

August 23, 2021

Ms. Theresa White  
Executive Director,  
Ohio Power Siting Board  
180 East Broad Street 6<sup>th</sup> Floor  
Columbus, OH 43215

**Re: Dominion Energy Ohio Letter of Notification for PIR 2647 37<sup>th</sup> & Cleveland, Canton Township, Stark County, Ohio Case No. 21-0874-GA-BLN**

Dear Ms. White:

This letter serves as Dominion Energy Ohio's (DEO) application notification letter in the above-referenced matter. In accordance with Ohio Administrative Code ("OAC") 4906-6-03(A), DEO provides the following information:

**Project Description:** This project involves the replacement of approximately 6,115 feet (1.15 miles) of 2 to 6-inch bare-steel pipe with coated 6-inch and 12-inch steel pipe, and 135 feet of 8-inch medium density plastic pipe. The existing pipe will be abandoned in place. The replacement pipe will be installed primarily within the road right-of-way of a portion of Cleveland Avenue in Canton Township, Stark County. This project meets the requirements for a Letter of Notification Application per OAC 4906-1-01, Appendix B (1) (b) (replacement of an existing pipeline segment greater than 1 mile in length but not greater than 5 miles).

**Anticipated Project Schedule:** Construction is anticipated to begin in the Fall of 2021 and placed in service by the end of 2021.

**Request for Expedited Treatment:** In accordance with OAC 4906-6-04, DEO hereby requests expedited processing of the Application. The Application and a check for \$2000 to cover processing fees in advance was hand-delivered to Staff earlier today.

Sincerely,

*s/ Mark A. Whitt*

ON BEHALF OF  
THE EAST OHIO GAS COMPANY  
D/B/A DOMINION ENERGY OHIO

WHITT STURTEVANT LLP

01-12

2592

88 E BROAD ST STE 1590  
COLUMBUS, OH 43215-3528

DATE

8/23/21

6-12/410  
230

CHECK ARMOR  
PRINTED NOTE EDITION

PAY  
TO THE  
ORDER OF

Ohio Power Siting Board

Two Thousand dollars & 00/100

\$ 2000.00

DOLLARS



Photo  
Safe  
Deposit  
Print on back

PNC BANK

PNC Bank, N.A. 070

FOR

DEO PIR 2647

MP

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## **LETTER OF NOTIFICATION APPLICATION**

### **PIR 2647 – 37<sup>TH</sup> AND CLEVELAND AVE Twelve (12)-Inch High Pressure Distribution Pipeline Project Canton Township, Stark County, Ohio**

**Ohio Power Siting Board  
Case No. 21-0874-GA-BLN**



The following information is being submitted in accordance with Ohio Administrative Code (OAC) Chapter 4906-6-05, Accelerated Application Requirements.

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

The applicant is Dominion Energy Ohio (“DEO”). The name of the project is *PIR 2647 – 37<sup>th</sup> & Cleveland Ave.* The internal project numbers are master work order (“MWO”) 63315864 and SAP ID P400146591.

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

This project involves the replacement of approximately 6,115 feet (1.15 miles) of 2 to 6-inch bare-steel pipe with coated 6-inch and 12-inch steel pipe, and 135 feet of 8-inch medium density plastic pipe, using a combination of open trench and horizontal directional drilling methods. The existing pipe will be abandoned in place. The replacement pipe will be installed primarily within the road right-of-way of a portion of Cleveland Avenue in Canton Township, Stark County. This project meets the requirements for a Letter of Notification Application per OAC Rule 4906-1-01, Appendix B (1) (b) (replacement of an existing pipeline segment greater than 1 mile in length but not greater than 5 miles).

**4906-6-05(B)(2): Statement of Need**

DEO is undertaking this project to maintain pipeline integrity, enhance public safety, and continue to meet supply demands. As shown in the chart below, the existing steel mainline has 3,515 feet of pipe that is 77 years old, 1,728 feet of pipe that is 75 years old, approximately 1 foot of pipe that 67 years old, and 10 feet of pipe that is 51 years old:





Year Installed	Distance of Pipeline Segment to be Replaced (Ft.)	Existing Size and Type	Coating
1944	2819	6" 0.280 wall STL	BARE
1944	696	6" 0.322 wall STL	BARE
1946	1727	6" 0.280 wall STL	BARE
1946	1	2" unknown wall STL	UNKNOWN
1954	1	4" unknown wall STL	BARE
1967	9	6" 0.188 wall STL	BARE
1967	1	4" unknown wall STL	T&W

**4906-6-05(B)(3): Location of the Project**

**Attachment A** contains an area system map showing the location of the replacement pipeline in relation to the existing pipeline. The project is completely within the boundaries of Canton Township, Stark County, Ohio.

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

For replacement projects, DEO typically prefers to install replacement mainlines within the same corridor as the existing mainline. This enables DEO to minimize the need to obtain new land rights, minimize disruption to existing landowners, and reduce project costs (which are ultimately borne by ratepayers). For this project, the existing mainline segment is located partly within public right-of-way and partly on private land abutting the right-of-way. As shown on **Attachment A**, approximately 2,722 feet will be relocated from a portion of the corridor currently occupied pursuant to an easement to the public

**Submitted by**  
**Dominion Energy Ohio**

Project MWO 63315864

13182044v1



right-of-way. This will minimize the overall impact of construction on residents and businesses along both the existing and proposed corridor.

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

DEO has sent a letter to property owners and tenants listed on **Attachment B** informing them of the nature of the project, the proposed timeframe of the project construction, and restoration activities. Another set of letters will be sent prior to construction as construction activities being conducted in the vicinity of the property owners or tenants and after restoration of disturbed areas.

The first landowner letter (**Attachment C-1**) was sent the week of May 26, 2021 to all parties identified on **Attachment B**. The second landowner model letter will be sent seven (7) days prior to construction and is included for reference as **Attachment C-2**.

**4906-6-05(B)(6): Anticipated construction schedule, in-service date**

The construction of the replacement pipeline is anticipated to begin in Fall 2021. DEO plans to place the line in-service by the end of 2021. Restoration activities will be complete by summer 2022.

**4906-6-05(B)(7): Project Area Map and Directions**

An area map that is at least of a 1:24000 scale that depicts roads, streets, and highways is attached as **Attachment A**.



**4906-6-05(B)(8): Property Owner List**

This project is entirely within DEO's existing easements and road right-of-way. Therefore, DEO will not need to obtain easements, options, or land use agreements to construct the facility.

**4906-6-05(B)(9): Technical Features of the Project**

DEO will replace approximately 5,320 feet of existing 6-inch and 8-inch diameter pipeline (MAOP 160 psi) with 12-inch fusion bond epoxy ("FBE") and powercrete epoxy coated steel via open trench and horizontal directional drilling ("HDD") bore methods. Additionally, DEO is planning to replace approximately 130 feet of existing non-jurisdictional six (6)-inch diameter tarred & wrapped steel pipeline (MAOP 25 psi) with eight (8)-inch diameter medium density plastic pipeline via open trench and "HDD" methods.

**(a): Operating Characteristics**

***Pipeline MAOP:*** The new pipeline will operate at an MAOP of 160 psig and have a diameter of 12-inches and 6- inches.

***Pipe Material:*** The proposed 12-inch steel pipeline will have a wall thickness of 0.375 inch and a yield strength of 42,000 psi and the proposed, non-jurisdictional 6-inch steel pipeline will have a wall thickness of 0.280 inch and a yield strength of 35,000 psi. The pipelines will be cathodically protected by 17 pound anodes and will be externally coated with between 14 and 16 Mils of Fusion Bonded Epoxy or Powercrete epoxy.

***Structures:*** No additional structures will be required for the new pipeline.



***Right-of-Way (“ROW”) and/or Land Requirement:*** The land needed in the project area will be located within public ROW and DEO easements. The project area begins west of Maplewood Ave in an existing DEO easement. The pipeline will be installed in public road right-of-way and DEO easements and will be replaced across Maplewood Ave, through the intersection of Forestdale Ave and 37<sup>th</sup> St, across Diane Ave, along Highview Ave heading north to Carnwise St and heading east along Carnwise St ending approximately 1,675 feet east of Cleveland Ave. The existing pipe will be abandoned in place.

**4906-6-05(B)(9)(c): Estimated Capital Costs**

The estimated capital cost for this pipeline replacement project (including the non-jurisdictional six (6) and eight (8) inch replacement) is \$1,240,600.

**4906-6-05(B)(10)(a): Land Use**

The project area is comprised of maintained existing road and DEO ROW located within Canton Township in Stark County, Ohio. The land use associated with the project is primarily commercial, and residential development. Per the environmental field study prepared by EnviroScience Inc. which reviewed all areas approximately 30 feet from the road centerline and/or 20 feet from the edge of pavement, and all area within DEO ROW. The project area contains one (1) intermittent stream and three (3) wetlands (**Attachment D**). Nimishillen Creek is located east of the project area. The project terminates within the floodplain of Nimishillen Creek.



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

Land use associated with the project area consists primarily of urban residential and commercial land. The vegetation with the project area is maintained lawn and forest with small amount of open field. None of the properties that cross the project area are designated as having a Current Agricultural Use Value (“CAUV”).

**4906-6-05(B)(10)(c): Archeological and Cultural Resources**

In July 2021, DEO’s consultant, EnviroScience Inc. performed an Ohio Historic Preservation Office (“OHPO”) Literature Review for archaeological and cultural resources within the project area and 1,000 foot buffer surrounding the project area. Also included was a of local historic districts and properties.

The literature review included a search for records of Ohio Archaeological Inventory (“OAI”) Properties, Ohio Historic Inventory (“OHI”) Properties, National Register Listed Properties, National Register Listed Districts, Determinations of Eligibility, Phase 1, 2, or 3 Survey Areas, and local historic districts and properties. According to the records search, no historic or cultural resources are located within the study area or 1,000 foot buffer area.

No OHI properties, National Register Listed Properties, National Register Listed Districts, Determination of Eligibility Properties, Phase 1, 2, or 3 Survey Areas, or local



historic designations were identified within the project area. One Phase 1 Survey Area is located within the 1,000 foot buffer east of the project area.

Because this project does not have any federal ties, no consultation with the Ohio Historic Preservation Office was required.

Supportive Document	Attachment
Ohio Historic Preservation Office Map	J

**4906-6-05(B)(10)(d): List of Governmental Agencies Which Have Requirements to be met by the Project**

The following agencies have requirements to be met at various times by this project:

Name of Agency	Document Generated and/or Submitted	Attachment
U.S. Army Corps of Engineers	Wetland Delineation Report	D
	Non-reporting Nationwide Permit #3	E
Ohio Environmental Protection Agency	Ohio Rapid Assessment Method Verification Documentation	F
	NOI for General Construction Stormwater Permit Application	G
U.S. Fish and Wildlife Service (USFWS)	July 29, 2021 Information for Planning and Consultation	H
Ohio Department of Natural Resources	June 17, 2021 Endangered Species Consultation	I
Ohio Historic Preservation Office (OHPO)	July 29, 2021 EnviroScience Ohio Historic Preservation Office Literature Review Mapping	J

**Submitted by**  
**Dominion Energy Ohio**

Project MWO 63315864

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Stormwater Pollution Prevention Plan	Stormwater Pollution Prevention Plan	K
Stark County Soil and Water Conservation (SWCD)	July 20, 2021 SWPPP Approval	L
Stark County Floodplain	July 8, 2021 Floodplain Development Permit	M

A construction Storm Water Pollution Prevention Plan (“SWPPP”) has been prepared for the project. A copy of the SWPPP is attached as **Attachment K**. The SWPPP will be included in the package submitted for competitive bids from contractors. A NOI was submitted to the Ohio EPA for the project on July 1, 2021. The permit coverage was issued on July 8, 2021 and is included as **Attachment G**.

