMENTS S		no Tinkors Crock draining	rosidential area	Pupe through y	ouna forest nine (
NOTE: 01	The second secon			bestien Mensel for O		<u>e rtaris tribagir y</u>	oung to est, pipe t
NOTE: Co	omplete All items On This F	orm - Refer t	o "Field Eva	iuation Manual for Ol	nio's PHWH S	treams" for in	structions
TREAM C	CHANNEL NONE / NAT	URAL CHANN	IEL BECO	OVERED Y RECOVER	RING RECE	ENT OR NO REC	OVERY
SUE	STRATE: Estimate percent of a	every type of s	substrate pres	ent. Check ONLY two pr	edominant subs	trate TYPE boxes	
(Ma:	x of 32). Add total number of sigr	PERCENT		(Max of 8). Final metric s	core is sum of b	OXES A & B.	Metric
	BLDR SLABS [16 pts]	FERCENT	TIFE	SILT [3 pts]		15	Points
1	BOULDER (>256 mm) [16 pts]			LEAF PACK/WOODY D	EBRIS [3 pts]		Substrate
1	BEDROCK [16 pts]			FINE DETRITUS [3 pts	5]		Max = 40
	COBBLE (65-256 mm) [12 pts]			CLAY OF HARDPAN [0	ptsj		
	GRAVEL (2-04 mm) [9 pts] SAND (~2 mm) [6 pts]	10		APTIFICIAL [2 nte]		_20_	15
	SAMU (<2 mm) [0 prs]	_10_		ARTIFICIAL [3 pis]			
Bidr	Total of Percentages of Slabs Boulder Cobble Bedrock	15	(A)			(B)	A+B
CORE OF	TWO MOST PREDOMINATE SU	BSTRATE TY	PES: 9	TOTAL NUMBER	OF SUBSTRATE	TYPES: 6	
Max	imum Pool Denth Measure the	maximum no	ol denth withi	n the 61 meter (200 ft) ;	evaluation reach	at the time of	Pool Denth
eval	uation. Avoid plunge pools from i	road culverts o	r storm water p	ipes) (Check ONLY on	e box):	The time time of	Max = 30
> 30	centimeters [20 pts]		~	> 5 cm - 10 cm [15 pts	9]		
> 22.	5 - 30 cm [30 pts]			< 5 cm [5 pts]		ntsl	15
- 10	~ 22.3 Cin [23 pia]			NO WATER OR MOIS	I CINNILL [0	praj	15
COM	MMENTS			MAXIMUM POC	L DEPTH (cent	timeters): 10	E.
BAN	NK FULL WIDTH (Measured as 1	the average of	f 3-4 measurer	nents) (Check (ONLY one box)		Bankfull
BAN > 4.0	NK FULL WIDTH (Measured as meters (> 13') [30 pts]	the average of	f 3-4 measurei	ments) (Check (> 10 m - 15 m (> 3' 3"	DNLY one box) - 4' 8") [15 pts]		Bankfull Width
BAN > 4.0 > 3.0 > 1.5	NK FULL WIDTH (Measured as meters (> 13") [30 pts] m - 4.0 m (> 9" 7" - 13") [25 pts] m - 3.0 m (> 9" 7" - 4" 8") [20 pts]	the average of	f 3-4 measurei	ments) (Check 0 >10 m - 15 m (>3'3" ≤10 m (≤3'3") [5 pts	DNLY one box) - 4' 8") [15 pts] 5]		Bankfull Width Max=30
BAN > 4.0 > 3.0 > 1.5	NK FULL WIDTH (Measured as meters (> 13') [30 pts] m - 4.0 m (> 9' 7" - 13') [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	the average o	f 3-4 measurer	ments) (Check 0 >10 m - 15 m (>3'3" ≤10 m (≤3'3") [5 pts	DNLY one box) - 4' 8") [15 pts] 5]		Bankfull Width Max=30
BAN > 4.0 > 3.0 > 1.5 COM	NK FULL WIDTH (Measured as meters (> 13") [30 pts] m - 4.0 m (> 9" 7" - 13") [25 pts] m - 3.0 m (> 9" 7" - 4" 8") [20 pts] MMENTS	the average o	f 3-4 measurer	ments) (Check 0 > 1 0 m - 1 5 m (> 3' 3" ≤ 1 0 m (≤3' 3") [5 pts AVERAGE BAN	DNLY one box) - 4' 8") [15 pts] 5] IKFULL WIDTH	(meters): 0.2	Bankfull Width Max=30
BAN > 4.0 > 3.0 > 1.5 COM	NK FULL WIDTH (Measured as meters (> 13") [30 pts] m - 4.0 m (> 9' 7" - 13") [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS	the average o	f 3-4 measurei	ments) (Check 0 >10 m - 15 m (>3'3" ≤10 m (≤3'3") [5 pts AVERAGE BAN	DNLY one box) - 4' 8") [15 pts] 5] IKFULL WIDTH	(meters): 0.2	Bankfull Width Max=30
BAN > 4.0 > 3.0 > 1.5 COM	NK FULL WIDTH (Measured as meters (> 13") [30 pts] m - 4.0 m (> 9' 7" · 13") [25 pts] m - 3.0 m (> 9' 7" · 4' 8") [20 pts] MMENTS	the average of	f 3-4 measurer	ments) (Check 0 > 1 0 m - 1 5 m (> 3' 3" ≤ 1 0 m (≤3' 3") [5 pts AVERAGE BAN	DNLY one box) - 4' 8") [15 pts] 5] IKFULL WIDTH ed	(meters): 0.2	Bankfull Width Max=30
BAN > 4.0 > 3.0 > 1.5 COM	NK FULL WIDTH (Measured as 1 meters (> 13") [30 pts] m - 4.0 m (> 9' 7" - 13") [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOO RIPARIAN WIDTH	the average of The DPLAIN QUA	f 3-4 measurer f 3-4 measurer f f f f f f f f f f f f f f f f f f	ments) (Check 0 > 1 0 m - 1 5 m (> 3' 3" ≤ 1 0 m (≤3' 3") [5 pts AVERAGE BAN n <u>must</u> also be complete DTE: River Left (L) and Ri	DNLY one box) - 4' 8") [15 pts] IKFULL WIDTH ed ight (R) as looki	(meters): 0.2	Bankfull Width Max=30
BAN > 4.0 > 3.0 > 1.5 COM	NK FULL WIDTH (Measured as 1 meters (> 13') [30 pts] m - 4.0 m (> 9' 7" - 13') [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOO <u>RIPARIAN WIDTH</u> R (Per Bank)	the average of Th DPLAIN QUA FLOOD L R	f 3-4 measurer his information LITY ☆NC PLAIN OUALIT (Most Predo	ments) (Check (Ch	DNLY one box) - 4' 8") [15 pts] 5] IKFULL WIDTH ed ight (R) as looki	(meters): 0.2	Bankfull Width Max=30
BAN > 4.0 > 3.0 > 1.5 CON	NK FULL WIDTH (Measured as 1 meters (> 13') [30 pts] m - 4.0 m (> 9' 7" - 13') [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOC <u>RIPARIAN WIDTH</u> R (Per Bank) Wide >10m	the average of Th DPLAIN QUA <u>FLOOD</u> L R	f 3-4 measurer his information LITY ☆NC PLAIN QUALIT (Most Predor Mature Fore:	ments) (Check (Ch	DNLY one box) - 4' 8") [15 pts] IKFULL WIDTH ed ight (R) as looki L R Co	(meters): 0.2 ng downstream nservation Tillage	Bankfull Width Max=30
BAN > 4.0 > 3.0 > 1.5 CON	NK FULL WIDTH (Measured as meters (> 13") [30 pts] m - 4.0 m (> 9' 7" - 13") [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOCE RIPARIAN WIDTH R (Per Bank) Wide >10m Moderate 5-10m	the average of Th DPLAIN QUA <u>FLOOD</u> L R	f 3-4 measurer nis information LITY ☆NC PLAIN QUALIT (Most Predo Mature Fore: Immature Fo	ments) (Check O > 10 m - 15 m (> 3' 3") \leq 10 m (\leq 3' 3") \leq 10 m (\leq 3' 3") [5 pts AVERAGE BAN anust also be complete DTE: River Left (L) and Ri \underline{Y} minant per Bank) st, Wetland rest, Shrub or Old Field	DNLY one box) 4'8") [15 pts] IKFULL WIDTH ed ight (R) as looki L R Co Uri	(meters): 0.2 ng downstream nservation Tillage ban or Industrial	Bankfull Width Max=30
BAN > 4.0 > 3.0 > 1.5 COM	NK FULL WIDTH (Measured as 1 meters (> 13') [30 pts] m - 4.0 m (> 9' 7" - 13') [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOCE RIPARIAN WIDTH R (Per Bank) Wide >10m Moderate 5-10m	the average of The POPLAIN QUA FLOOD L R	f 3-4 measurer his information LITY ☆NC PLAIN OUALIT (Most Predo Mature Fore: Immature Fo	ments) (Check (Che	DNLY one box) - 4' 8") [15 pts] KFULL WIDTH ed light (R) as looki L R Co Uri	(meters): 0.2 ng downstreams nservation Tillage ban or Industrial en Pasture, Row	Bankfull Width Max=30
BAN > 4.0 > 3.0 > 1.5 COM	NK FULL WIDTH (Measured as meters (> 13") [30 pts] m - 4.0 m (> 9' 7" - 13') [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOCE RIPARIAN WIDTH R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m	the average of Th DPLAIN QUA <u>FLOOD</u> L R	f 3-4 measurer nis information LITY ☆NC PLAIN OUALIT (Most Predo Mature Fore: Immature Fore: Residential,	ments) (Check C > 10 m - 15 m (> 3' 3" \leq 10 m (\leq 3' 3") [5 pts AVERAGE BAN must also be complete DTE: River Left (L) and River \underline{Y} minant per Bank) st, Wetland rest, Shrub or Old Field Park, New Field	DNLY one box) - 4' 8") [15 pts] IKFULL WIDTH ed ight (P) as looki L R Co Uri Op	(meters): 0.2 ng downstream nservation Tillage pan or Industrial en Pasture, Row	Bankfull Width Max=30
BAN > 4.0 > 3.0 > 1.5 COM	NK FULL WIDTH (Measured as 1 meters (> 13') [30 pts] m - 4.0 m (> 9' 7" - 13') [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS MMENTS RIPARIAN ZONE AND FLOC <u>RIPARIAN WIDTH</u> R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS	the average of DPLAIN QUA FLOOD L R	f 3-4 measurer his information LITY ☆NC PLAIN QUALIT (Most Predo Mature Fore: Immature Fo Residential, Fenced Past	ments) (Check (Che	DNLY one box) - 4' 8") [15 pts] IKFULL WIDTH ed ight (P) as looki L R Co Uri Op Mit	(meters): 0.2 ng downstream nservation Tillage pan or Industrial en Pasture, Row ning or Constructi	Bankfull Width Max=30 5
BAN > 4.0 > 3.0 > 1.5 COM	NK FULL WIDTH (Measured as meters (> 13') [30 pts] m - 4.0 m (> 9' 7" - 13') [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOOD RIPARIAN WIDTH R (Per Bank) Wide >10m Moderate 5-10m None COMMENTS FLOW REGIME (At Time of B	the average of Th DPLAIN QUA FLOOD L R Evaluation (C	f 3-4 measurer his information LITY ☆NO PLAIN QUALIT (Most Predor Mature Fore: Immature Fore: Immature Fore: Residential, Fenced Past Check ON/Y on	ments) (Check O > 10 m - 15 m (> 3' 3" \leq 10 m (\leq 3' 3") [5 pts AVERAGE BAN To must also be complete DTE: River Left (L) and Ri Y minant per Bank) st, Wetland rest, Shrub or Old Field Park, New Field ure e box):	DNLY one box) - 4' 8") [15 pts] IKFULL WIDTH ed ight (R) as looki L R Co Uri Op	(meters): 0.2 ng downstream nservation Tillage ban or Industrial en Pasture, Row ning or Constructi	Bankfull Width Max=30 5
BAN > 4.0 > 3.0 > 1.5 CON	NK FULL WIDTH (Measured as 1 meters (> 13') [30 pts] m - 4.0 m (> 9' 7" - 13') [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOOD RIPARIAN WIDTH R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m	the average of The POPLAIN QUA FLOOD L R Evaluation) (C	f 3-4 measurer his information LITY ☆NC PLAIN QUALIT (Most Predo Mature Fore: Immature Fo Residential, Fenced Past Check ONLY on	ments) (Check (Che	DNLY one box) - 4' 8") [15 pts] IKFULL WIDTH ed ight (R) as looki L R Co Uri Op Min isolated pools,	(meters): 0.2 ng downstream nservation Tillage ban or Industrial en Pasture, Row ning or Constructi no flow (Intermitt	Bankfull Width Max=30 5 Crop on
BAN > 4.0 > 3.0 > 1.5 CON	NK FULL WIDTH (Measured as meters (> 13') [30 pts] m - 4.0 m (> 9' 7" - 13') [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOOD RIPARIAN WIDTH R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m	the average of The POPLAIN QUA FLOOD L R Evaluation) (C pools (Interstiti)	f 3-4 measurer his information LITY ☆NC PLAIN QUALIT (Most Predo Mature Fore: Immature Fo Residential, Fenced Past Check ONLY on al)	ments) (Check (Che	DNLY one box) - 4' 8") [15 pts] IKFULL WIDTH ed ight (R) as looki L R Co Uri Op Min isolated pools, o water (Ephem	(meters): 0.2 ng downstream nservation Tillage ban or Industrial en Pasture, Row hing or Constructi no flow (Intermitt eral)	Bankfull Width Max=30 5 Crop on ent)
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BAN > 4.0 > 3.0 > 1.5 COM	NK FULL WIDTH (Measured as meters (> 13') [30 pts] m - 4.0 m (> 9' 7" - 13') [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOOD RIPARIAN WIDTH R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m	the average of POPLAIN QUA FLOOD L R Evaluation) (C pools (Interstiti, ts per 61 m (20 1,0	f 3-4 measurer his information LITY ☆NO PLAIN OUALIT (Most Predo Mature Fore: Immature Fore: Immature Fore: Residential, Fenced Past Check ONLY on al) 00 ft) of channe	ments) (Check O > 1 0 m - 1.5 m (> 3' 3") ≤ 1 0 m (≤3' 3") Standard Sta	DNLY one box) - 4' 8") [15 pts] IKFULL WIDTH ed ight (R) as looking L R Co Url Op Min isolated pools, o water (Ephem x):	(meters): 0.2 ng downstream nservation Tillage ban or Industrial en Pasture, Row ning or Constructi no flow (Intermitt eral) 3.0	Bankfull Width Max=30 5
BAN > 4.0 > 3.0 > 1.5 COM	NK FULL WIDTH (Measured as meters (> 13') [30 pts] m - 4.0 m (> 9' 7" - 13') [25 pts] m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOCE RIPARIAN WIDTH R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m	the average of PDPLAIN QUA FLOOD L R Evaluation) (C pools (Interstiti) ts per 61 m (20 1.0 1.5	f 3-4 measurer his information LITY ☆NC PLAIN OUALIT (Most Predou Mature Fore: Immature	ments) (Check (Che	DNLY one box) - 4' 8") [15 pts] IKFULL WIDTH ed ight (R) as looki L R Co Uri Op Min isolated pools, o water (Ephem x):	(meters): 0.2 ng downstream nservation Tillage pan or Industrial en Pasture, Row ning or Construction no flow (Intermitteral) 3.0 >3	Bankfull Width Max=30