A request for approval from the Stark County SWCD was submitted on July 1, 2021 for the project due to ground disturbance of greater than one acre. Approval from the Stark County SWCD was issued on July 20, 2021 and is included as **Attachment L**.

The pipeline construction terminates in the floodplain of Nimishillen Creek. A request for a floodplain development permit from the Stark County Building Inspection Department was submitted on July 8, 2021 (**Attachment M**). The floodplain permit is pending.

Hydrostatic testing will need to be completed for this project. The discharge method and location for hydrostatic test waters will be determined when the construction contract is awarded, or during the pre-construction meeting. Test waters will be removed from the site or released so it does not enter wetlands or streams when feasible. If test





waters will likely enter a waterbody, including via storm sewers, authorization for coverage under the Ohio EPA General Permit OHH000003 – Hydrostatic Test Water is required. A Hydrostatic Test Water Discharge Notice of Intent (“HTNOI”) must be submitted to the Ohio EPA one month prior to hydrostatic testing. When approval from the Ohio EPA is received, the contractor will adhere to the applicable construction terms and conditions of Hydrostatic Test Water General Permit OHH000003.

DEO requests that Staff include a condition such as the one given in *Vectren Energy Delivery of Ohio, Inc.*, Case No. 16-2175-GA-BLN that prior to the commencement of construction activities in areas that require permits or authorizations by federal or state laws and regulations, DEO shall obtain and comply with such permits or authorizations. Copies of the permits will be provided upon receipt.

There are no other known local, state, or, federal requirements that must be met prior to commencement of construction on the proposed pipeline project.

**4906-6-05(B)(10)(e): Federal and State Designated Species**

In November 2016 and March 2017, DEO’s consultant, EnviroScience Inc., reviewed the study area for suitable habitat for federally listed species known to be located within Stark County, Ohio. The results are included in the Wetlands Delineation Report provided in **Attachment D**. The study area is located along existing road ROW along 37<sup>th</sup> Street, Carnwise Street SE, Cleveland Avenue, Forestdale Avenue, Highview Avenue, and existing easements located southwest and south of the intersection of 37<sup>th</sup> Street and





Maplewood Avenue SW, and northeast of the intersection of 37<sup>th</sup> Street SW and Forestdale Avenue SW.

The study area contains three wetlands and one stream. The wetlands and streams are proposed to be temporarily impacted to allow for the necessary activities required for the pipeline installation. All proposed construction related activities involved will follow those authorized in the U.S. Army Corps of Engineers (“USACE”) 2017 Nationwide Permit #3 (Maintenance) and associated 401 Water Quality Certification as issued by the Ohio EPA. Temporary impact to the wetlands and stream within the project area are classified as non-reporting activities; therefore, a Pre-construction Notification to USACE is not necessary. A NWP #3 checklist was completed for the project (**Attachment E**).

A project notification was submitted to the Ohio EPA on January 5, 2018 due to impact greater than 0.1 of an acre for two onsite wetlands. Ohio EPA requested an ORAM verification for the onsite wetlands. On March 27, 2018, Cara Hardesty with the Ohio EPA was onsite for the ORAM verification. On March 29, 2018, she indicated Wetlands W-1 and W-2 are within the range of a modified Category 2 wetlands and Wetland W-3 is within the range of a Category 2 wetland (**Attachment F**).

According to the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) Summary (**Attachment H**), two federally listed species have ranges which include Stark County, Ohio: the state and federally endangered Indiana bat (*Myotis sodalis*), the federally threatened northern long-eared bat (*Myotis septentrionalis*), and the federally threatened eastern massasauga (*Sistrurus catenatus*).



Additionally, the IPaC indicated there are several migratory bird species indicated as birds of conservation concern. Lastly, the IPaC indicated that the bald eagle (*Haliaeetus leucocephalus*), a species of concern, which is protected under the Bald and Golden Eagle Protection Act, has range within the state of Ohio.

According to the report provided by EnviroScience Inc., three potential roost trees for the Indiana bat and/or the northern long-eared bat were located within the study area (**Attachment D**).

According to EnviroScience, Inc. the field review of the study area (refer to **Attachment D**) revealed that Wetland W-3 may provide suitable overwintering habitat for the eastern massasauga but due to residential developments to the west of Wetland W-3, there is minimal connected upland habitat and eastern massasaugas are unlikely to be present.

The bald eagle nests in large trees near water. No bald eagles or bald eagle nesting sites were observed within or adjacent to the study area. Canton Township in Stark County has no known bald eagle nesting sites per information provided by U.S. Fish and Wildlife Service ("USFWS").

DEO submitted a letter on June 17, 2021 to the Ohio Department of Natural Resources ("ODNR") requesting a finding from ODNR regarding any adverse effect to any



state listed and natural areas that have a geological and/or ecological significance to them (**Attachment J**). A response from ODNR is pending.

Supportive Document	Attachment
Information for Planning and Consultation (IPAC)	<b>J</b>

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

There are no national or state parks or forests, wilderness areas, wildlife refuges, wildlife management areas, or wildlife sanctuaries located in the immediate vicinity of the proposed project. There are no national and state forests and parks, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries located within the project area. The response from ODNR will verify or alter this understanding.

According to EnviroScience's assessment of the project area, three wetlands and one stream are located within the project area. A copy of the Delineation Report is included in **Attachment D**.

The three wetlands and one stream within the project area will be temporarily impacted by construction activities associated with the installation of the pipeline. All work shall be performed within the designated project area. Construction will be limited to these areas and will require soil disturbance to accommodate areas for trench excavation, side-cast spoil, temporary storage of the new pipe, and equipment/vehicular traffic.



Separation of the topsoil from the subsoil will generally be performed at the wetlands, stream, and residential and commercial properties. The backfill material that will be returned to the trench will consist of the same material removed from the excavation, to the extent practicable.

Following pipeline replacement, all disturbed areas will be returned to their original slope and contour, stabilized, seeded, and revegetated to provide a permanent herbaceous cover to stabilize the soils, and temporary erosion controls will be maintained until this permanent cover is established.

**4906-6-05(B)(10)(g): Any Known Unusual Conditions Resulting in Significant Environmental, Social, Health, or Safety Impacts**

As illustrated by the studies and investigations conducted as a part of this project to date, there are no readily known unusual conditions in the area of the proposed project that will result in significant environmental impacts. Additionally, because this project proposes to replace an existing pipeline primarily within existing pipeline easements or new easements within routinely maintained land, there has already been prior ground disturbance and maintenance in the area. Other than slight potential health and safety issues associated with construction, which will be minimized with the best practices during construction, there are no additional health, social or safety impacts that will exist as a result of this project.

Receipt of all environmental permits will confirm or alter the understanding regarding these impacts.



**4906-6-07 SERVICE AND PUBLIC DISTRIBUTION OF ACCELERATED  
CERTIFICATE APPLICATIONS**

**4906-6-07(A)(1): Service of Accelerated Application Upon Officials**

Simultaneously with the filing this accelerated application with the Board, DEO has caused a copy of the application to be delivered to the following public officials

Stark County Commissioners  
c/o Brant A. Luther  
County Administrator  
110 Central Plaza South, Suite 240  
Canton, Ohio 44702

Anthony Peldunas  
President  
Stark County Regional Planning  
Authority  
201 3<sup>rd</sup> Street, Suite 201  
Canton, Ohio 44702-1211

Keith A Bennett, P.E., P.S.  
Stark County Engineer  
5165 Southway St. SW  
Canton, Ohio 44706

Donald Bendetta,  
Stark County Utility Coordinator  
5165 Southway St. SW  
Canton, Ohio 44706

Christopher Neisel,  
Road Superintendent  
Canton Township Road  
Department  
4711 Central Ave. SE  
Canton, Ohio 44707

Christopher Nichols,  
Board of Trustee President  
Canton Township Board of  
Trustees Office  
4711 Central Ave. SE  
Canton, Ohio 44707

A copy of this accelerated application and a transmittal letter to public officials  
(Attachment N) has been sent to the officials listed above.

**4906-6-07(A)(2): Service of Accelerated Application Upon Main Public Libraries of  
Each Political Subdivision**

A copy of this accelerated application is being sent to the Stark County District Main  
Library located at 715 Market Avenue N., Canton, OH 44702.

**CASE No. 21-0874-GA-BLN**  
**PIR 2647 – 37<sup>TH</sup> & CLEVELAND AVE**  
**CANTON TOWNSHIP, STARK COUNTY, OHIO**  
**TWELVE (12)-INCH HIGH PRESSURE PIPELINE REPLACEMENT**

**4906-6-07(A)(3): DEO's Website**

A copy of the accelerated application is located on DEO's web page at <https://www.dom.com/business/dominion-east-ohio/customer-service/rates-and-regulation/siting-board-filings>. Choose the case number of this case and double click to view the application.

Further interested persons may contact DEO at 320 Springside Dr., Akron, Ohio, 44333 to obtain either an electronic copy or a paper copy of this accelerated application.

**4906-6-07(B): Proof of Compliance**

Within seven days of the filing of this accelerated application, DEO will cause proof of compliance with this requirement to be filed with the Board.

**CASE NO. 21-0874-GA-BLN**  
**PIR 2647 – 37<sup>TH</sup> & CLEVELAND AVE**  
**CANTON TOWNSHIP, STARK COUNTY, OHIO**  
**TWELVE (12)-INCH HIGH PRESSURE PIPELINE REPLACEMENT**

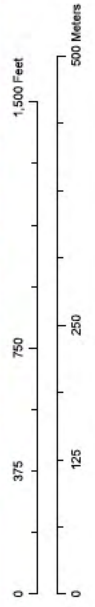
**ATTACHMENT A**

**AERIAL MAP**





Figure C-1. Site Map Overview of Wetlands and Other Water Resources, PIR 2047 - 34th and Cleveland.





**CASE NO. 21-0874-GA-BLN**  
**PIR 2647 – 37<sup>TH</sup> & CLEVELAND AVE**  
**CANTON TOWNSHIP, STARK COUNTY, OHIO**  
**TWELVE (12)-INCH HIGH PRESSURE PIPELINE REPLACEMENT**

**ATTACHMENT B**

**LIST OF AFFECTED LANDOWNERS AND TENANTS<sup>1</sup>**

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PIR PROJECT PIR #  
MWO #                      Ref. #

Current Property Owner	Mailing Address	City	State	Zip	Parcel #							
Rchard Murphy	3569 Deer Trace Ave NW	Canton	OH	44708	1315150							
Steven & Jenn fer Smth	3805 Map ewood Ave SW	Canton	OH	44706	1310006 & 131007							
Cra g & Lor L ndamood	3727 Map ewood Ave Sw	Canton	OH	44706	1307527							
Laura Kenn son	3800 Map ewood Ave SW	Canton	OH	44706	1307523							
C fford & Dana Cook	3732 Map ewood Ave SW	Canton	OH	44706	1308446							
Dav d & Nco e Lake	718 37th St SW	Canton	OH	44706	1302197							
Robert Fowers Jr	3400 Rexda e St SW	Canton	OH	44706	1308306							
Bon ta Feddersen	3677 Forestda e Ave SW	Canton	OH	44706	1308265							
Dav d & Barbara D on	553 37th St SW	Canton	OH	44706	1308248							
Fred & K mbery Smart	3670 Forestda e Ave SW	Canton	OH	44706	1308249							
Drew Daberko	3660 Forestda e Ave SW	Canton	OH	44706	1308250							
Dan e Tozz	4511 Be den Ave SE	Canton	OH	44707	1308253							
James & Maureen Tozz	1927 Markey St NW	N Canton	OH	44720	1308254							
Jerry Ward	522 Ma haven St SW	Canton	OH	44706	1308255							
Mchae Keser	530 Ma haven St SW	Canton	OH	44706	1308256							
Kev n Wcks	3810 Georgetown Rd N	Canton	OH	44704	1305595							
Matthew Pu em	3631 Dane Ave SW	Canton	OH	44706	1306116							
Cay Ca kns Tr	3630 Dane Ave SW	Canton	OH	44706	1303418							
Car Behrnger	3640 Dane Ave SW	Canton	OH	44706	1303818							
Trav s Curutu	3633 Hghv ew Ave Sw	Canton	OH	44706	1312417							
Mchae G s	3626 Hghv ew Ave SW	Canton	OH	44706	1303909							
Todd Frend	3623 Hghv ew Ave SW	Canton	OH	44706	1303914							
Dona d McMahon	300 Camwse St SW	Canton	OH	44706	1306553							
Sandra Shutz	236 Camwse St SW	Canton	OH	44706	1306225							
Barkhe mer Rea ty LTD	224 Camwse St SW	Canton	OH	44706	1306552							
John Vanmeter	212 Carw se St SW	Canton	OH	44706	1306551							
Federa Nat ona Mortgage	200 Camwse St SW	Canton	OH	44706	1306550							
21st Mortgage Corporat on	134 Carw se St SW	Canton	OH	44706	1306329							

[illegible]

**CASE NO. 21-0874-GA-BLN**  
**PIR 2647 – 37<sup>TH</sup> & CLEVELAND AVE**  
**CANTON TOWNSHIP, STARK COUNTY, OHIO**  
**TWELVE (12)-INCH HIGH PRESSURE PIPELINE REPLACEMENT**

**ATTACHMENT C**

**MODEL NOTIFICATION LETTER TO PROPERTY OWNERS SENT**

**FIRST LANDOWNER LETTER**

May 26, 2021

Richard Murphy  
3569 Deer Trace Ave NW  
Canton, Ohio 44708

Dear Property Owner or Tenant:

**New Pipeline Project**

Dominion Energy Ohio (DEO) is preparing to construct a pipeline project replacing approximately 5,320 feet of existing 6-inch and 8-inch pipeline with 6,115 feet of 6-inch and 12-inch pipeline. This project is located within existing DEO easements and public right of way, starting at Sherer Ave and continuing northeast in DEO Easements across Maplewood Ave, Forestdale Ave, Diane Ave, along Highview Ave and Carnwise St, ending east of Carnwise St.

Please be assured that during work on the project described above, all of DEO's Standard Safety and Operating Procedures and all applicable federal, state and local laws, regulations and ordinances will be fully adhered to.

**Timeline for Construction of the Project**

DEO anticipates that construction of the replacement pipeline will commence Mid-summer 2021. The construction is expected to last until approximately December 2021.

**Restoration Activities**

DEO will restore your property to the state that it was in prior to DEO's construction activities. It expects that the restoration activities will be completed by Spring 2022.

**Tenants**

If you have tenants occupying this property, please advise them of this pipeline project.

**Questions**

Should you have any questions concerning this pipeline project, please contact Dominion Energy Ohio's Land Services Department at 1-855-226-6022.

Sincerely,

DOMINION ENERGY OHIO

Land Services Department

**SECOND LANDOWNER MODEL LETTER  
TO BE SENT 7 DAYS PRIOR TO CONSTRUCTION**

[DATE TBD]

Richard Murphy  
3569 Deer Trace Ave NW  
Canton, Ohio 44708

Dear Property Owner or Tenant:

**New Pipeline Project**

As we indicated to you in a prior letter, Dominion Energy Ohio (“DEO”) is preparing to construct a pipeline project in your area. Dominion Energy Ohio (DEO) is preparing to construct a pipeline project replacing approximately 5,320 feet of existing 6-inch and 8-inch pipeline with 6,115 feet of 6-inch and 12-inch pipeline. This project is located within existing DEO easements and public right of way, starting at Sherer Ave and continuing northeast in DEO Easements across Maplewood Ave, Forestdale Ave, Diane Ave, along Highview Ave and Carnwise St, ending east of Carnwise St.

Please be assured that during work on the project described above, all of DEO’s Standard Safety and Operating Procedures and all applicable federal, state and local laws, regulations and ordinances will be fully adhered to.

**Timeline for Construction of the Project**

DEO anticipates that construction of the replacement pipeline will commence on or about **September 2021**. The construction is expected to last until approximately **December 2021**.

**Restoration Activities**

DEO will restore your property to the state that it was in prior to DEO’s construction activities. It expects that the restoration activities will be completed by **June 2022**.

**Tenants**

If you have tenants occupying this property, please advise them of this pipeline project.

**Questions**

DEO has a complaint resolution process. Should you have any questions concerning this pipeline project, please contact Dominion East Ohio’s Land Services Department at 1-855-226-6022 who will see that it is communicated to DEO’s Project Manager, David Hollendonner. Please mention the project reference, located on the bottom of this letter, when you call. If you have a complaint during construction or restoration, your call will be returned in a timely manner. Please be aware that DEO will make every best effort to resolve issues pertaining to the project.

Safety is Dominion’s highest priority. Be assured we will take every possible step to ensure the security of the area, your property, your family, and our employees.

Sincerely,  
DOMINION ENERGY OHIO – Land Services Department

**CASE NO. 21-0874-GA- BLN**  
**PIR 2647 – 37<sup>TH</sup> & CLEVELAND AVE**  
**CANTON TOWNSHIP, STARK COUNTY, OHIO**  
**TWELVE (12)-INCH HIGH PRESSURE PIPELINE REPLACEMENT**

**ATTACHMENT D**

**ENVIROSCIENCE INC. DELINEATION REPORT**

# **Wetlands and Other Waters Delineation Report**

Prepared for:

**The East Ohio Gas Company**  
320 Springside Drive, Suite 320  
Akron, Ohio 44333

for the:

**PIR 2647 – 37<sup>th</sup> and Cleveland**  
Canton Township, Stark County, Ohio

Prepared by:



**EnviroScience**  
Excellence In Any Environment

Project No. 9268

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## STATEMENT OF CERTIFICATION

*The analyses, opinions and conclusions in this report are based entirely on EnviroScience's unbiased, professional judgment. EnviroScience's compensation is not in any way contingent on any action or event resulting from this study. Neither EnviroScience nor any EnviroScience employee has any vested interest in the property examined in this study.*

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## EXECUTIVE SUMMARY

EnviroScience, Inc. performed a delineation of wetlands and other waters in November 2016 and March 2017 for the East Ohio Gas Company (EOG) at the location of the PIR 2647 – 37<sup>th</sup> and Cleveland project in Canton Township, Stark County, Ohio. The purpose of the project is to replace approximately 6,454 feet of natural gas pipeline (three [3], six [6], and twelve [12]-inch diameter) under EOG's Pipeline Infrastructure Replacement (PIR) Program. The PIR 2647 – 37<sup>th</sup> and Cleveland project is located along existing road right-of-way (ROW) of 100 feet wide (50 feet on either side of the road center line) along Carnwise Street SW; 85 feet wide (42.5 feet on either side of the road center line) along Cleveland Street SW; 50 feet wide (25 feet on either side of the road center line) along 37<sup>th</sup> Street SW and an off-road easement. The western terminus of the project area is located along the off-road easement near Maplewood Avenue SW and extends generally northeastward both on and off-road to Carnwise Street SW and ends west of Nimishillen Creek.

Four (4) distinct vegetative communities were identified within the project area, including one (1) wetland community type. Upland communities exist primarily as maintained lawn and forest communities with a small portion of open field community. The surrounding area exists as residential and urban residential land use with forest.

Three (3) wetlands were identified within the project area and account for 0.485 acres. One (1) intermittent stream was identified and delineated within the project area and account for an additional 74 linear feet (0.008 of an acre) of waterway. No other open water aquatic resources were identified within the project area.

The wetlands and waterbodies are under the jurisdiction of the Ohio EPA or U.S. Army Corps of Engineers (USACE). No filling may occur within this area without their written permission. If impacts to any of the water resources are proposed, this activity would follow those authorized by a permit in the USACE 2017 Nationwide Permits (NWP) program. However, if all onsite water resources are avoided, a USACE NWP or Ohio EPA Water Quality Certification will not be required for this project.

If wetland or streams will be impacted for this project, U.S. Fish and Wildlife Service (USFWS) coordination will be initiated by the USACE. If no wetland or stream impacts are proposed, USFWS coordination is not required. However, coordination with the Ohio Department of Natural Resources (ODNR) is recommended prior to project initiation in accordance with Ohio's rule regarding threatened and endangered species.

If the proposed ground disturbance for a project is greater than one (1) acre, the following must be prepared and submitted before construction: a Notice of Intent through the Ohio EPA, a Stormwater Pollution Prevention Plan, and coordination with the Stark County Soil and Water Conservation District (SWCD). The total size of the proposed project area is approximately 12.8 acres and therefore, the above submittals would be required unless ground disturbance is minimized.

## 1.0 INTRODUCTION AND SITE DESCRIPTION

EnviroScience, Inc. performed a delineation of wetlands and other waters in November 2016 and March 2017 for EOG at the location of the PIR 2647 – 37<sup>th</sup> and Cleveland project in Canton Township, Stark County, Ohio. The purpose of the project is to replace approximately 6,454 feet of natural gas pipeline (three [3], six [6], and twelve [12]-inch diameter) under EOG's PIR Program. The PIR 2647 – 37<sup>th</sup> and Cleveland project is located along existing road right-of-way (ROW) of 100 feet wide (50 feet on either side of the road center line) along Carnwise Street SW; 85 feet wide (42.5 feet on either side of the road center line) along Cleveland Street SW; 50 feet wide (25 feet on either side of the road center line) along 37<sup>th</sup> Street SW and an off-road easement. The western terminus of the project area is located along the off-road easement near Maplewood Avenue SW and extends generally northeastward both on and off-road to Carnwise Street SW and ends west of Nimishillen Creek.

Four (4) distinct vegetative communities were identified within the project area, including one (1) wetland community type. Upland communities exist primarily as maintained lawn and forest communities with a small portion of open field community. The surrounding area exists as residential and urban residential land use with forest.

The project area is located in the Tuscarawas River drainage basin (Hydrologic # 05040001) which drains approximately 2,590 square miles in eastern Ohio. It is within the Erie Drift Plain ecoregion (Woods *et al.* 1998) of Ohio. The project area is located within the area covered by the Northcentral and Northeast and Eastern Mountain and Piedmont Regional Supplements (USACE 2012a and USACE 2012b) and associated plant list (Lichvar 2012). The project area is regulated by the USACE Huntington District.

## 2.0 METHODS

Government agencies regulate coastal and inland waters for commerce, flood control and water quality. These water bodies provide numerous functions and values necessary to protect and sustain our quality of life. Wetlands comprise a significant portion of regulated waters. The U.S. Army Corps of Engineers (Corps) and Environmental Protection Agency (EPA) jointly define wetlands as:

“Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

The remaining deepwater aquatic habitats (open waters) are defined by the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) as:

“ . . . areas that are permanently inundated at mean annual water depths >6.6 ft or permanently inundated areas <6.6 ft in depth that do not support rooted emergent or woody plant species.”