ADDITIONAL STREAM INFORMATION (This information Must A	Also be Completed):
QHEI PERFORMED? Yes Vo QHEI Score	(If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH Name: CWH Name:	Distance from Evaluated Stream <u>0.43 miles</u> Distance from Evaluated Stream
EWH Name:	Distance from Evaluated Stream
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE	E ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION
USGS Quadrangle Name: <u>Hudson</u>	NRCS Soil Map Page: _ NRCS Soil Map Stream Order _
County: <u>Portage</u> To	ownship / City: <u>Streetsboro</u>
MISCELLANEOUS	
Base Flow Conditions? (Y/N): <u>yes</u> Date of last precipitation: <u>20</u>	<u>24-02-22</u> Quantity: <u>.53</u>
Photo-documentation Notes:	
Elevated Turbidity? (Y/N): <u>no</u> Canopy (% open): <u>100</u>	
Were samples collected for water chemistry? (Y/N): <u>no</u> Lab Samp	ple # or ID (attach results): _
Field Measures: Temp (°C) <u>6.1</u> Dissolved Oxygen (mg/l) _ pH	(S.U.) 8.13 Conductivity (µmhos/cm) _
Is the sampling reach representative of the stream (Y/N) \underline{yes} If	not, please explain:

BIOLOGICAL OBSERVATIONS

(Record all observations below) N/A 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

FLOW -

Durn Hudgen Erst F9 DUT 2/02/23 SEON-7 Fish Tenje 6/2 10 Deserres 11 11 Int to 7 STEEP = Bang Lueka CM CULIVAUX P D' Sut DS 9 200 11 2 At 100 TOT . CORPLE RUNGE STER tow 4 GRAVEL Wart PACK But POOL EPANEL, Rat SAND/ --F E E E Scale: I square =____

ChieEPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3): 25

NUMBER 8 RIVER CODE RIVE	R BASIN	_ DRAINAGE A	REA (mi ²) 0.0667			
GTH OF STREAM REACH (ft) 200 LAT.	41.229639	LONG81.3	82617 RIVER MILE	_		
E	MMENTS	Small channel di	aining residential area.	Runs through	oung fores	t and cleared ROV
TE: Complete All Items On This For	rm - Refer t	to "Field Eval	uation Manual for Of	nio's PHWH s	Streams"	for Instructions
REAM CHANNEL NONE / NATU DIFICATIONS:	IRAL CHANN	IEL RECO	VERED ⊀ RECOVER	ING REC	ENT OR NO	O RECOVERY
SUBSTRATE; Estimate percent of ev	very type of s	substrate prese	ent. Check ONLY two pre	edominant subs	strate TYPE	boxes
(Max of 32). Add total number of signif	icant substra	te types found (Max of 8). Final metric st	core is sum of b	oxes A & B	HH
	PERCENT	TYPE	011 7 10 1 1		PERCEN	I Poin
BOULDER (>256 mm) [16 pts]	15	10.0	SILI (3 ptsj I FAF PACK/WOODY D	EBRIS [3 ots]	10	1 om
BEDROCK [16 pts]		1000	FINE DETRITUS [3 pts			Subst
COBBLE (65-256 mm) [12 pts]	15		CLAY or HARDPAN 10	pts]		Max =
GRAVEL (2-64 mm) [9 pts]	30		MUCK [0 pts]		20	15
SAND (<2 mm) [6 pts]		10.00	ARTIFICIAL [3 pts]		-	15
Total of Percentages of		(A)			(B)	A + E
Bidr Slabs, Boulder, Cobble, Bedrock	30	PES: 9			E TYPES.	6
The OF TWO WOST FREDOMINATE SUB	STRATE I Y		TOTAL NUMBER U	JUDSIKAI	E TIFES:	
Maximum Pool Depth Measure the r	naximum po	ol depth within	the 61 meter (200 ft) e	evaluation reac	n at the time	e of Pool D
evaluation. Avoid plunge pools from ro	ad culverts o	r storm water pi	pes) (Check ONLY on > 5 cm - 10 cm [15 ptc	e box): 1		Max =
> 22.5 - 30 cm [30 pts]		1	< 5 cm [5 pts]	1		
> 10 - 22.5 cm [25 pte]					1. S. A.	
> 10 - 22.5 Cin [25 pis]			NO WATER OR MOIS	T CHANNEL [O	pts	5
COMMENTS			NO WATER OR MOIS	L DEPTH (cen	timeters):	0.6
COMMENTS			NO WATER OR MOIS	L DEPTH (cen	timeters):	0.6
COMMENTS BANK FULL WIDTH (Measured as th	ne average of	f 3-4 measuren	MAXIMUM POO ments) (Check C	L DEPTH (cen DRLY one box)	timeters):	0.6 Bank
COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	ie average o	f 3-4 measuren	NO WATER OR MOIS MAXIMUM POO tents) (Check C >10 m - 15 m (> 3' 3") ≤ 10 m (≤3' 3") [5 pts	[CHANNEL [0 L DEPTH (cen DNLY one box) - 4' 8") [15 pts]]	timeters):	0.6 Bankt Widt Max=
COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	ne average o	f 3-4 measuren	NO WATER OR MOIS MAXIMUM POO ments) (Check C > 1 0 m - 1 5 m (> 3' 3") ≤ 1 0 m (≤3' 3")	<u>T CHANNEL [0</u> L DEPTH (cen DNLY one box) - 4' 8") [15 pts]]	timeters):	0.6
COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS	e average o	f 3-4 measuren	NO WATER OR MOIS MAXIMUM POO nents) (Check C > 10 m - 15 m (> 3' 3") 5 pts AVERAGE BAN	L DEPTH (cen DVLY one box) - 4' 8") [15 pts]] KFULL WIDTH	timeters): : ! (meters):	0.6 0.75 0.75
COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS	e average o	f 3-4 measuren	NO WATER OR MOIS MAXIMUM POO Immediation (Check C > 1 0 m - 1 5 m (> 3' 3") ≤ 1 0 m (≤ 3' 3") ≤ 1 0 m (≤ 3' 3") [5 pts AVERAGE BAN	L DEPTH (cen NLY one box) - 4' 8") [15 pts]] KFULL WIDTH	timeters): : I (meters):	0.6 Bankt Widt Max= 0.75 5
COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS	e average o' Th	f 3-4 measurem	NO WATER OR MOIS MAXIMUM POO ments) (Check C > 10 m - 15 m (> 3' 3" ≤ 10 m (≤3' 3") [5 pts AVERAGE BAN must also be complete	L DEPTH (cen DNLY one box) - 4' 8") [15 pts]] KFULL WIDTH	timeters): : I (meters):	0.6 Bankt Widt Max= 0.75 5
COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS RIPARIAN ZONE AND FLOOD	e average o Th PPLAIN QUA	f 3-4 measurem his information LITY ☆NO	NO WATER OR MOIS MAXIMUM POO Immunity (Check C > 1 0 m - 1 5 m (> 3' 3") ≤ 1 0 m (≤ 3' 3") AVERAGE BAN Must also be complete TE: River Left (L) and Ri	L DEPTH (cen NLY one box) - 4' 8") [15 pts]] KFULL WIDTH ed ght (F) as look	timeters): : I (meters): ing downstr	0.6 Bankt Widt Max= 0.75 5
COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4'.8") [20 pts] COMMENTS RIPARIAN ZONE AND FLOOD <u>RIPARIAN WIDTH</u>	ne average of Th OPLAIN QUA FLOO	f 3-4 measurem his information LITY ☆NO PLAN QUALIT	NO WATER OR MOIS MAXIMUM POO nents) (Check C > 1 0 m - 15 m (> 3' 3") ≤ 1 0 m (≤3' 3") AVERAGE BAN must also be complete TE: River Left (L) and Right	L DEPTH (cen DVLY one box) - 4' 8") [15 pts] J KFULL WIDTH ed ght (P) as look	timeters): : I (meters): Ing downstr	0.6 Bankt Widt Max= 0.75 5
COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13) [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS RIPARIAN ZONE AND FLOOD RIPARIAN WIDTH L R (Per Bank) Wide > 10m	ne average of Th DPLAIN QUA <u>FLOOD</u> L R	f 3-4 measurem f 3-4 measure	NO WATER OR MOIS MAXIMUM POO Immunity (Check C > 10 m - 15 m (> 3' 3") 5 pts AVERAGE BAN must also be completed TE: River Left (L) and Right Y Immunity Y	L DEPTH (cen DNLY one box) - 4' 8") [15 pts]] KFULL WIDTH ed ght (R) as look L R	timeters): (meters): (meters): ng downstr	0.6 Bankt Widt Max= 0.75 5
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ADDITIONAL STREAM INFORMATION (This Information Mu	ist Also be Completed):
QHEI PERFORMED? Yes Vo QHEI Score	re (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S) WWH 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: <u>Hudson</u>	NRCS Soil Map Page: _ NRCS Soil Map Stream Order _
County: <u>Portage</u>	Township / City: <u>Streetsboro</u>
MISCELLANEOUS	
Base Flow Conditions? (Y/N): <u>yes</u> Date of last precipitation:	: <u>2024-02-22</u> Quantity: <u>0.53</u>
Photo-documentation Notes:	
Elevated Turbidity? (Y/N): <u>no</u> Canopy (% open): <u>85</u>	
Were samples collected for water chemistry? (Y/N): <u>yes</u> Lab S	Sample # or ID (attach results): _
Field Measures: Temp (°C) <u>7.4</u> Dissolved Oxygen (mg/l) _	pH (S.U.) 8.18 Conductivity (µmhos/cm) _
Is the sampling reach representative of the stream (Y/N) \underline{yes}	If not, please explain:

BIOLOGICAL OBSERVATIONS

(Record all observations below) N/A 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

FLOW -



ChieEPA Primary Headwater Habitat Evaluation Form HHEI Score (sum of metrics 1, 2, 3): 37

ENGTH OF STREAM REACH (f) _200_LXT_41230253_LONG_8138256_RIVER MILE ATE _ 2024.02.22_SCOPEP_FVN_ COMMENTS_mail stream draining residential. Rows though young woods, into PEM wetland. Poor NOTE: Complete All terms On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions STREAM CHANNEL NONE / NATURAL CHANNEL RECOVERED P RECOVERING RECENT OF NO RECOVERY Max of 32, Add tetal number of significant substrate preserie. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add tetal number of significant substrate preserie. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add tetal number of significant substrate preserie. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add tetal number of significant substrate preserie. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add tetal number of significant substrate preserie. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add tetal number of significant substrate preserie. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add tetal number of significant substrate preserie. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add tetal number of significant substrate preserie. Check ONLY one box the two preseries of the first preseries of the first preseries of the first preseries of the two preseries of the first pr		ER RIVER CODE RIVE	ER BASIN	DRAINAGE A	REA (mi ²)0.072			
ATE2024-02-22SCOPEREVNCOMMENTSsmall stream draning residential. Elows through young woods, into PEM wetland. Poor NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions TITREAM CHANNEL WOODF(CATIONS) NONE / NATURAL CHANNEL RECOVERING RECENT OF NO RECOVERY SUBSTRATE: Estimate percent of every type of substrate present. Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 6). Final metric score is sum of boxes A & B. The Information Part PackWooDDY DEBRIS [3 pts] Total substrate TYPE final metric score is sum of boxes A & B. TYPE BLDR SLABS [16 pts] ERCENT TYPE SULT [3 pts] Total substrate TYPE (3 pts) Substrate (A) COBBLE (65-256 mm) [12 pts] ERCENT TYPE SULT [3 pts] 40	ENGTH OF	STREAM REACH (ft) L	AT. 41.2302	53 LONG.	-81.38256 RIVER MILE	<u> </u>		
NOTE: Complete All items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions INTERAM CHANNEL NONE / NATUPAL CHANNEL RECOVERING RECOVERING RECENT OR NO RECOVERY SUBSTRATE: Estimate percent of every type of substrate present. Check ONLY Mop predominant substrate TYPE boxes (Max of 3), Final metric score is sum of boxes A & B. INTER SUBSTRATE FYPE boxes INTER Substrate TYPE boxes	ATE202	24-02-22 SCORER EVN CO		Small stream d	raining residential. Flows	through young	woods, into PEM w	etland. Poor dev
TREAM CHANNEL MODIFICATIONS: NONE / NATUPAL CHANNEL RECOVERING RECOVERING RECENT OR NO RECOVERY SUBSTRATE: Estimate parcent of every type of substrate present. Check ONLY by predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 5). Final metric score is sum of boxes A 8. B.	NOTE: C	omplete All Items On This F	orm - Refer t	o "Field Eva	duation Manual for Of	hio's PHWH S	Streams" for Inst	ructions
THEAM CHANNEL WODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED PECCURING RECOVERING RECOVERING RECENT OF NO RECOVERY SUBSTRATE: Estimate percent of every type of substrate types found (Max of 8). Final metric score is sum of boxes A & 8. Image: 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 & 8. Image: 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 & 8. Image: 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 & 8. Image: Substrate TYPE boxes (Max of 32). Add total number of significant substrate TYPE boxes (Max of 32). Add total number of significant substrate TYPE boxes (COBBLE (65.266 mm) [12 pts] Image:								
SUBSTRATE: Estimate percent of every type of substrate present. Check ONLY we predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 6). Final metric accre is sum of boxes A & B. If I	MODIFIC	CHANNEL NONE / NAT ATIONS:	URAL CHANN	EL REC	OVERED ⊀ RECOVER	RING RECE	ENT OR NO RECO	VERY
PERCENT TYPE SILT [3 pts] PERCENT PERCENT BLOP SLABS [16 pts] 5 LEAF PACKWOODY DEBRIS [3 pts] 35 BEDDROCK [16 pts] 5 LEAF PACKWOODY DEBRIS [3 pts] 35 COBBL (65:256 mm) [16 pts] - CLAY or HAPDPAN [0 pts] 40 SAND (<2 mm) [6 pts]	SU	BSTRATE: Estimate percent of (ax of 32). Add total number of sign	every type of s	substrate pres	sent, Check ONLY two pro (Max of 8), Final metric si	edominant subs	strate TYPE boxes	1 HHEI
BLDE SLABS (16 pts) SILT [2 pts] 20 35 BUDDER (256 mm) [16 pts] FINE DETRITUS [3 pts] 20 35 BEDPROCK (16 pts) FINE DETRITUS [3 pts] 40 35 COBBLE (65 256 mm) [12 pts] CLAY or HAPDPAN [10 pts] 40 7 SAND (<2 mm) [6 pts]	TYPE	ал от оду, таке топал план от от оту,	PERCENT	TYPE	Conserved e Yr i maar meeride er		PERCENT	Metric
BOUDDER (226 mm) [12 pts] 5 IEAF PACKWOODY DEBRIS (3 pts] 35 BEDROCK [12 pts] FINE DETRITUS [3 pts] 35 COBBLE (65-256 mm) [12 pts] CLAY or HARDPAN [0 pts] 40 GRAVEL (2-64 mm) [9 pts] MUCK [0 pts] 40 SAND (-27 mm) [6 pts] MUCK [0 pts] 40 Total of Percentages of (A) (B) Bidr Slabs, Boulder, Cobble, Bedrock .5 3 TOTAL NUMBER OF SUBSTRATE TYPES: 4 Maximum Pool Depth Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Avoid plumps pools from road culvers or storm water pipes) (Check ONLY one box): 30 centimeters [20 pts] 5 com [3 pts] 25 > 30 centimeters [20 pts] < 5 cm [3 pts]	18.1	BLDR SLABS [16 pts]		10.00	SILT [3 pts]			Points
OCDBUE (65:26 mm) [12 pts] CLAY or HAPDPAN [0 pts] Max = 4 GRAVEL (2:64 mm) [9 pts] MUCK [0 pts] 40 Total of Percentages of Bidr Slass, Bourder, Cobble, Bedrock 5. (A) (B) Maximum Pool Depth Measure the maximum pool depth within the 61 meter (200 ft) evaluation reach at the time of evaluation. Axoid plung pools from road culverts or storm water pipes) (Check ONLY one box): > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] 25 > 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	13-3	BOULDER (>256 mm) [16 pts]	_5_	*	LEAF PACK/WOODY D	EBRIS [3 pts]		Substrate
GPAVEL (2:64 mm) [9 pts] 40 7 SAND (<2 mm) [6 pts]	19.3	COBBLE (65-256 mm) [12 pts]			CLAY or HAPDPAN IO	ntsl	_	Max = 40
SAND (<2 mm) [6 pts]	6 A (GRAVEL (2-64 mm) [9 pts]		×	MUCK [0 pts]	proj	40	7
Total of Percentages of Bidr Slabs, Boulder, Cobble, Bedrock _ 5_ (A) (B) A + B Bidr Slabs, Boulder, Cobble, Bedrock _ 5_ (B) TOTAL NUMBER OF SUBSTRATE TYPES: (A) (B) Naximum Pool Depth Measure the maximum pool depth within the 61 meter (200 ft) 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] (B) > 22.5 - 30 cont [30 pts] > 5 cm (5 pts] NO WAITER DOR MOIST CHANNEL [0 pts] [C] COMMENTS	a af S	SAND (<2 mm) [6 pts]	Ξ.	10.15	ARTIFICIAL [3 pts]			
Bidr Slabs, Boulder, Cobble, Bedrock (4) CORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 TOTAL NUMBER OF SUBSTRATE TYPES: 4 Maximum Pool Depth Measure the maximum pool depth within the 61 meter (200 ff) svaluation reach at the time of evaluation. Avoid plunge pools from road culveris or storm water pipes) (Check ONLY one box): 4 > 30 centimeters [20 pts] > 5 cm - 10 cm [15 pts] > 5 cm - 10 cm [15 pts] 25 > 22.5 - 30 cm [30 pts] < 5 cm [5 pts]	-	Total of Percentages of		(A)			(B)	Arp
COMMENTS	Bld	Ir Slabs, Boulder, Cobble, Bedrock	k_5_				-/	A+B
Maximum Pool Depth Measure the maximum pool depth within the 61 meter (200 ff) evaluation neach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box): Pool Dep Max = 3 > 30 centimeters [20 pts] > 5 cm -10 cm [15 pts] > 10 - 22.5 cm [25 pts] 25 cm -10 cm [15 pts] <t< td=""><td>ORE OF</td><td>TWO MOST PREDOMINATE SU</td><td>BSTRATE TY</td><td>PES: 3</td><td>TOTAL NUMBER O</td><td>OF SUBSTRAT</td><td>E TYPES: 4</td><td>1.1</td></t<>	ORE OF	TWO MOST PREDOMINATE SU	BSTRATE TY	PES: 3	TOTAL NUMBER O	OF SUBSTRAT	E TYPES: 4	1.1
COMMENTS	> 30 > 22 > 10	0 centimeters [20 pts] 2.5 - 30 cm [30 pts] 0 - 22.5 cm [25 pts]	roau cuivens o	r storm water	 > 5 cm - 10 cm [15 pts] < 5 cm [5 pts] NO WATER OR MOIS 	T CHANNEL [0	pts]	25
BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box): Same in the image i	144							
COMMENTS	CO	MMENTS			MAXIMUM POO)L DEPTH (cen	timeters): 16	
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 * NOTE: River Left (L) and Right (R) as looking downstream* RIPARIAN WIDTH FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream* RIPARIAN WIDTH FLOODPLAIN OUALITY * NOTE: River Left (L) and Right (R) as looking downstream* RIPARIAN WIDTH FLOODPLAIN OUALITY * L R (Per Bank) L R Residentian per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage Moderate 5-10m Immature Forest, Shrub or Old Field Urban or Industrial Narrow <5m	CO BA > 4.0 > 3.0 > 1.5	MMENTS NK FULL WIDTH (Measured as 0 meters (> 13') [30 pts] 0 m - 4.0 m (> 9' 7" - 13') [25 pts] 5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]	the average o	f 3-4 measure	MAXIMUM POO ments) (Check O > 1 0 m - 1 5 m (> 3' 3" ≤ 1 0 m (≤3' 3") [5 pts	DL DEPTH (cen DNLY one box) - 4' 8") [15 pts] 5]	timeters): 16	Bankfull Width Max=30
RIPARIAN ZONE AND FLOODPLAIN QUALITY ** NOTE: River Left (L) and Right (R) as looking downstream* RIPARIAN WIDTH FLOODPLAIN QUALITY L R (Per Bank) L R Wide >10m Mature Forest, Wetland Conservation Tillage Moderate 5-10m Immature Forest, Shrub or Old Field Urban or Industrial Narrow <5m	CO BA > 4.0 > 3.0 > 1.5 CO	MMENTS NK FULL WIDTH (Measured as 0 meters (> 13') [30 pts] 0 m - 4.0 m (> 9' 7" - 13') [25 pts] 5 m - 3.0 m (> 9' 7" - 4' 8'') [20 pts] MMENTS	the average o	f 3-4 measure	MAXIMUM POO ments) (Check C > 1 0 m - 1 5 m (> 3' 3" ≤ 1 0 m (≤3' 3") [5 pts AVERAGE BAN	DL DEPTH (cen DNLY one box) - 4' 8") [15 pts]] IKFULL WIDTH	timeters): 16 : (meters): 0.3	Bankfull Width Max=30