The methods used for determining and delineating wetlands and open waters strictly adhere to those found in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountain and Piedmont Region* (USACE 2012a and USACE 2012b). Wetlands and open water boundaries were determined by the disappearance of one or more of their diagnostic characteristics.

Ordinary high water marks (OHWM) defined the outermost regulatory boundaries of ephemeral and open waters.

Each sample plot and the perimeter of each wetland and other water was surveyed and marked in the field with plain pink flags and pink “wetland boundary” flags, respectively. A global positioning system (GPS) unit with submeter accuracy was used, in conjunction with aerial photography and topographic figures, for the survey. Computer Aided Design (CAD) software was used to determine wetland dimensions and produce a map of the project area showing wetlands and other waters.

## **2.1 WETLANDS**

### **2.1.1 Determination**

A review of secondary literature sources was performed to find known wetlands and other significant ecological resources and areas with high potential for wetlands in or near the proposed project area. Resources included some or all of the following:

1. U.S. Geological Survey (USGS) topographic maps;
2. National Wetlands Inventory (NWI) maps;
3. Web Soil Survey;
4. Aerial Photographs; and
5. Federal Emergency Management Agency Flood Insurance Rate Map.

A field inspection of the project area was then completed to identify major plant communities and to visually locate potential wetlands. The routine, onsite (Level 2) wetland determination was used to perform the delineation. Wetland communities were classified according to the classification scheme of Cowardin *et al.* (1979) (Table 1). Mature nonwetland communities that had reached a stable equilibrium were classified



according to Anderson (1982) and Gordon (1966, 1969). Disturbed and successional nonwetland communities were classified as one of the categories described in Table 2.

**Table 1. Wetland Communities (Cowardin *et al.* 1979)**

Community	Description
PEM	Palustrine Emergent
PSS	Palustrine Scrub-Shrub
PFO	Palustrine Forested
POW	Palustrine Open Water

**Table 2. Disturbed and Successional Nonwetland Communities**

Community		Description
Disturbed	Urban	regularly maintained land; residential; industrial
	Agricultural	land used for producing crops or raising livestock; cropland; pastureland
	Cleared	disturbed areas devoid of most vegetation from recent clearing, grading or filling
Successional	Open Field	herbaceous community without woody vegetation
	Old Field	herbaceous community having woody vegetation coverage of <50%
	Scrub-Shrub	community dominated by woody vegetation <6 m (20 ft) tall
	Forest	community dominated by woody vegetation >6 m (20 ft) tall

Sample plots were established within each natural community and potential wetland within the study area. Complete data for each sample plot were collected and recorded on the USACE's Routine Wetland Determination Data Forms contained in the applicable USACE Regional Supplements (USACE 2012a and USACE 2012b). Vegetation, hydrology and soils were evaluated at each sample plot.

#### 2.1.1.1 Vegetation

To detect the presence or absence of hydrophytic vegetation, four plant strata were evaluated within specific radii of the plot center. Each stratum was ranked by aerial cover in descending order of abundance. Table 3 provides information on each vegetative stratum.

**Table 3. Vegetative Strata**

Stratum	Definition	Survey Area
Tree	woody plants > or equal to 3 in. (7.6 cm) dbh, regardless of height	30 ft (9.1 m) radius
Sapling/shrub	woody plants <3 in. (7.6 cm) dbh and ≥3.28 ft	15 ft (4.6 m) radius



	(1 m) tall	
Herbaceous	herbs and woody plants less than 3.28 ft (1 m) in height	5 ft (1.5 m) radius
Woody vines	woody vines >3.28 ft (1 m) in height	30 ft (9.1 m) radius

Percent dominance was obtained for each species and within each stratum. Dominant species are those which cumulatively totaled in order of abundance immediately exceed 50% and also include any individual species with an abundance of 20% or more (USACE 2012a and USACE 2012b). Dominant taxa were identified using recognized local guides: nomenclature follows the *National List of Scientific Plant Names* (USDA 1982). Following the identification of each plant species present within the plot, all dominant species within each stratum were assigned a wetland indicator status according to Lichvar (2012). Indicators are summarized in Table 4.

**Table 4. Plant Indicators**

Indicator	Category	Definition
OBL	Obligate Wetland	almost exclusively (>99% of occurrences) found in wetlands
FACW	Facultative Wetland	most likely found in wetlands (67-99% of occurrences)
FAC	Facultative	equally likely found in wetlands or nonwetlands (34-66%)
FACU	Facultative Upland	most likely found in nonwetlands (1-33% occurrence in wetlands)
UPL	Obligate Upland	almost exclusively found in nonwetlands (<1% occurrence in wetlands)

An 'NI' (no indicator) designation represents species where not enough information is available to assign an indicator; an 'NL' (no listing) designation is given to species whose identification was not determined sufficiently enough to assign an indicator. Once the indicator status is assigned to each dominant species, the evaluator can perform the percent dominance test according to the protocol outlined within the applicable Regional Supplement (USACE 2012a and USACE 2012b) to determine if the plot meets the criterion for hydrophytic vegetation.

### **2.1.1.2 Hydrology**

To detect the presence or absence of wetland hydrology, surface and subsurface hydrologic indicators were evaluated at the sample plot and throughout the adjacent community. Primary sources of wetland hydrology include direct precipitation, headwater flooding, backwater flooding, groundwater or any combination of these. When obtaining data at each sample plot, the evaluator observes evidence of hydrology. Primary indicators of hydrology (only one of these is necessary to indicate sufficient wetland hydrology) include the presence of surface water, water marks, sediment deposits, drift deposits, etc. (USACE 2012a and USACE 2012b). Secondary indicators of hydrology (which requires two or more at each sample plot) include surface soil cracks, drainage patterns, crayfish burrows, etc. (USACE 2012a and USACE 2012b).

### **2.1.1.3 Soils**

The upper horizons of the soil at each sample plot were examined to detect the presence or absence of hydric soils indicators. Current USACE guidance requires the evaluator to assess the upper 20 inches of soil for hydric soil characteristics. Most indicators of hydric soils require an assessment of soil matrix color and mottle characteristics (Environmental Laboratory 1987, USACE 2012a, and USACE 2012b). ) for each horizon. These characteristics were determined by comparing a moist sample with *Munsell Soil Color Chart* (Munsell Color 2009) or *The Globe Soil Color Book* (Visual Color Systems, 2004).

## **2.1.2 ORAM Categorization**

Each wetland system was categorized in accordance with version 5.0 of the Ohio EPA's Ohio Rapid Assessment Method for Wetlands (ORAM) (Mack 2001). Field scoring forms are contained in Appendix D.

Ohio EPA has established three primary and three intermediate categories of wetland quality which are based on a wetland's size, its hydrologic function, the types of plant communities present, the physical structure of the wetland plant community and the wetland's level of disturbance (OAC 3745-1-54). The relationship between the various wetland categories and their respective ORAM scores is presented in Table 5. ES also evaluated the project area for the presence of state threatened and endangered species as part of the ORAM evaluation.



**Table 5. ORAM Scores and Categories**

<b>ORAM Score</b>	<b>ORAM Category</b>	<b>Description</b>
0-29.9	Category 1	Lowest quality, and are generally characterized by hydrological isolation, lack of plant species diversity, insufficient habitat availability, and limited potential to perform major wetland functions.
30-34.9	Category 1 or 2 (Gray Zone)	ORAM score is insufficient to categorize wetland. In absence of a nonrapid method such as VIBI, assign the wetland to the higher functional category (Category 2)
35-44.9	Modified Category 2	Category 2 wetlands that may be of lower quality or degraded but have reasonable potential to be restored.
45-59.9	Category 2	Wetlands that have the capability to support a moderate wildlife community or maintain mid-level hydrological functions.
60-64.9	Category 2 or 3 (Gray Zone)	ORAM score is insufficient to categorize wetland. In absence of a nonrapid method such as VIBI, assign the wetland to the higher functional category (Category 3)
65-100	Category 3	Highest quality, generally characterized by a high level of biological diversity and topographical variation, threatened or endangered species, large numbers of native species, or a high level of functional importance to its surroundings.

Category 3 wetlands have the highest quality, and are generally characterized by a high level of biological diversity and topographical variation, large numbers of native species, or a high level of functional importance to its surroundings. Category 2 wetlands have the capability to support a moderate wildlife community or maintain mid-level hydrological functions. Category 2 also includes wetlands that may be of lower quality or degraded but have reasonable potential to be restored (Modified Category 2). Category 1 wetlands are of the lowest quality, and are generally characterized by hydrological isolation, lack of plant species diversity, insufficient habitat availability, and limited potential to perform major wetland functions (OAC 3745-1-54).

Since the ORAM is a rapid assessment method, there are certain wetland scores which fail to clearly differentiate the wetland's functional category. The so-called "gray zone" wetlands fall between the definite scoring breaks between the categories. Ohio EPA requires that "gray zone" wetlands be considered as the higher category unless more detailed functional assessments such as the VIBI or AmphIBI are conducted on those wetlands. As a result of this requirement, wetlands whose scores fall between the breakpoints for Categories 1 and 2 (1 or 2 gray zone wetlands) wetlands will be considered as Category 2 wetland for purposes of this report. Wetlands whose scores fall between the breakpoints for Categories 2 and 3 wetlands (2 or 3 gray zone wetlands) will be considered a Category 3 wetland for purposes of this report.

### 2.1.3 Cowardin Wetland Classification

The U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory uses the *Classification of Wetlands and Deepwater Habitats of the United States* to classify wetland habitat types (Cowardin et al 1979). This classification system is hierarchical and defines five major systems – Marine, Estuarine, Riverine, Lacustrine, and Palustrine. The Palustrine system was the only type of wetland system identified within the study area and is defined as including all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean driven-derived salts is below 0.5 percent (Cowardin et al 1979).

## 2.2 OTHER WATERS

Other waters include ephemeral and open waters. These waters are broken down into two categories: 1) ponds and lakes; and 2) streams and rivers.

### 2.2.1 Ponds and Lakes

Palustrine systems other than wetlands, and lacustrine waters are addressed as ponds and lakes, respectively. These non-linear open waters may harbor important aquatic communities such as vegetated shallows (aquatic bed) and mud flats. They are classified according to Cowardin *et al.* (1979).

### 2.2.2 Streams and Rivers

Riverine systems are linear flowing waters bounded by a channel. Cowardin *et al.* (1979) divides these system into four groups, however, for the purpose of this report streams are placed into three regulatory types, listed below.

Ephemeral: An ephemeral stream only conveys runoff precipitation and meltwater. It is permanently located above the water table and is most often dry.

Intermittent: An intermittent stream is located below the water table for parts of the year, but does have dry periods.

Perennial: A perennial stream typically has flowing water throughout the entire year.

In addition to flow characteristics, the USACE has defined other regulatory categories that apply to streams, which are listed below (USACE and USEPA, 2007).

Traditional Navigable Waters (TNW): all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.

Relatively Permanent Waters (RPW): non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months).

Non-Relatively Permanent Waters (Non-RPW): non-navigable tributaries of traditional navigable waters that are not relatively permanent where the tributaries typically do not have continuous flow at least seasonally (e.g., typically three months).

The Corps and USEPA will assert jurisdiction under the Clean Water Act on Traditional Navigable Waters (TNWs) and all wetlands adjacent to them, non-navigable tributaries of TNWs that are Relatively Permanent Waters (RPW) [i.e., tributaries that typically flow year-round or have continuous flow at least seasonally]; and wetlands that directly abut such tributaries. In addition, the agencies will assert jurisdiction over every water body that is not an RPW if that water body is determined (on the basis of a fact-specific analysis) to have a significant nexus with a TNW.