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Wide >10m Mature Forest, Wetland Conservation Tillage Moderate 5-10m Immature Forest, Shrub or Old Field Urban or Industrial Narrow <5m	CO BA > 4.0 > 3.0 > 1.5 CO	MMENTS NK FULL WIDTH (Measured as 10 meters (> 13') [30 pts] 0 m - 4.0 m (> 9' 7" - 13') [25 pts] 5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOO	the average of I DPLAIN QUA	f 3-4 measure Inis informatio LITY ☆N	MAXIMUM POO ments) (Check C > 1 0 m - 1 5 m (> 3' 3" ≤ 1 0 m (≤3' 3") [5 pts AVERAGE BAN n must also be complete DTE: River Left (L) and Ri	DL DEPTH (cen DNLY one box) - 4' 8") [15 pts] s] IKFULL WIDTH ed ight (R) as looki	timeters): 16 : (meters): 0.3	Bankfull Width Max=30
Moderate 5-10m Immature Forest, Shrub or Old Field Urban or Industrial Narrow <5m	BA > 4.0 > 3.0 > 1.5 CO	MMENTS NK FULL WIDTH (Measured as 10 meters (> 13') [30 pts] 0 m - 4.0 m (> 9' 7" - 13') [25 pts] 5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOOD <u>RIPARIAN WIDTH</u> R (Per Bank)	the average of I DDPLAIN QUA <u>FLOOD</u> I R	f 3-4 measure nis informatio LITY ☆N PLAIN QUALI (Most Predo	MAXIMUM POO ments) (Check C > 1 0 m - 1 5 m (> 3' 3" ≤ 1 0 m (≤3' 3") [5 pts AVERAGE BAN n must also be complete DTE: River Left (L) and Ri IY minant per Bank)	DL DEPTH (cen DNLY one box) - 4' 8") [15 pts] 5] IKFULL WIDTH ed ight (R) as looki	timeters): 16 : (meters): 0.3	Bankfull Width Max=30
Narrow <5m Residential, Park, New Field Open Pasture, Row Crop None Fenced Pasture Mining or Construction COMMENTS	CO BA > 4 (> 3 (> 1,5 CO	MMENTS	the average of I DDPLAIN QUA <u>FLOOD</u> L R	f 3-4 measure nis informatio LITY ☆N PLAIN QUALI (Most Predo Mature Fore	MAXIMUM POO ments) (Check C > 10 m - 15 m (> 3' 3" ≤ 10 m (≤3' 3") [5 pts AVERAGE BAN n must also be complete DTE: River Left (L) and Ri IY minant per Bank) st, Wetland	DL DEPTH (cen DNLY one box) - 4' 8") [15 pts] s] IKFULL WIDTH ed ight (P) as looki L R Co	timeters): 16 : I (meters): 0.3 Ing downstream A	Bankfull Width Max=30
None Fenced Pasture Mining or Construction COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Moist Channel, isolated pools, no flow (Intermittent) Stream Flowing Moist Channel, isolated pools, no flow (Intermittent) Dry channel, no water (Ephemeral) COMMENTS SINUOSITY (Number of bends per 61 m (200 ff) of channel). (Check ONLY one box):	CO BA > 4.0 > 3.0 > 1.5 CO	MMENTS	the average of I DPLAIN QUA <u>FLOOD</u> L R <u>V</u>	f 3-4 measure nis informatio LITY ☆N PLAIN OUALI (Most Predo Mature Fore Immature Fore	MAXIMUM POO ments) (Check C > 1 0 m - 1 5 m (> 3' 3") $(> 3' 3")$ $\leq 1 0$ m ($\leq 3' 3"$) [5 pts AVERAGE BAN n must also be completed DTE: River Left (L) and Ri IY minant per Bank) st, Wetland orest, Shrub or Old Field	DL DEPTH (cen DNLY one box) - 4' 8") [15 pts] 5] IKFULL WIDTH ed ight (R) as looki L R Co	timeters): 16 : (meters): 0.3 ng downstream onservation Tillage ban or Industrial	Bankfull Width Max=30
COMMENTS FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel). (Check ONLY one box):	CO BA > 3 (> 3 (> 1 ! CO	MMENTS NK FULL WIDTH (Measured as 0 meters (> 13') [30 pts] 0 m - 4.0 m (> 9' 7" - 13') [25 pts] 5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS RIPARIAN ZONE AND FLOOD RIPARIAN WIDTH R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m	the average of I DPLAIN QUA <u>FLOOD</u> L R	f 3-4 measure nis informatio LITY ☆N PLAIN QUALI (Most Predo Mature Fore Immature Fore	MAXIMUM POO ments) (Check C > 1 0 m - 1 5 m (> 3' 3" ≤ 1 0 m (≤3' 3") [5 pts AVERAGE BAN n must also be complete OTE: River Left (L) and Ri IY minant per Bank) st, Wetland prest, Shrub or Old Field Park New Field	DL DEPTH (cen DNLY one box) - 4' 8") [15 pts] s] IKFULL WIDTH ed ight (R) as looki L R Co Un	timeters): 16 : (meters): 0.3 Ing downstream onservation Tillage ban or Industrial pen Pasture, Row C	Bankfull Width Max=30 5
FLOW REGIME (At Time of Evaluation) (Check ONLY one box): Stream Flowing Subsurface flow with isolated pools (Interstitial) COMMENTS SINUOSITY (Number of bends per 61 m (200 ft) of channel). (Check ONLY one box):	CO BA > 4.0 > 3.0 > 1.8 CO	MMENTS NK FULL WIDTH (Measured as 10 meters (> 13') [30 pts] 0 m - 4.0 m (> 9' 7' - 13') [25 pts] 5 m - 3.0 m (> 9' 7' - 4' 8'') [20 pts] MMENTS RIPARIAN ZONE AND FLOC <u>RIPARIAN WIDTH</u> R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None	the average of I DDPLAIN QUA <u>FLOOD</u> L R	f 3-4 measure his informatio LITY ☆N PLAIN QUALI (Most Predo Mature Fore Immature For Residential, Forced Pas	MAXIMUM POO ments) (Check C > 1 0 m - 1 5 m (> 3' 3" ≤ 1 0 m (≤3' 3") [5 pts AVERAGE BAN n must also be complete OTE: River Left (L) and Ri LY minant per Bank) st, Wetland prest, Shrub or Old Field Park, New Field ture	DL DEPTH (cen DNLY one box) - 4' 8") [15 pts] s] IKFULL WIDTH ed ight (R) as looki L R Co Un Op	timeters): 16 : (meters): 0.3 Ing downstream onservation Tillage ban or Industrial ben Pasture, Row Constantion	Bankfull Width Max=30 5
SINUOSITY (Number of bends per 61 m (200 ft) of channel). (Check ONLY one box):	CO BA > 4.0 > 3.0 > 1.5 CO	MMENTS NK FULL WIDTH (Measured as 10 meters (> 13') [30 pts] 0 m - 4.0 m (> 9' 7" - 13') [25 pts] 5 m - 3.0 m (> 9' 7" - 4' 8'') [20 pts] MMENTS MMENTS RIPARIAN ZONE AND FLOC <u>RIPARIAN WIDTH</u> R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS	the average of I DPLAIN QUA <u>FLOOD</u> L R	f 3-4 measure his informatio LITY ☆N PLAIN OUALI (Most Predo Mature Fore Immature For Residential, Fenced Pas	MAXIMUM POO ments) (Check C > 1 0 m - 1 5 m (> 3' 3" ≤ 1 0 m (≤3' 3") [5 pts AVERAGE BAN n must also be complete OTE: River Left (L) and Ri TY minant per Bank) st, Wetland orest, Shrub or Old Field Park, New Field ture	DL DEPTH (cen DNLY one box) - 4' 8") [15 pts] s] IKFULL WIDTH ed ight (R) as looki L R Co Un Op Mi	timeters): 16 : (meters): 0.3 Ing downstream onservation Tillage ban or Industrial ben Pasture, Row Coning or Construction	Bankfull Width Max=30 5
	CO BA > 4 (> 3 (> 1 ! CO	MMENTS NK FULL WIDTH (Measured as 0 meters (> 13') [30 pts] 0 m - 4.0 m (> 9' 7" - 13') [25 pts] 5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS MMENTS RIPARIAN ZONE AND FLOO <u>RIPARIAN WIDTH</u> R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of B Stream Flowing Subsurface flow with isolated b COMMENTS	the average of I DPLAIN QUAL FLOOD L R V V Evaluation) (C pools (Interstiti)	f 3-4 measure nis informatio LITY ☆N PLAIN QUALI (Most Predo Mature Fore Immature Fore Immature Fore Residential, Fenced Pas Check ONLY or al)	MAXIMUM POO ments) (Check C > 1 0 m - 1 5 m (> 3' 3" ≤ 1 0 m (≤3' 3") [5 pts AVERAGE BAN n <u>must</u> also be complete OTE: River Left (L) and Ri LY minant per Bank) st, Wetland orest, Shrub or Old Field Park, New Field ture he box): Moist Channel, Dry channel, no	DL DEPTH (cen DNLY one box) - 4' 8") [15 pts] s] IKFULL WIDTH ed ight (P) as looki L R Co Un Op Mi	timeters): 16 : (meters): 0.3 Ing downstream onservation Tillage ban or Industrial pen Pasture, Row C ning or Construction no flow (Intermitter leral)	Bankfull Width Max=30 5
None 1.0 2.0 3.0	CO BA > 4.0 > 3.0 > 1.5 CO	MMENTS NK FULL WIDTH (Measured as 10 meters (> 13') [30 pts] 0 m - 4.0 m (> 9' 7' - 13') [25 pts] 5 m - 3.0 m (> 9' 7' - 4' 8'') [20 pts] MMENTS MMENTS RIPARIAN ZONE AND FLOC <u>RIPARIAN WIDTH</u> R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of B Stream Flowing Subsurface flow with isolated (COMMENTS SINUOSITY (Number of bend	the average of I DPLAIN QUA FLOOD L R Evaluation) (C pools (Interstiti)	f 3-4 measure his informatio LITY ☆N PLAIN QUALI (Most Predc Mature Fore Immature Fore Immature Fore Residential, Fenced Pas theck ONLY or al)	MAXIMUM POO ments) (Check O > 10 m - 15 m (> 3' 3") ≤ 10 m (≤3' 3") [5 pts AVERAGE BAN n must also be complete OTE: River Left (L) and Ri DT minant per Bank) st, Wetland orest, Shrub or Old Field Park, New Field ture he box): Moist Channel, Dry channel, no	DL DEPTH (cen DNLY one box) - 4' 8") [15 pts] s] IKFULL WIDTH ed ight (R) as looki L R Co Uri Op Mi , isolated pools, o water (Ephem	timeters): 16 (meters): 0.3 (meters): 0.3 ng downstream onservation Tillage ban or Industrial pen Pasture, Row C ning or Construction no flow (Intermitter peral)	Bankfull Width Max=30 5
0.5 1.5 2.5 >3	CO BA > 3 (> 3 (> 1.5 CO	MMENTS NK FULL WIDTH (Measured as 0 meters (> 13') [30 pts] 0 m - 4.0 m (> 9' 7" - 13') [25 pts] 5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] MMENTS MMENTS RIPARIAN ZONE AND FLOO RIPARIAN WIDTH R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of B Stream Flowing Subsurface flow with isolated COMMENTS SINUOSITY (Number of benc None	the average of The average of The DPLAIN QUAL FLOOD L R Evaluation) (C pools (Interstiti) ds per 61 m (20 1,0	f 3-4 measure nis informatio LITY ☆N PLAIN QUALI (Most Predo Mature Fore Immature Fore Residential, Fenced Pas theck <i>ONLY</i> or al)	MAXIMUM POO ments) (Check O > 1 0 m - 1 5 m (> 3' 3") ≤ 1 0 m (≤ 3' 3") [5 pts AVERAGE BAN n must also be complete DTE: River Left (L) and Ri TY minant per Bank) st, Wetland orest, Shrub or Old Field Park, New Field ture ne box): Moist Channel, Dry channel, no = 2.0	DL DEPTH (cen DNLY one box) - 4' 8") [15 pts] IKFULL WIDTH ed ight (R) as looki L R Co Un Op Mi , isolated pools, o water (Ephem x):	timeters): 16 (meters): 0.3 (meters): 0.3 ng downstream onservation Tillage ban or Industrial pen Pasture, Row C ning or Construction no flow (Intermitter ieral) 3.0	Bankfull Width Max=30 5

ADDITIONAL STREAM INFORMATION (This Information Mu	st Also be Completed):
QHEI PERFORMED? Yes Vo QHEI Score	e (If Yes, Attach Completed QHEI Form)
DOWNSTREAM DESIGNATED USE(S)	Distance from Evaluated Stream 0.38 miles
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: <u>Hudson</u>	NRCS Soil Map Page: _ NRCS Soil Map Stream Order _
County: <u>Portage</u>	Township / City: <u>Streetsboro</u>
MISCELLANEOUS	
Base Flow Conditions? (Y/N): <u>yes</u> Date of last precipitation:	2024-02-22 Quantity: .53
Photo-documentation Notes:	
Elevated Turbidity? (Y/N): <u>no</u> Canopy (% open): <u>95</u>	
Were samples collected for water chemistry? (Y/N): <u>no</u> Lab Sa	ample # or ID (attach results): _
Field Measures: Temp (°C) <u>5.6</u> Dissolved Oxygen (mg/l) _	pH (S.U.) 8.09 Conductivity (µmhos/cm) _
Is the sampling reach representative of the stream (Y/N) $\underline{\ yes}$	If not, please explain:

Additional comments/description of pollution impacts: <u>Residential litter</u>

BIOLOGICAL OBSERVATIONS (Record all observations below) N/A

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

FLOW -



	/LOCATION	ergy - Darrow	-Hudson East	138kV Project.		
L INCHING	ER RIVER CODE RIVE	R BASIN	DRAINAGE A	REA (mi ²) <u><0.0</u> 01		
NGTH OF	STREAM REACH (ft) 200 LAT.	41.220808	LONG81.	382524 RIVER MILE		
ATE202	24-02-23 SCORER EVN CO	DMMENTS				
NOTE: C	omplete All Items On This Fr	orm - Refer te	o "Field Eva	luation Manual for C	bio's PHWH	Streams" for Instructio
	-					
I REAM	ATIONS: NONE / NAT	URAL CHANNI	EL RECO	OVERED 🔮 RECOVE	RING REC	ENT OR NO RECOVERY
		Constant States				
(Ma	ax of 32). Add total number of sign	ificant substrat	e types found	(Max of 8). Final metric	score is sum of	boxes A & B.
YPE		PERCENT	TYPE			PERCENT M
	BLDR SLABS [16 pts] BOULDER (>256 mm) [16 pts]	10		SILT [3 pts]	DEBRIS 13 nts	P0
10.1	BEDROCK [16 pts]	_10_	1000	FINE DETRITUS 13 p	ts]	Sut
18.1	COBBLE (65-256 mm) [12 pts]	15	1.000	CLAY or HAPDPAN	0 pts]	Ma
	GRAVEL (2-64 mm) [9 pts]			MUCK [0 pts]		_ 2
	SAND (<2 mm) [6 pts]		10.15	ARTIFICIAL [3 pts]		— L <u></u>
	Total of Percentages of	25	(A)			(B) A
ORE OF	TWO MOST PREDOMINATE SU	BSTRATE TVE	ES: 15		OF SUBSTRAT	E TYPES 6
Ma	ximum Pool Depth Measure the Juation. Avoid plunge pools from r	maximum poo road culverts or	storm water n	n the 61 meter (200 ft) ines) (Check ONLY c	evaluation read	th at the time of Poo
> 30	centimeters [20 pts]	oud surverts of	Storm Mater p	> 5 cm - 10 cm [15 p	ts]	
> 22	.5 - 30 cm [30 pts]		-	< 5 cm [5 pts]	ST CHANNEL D	0 stel
>10	~ 22.5 Cin [25 pts]			NO WATER OR MOI		
co	MMENTS			MAXIMUM PO	OL DEPTH (cei	ntimeters): 25
BA	NK FULL WIDTH (Measured as f	the average of	3-4 measurer	nents) (Check	ONLY one box): Ba
> 4.() meters (> 13') [30 pts]) m - 4.0 m (> 9' 7" - 13') [25 pts]		1	>10 m - 15 m (>3': ≤10 m (≤3'3") [5 p	3" - 4' 8") [15 pts ts]	j Vi Ma
> 1 4	5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]					
co	MMENTS			AVERAGE BA	NKFULL WIDT	H (meters): 0.85
		Th	is information	n must also be comple	ted	
	RIPARIAN ZONE AND FLOO	DPLAIN QUAL)TE: River Left (L) and I	Right (R) as look	ding downstreams
	R (Per Bank)	L R	(Most Predor	ninant per Bank)	LR	
L		100	Manual France			onservation Tillage
L	Wide >10m	10.00	Mature Fores	st, Wetland		onoorvenon mago
L	Wide >10m Moderate 5-10m		Immature Fore	st, Wetland rest, Shrub or Old Field	U U	rban or Industrial
1 2	Wide >10m Moderate 5-10m Narrow <5m	**	Immature Fore: Immature Fo	st, Wetland rest, Shrub or Old Field Park, New Field	0	rban or Industrial pen Pasture, Row Crop
1.1.2	Wide >10m Moderate 5-10m Narrow <5m None	**	Residential, I	st, Wetland rest, Shrub or Old Field Park, New Field ure		rban or Industrial pen Pasture, Row Crop
118 2.2	Wide >10m Moderate 5-10m Narrow <5m None COMMENTS	**	Residential, I Fenced Past	st, Wetland rest, Shrub or Old Field Park, New Field ure	0 	rban or Industrial pen Pasture, Row Crop lining or Construction
	Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of E	Valuation) (Cl	Residential, I Fenced Past	st, Wetland rest, Shrub or Old Field Park, New Field ure e box):		rban or Industrial pen Pasture, Row Crop lining or Construction
N LO S LL	Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of E Stream Flowing	Valuation) (Cl	Residential, I Fenced Past	st, Wetland rest, Shrub or Old Field Park, New Field ure e box): Moist Channe	el, isolated pools	rban or Industrial pen Pasture, Row Crop lining or Construction
-11 × -11 - × -1	Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of E Stream Flowing Subsurface flow with isolated p COMMENTS	Evaluation) (Cl	Residential, I Fenced Past heck ONLY on	st, Wetland rest, Shrub or Old Field Park, New Field ure e box): Moist Channe Dry channel,	U O Pl, isolated pools no water (Epher	rban or Industrial pen Pasture, Row Crop lining or Construction , no flow (Intermittent) neral)
IN OLD NEL	Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of E Stream Flowing Subsurface flow with isolated p COMMENTS	Evaluation) (Cl	Residential, I Fenced Past heck ONLY on	st, Wetland rest, Shrub or Old Field Park, New Field ure e box): Moist Channe Dry channel,	el, isolated pools no water (Epher	rban or Industrial pen Pasture, Row Crop lining or Construction , no flow (Intermittent) neral)
LIN DOLLAR	Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of E Stream Flowing Subsurface flow with isolated p COMMENTS SINUOSITY (Number of bency None	Evaluation) (Cl pools (Interstitia ls per 61 m (20	Mature Fore Immature Fo Residential, I Fenced Past heck <i>ONLY</i> on I) 0 ft) of channe	st, Wetland rest, Shrub or Old Field Park, New Field ure e box): Moist Channe Dry channel, 1) (Check <i>ONLY</i> one b 2.0	el, isolated pools no water (Epher ox):	rban or Industrial pen Pasture, Row Crop lining or Construction , no flow (Intermittent) neral)

ADDITIONAL STREAM INFORMATION (This information must also be Completed):					
QHEI PERFORMED? Yes Vo QHEI Scor	e (If Yes, Attach Completed QHEI Form)				
DOWNSTREAM DESIGNATED USE(S) WWH Name: Tinkers Creek CWH Name: EWH Name:	Distance from Evaluated Stream <u>0.43-</u> mile Distance from Evaluated Stream Distance from Evaluated Stream				
MAPPING: ATTACH COPIES OF MAPS, INCLUDING	THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION				
USGS Quadrangle Name: <u>Hudson</u>	NRCS Soil Map Page: _ NRCS Soil Map Stream Order _				
County: <u>Portage</u>	Township / City: <u>Streetsboro</u>				
MISCELLANEOUS					
Base Flow Conditions? (Y/N): yes Date of last precipitation	: <u>2024-02-22</u> Quantity: <u>.53</u>				
Photo-documentation Notes:					
Elevated Turbidity? (Y/N): <u>no</u> Canopy (% open): <u>100</u>					
Were samples collected for water chemistry? (Y/N): <u>no</u> Lab S	ample # or ID (attach results): _				
Field Measures: Temp (°C) $\underline{10.7}$ Dissolved Oxygen (mg/l) _	pH (S.U.) 7.46 Conductivity (µmhos/cm) _				
Is the sampling reach representative of the stream (Y/N) $\underline{,yes}$	If not, please explain:				

BIOLOGICAL OBSERVATIONS (Record all observations below) N/A

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:

ON /THE LAS

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

FLOW -



		HH	El Score (si	im of metr	(cs 1, 2, 3):	
TE NAME/LOCATION	ergy - Darrow -	Hudson East 138kV F	roject.			
TE NUMBER RIVER CODE RIVE	R BASIN	DRAINAGE AREA (m	²) <u>0.0659</u>			
NGTH OF STREAM REACH (ft) $\frac{200}{100}$ LAT.	41.225032	LONG, <u>-81,382509</u>	_ RIVER MILE _	-		
ATE	MMENTS					
IOTE: Complete All Items On This Fo	orm - Refer to	Field Evaluation	Manual for Oh	nio's PHWH	Streams" for Instruc	tions
IODIFICATIONS:	JRAL CHANNE	EL RECOVEREL	RECOVER	ING RE	LENT OF NO RECOVER	₹¥
SUBSTRATE: Estimate percent of e	very type of s	ubstrate present. Che	eck ONLY two pre	edominant sul	ostrate TYPE boxes	-
(Max of 32). Add total number of signi	ificant substrate	e types found (Max of	8). Final metric so	core is sum of	boxes A & B.	HH
YPE	PERCENT	TYPE			PERCENT	Poin
BOULDER (>256 mm) [16 pts]	15	LEAF F	PACK/WOODY D	EBRIS 13 pts	15	I UIII
BEDROCK [16 pts]		FINE	ETRITUS [3 pts]		Subst
COBBLE (65-256 mm) [12 pts]	30	CLAY (HAPDPAN [0	pts]	- 1	Max =
GRAVEL (2-64 mm) [9 pts]		MUCK	[0 pts]		_	23
SAND (<2 mm) [6 pts]	_21_	ARTIFI	CIAL [3 pts]		_	20
Total of Percentages of		(A)			(B)	A+F
Bldr Slabs, Boulder, Cobble, Bedrock		18				1000
ORE OF TWO MOST PREDOMINATE SUE	BSTRATE TYP	ES: 10 TC	DTAL NUMBER C	OF SUBSTRA	TE TYPES: 5	
Maximum Pool Depth Measure the	maximum poo	ol depth within the 61	meter (200 ft)	evaluation rea	ch at the time of F	Pool D
evaluation. Avoid plunge pools from ro	oad culverts or	storm water pipes)	(Check ONLY on	e box):		Max =
> 30 centimeters [20 pts]		~ ~ ~ / /				
> 22.5 - 30 cm [30 pts]		< 5 cr	n [5 pts]	1		leste.
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]		< 5 cr < 5 cr NO W	n [5 pts] ATER OR MOIS	T CHANNEL J	0 pts]	30
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts]		> 5 cr < 5 cr NO W	I - 10 CM [15 pts n [5 pts] IATER OR MOIS		0 pts]	30
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS		<pre><5 cr <5 cr NO W</pre>	MAXIMUM POO	T CHANNEL L DEPTH (ce	10 pts] entimeters): 25	30
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	he average of	3-4 measurements)	IS THE CHILLE PLS IN [5 pts] MAXIMUM POO (Check C	DEPTH (ce	(0 pts) entimeters): 25	30 Bankf
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as the second se	he average of	3-4 measurements) > 10 ≤ 10	MAXIMUM POO (Check C m - 1.5 m (> 3' 3") m (≤3' 3") [5 pts	1 <u>T CHANNEL</u> <u>L DEPTH (ce</u> <u>DNLY one bo</u> - 4' 8") [15 pt:]	(0 pts) entimeters): 25 x): s]	30 Bankt Widt Max=
<pre>> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8'') [20 pts]</pre>	he average of	3-4 measurements) >10 ≤10	MAXIMUM POO (Check C m -1.5 m (> 3'3" m (≤3'3") [5 pts] <u>T CHANNEL</u> L DEPTH (ce DNLY one bo: - 4' 8") [15 pt:]	0 pts] entimeters): 25	30 Bankt Widt Max=
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8'') [20 pts] COMMENTS	he average of	3-4 measurements) > 1 0 ≤ 1 0	ATER OR MOIS MAXIMUM POO (Check C m - 1.5 m (> 3' 3" m (≤3' 3") [5 pts AVERAGE BAN	I T CHANNEL J L DEPTH (ce DNLY one bo: - 4' 8") [15 pt:] KFULL WIDT	<u>(0 pts)</u> intimeters): 25 x): s] H (meters): 0.8	30 Bankt Widt Max=
<pre>> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS</pre>	he average of	3-4 measurements) > 10 ✓ ≤ 10	ATER OR MOIS MAXIMUM POO (Check C m - 1.5 m (> 3' 3" m (≤3' 3") [5 pts AVERAGE BAN	I CHANNEL L DEPTH (ce DNLY one bo: - 4' 8") [15 pt:] KFULL WIDT	(0 pts) entimeters): 25 x): s] H (meters): 0.8	30 Bankt Widt Max= 5
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	he average of Thi	3-4 measurements) >10 >10 ≤10	ATER OR MOIS MAXIMUM POO (Check C m - 1 5 m (> 3' 3" m (≤3' 3") [5 pts AVERAGE BAN	I <u>CHANNEL</u> L DEPTH (ce DNLY one bo: - 4' 8") [15 pt:] KFULL WIDT	0 pts] entimeters): 25 x): s] H (meters): 0.8	30 Bankt Widt Max= 5
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22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" + 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts] COMMENTS RIPARIAN ZONE AND FLOOD <u>RIPARIAN WIDTH</u> L R (Per Bank)	he average of Thi DPLAIN QUAL <u>FLOODP</u> L R	3-4 measurements) >10 >10 >10 >10 >10 >10 >10 >10	ATER OR MOIS MAXIMUM POO (Check C m - 1.5 m (> 3' 3" m (≤3' 3") [5 pts AVERAGE BAN also be complete er Left (L) and Ri er Bank)	L DEPTH (ce DNLY one bo: - 4' 8") [15 pt: KFULL WIDT d ght (R) as loo	ting downstream x	30 Bankt Widt Max= 5
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" · 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" · 4' 8") [20 pts] COMMENTS RIPARIAN ZONE AND FLOOD <u>RIPARIAN WIDTH</u> L R (Per Bank) Wide >10m	he average of Thi DPLAIN QUAL <u>FLOODP</u> L R	3-4 measurements) >10 >10 >10 >10 >10 >10 Interpret of the second se	IS TO CIN [13 pts] IATER OR MOIS MAXIMUM POO (Check C m - 1.5 m (> 3' 3" m (≤ 3' 3") [5 pts AVERAGE BAN AVERAGE BAN also be complete er Left (L) and Ri er Bank) und	L DEPTH (ce DNLY one bo: - 4' 8") [15 pt: KFULL WIDT ed ght (R) as loo	o pts] entimeters): 25 x): s] H (meters): 0.8 king downstream≯	30 Bankt Widt Max= 5
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> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	he average of Thi DPLAIN QUAL FLOODP L R	3-4 measurements) >10 >10 >10 >10 >10 >10 >10 >10	ATER OR MOIS MAXIMUM POO (Check C MAXIMUM POO (Check C m - 1.5 m (> 3' 3") m (≤3' 3") [5 pts AVERAGE BAN AVERAGE BAN Also be complete er Left (L) and Ri er Bank) ind rub or Old Field mu Field	L DEPTH (ce DNLY one bo: - 4' 8") [15 pt: KFULL WIDT ed ght (P) as loo	0 pts]	30 Bankt Widt Max= 5
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	he average of Thi DPLAIN QUAL FLOODP L R	3-4 measurements) 3-4 measurements) ⇒ 1 0 ⇒ 1 0 ≤ 1 0 S information <u>must</u> a ITY ☆NOTE: Riv CAIN OUALITY (Most Predominant p Mature Forest, Wetla Immature Forest, Sh Residential, Park, Ne	ATER OR MOIS MAXIMUM POO (Check C m ~ 1.5 m (> 3' 3" m (≤3' 3") [5 pts AVERAGE BAN AVERAGE BAN AVERAGE BAN also be complete er Left (L) and Ri er Bank) and rub or Old Field w Field	L R L R CHANNEL L DEPTH (ce DNLY one bo: - 4' 8") [15 pt: 1 KFULL WIDT cd ght (R) as loo L R L C L C	0 pts] entimeters): 25 x): 5] H (meters): 0.8 king downstreams Conservation Tillage Jrban or Industrial Open Pasture, Row Crop	30 Bankt Widt Max= 5
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	he average of Thi DPLAIN QUAL FLOODP L R	3-4 measurements) > 1 0 > 1 0 S information <u>must</u> a ITY ☆ NOTE: Riv LAIN OUALITY (Most Predominant p Mature Forest, Wetla Immature Forest, Sh Residential, Park, Ne Fenced Pasture	ATER OR MOIS MAXIMUM POO (Check C m - 1.5 m (> 3' 3" m (≤3' 3") [5 pts AVERAGE BAN Also be complete er Left (L) and Ri er Bank) ind rub or Old Field w Field	I CHANNEL CHANNEL CHANNEL CHANNEL CHANNEL CAN CHANNEL CAN CAN CAN CAN CAN CAN CAN CAN	[0 pts] intimeters): 25 k): - i] - H (meters): 0.8 king downstreams - Conservation Tillage - Jrban or Industrial - Open Pasture, Pow Crop - Mining or Construction -	30 Bankf Widt Max= 5
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	he average of Thi DPLAIN QUAL FLOODP L R	3-4 measurements) > 1 0 > 1	ATER OR MOIS MAXIMUM POO (Check C MAXIMUM POO (Check C m - 1.5 m (> 3' 3" m (≤3' 3") [5 pts AVERAGE BAN AVERAGE BAN AVERAGE BAN also be complete er Left (L) and Ri er Bank) ind rub or Old Field w Field	L R L R KFULL WIDT C C C C C C C C C C C C C	0 pts] entimeters): 25 x): 5] H (meters): 0.8 king downstream* Conservation Tillage Jrban or Industrial Open Pasture, Pow Crop Mining or Construction	30 Bankf Widt Max= 5
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	he average of Thi DPLAIN QUAL FLOODP L R	3-4 measurements) 3-4 measurements) > 1 0 > 1 0	MAXIMUM POO (Check C m <1.5 m (> 3' 3" m (≤3' 3") [5 pts AVERAGE BAN AVERAGE BAN Also be complete er Left (L) and Ri er Bank) ind rub or Old Field w Field Moist Channel	I CHANNEL	0 pts] entimeters): 25 x):	30 Bankt Widt Max= 5
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	he average of Thi DPLAIN QUAL FLOODP L R L R Valuation) (Cr vools (Interstitia	3-4 measurements) > 1 0 > NOTE: Riv LAIN OUALITY (Most Predominant p Mature Forest, Wetla Immature Forest, Sh Residential, Park, Ne Fenced Pasture heck ONLY one box)::)	ATER OR MOIS MAXIMUM POO (Check C m - 1.5 m (> 3' 3" m (≤3' 3") [5 pts AVERAGE BAN AVERAGE BAN AVERAGE BAN AVERAGE BAN AUSO be complete er Left (L) and Ri er Bank) ind rub or Old Field w Field Moist Channel, Dry channel, no	I CHANNEL C DEPTH (ce DNLY one bo: - 4' 8") [15 pt: KFULL WIDT ed ght (R) as loo L R () isolated pool b water (Ephe	0 pts] entimeters): 25 x): 5] H (meters): 0.8 king downstream* Conservation Tillage Jrban or Industrial Open Pasture, Row Crop Mining or Construction s, no flow (Intermittent) meral)	30 Bankt Widt Max= 5
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" - 4' 8') [20 pts] COMMENTS RIPARIAN ZONE AND FLOOD <u>RIPARIAN WIDTH</u> L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of E Stream Flowing Subsurface flow with isolated p COMMENTS SINUOSITY (Number of bendfilter) COMMENTS	he average of Thi DPLAIN QUAL FLOODP L R Valuation) (Cr pools (Interstitia s per 61 m (200	3-4 measurements) > 1 0 > 1 0 ≤ 1 0 3-4 measurements) > 1 0 ≤ 1 0 Sinformation must a ITY ☆ NOTE: Riv 2 AIN OUALITY (Most Predominant p Mature Forest, Wetla Immature Forest, Wetla Immature Forest, Wetla Immature Forest, Wetla Immature Forest, Sh Residential, Park, Ne Fenced Pasture neck ONLY one box): 1) Of() of channel) (Che	MAXIMUM POO (Check C m [5 pts] MAXIMUM POO (Check C m - 1.5 m (> 3' 3") m (≤3' 3") [5 pts AVERAGE BAN also be complete er Left (L) and Ri er Bank) and rub or Old Field w Field Moist Channel, Dry channel, no ck ONLY one box	I CHANNEL CHANNEL CHANNEL CHANNEL CHANNEL CHANNEL COMPACTION	0 pts] entimeters): 25 x):	30 Bankf Widt Max= 5
> 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as th > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" + 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" + 4' 8'') [20 pts] COMMENTS COMMENTS RIPARIAN ZONE AND FLOOD EIPARIAN WIDTH L R (Per Bank) Wide >10m Moderate 5-10m Narrow <5m None COMMENTS FLOW REGIME (At Time of E Stream Flowing Subsurface flow with isolated p COMMENTS SINUOSITY (Number of bend: None	he average of Thi DPLAIN QUAL FLOODP L R Valuation) (Cr vools (Interstitia s per 61 m (200 1.0	< 5 cr	MAXIMUM POO (Check C m [5 pts] MAXIMUM POO (Check C m - 1.5 m (> 3' 3") m (≤3' 3") [5 pts AVERAGE BAN Also be complete er Left (L) and Ri er Bank) and rub or Old Field w Field Moist Channel, no ck ONLY one box 2.0	I CHANNEL	0 pts] intimeters): 25 k): 5] H (meters): 0.8 King downstreams* Conservation Tillage Jrban or Industrial Open Pasture, Row Crop Alining or Construction s, no flow (Intermittent) meral) 3.0	30 Bankt Widt Max= 5