“A significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological, integrity of a TNW. Principal considerations when evaluating significant nexus include the volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to a TNW, plus the hydrologic, ecologic, and other functions performed by the tributary and all of its adjacent wetlands.”

### **3.0 LITERATURE REVIEW**

#### **3.1 USGS TOPOGRAPHIC MAP**

The U.S. Geological Survey (USGS) 7.5-minute topographic series (Canton East Quadrangle and Canton West Quadrangle) is shown on Figure 2 (Appendix A). The eastern portion of the project area slopes downward to the east toward Nimishillen Creek. the western portion of the project generally slopes downward to the north. Two (2) intermittent streams are depicted crossing the project area. Additionally, a perennial stream, Nimishillen Creek, is depicted at the eastern terminus of the project area within the project area buffer. Elevations within the project area range from approximately 990



feet above mean seal level (AMSL) to 1080 feet AMSL. The project area is shown to be partially along an existing pipeline ROW.

### 3.2 NWI MAP

The National Wetlands Inventory (NWI) map (Canton East Quadrangle and Canton West Quadrangle) of the project area is shown on Figure 3 in Appendix A. One (1) palustrine, forested, broad-leaved deciduous, seasonally flooded (PFO1C) wetland is depicted at the eastern end of the project area and is located along the floodplain of Nimishillen Creek. This wetland corresponds to the delineated Wetland W-3. Nimishillen Creek is indicated as a lower perennial, unconsolidated bottom, intermittently exposed (R2UBG) system. Along the western portion of the project area, one (1) riverine system is depicted crossing the southwestern portion of the project area. This is a seasonally flooded, intermittent streambed (R4SBC) and identified as Stream S-1 within the project area.

### 3.3 COUNTY SOIL SURVEY

The project area is found on the *Soil Survey of Stark County, Ohio* and was accessed on the Soil Survey Geographic (SSURGO) Database (USDA Web Soil Survey, 2010) (Figure 4; Appendix A). Eleven (11) soil types are depicted within the project area and are listed in Table 6. Three (3) soil types, Canadice silt loam (Ca), Sebring silt loam (Sb), and Sloan silt loam (Sl) are listed as hydric or predominantly hydric within Stark County.

**Table 6. Soil Types Mapped in the Project Area.**

Symbol	Soil Type	Status	Common Landform	Percent Hydric	Acres in Project Area	Percent Within Project Area
Ca	Canadice silt loam	predominantly hydric	depressions	95	0.256	2.0
CoD2	Chili gravelly loam, 12 to 18 percent slopes, moderately eroded	not hydric	terraces	0	0.051	0.4
CuB	Chili-Urban land complex, undulating	not hydric	N/A	0	3.901	30.4
DkB	Dekalb sandy loam, 2 to 6 percent slopes	not hydric	hills	0	0.042	0.3
FcB	Fitchville silt loam, 2 to 6 percent slopes	predominantly non-hydric	lake plains, terraces	5	0.692	5.4



**Table 6. Soil Types Mapped in the Project Area.**

Symbol	Soil Type	Status	Common Landform	Percent Hydric	Acres in Project Area	Percent Within Project Area
LaC	Latham silt loam, 6 to 12 percent slopes	not hydric	hills	0	0.431	3.4
LaF	Latham silt loam, 18 to 35 percent slopes	not hydric	hills	0	0.918	7.2
LuC	Loudonville-Urban land complex, rolling	not hydric	N/A	0	0.443	3.4
MvE	Muskingum and Gilpin silt loams, 18 to 25 percent slopes	not hydric	hills	0	0.072	0.6
Sb	Sebring silt loam	predominantly hydric	outwash plains	95	5.556	43.3
SI	Sloan silt loam	all hydric	flood plains	100	0.483	3.8

### **3.4 U.S. FISH AND WILDLIFE SERVICE**

The project contains three (3) wetlands and one (1) intermittent stream. The USACE has regulatory authority over federally listed threatened and endangered species through the NWP program. Under the 2017 Nationwide Permit (NWP) program, the USACE requires notification for multiple reasons including activities that impact potential roost trees within regulated waters and when impacts are proposed to occur in specific waterways/townships (listed in Appendix 1 of the NWP Regional General Conditions). These two conditions are directly related to protection of threatened and endangered species. This project is not located within a specific waterway township. However, if the PRT located within Wetland W-2 cannot be avoided a PCN will need to be submitted to the USACE for impacts to PRT's within regulated waters. Additionally, coordination with the Ohio Department of Natural Resources (ODNR) is recommended prior to project initiation in accordance with Ohio's rule regarding threatened and endangered species.

The project area was examined for suitable habitat for federally listed species whose known range includes Stark County, Ohio. These species are the federally endangered Indiana bat (*Myotis sodalis*), the federally threatened northern long-eared bat (*Myotis*

*septentrionalis*), the federally threatened eastern massasauga (*Sistrurus catenatus*) and the federal species of concern bald eagle (*Haliaeetus leucocephalus*).

The project area is located in a residential setting with forest and trees of various size scattered throughout. The project area contains sections of forested property, primarily along the off-road ROW portion. Living or dead trees with shedding or peeling bark or cavities may serve as roosting trees for the Indiana bat and/or the northern long-eared bat. Three (3) trees with characteristics that may potentially provide some level of roosting habitat for the Indiana bat and/or the northern long-eared bat are located along the forested portions or within residential yards of the project area. The potential roost trees (PRTs) are standing dead trees and one (1) silver maple (*Acer saccharinum*) with diameter at breast height (dbh) measurements between 15 and 34 inches. The PRTs had 30 to 100 percent solar exposure with holes, peeling, and exfoliating bark. The location of these trees are indicated on the map included in Attachment A. Representative photographs of the habitat trees are included in Attachment B (Photos 14-16).

Preferred habitat for the eastern massasauga includes wet areas including wet prairies, marshes and low areas along rivers and lakes, primarily in crayfish burrows and similar structures. In many areas eastern massasaugas also use adjacent uplands during part of the year. Wetland W-3 is part of a larger (4-7 acre) wetland along Nimishillen Creek, and may provide suitable overwintering habitat for the eastern massasauga. The wetland is largely surrounded by residential development to the west. There is minimal potential upland habitat with suitable connectivity; upland habitat present is largely forest, with maintained lawn, and a small amount of open field vegetation. It is unlikely that the hydroperiod is sufficient to support crayfish and crayfish burrows were not observed, however, other animal burrows of various size were observed. Therefore, eastern massasaugas are unlikely to be present.

Bald eagles nest in large trees near water. No bald eagle habitat was observed within or adjacent to the project area. Furthermore, according to the information provided to EOG, Canton Township in Stark County has no known bald eagle nesting sites. Therefore, no further coordination with the USFWS is necessary with regard to the bald eagle.

### **3.5 AERIAL PHOTOGRAPHY**

A recent aerial photograph of the project area is shown on Figure 5 (Appendix A). The project area is depicted as on-road and off-road ROW through residential property with maintained lawn, open field, and forest vegetative communities. The project area is shown terminating to the east at Nimishillen Creek. The surrounding land use is primarily residential and commercial with maintained lawn and forest communities.



### 3.6 FEMA FLOOD INSURANCE RATE MAP

The Federal Emergency Management Agency (FEMA) produces Flood Insurance Rate Maps (FIRM), which shows the locations of predictable floodplain during precipitation flood events. The FIRM map of the project area was researched and it was found that the project crosses the 500-Year Flood Zone (Zone X) and 100-Year Flood Zone along Nimishillen Creek at the eastern end of the project area (Appendix A; Figure 6). A Base Flood Elevation (BFE) study was conducted within this area. It was determined that the BFE within this area is 998 AMSL.

### 4.0 RESULTS

Five (5) sample plots were established within four (4) natural communities. One (1) of those communities is considered wetland. Table 7 summarizes the sample plot data.

**Table 7. Sample Plot Results.**

Sample Plot	Photo*	Community**	Hydrophytic Vegetation	Wetlands Hydrology	Hydric Soil	Status	Location
1	1	Forest				Non-Wetland	SP-1
2	2	PEM	X	X	X	Wetland	W-2
3	3	Maintained Lawn				Non-Wetland	SP-3
4	4	Open Field	X			Non-Wetland	SP-4
5	5	PEM	X	X	X	Wetland	W-3

\*photos are located in Appendix B \*\* PEM=Palustrine Emergent

Each sample plot, delineated wetland, and other waters are illustrated on Figure 5 (Appendix A). The following section describes general conditions found within each plant community and summarizes relevant information from the data forms, located in Appendix C.

#### 4.1 NONWETLANDS

Three (3) upland communities, maintained lawn, open field, and forest exist within the project area. Sample Plot 1 represents the forest community, red oak (*Quercus rubra*, FACU), black cherry (*Prunus serotina*, FACU), American beech (*Fagus grandifolia*, FACU), white ash (*Fraxinus americana*, FACU), and big-tooth aspen (*Populus grandidentata*, FACU) are present within the tree stratum. The shrub/sapling stratum contains black cherry, red oak, and European privet (*Ligustrum vulgare*, FACU). Eastern



poison ivy (*Toxicodendron radicans*, FAC) and garlic mustard (*Alliaria petiolata*, FACU) are present in the herbaceous layer.

The maintained lawn community is represented by Sample Plot 3. The herbaceous vegetation present within Sample Plot 3 consists of Kentucky blue grass (*Poa pratensis*, FACU), common dandelion (*Taraxacum officinale*, FACU), and English plantain (*Plantago lanceolata*, FACU). The species present within the tree stratum include; red oak, northern catalpa (*Catalpa speciosa*, FAC), and sugar maple (*Acer saccharum*, FACU).

The open field community is represented by Sample Plot 4. The herbaceous vegetation present within Sample Plot 4 consists of reed canary grass (*Phalaris arundinacea*, FACW), purple deadnettle (*Lamium purpureum*, UPL), Fuller's teasel (*Dipsacus fullonum*, FACU), sticky-willy (*Galium aparine*, FACU), and woodland strawberry (*Fragaria vesca*, UPL).

## 4.2 WETLANDS

Three (3) wetlands were identified and delineated within the project area. The onsite portions of these wetlands consist of palustrine emergent (PEM) vegetation. The delineated wetlands have been categorized using the Ohio Rapid Assessment Method for Wetlands v.5.0 (ORAM); scoring forms are included in Appendix D. Wetland results are given in Table 8 and are briefly described in the following section. Wetland size has been determined for areas within the project area. Wetlands are illustrated on Figure 5 (Appendix A).

**Table 8. Wetland Results within the Project Area.**

Wetland		Photo*	Cowardin Classification	ORAM Score	ORAM Category	Size within Project Area (acres)	Length of Wetland Crossing (feet)
W-1	a	6	PEM	43	Modified 2	0.003	28
	b					0.001	28
W-2		7	PEM			0.201	261
W-3		8	PEM	48.5	Category 2	0.280	335
Total Wetlands						0.485	652

\*photos are located in Appendix B

The onsite portions of Wetland W-1 and Wetland W-2 are composed of PEM vegetation and are represented by Sample Plot 2. The dominant species within the herbaceous layer was reed canary grass and creeping-Jenny (*Lysimachia nummularia*, FACW) and sweet woodreed (*Cinna arundinacea*, FACW) were also present within the herbaceous stratum.

The onsite portion of Wetland W-3 is composed PEM vegetation and is represented by Sample Plot 5. The herbaceous vegetation within Sample Plot 5 consists of reed canary grass, lake bank sedge (*Carex lacustris*, OBL), wingstem (*Verbesina alternifolia*, FACW), Fuller's teasel, and common woodworm (*Artemisia vulgaris*, UPL).

Wetland W-1 and Wetland W-2 assessed within the range of a modified Category 2 wetland using the ORAM scoring method. These wetlands extend offsite and have palustrine scrub-shrub and palustrine forested components, have relatively wide buffers, low intensity of surrounding land use, moderate habitat development, moderate coverage of invasive species, and some standing dead trees.

Wetland W-3 assessed within the range of a Category 2 wetland using the ORAM scoring method. The wetland has several hydrological sources, is in the floodplain of Nimishillen Creek, and extends both north and south of the project area. The wetland has relatively wide buffers, moderate intensity of surrounding land use, moderate horizontal interspersion, multiple vegetative communities, and moderate coverage of invasive species.

#### **4.3 Streams and Rivers**

One (1) intermittent stream was identified and delineated within the project area. The results are depicted in Table 9 and illustrated on Figure 5 (Appendix A). Stream S-1 was assessed together using the Qualitative Habitat Evaluation Index (QHEI). The scoring forms are included in Appendix E.



**Table 9. Stream Results within the Project Area.**

Stream	Photos*	Type	Bankfull Width (feet)	Depth at Time of Survey (inch)	Length Within Project Area (linear feet)	Area Within Project Area (acres)	QHEI/ HHEI Score
S-1	9-11	Intermittent	4.5	3	74	0.008	32
<b>Total Stream</b>					<b>74</b>	<b>0.008</b>	

\*photos are located in Appendix B

Stream S-1 is an intermittent stream that crosses the project area near the western terminus and flows north. The assessment of the on-site sections of Stream S-1 resulted in a QHEI score of 32, classifying it as a 'Poor' Modified Warmwater Habitat

#### **4.4 PONDS AND LAKES**

No open water aquatic resources were identified within the project area.

#### **5.0 REGULATORY JURISDICTION**

The wetlands and waterbodies are under the jurisdiction of the Ohio EPA or Corps. No filling may occur within these areas without their written permission. Please contact the Ohio EPA Division of Surface Water at (614) 644-2001 or the Huntington District, U.S. Army Corps of Engineers, at (304) 399-5210 before working in these areas.

The following information is excerpted and summarized from the 2007 *U.S. Army Corps Of Engineers Jurisdictional Determination Form Instructional Guidebook*.

"In 2001, the ... U.S. Supreme Court's decision in the *Solid Waste Agency of Northern Cook County (SWANCC) v. Corps* held that isolated, intrastate, non-navigable waters could not be regulated under the CWA based solely on the presence of migratory birds. Following the SWANCC decision it generally was believed that a water body (including a wetland) was subject to CWA jurisdiction if the water body was part of the U.S. territorial seas, or a traditional navigable water, or any tributary to a traditional navigable water, or a wetland adjacent to any one of the above. In addition, isolated wetlands and other waters might be considered jurisdictional where they had the necessary link to either navigable waters or interstate commerce."

In the state of Ohio, the Ohio EPA isolated wetland permitting program was legislatively created in response to the 2001 SWANCC decision. On July 17, 2001, House Bill 231 was signed into law, establishing a permanent permitting process for isolated wetlands. The

provisions of House Bill 231 were incorporated in Sections 6111.021 through 6111.029 of the Ohio Revised Code.

“In 2006, the Supreme Court once again addressed the jurisdictional scope of Section 404 of the CWA, specifically the term “the waters of the U.S.,” in *Rapanos v. U.S.* and in *Carabell v. U.S.* (hereafter referred to as *Rapanos*).

The decision provides two new analytical standards for determining whether water bodies that are not traditional navigable waters (TNWs), including wetlands adjacent to those non-TNWs, are subject to CWA jurisdiction: (1) if the water body is relatively permanent, or if the water body is a wetland that directly abuts (e.g., the wetland is not separated from the tributary by uplands, a berm, dike, or similar feature) a relatively permanent water body (RPW), or (2) if a water body, in combination with all wetlands adjacent to that water body, has a significant nexus with TNWs. CWA jurisdiction over TNWs and their adjacent wetlands was not in question in this case, and, therefore, was not affected by the *Rapanos* decision. In addition, at least five of the Justices in *Rapanos* agreed that CWA jurisdiction exists over all TNWs and over all wetlands adjacent to TNWs.

The Memo states that the [Corps and USEPA] will assert jurisdiction over the following categories of water bodies: TNWs; all wetlands adjacent to TNWs; non-navigable tributaries of TNWs that are relatively permanent (i.e., tributaries that typically flow year-round or have continuous flow at least seasonally); and wetlands that directly abut such tributaries. In addition, the agencies will assert jurisdiction over every water body that is not an RPW if that water body is determined (on the basis of a fact-specific analysis) to have a significant nexus with a TNW. The classes of water body that are subject to CWA jurisdiction only if such a significant nexus is demonstrated are: non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally; wetlands adjacent to such tributaries; and wetlands adjacent to but that do not directly abut a relatively permanent, non-navigable tributary. A significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological, integrity of a TNW. Principal considerations when evaluating significant nexus include the volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to a TNW, plus the hydrologic, ecologic, and other functions performed by the tributary and all of its adjacent wetlands.”

## **5.1 AGENCY COORDINATION**

Based on the site plans for the PIR 2647 – 34<sup>th</sup> and Cleveland project, the proposed activities would follow those authorized by a permit in the USACE 2017 Nationwide Permits program, if impacts to onsite water resources are proposed. Each NWP has its own rules regarding notification requirements if impacts are proposed. These requirements will be reviewed after impacts are determined. Additionally, this project is not located within a specific waterway township that is included in Appendix 1 of the NWP Regional General Conditions. However, this project will require a PCN if the PRT located within Wetland W-2 cannot be avoided. If a PCN is required, USFWS and OHPO coordination will be initiated through the USACE. If impacts to onsite wetland or streams are avoided, USACE, USFWS, and OHPO coordination is not required. Coordination

with the ODNR is recommended in accordance with Ohio's rules regarding threatened and endangered species.

Based on the Stream Eligibility Map provided by the Ohio Environmental Protection Agency (EPA), the project area is located within an area that is eligibility for coverage under the 401 Water Quality Certification (WQC) for the NWP.

A Stormwater Pollution Prevention Plan (SWPPP) should be prepared in accordance with the Ohio Rain Water and Land Development Manual for projects with earth disturbance greater than one (1) acre. In addition, the National Pollution Discharge Elimination System (NPDES) General Construction Site Stormwater Permit (OHC000004) through the Ohio EPA is required for projects resulting in earth disturbance greater than one (1) acre unless the project is located in a combined sewer serviced area in which NOI submittal is not required. This project is not located within a combined sewer service area. Earth disturbance for pipeline replacement activities may result from pipeline installation, pipeline capping of abandoned lines, vehicular and construction traffic within unpaved pipe yard areas, and/or equipment access along unpaved routes.

For the PIR 2647 – 37<sup>th</sup> and Cleveland project, if no additional unpaved areas are required for the pipeline replacement and earth disturbance is limited to pipeline installation within the designated project area, a 6.7 foot wide earth disturbance limit would need to be maintained along the replacement of 6,454 feet of pipe to stay below the one (1) acre threshold. If additional disturbance is required for pipeline capping of abandoned lines, vehicular and construction traffic within unpaved pipe yard areas, and/or equipment access along unpaved routes, this area will be included in the calculation and the disturbance width will be reduced. The Stark County SWCD requires coordination for any projects with earth disturbance greater than or equal to one (1) acre.

The USACE and the Ohio Historical Preservation Office (OHPO) do not require a formal Section 106 consultation be completed for pipeline replacement/repair projects due to previous ground disturbance unless historical properties will be impacted by the project. A preliminary review of historic features was conducted and indicates that no historic features are located within or near the project area. However, if a PCN will be submitted to USACE for temporary impacts to wetlands, the USACE will take the lead with regards to Section 106. Any additional coordination with OHPO will be determined by the USACE at that time.

## **6.0 ASSUMPTIONS AND DISCLAIMERS**

The constant influence of human activity on the project area can result in a rapid change of ecological boundaries. Over time, natural succession and changes in hydrology can also affect their boundaries. Precision of GPS collected data is subject to variation caused by canopy cover, atmospheric interference and satellite configuration. Because slight inaccuracies are possible, all acreages and derived boundaries presented in this report are approximate.

The results and conclusions contained in this report apply to the year and date in which the data were collected. This report is not considered officially valid until it is approved by the Corps. The report is then valid for a period of five years. Refer to the Corps' Regulatory Guidance Letter # 94-1 (23 May 1994).



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## **Appendix A:**

### **Figures**



Date: 9/19/2017 Path: C:\Users\Gregory Hoyer\Desktop\P\_R2647\OptionB\GIS\Map1\_Location.mxd

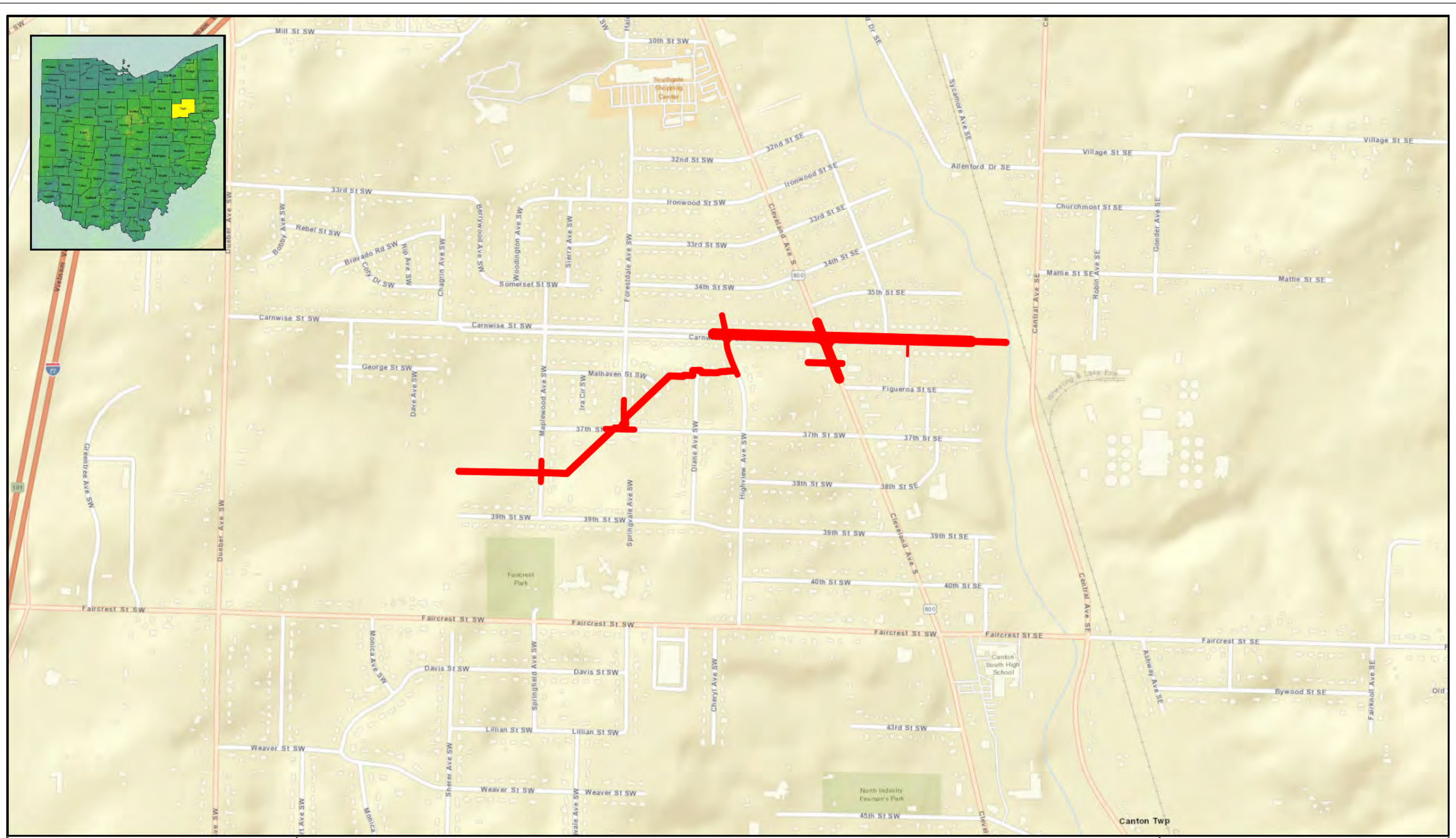
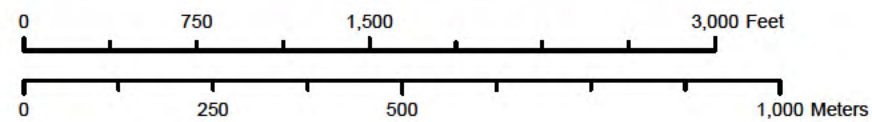


Figure 1. Location of Site on Highway Map of Stark County, Ohio.  
PIR 2647 - 34th and Cleveland.