ADDITIONAL STREAM INFORMATION (This information must also be Completed):					
QHEI PERFORMED? Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)					
DOWNSTREAM DESIGNATED USE(S) WWH Name: Tinkers Creek CWH Name: EWH Name:	Di: Dis	stance from Evaluated Stream0.45-mile stance from Evaluated Stream stance from Evaluated Stream			
MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION					
USGS Quadrangle Name: <u>Hudson</u>	NRCS Soil Map Page: _	NRCS Soil Map Stream Order _			
County: <u>Portage</u>	Township / City: <u>Streetsboro</u>	<u>-</u> ,			
MISCELLANEOUS					
Base Flow Conditions? (Y/N): <u>yes</u> Date of last precipitation	2024-02-22 Quantity:				
Photo-documentation Notes:					
Elevated Turbidity? (Y/N): no Canopy (% open): 80					
Were samples collected for water chemistry? (Y/N): <u>no</u> Lab Sample # or ID (attach results): _					
Field Measures: Temp (°C) <u>13.7</u> Dissolved Oxygen (mg/l) _	pH (S.U.) 7.57 Conductivity	ν (µmhos/cm) _			
Is the sampling reach representative of the stream (Y/N) $\underline{\mbox{yes}}$	If not, please explain:				

BIOLOGICAL OBSERVATIONS (Record all 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) _ Species observed (if known): _ Comments Regarding Biology:

N/A

ON /THE LAS

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

FLOW -



ChicEPA Qu an	alitative Habitat Evalua d Use Assessment Fie	tion Index QHE	El Score: 46.00
Stream & Location: S-EVN-12 (Powers	Brook) east of Stow Road Fairfield Summ	it County RM: 5.1	Date: 2 / 26 / 24
FE Darrow-Hudson East 138kV ROW Assura	nce Program 🛱 Scorers Full Name	& Affiliation: E. Given & E	. Van Nort, TRC
<i>River Code:</i>	ORET #: Lat./ Long	<u>40</u> 815569 /8 · .	66986 Office verified location
1] SUBSTRATE Check ONLY Two substrates where the every BEST TYPES POOL RIFFLE DEDUCTION COBLE [9] DEDUCTOR [9	Ate TYPE BOXES; type present OTHER TYPES HARDPAN [4] DETRITUS [3] SILT [2] ARTIFICIAL [0] (Score natural substrates; ignore (Score natural substrates; ignore SILT [2] SILT [2] (Score natural substrates; ignore SILT [2] (Score natural substrates; ignore SILT [2] (Score natural substrates; ignore Core [2] SILT [2] (Core natural substrates; ignore Core [2] (Core natural substrates; ignore Core [2] (Core natural substrates; ignore (Core natural substrates; ignore) (Core nat	Check ONE (Or 2 & a ORIGIN MESTONE [1] LLS [1] TETLANDS [0] ARDPAN [0] ANDSTONE [0] IP/RAP [0] ACUSTURINE [0] HALE [-1] OAL FINES [-2]	Average) QUALITY HEAVY [-2] MODERATE [-1] FREE [1] EXTENSIVE [-2] MODERATE [-1] MODERATE [-1] NORMAL [0] NONE [1]
2] INSTREAM COVER Indicate presence quality; 2-Moder quality; 3-Highest quality in moderate or great diameter log that is stable, well developed ro- UNDERCUT BANKS [1] 2 OVERHANGING VEGETATION [1] 3HALLOWS (IN SLOW WATER) [1] ROOTMATS [1] Comments	e 0 to 3: 0-Absent; 1-Very small amounts ate amounts, but not of highest quality or ter amounts (e.g., very large boulders in o otwad in deep / fast water, or deep, well-d POOLS > 70cm [2] OXBO ROOTWADS [1] AQUA BOULDERS [1] 1 LOGS	or if more common of marginal in small amounts of highest leep or fast water, large C efined, functional pools. WS, BACKWATERS [1] CIC MACROPHYTES [1] OR WOODY DEBRIS [1]	AMOUNT theck ONE (Or 2 & average) EXTENSIVE >75% [11] MODERATE 25-75% [7] SPARSE 5-<25% [3] NEARLY ABSENT <5% [1] Cover Maximum
3] CHANNEL MORPHOLOGY Check (SINUOSITY DEVELOPMENT HIGH [4] EXCELLENT [7] MODERATE [3] GOOD [5] LOW [2] FAIR [3] NONE [1] POOR [1] Comments	DNE in each category (<i>Or 2 & average</i>) CHANNELIZATION NONE [6] RECOVERED [4] RECOVERING [3] RECENT OR NO RECOVERY [1]	STABILITY HIGH [3] MODERATE [2] LOW [1]	Channel Maximum 20
4] BANK EROSION AND RIPARIAN River right looking downstream EROSION I WIDE > 50 NONE / LITTLE [3] MODERAT MODERATE [2] NARROW HEAVY / SEVERE [1] VERY NAU NONE [0] Comments	ZONE Check ONE in each category for AN WIDTH FLOOD F Dm [4] Grade Forest, SWAM FE 10-50m [3] SHRUB OR OLD 5-10m [2] RESIDENTIAL, P RROW < 5m [1]	EACH BANK (Or 2 per bank 8 PLAIN QUALITY P [3] FIELD [2] ARK, NEW FIELD [1] RE [1] , ROWCROP [0]	A average) DNSERVATION TILLAGE [1] RBAN OR INDUSTRIAL [0] NING / CONSTRUCTION [0] Dredominant land use(s) m riparian. Riparian Maximum 10
5] POOL / GLIDE AND RIFFLE / RU MAXIMUM DEPTH CHANN Check ONE (ONLY!) Check ONE 0.7-<1m [4] POOL WIDTH 0.4-<0.7m [2] POOL WIDTH 0.2-<0.4m [1] 0.2-<0.4m [1] Comments	N QUALITY NEL WIDTH (Or 2 & average) RIFFLE WIDTH [2] RIFFLE WIDTH [1] RIFFLE WIDTH [1] RIFFLE WIDTH [1] A CURREN Check A TORRENTIAL [- VERY FAST [1] MODERATE [1] Indicate for re	IT VELOCITY LL that apply 1] [] SLOW [1] [] INTERSTITIAL [-1] [] INTERMITTENT [-2] [] EDDIES [1] ach - pools and riffles.	Recreation Potential Primary Contact Secondary Contact (circle one and comment on back) Pool / Current Maximum
Indicate for functional riffles; E of riffle-obligate species: RIFFLE DEPTH RUN DE BEST AREAS > 10cm [2] MAXIMUM > BEST AREAS 5-10cm [1] MAXIMUM < BEST AREAS < 5cm [metric=0] Comments	Best areas must be large enoug Check ONE (Or 2 & average) PTH RIFFLE / RUN SUBS 50cm [2] STABLE (e.g., Cobble, Bo 50cm [1] MOD. STABLE (e.g., Larg) UNSTABLE (e.g., Fine Gra	h to support a populati TRATE RIFFLE / RUN ulder) [2]	12 ON <u>IPFLE [metric=0]</u> EMBEDDEDNESS NE [2] N [1] DERATE [0] Riffle / Run Maximum 8 0.00
6] <i>GRADIENT</i> (8.95 ft/mi) □ VERY DRAINAGE AREA ☑ MODI (1.02 mi²) □ HIGH	LOW - LOW [2-4] %P0 ERATE [6-10] - VERY HIGH [10-6] %R	DOL: 15 %GLIDE: UN: 85 %RIFFLE:	0 Gradient 0 Maximum 10