 Project Area





Date: 9/19/2017 Path: C:\Users\Gregory.Hoever\Documents\PIR 2647\OptionB\GIS\Map2\_Topo.mxd

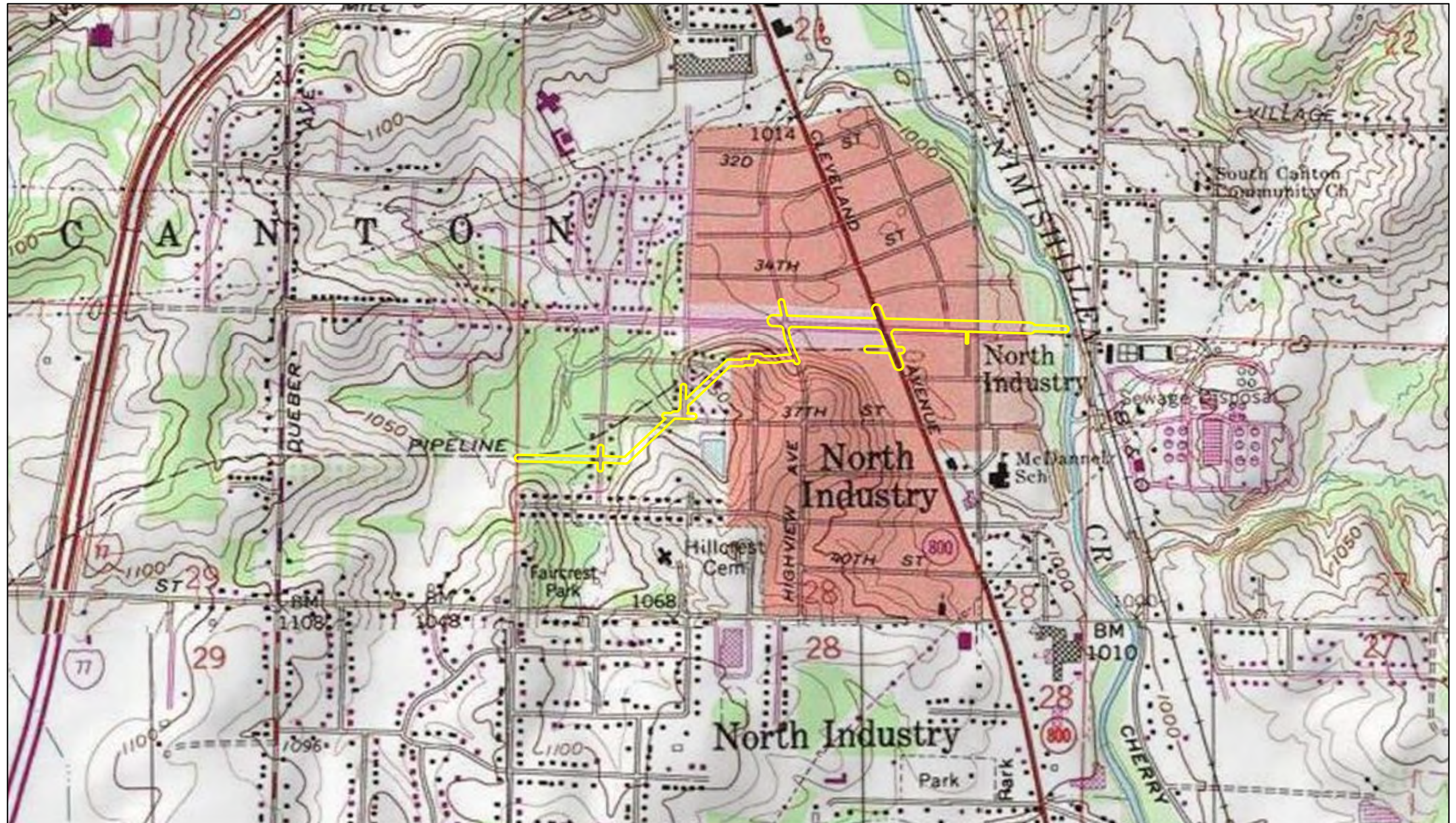
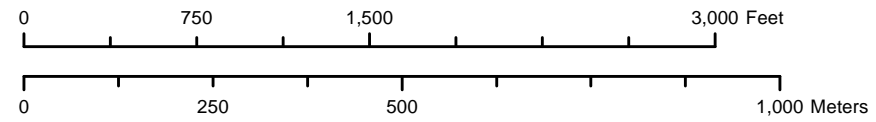


Figure 2. USGS 7.5-minute Topographic Map of Canton East and Canton West Quadrangles. PIR 2647 - 34th and Cleveland.

 Project Area

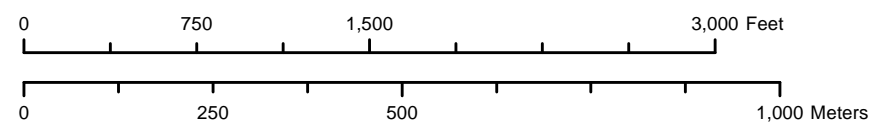








 Project Area





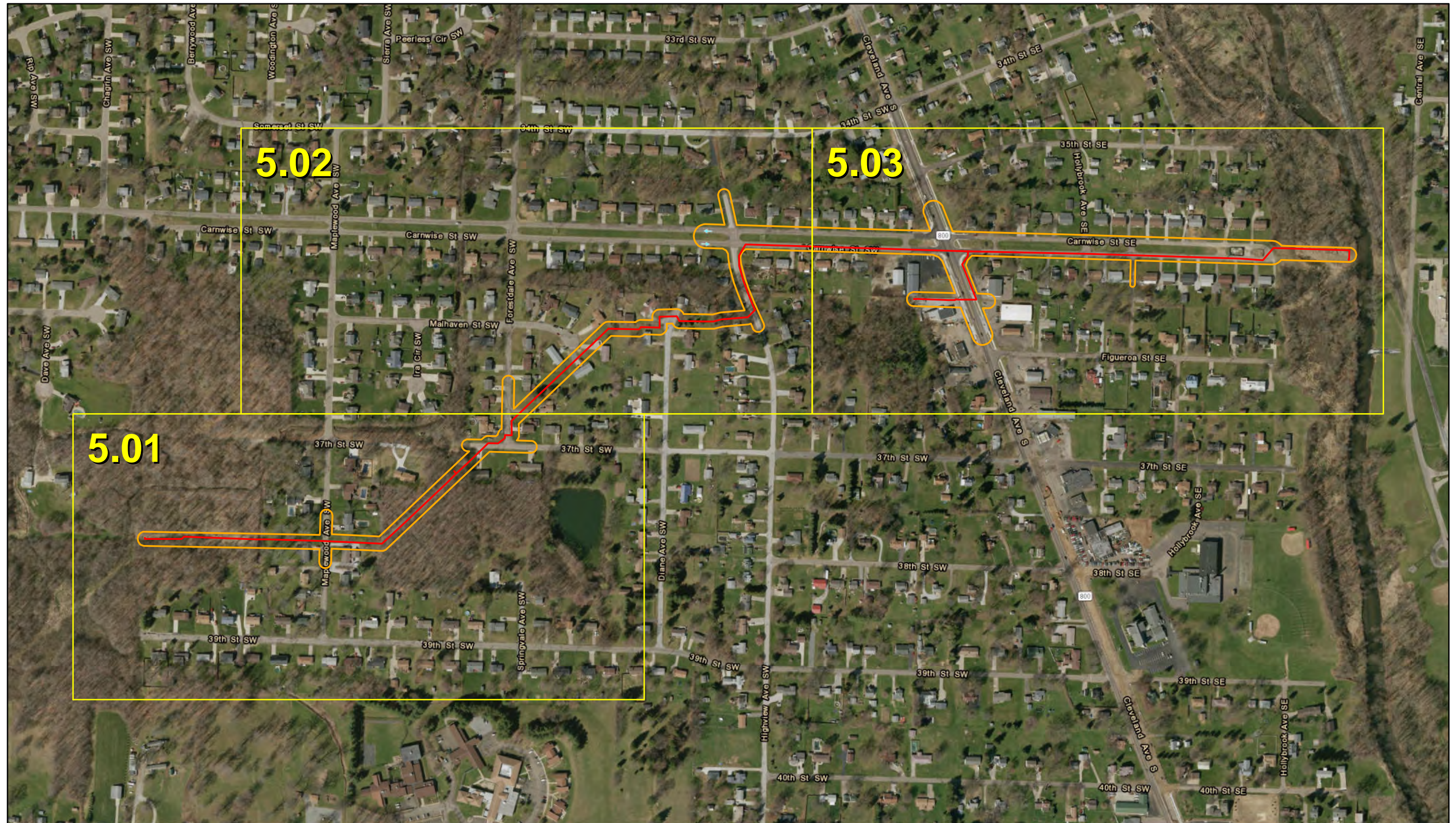
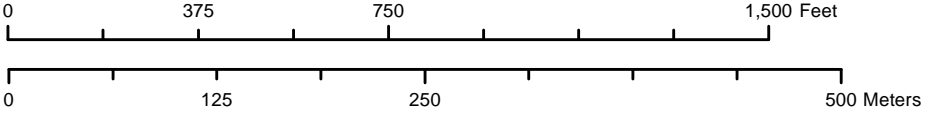


Figure 5. Site Map Overview of Wetlands and Other Water Resources. PIR 2647 - 34th and Cleveland.

- Pipeline
- Project Area









Date: 9/19/2017 Path: P:\10\_Projects\Domino\EOG470NR\PIR1\_Projects\PIR\_2647\_34thandCleveland\GIS\Map5\_Site.mxd



Figure 5.02. Site Map of Wetlands and Other Water Resources.  
PIR 2647 - 37th and Cleveland.