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



FI MEASUREMENTS

max. depth 0.3m

X depth 12cm x width 0.8m

HARDENED / URBAN / DIRT&GRIME

WWTP / CSO / NPDES / INDUSTRY

El ISSUES

Circle some & COMMENT

PUBLIC / PRIVATE / BOTH / NA ACTIVE / HISTORIC / BOTH / NA

DI MAINTENANCE

YOUNG-SUCCESSION-OLD SRRAY / SNAG / REMOVED **MODIFIED / DIPPED OUT / NA**

LEVEED / ONE SIDED

MONNG-BED OAD-STABLE

ÅRMOURED / SLUMPS

ISLANDS / SCOURED

RELOCATED / CUTOFFS

IMPOUNDED / DESICCATED

bankfull width

LOGGING / IRRIGATION / COOLING FALSE BANK / MANURE / LAGOON

BANK / EROSION / SURFACE

BMPs-CONSTRUCTION-SEDIMENT

CONTAMINATED / LANDFILL

bankfull x depth

W/D ratio

bankfull max. depth floodprone x2 width

WASH H₂0 / TILE / H₂0 TABLE ACID / MINE / QUARRY / FLOW entrench. ratio

NATURAL / WET AND / STAGNANT PARK / GOLF / LAWN / HOME



TE NAME/LOCATION S-EVN-13. FirstFnerr	v - Darrow -	Hudson East 138Kv Project.		
TE NUMBER RIVER CODE RIVER	BASIN	DRAINAGE AREA (mi ²) 0001		
NGTH OF STREAM REACH (ft) 200 LAT 4	1 21747173	33 LONG -81 4074234167	RIVER MILE	
ATE 2024-02-26 SCOPER EVN COM	MENTS			_
NOTE: Complete All Items On This Form	n Defer to	IField Evaluation Manual fr	or Obiolo PUM	U Streeme" for Instructio
NOTE: Complete All items on This Form	n - Reier ic	Field Evaluation Manual IC		n Streams for Instructio
TREAM CHANNEL VINNE / NATUR	AL CHANNE	EL RECOVERED RECO	OVERING R	ECENT OR NO RECOVERY
SUBSTRATE; Estimate percent of eve	ry type of s	ubstrate present. Check ONLY tv	vo predominant s	substrate TYPE boxes
(Max of 32). Add total number of signific	ant substrate	e types found (Max of 8). Final me	tric score is sum	of boxes A & B.
	ERCENT	TYPE SILT 12 ptpl		PERCENT PO
BOULDER (>256 mm) [16 pts]	_	LEAF PACK/WOOI	DY DEBRIS [3 p	ts] <u>25</u>
BEDROCK [16 pts]	_	FINE DETRITUS	3 pts]	Sub
COBBLE (65-256 mm) [12 pts]	<u> </u>	CLAY or HAPDPAN	V [0 pts]	_45
GRAVEL (2-64 mm) [9 pts]	-	MUCK [0 pts]		— 6
SAND (<2 mm) [6 pts]	-	ARTIFICIAL [3 pts]	— L
Total of Percentages of Bidr Slabs, Boulder, Cobble, Bedrock	0	(A)		(B) A
CORE OF TWO MOST PREDOMINATE SUBS	TRATE TYP	ES: 3 TOTAL NUME	ER OF SUBSTR	RATE TYPES: 3
Marine Barl David Marrie the		1 de este sette de la constant (200		
evaluation Avoid plunge pools from road	aximum poo	a depth within the 61 meter (200	π) evaluation re	each at the time of Pool
	d culverts or	storm water pipes) (Check ONL	Y one hox).	I Ma
> 30 centimeters [20 pts]	d cuiverts or	storm water pipes) (Check ONL > 5 cm - 10 cm [1	Y one box): .5 pts]	
 > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10, 33.5 cm [30 pts] 	d cuiverts or	storm water pipes) (Check OVL > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR A	5 pts]	
 > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] 	d cuiverts or	storm water pipes) (Check ONL > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M	Y one box): 5 pts] //OIST CHANNE	L [0 pts] 5
 > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS 	d cuiverts or	storm water pipes) (Check ONL > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM	Y one box): 5 pts] MOIST CHANNE POOL DEPTH (L [0 pts] 5 centimeters): 0.7
 > 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as the 	a cuiverts or	storm water pipes) (Check OV/ > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check OV/	Y one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one b	centimeters): 0.7
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	a cuiverts or	storm water pipes) (Check OV/ > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check > 10 m - 15 m (>	Y one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one t: 3'3" - 4' 8") [15	L [0 pts] centimeters): 0.7 box): pts]
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	a cuiverts or	storm water pipes) (Check OV/ > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check OV/ > 10 m - 15 m (> ≤ 10 m (≤3' 3") [Y one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one 1: 3' 3" - 4' 8") [15] [5 pts]	L [0 pts] centimeters): 0.7 box): pts] Max
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	a cuiverts or	storm water pipes) (Check OV/ > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check > 1 0 m - 1.5 m (> ≤ 1 0 m (≤3' 3')	Y one box): 5 pts] <u>MOIST CHANNE</u> <u>POOL DEPTH (</u> <u>eck ONLY one k</u> 3' 3" - 4' 8") [15 5 pts]	centimeters): 0.7 box): pts]
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as the > 4.0 meters (> 13') [30 pts] > 3.0 m - 4.0 m (> 9' 7" + 13') [25 pts] > 1.5 m - 3.0 m (> 9' 7" + 4' 8") [20 pts] COMMENTS	a cuiverts or	storm water pipes) (Check OV/ > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Che > 10 m - 15 m (> ≤ 10 m (≤3' 3") [AVERAGE	Y one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one i: 3' 3" - 4' 8") [15 5 pts] BANKFULL WI	L [0 pts] 5 centimeters): 0.7 box): bts] W Ma DTH (meters): 0.3 5
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS BANK FULL WIDTH (Measured as the > 4.0 meters (> 13") [30 pts] > 3.0 m - 4.0 m (> 9"7" + 13") [25 pts] > 1.5 m - 3.0 m (> 9"7" + 4"8") [20 pts] COMMENTS	a cuiverts or	storm water pipes) (Check OV/ > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check > 10 m - 15 m (> ≤ 10 m (≤3' 3')] AVERAGE s information must also be com	Y one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one I: 3' 3" - 4' 8") [15 5 pts] BANKFULL WI	L [0 pts] 5 centimeters): 0.7 box): bts] W Ma DTH (meters): 0.3 5
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	a cuiverts or average of PLAIN QUAL	storm water pipes) (Check ONL > 5 cm - 10 cm [1 < 5 cm [5 pts]	Y one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one b 3' 3" - 4' 8") [15 5 pts] BANKFULL WI apleted nd Right (R) as lo	L [0 pts] 5 centimeters): 0.7 box): pts] 8a W Ma DTH (meters): 0.3 5
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	a cuiverts or average of Thi PLAIN QUAL FLOODP	storm water pipes) (Check UNL > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check > 10 m - 15 m (> ≤ 10 m (≤3' 3') [AVERAGE s information must also be com ITY ☆NOTE: River Left (L) a LAIN QUALITY	Y one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one I: 3' 3" - 4' 8") [15 3' 3" - 4' 8") [15 5 pts] BANKFULL WIG pleted nd Right (R) as le	L [0 pts] 5 centimeters): 0.7 box): bts] 0.3 5 DTH (meters): 0.3 5
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	average of Thi PLAIN QUAL FLOODP L R	storm water pipes) (Check OV/ > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check > 1 0 m - 15 m (> ≤ 1 0 m (≤3' 3')] AVERAGE s information must also be com ITY ☆NOTE: River Left (L) at LAIN OUALITY (Most Predominant per Bank) Mature Eorest Wetland	Y one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one b 3' 3" - 4' 8") [15 3' 3" - 4' 8") [15 5 pts] BANKFULL WI hpleted nd Right (R) as lo L R	L [0 pts] 5 centimeters): 0.7 box): pts] Bai W Ma DTH (meters): 0.3 5 Doking downstream≯
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	average of PLAIN QUAL FLOODP L R	storm water pipes) (Check OV/ > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check > 10 m - 15 m (> ≤ 10 m (≤3' 3") [AVERAGE s information must also be com ITY ☆NOTE: River Left (L) a LAIN OUALITY (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old F	Y one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one t: 3' 3" - 4' 8") [15 3' 3" - 4' 8") [15 5 pts] BANKFULL WI npleted nd Right (R) as lo L R ield	L [0 pts] 5 centimeters): 0.7 box): pts] 8a W Ma DTH (meters): 0.3 5 DTH (meters): 0.3 5
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	average of PLAIN QUAL FLOODP L R	storm water pipes) (Check OV/ > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check > 10 m - 15 m (> < 10 m (≤3' 3") [AVERAGE s information must also be com ITY ☆NOTE: River Left (L) a LAIN OUALITY (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old F	Y one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one t: 3' 3" - 4' 8") [15 5 pts] BANKFULL WIG npleted nd Right (R) as lo L R ield	L [0 pts] 5 centimeters): 0.7 box): bts] 8 DTH (meters): 0.3 5 DOTH (meters): 0.3 5
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	average of Plain QUAL FLOODP L R	storm water pipes) (Check OV/ > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check > 10 m - 15 m (> ≤ 10 m (≤3' 3'')] AVERAGE s information must also be com ITY ☆NOTE: River Left (L) a LAIN OUALITY (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Wetland Immature Forest, Shrub or Old F Residential, Park, New Field	Y one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one b 3' 3" - 4' 8") [15 5 pts] BANKFULL WID npleted nd Right (R) as lo L R ield	L [0 pts] 5 centimeters): 0.7 box): pts] 0.3 5 DTH (meters): 0.3 5 Doking downstream≯ Conservation Tillage Urban or Industrial Open Pasture, Row Crop
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	average of Paverage of PLAIN QUAL FLOODP L R	storm water pipes) (Check OV/ > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check > 10 m - 15 m (> ≤ 10 m (≤3' 3'') [AVERAGE s information must also be com ITY ☆NOTE: River Left (L) a LAIN OUALITY (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Wetland Immature Forest, Shrub or Old F Residential, Park, New Field Fenced Pasture	Y one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one b 3'3" - 4" 8") [15 5 pts] BANKFULL WID npleted nd Right (R) as lo L R jeld	L [0 pts] 5 centimeters): 0.7 box): pts] 0.3 5 DTH (meters): 0.3 5 Doking downstream☆ Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	average of PLAIN QUAL FLOODP L R	storm water pipes) (Check OV/ > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check > 10 m - 15 m (> < 10 m (≤3' 3") [AVERAGE s information must also be com ITY ☆NOTE: River Left (L) at LAIN OUALITY (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old F Residential, Park, New Field Fenced Pasture	Ar one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one i: 3' 3" - 4' 8") [15 5 pts] BANKFULL WIG npleted nd Right (R) as lo L R ield	L [0 pts] 5 centimeters): 0.7 box): pts] 0.3 5 DTH (meters): 0.3 5 Doking downstream≯ Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	average of Plain QUAL FLOODP L R	storm water pipes) (Check ONL > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check > 10 m - 15 m (> ≤ 10 m (≤3' 3")] AVERAGE s information must also be com ITY ☆NOTE: River Left (L) a LAIN OUALITY (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Wetland Immature Forest, Shrub or Old F Residential, Park, New Field Fenced Pasture meck ONLY one box):	Y one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one t: 3' 3" - 4' 8") [15 5 pts] BANKFULL WI npleted nd Right (R) as lo L R ield	L [0 pts] 5 centimeters): 0.7 box): pts] 0.3 5 DTH (meters): 0.3 5 coking downstream≯ Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	a cuiverts or average of PLAIN QUAL FLOODP L R L R Uuation) (Cr ols (Interstitia	storm water pipes) (Check ONL > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Check > 10 m - 15 m (> < 10 m (≤3' 3")] AVERAGE s information must also be com ITY ☆NOTE: River Left (L) a LAIN OUALITY (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Wetland Immature Forest, Shrub or Old F Residential, Park, New Field Fenced Pasture neck ONLY one box): Moist Cha Dry chann	Ar one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one to 3'3" - 4" 8") [15 5 pts] BANKFULL WIC pleted nd Right (R) as lo L R jeld	L [0 pts] 5 centimeters): 0.7 box): pts] 0.3 5 DTH (meters): 0.3 5 Doking downstream≯ Conservation Tillage Urban or Industrial Open Pasture, Row Crop Mining or Construction ols, no flow (Intermittent) hemeral)
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	average of This PLAIN QUAL PLOODP L R Junction (Cr als (Interstitia per 61 m (200	storm water pipes) (Check ONL > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Che > 10 m - 15 m (> ≤ 10 m (≤3' 3'') [AVERAGE s information must also be com ITY ☆NOTE: River Left (L) a LAIN OUALITY (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Wetland Immature Forest, Shrub or Old F Residential, Park, New Field Fenced Pasture neck ONLY one box): Moist Cha Dry channel) (Check ONLY on	Ar one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one i: 3' 3" - 4' 8") [15 5 pts] BANKFULL WIG no Right (R) as lo L R ield	[0 pts] 5 centimeters): 0.7 box): Bail box): W box): Bail box Bail box <td< td=""></td<>
> 30 centimeters [20 pts] > 22.5 - 30 cm [30 pts] > 10 - 22.5 cm [25 pts] COMMENTS	a cuiverts or average of PLAIN QUAL FLOODP L R L R duation) (Cr ols (Interstitia per 61 m (200 1.0	storm water pipes) (Check ONL > 5 cm - 10 cm [1 < 5 cm [5 pts] NO WATER OR M MAXIMUM 3-4 measurements) (Che > 1 0 m - 1 5 m (> < 1 0 m (≤3' 3") [AVERAGE s information must also be com ITY ☆NOTE: River Left (L) a LAIN OUALITY (Most Predominant per Bank) Mature Forest, Wetland Immature Forest, Shrub or Old F Residential, Park, New Field Fenced Pasture Noist Cha Dry channel) (Check ONLY on 2.0	Ar one box): 5 pts] MOIST CHANNE POOL DEPTH (eck ONLY one to 3' 3" - 4' 8") [15 BANKFULL WIG mpleted nd Right (R) as lo L R ield ield mnnel, isolated po iel, no water (Epl me box):	L [0 pts] centimeters): 0.7 box): pts] DTH (meters): 0.3 5 DTH (meters): 0.3 5 DOTH (meters): 0.3 5 DO

ADDITIONAL STREAM INFORMATION (This information must also be completed).					
QHEI PERFORMED? Yes Vo QHEI Score (If Yes, Attach Completed QHEI Form)					
DOWNSTREAM DESIGNATED USE(S) WWH Name: CWH Name: EWH Name:		Distance from Evaluated Stream 0.08-mile Distance from Evaluated Stream Distance from Evaluated Stream			
MAPPING: ATTACH COPIES OF MAPS, INCLUDING	THE <u>ENTIRE</u> WATERSHED A	REA. CLEARLY MARK THE SITE LOCATION			
USGS Quadrangle Name: <u>Hudson</u>	NRCS Soil Map Page: _	_ NRCS Soil Map Stream Order _			
County: <u>Summit</u>	Township / City: <u>Hudson</u>	_			
MISCELLANEOUS					
Base Flow Conditions? (Y/N): <u>yes</u> Date of last precipitation: <u>2024-02-24</u> Quantity: <u>.41</u>					
Photo-documentation Notes:					
Elevated Turbidity? (Y/N): no Canopy (% open): 100					
Were samples collected for water chemistry? (Y/N): <u>no</u> Lab Sample # or ID (attach results): _					
Field Measures: Temp (°C) $\underline{13.7}$ Dissolved Oxygen (mg/l) _	pH (S.U.) 7.29 Conduct	ivity (µmhos/cm) _			
Is the sampling reach representative of the stream (Y/N) $\underline{_{yes}}$	If not, please explain:				

BIOLOGICAL OBSERVATIONS

(Record all observations below) N/A 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:

DDITIONAL STREAM INFORMATION (This Information Must Also be Completed)

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

FLOW -