- |                 |               |                   |                     |                               |                     |                                   |
|-----------------|---------------|-------------------|---------------------|-------------------------------|---------------------|-----------------------------------|
| ▲ PRT           | ● Sample Plot | ⊗ Inlet           | ■ Culvert           | — Stream (Intermittent)       | ■ Wetland (PEM)     | — Pipeline                        |
| ▲ PRT (Offsite) | ● M&R Station | ⊗ Inlet (Offsite) | ■ Culvert (Offsite) | — Stream (Offsite)            | ■ Wetland (Offsite) | — Project Area                    |
|                 |               |                   |                     | ▨ Nimishillen Creek (Offsite) |                     | — Project Area Buffer (Add'l 20') |

0 125 250 500 Feet

0 25 50 100 Meters



5.02



Date: 9/19/2017 Path: P:\10\_Projects\Domino\EOG470NR\PIR1\_Projects\PIR\_2647\_34handCleveland\GIS\Map5\_Site.mxd



Figure 5.03. Site Map of Wetlands and Other Water Resources.  
PIR 2647 - 37th and Cleveland.



- |                 |               |                   |                     |                               |                     |                                   |
|-----------------|---------------|-------------------|---------------------|-------------------------------|---------------------|-----------------------------------|
| ▲ PRT           | ● Sample Plot | ⊗ Inlet           | ■ Culvert           | — Stream (Intermittent)       | ■ Wetland (PEM)     | — Pipeline                        |
| ▲ PRT (Offsite) | ● M&R Station | ⊗ Inlet (Offsite) | ■ Culvert (Offsite) | — Stream (Offsite)            | ■ Wetland (Offsite) | — Project Area                    |
|                 |               |                   |                     | ▨ Nimishillen Creek (Offsite) |                     | — Project Area Buffer (Add'l 20') |

0 125 250 500 Feet

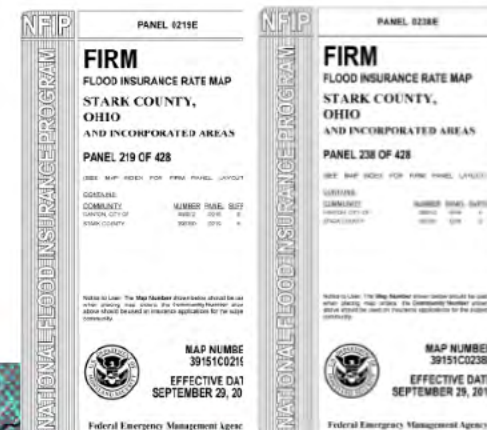
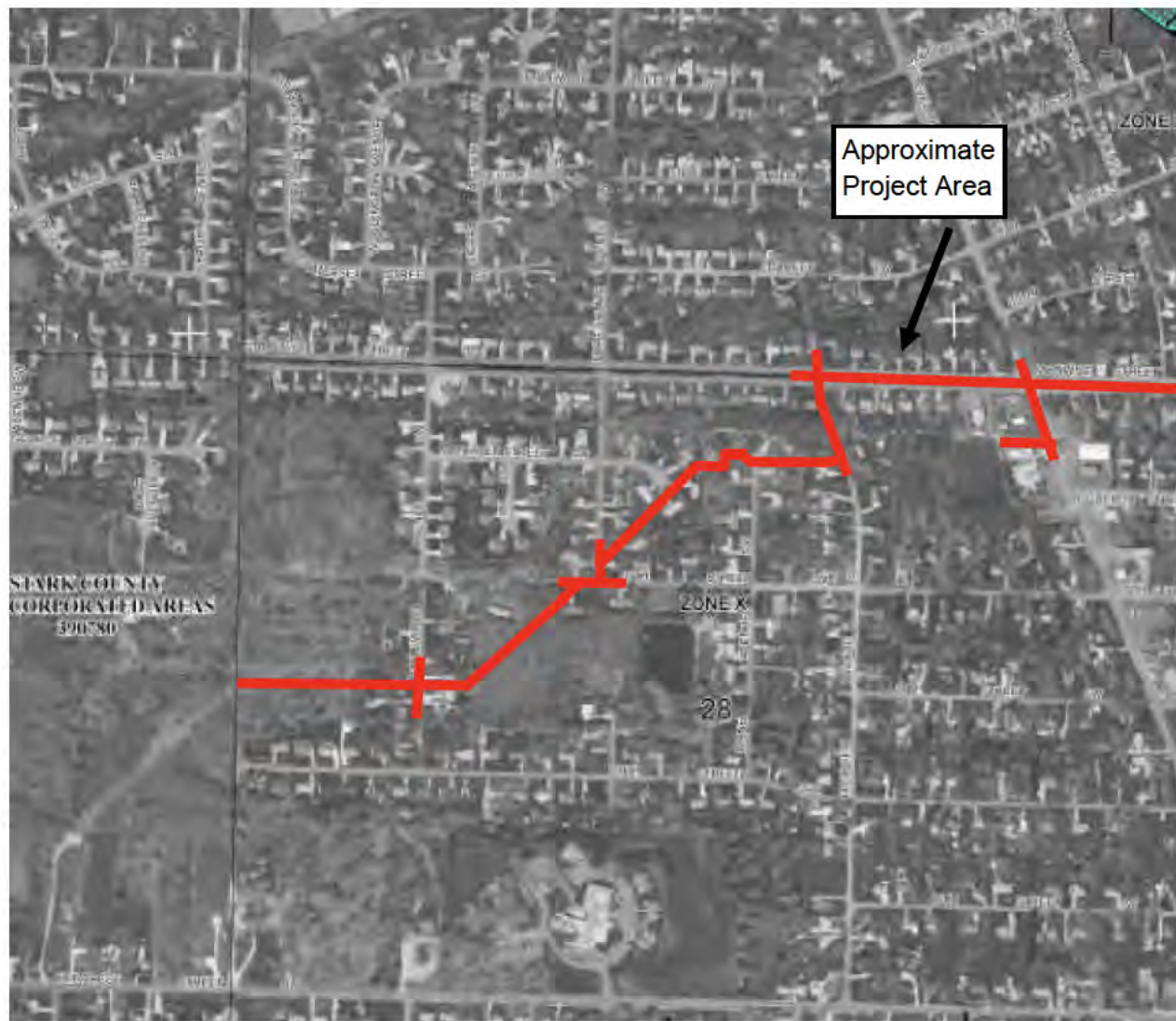
0 25 50 100 Meters



5.03







**Figure 6.0 FEMA FIRM map of the project area. PIR 2647 - 34th and Cleveland (Stark County).**

## **Appendix B:**

## **Photographs**



*PIR 2647 – 37<sup>th</sup> and Cleveland  
Photographed November 23, 2016 and March 24, 2017*



Photo 1. Sample Plot 1 within a forest community.



Photo 2. Sample Plot 2 within Wetland W-2, a palustrine emergent (PEM) wetland.



*PIR 2647 – 37<sup>th</sup> and Cleveland*  
*Photographed November 23, 2016 and March 24, 2017*



Photo 3. Sample Plot 3 within a maintained lawn community.



Photo 4. Sample Plot 4 within an open-field community.



*PIR 2647 – 37<sup>th</sup> and Cleveland  
Photographed November 23, 2016 and March 24, 2017*



Photo 5. Sample Plot 5 within a PEM wetland.



Photo 6. Wetland W-1 facing north.



*PIR 2647 – 37<sup>th</sup> and Cleveland  
Photographed November 23, 2016 and March 24, 2017*



Photo 7. Wetland W-2 facing east.



Photo 8. Wetland W-3 facing west.



*PIR 2647 – 37<sup>th</sup> and Cleveland*  
*Photographed November 23, 2016 and March 24, 2017*



Photo 9. Stream S-1 facing southwest, upstream.



Photo 10. Stream S-1 facing north, downstream





Photo 11. Stream S-1 substrate.



Photo 12. Photo of Nimishillen Creek, within the project buffer area.



*PIR 2647 – 37<sup>th</sup> and Cleveland*  
*Photographed November 23, 2016 and March 24, 2017*



Photo 13. M & R Station within the project area, located east of Cleveland Avenue South.



Photo 14. Potential roost tree (PRT 1), a standing dead with peeling bark and holes.





Photo 15. PRT 2, a standing dead tree in Wetland W-2 with peeling bark and holes.



Photo 16. PRT 3, a silver maple (*Acer saccharinum*) with holes.

**Appendix C:**  
**Routine Wetland Determination Data Forms**

## WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: PIR 2647 - 34th and Cleveland City/County: Stark Sampling Date: November 23, 2016

Applicant/Owner: The East Ohio Gas Company State: OH Sampling Point: SP-1

Investigator(s): R. Warren, E. Kennedy Sec ion, Township, Range: \_\_\_\_\_

Landform (hillslope, terrace, etc.): hillslope Local Relief (concave, convex, none): convex Slope (%): 5

Subregion (LRR or MLRA): LRR N, MLRA 124 Lat: 40.754167 Long: -81.390278 Datum: WGS-84

Soil Map Unit Name: GdD - Gilpin silt loam, 12 to 18 percent slopes NWI classification: N/A

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

Are Vegeta ion \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present?  
Yes X No \_\_\_\_\_

Are Vegeta ion \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Remarks:   Forest			

### HYDROLOGY

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

**VEGETATION (Five Strata) - Use scientific names of plants.**

 Sampling Point: SP-1

<u>Tree Stratum</u> (Plot size: <u>30</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Quercus rubra</u>	25	Yes	FACU
2. <u>Acer saccharum</u>	25	Yes	FACU
3. <u>Prunus serotina</u>	20	Yes	FACU
4. <u>Populus grandidentata</u>	10	No	FACU
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	80	= Total Cover	

<u>Sapling Stratum:</u> (Plot Size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Prunus serotina</u>	10	Yes	FACU
2. <u>Ligustrum vulgare</u>	5	Yes	FACU
3. <u>Quercus rubra</u>	5	Yes	FACU
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	20	= Total Cover	

<u>Shrub Stratum:</u> (Plot Size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
	0	= Total Cover	

<u>Herb Stratum:</u> (Plot size: <u>5</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>Toxicodendron radicans</u>	25	Yes	FAC
2. <u>Alliaria petiolata</u>	2	No	FACU
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
	27	= Total Cover	

<u>Woody Vine Stratum:</u> (Plot size: <u>15</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
	0	= Total Cover	

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

**Dominance Test worksheet:**

Number of Dominant Species  
That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant  
Species Across All Strata: 7 (B)

Percent of Dominant Species  
That Are OBL, FACW, or FAC: 0.00% (A/B)

**Prevalence Index worksheet:**

Total % Cover of:		Multiply by:	
OBL species	<u>0</u> x 1 =	<u>0</u>	
FACW species	<u>0</u> x 2 =	<u>0</u>	
FAC species	<u>25</u> x 3 =	<u>75</u>	
FACU species	<u>97</u> x 4 =	<u>388</u>	
UPL species	<u>0</u> x 5 =	<u>0</u>	
Column Totals:	<u>122</u> (A)	<u>463</u> (B)	

 Prevalence Index = B/A = 3.80
**Hydrophytic Vegetation Indicators:**

- 1 - Rapid Test for Hydrophytic Vegetation
- 2 - Dominance Test is >50%
- 3 - Prevalence Index is ≤3.0<sup>1</sup>
- 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)
- Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)

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

**Definitions of Four Vegetation Strata:**

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

**Sapling** - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** - All herbaceous (non-woody) plants, 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



Sampling Point: SP-1

US Army Corps of Engineers Eastern Mountains and Piedmont - Version 2.0

## WETLAND DETERMINATION DATA FORM - Eastern Mountains and Piedmont

Project/Site: PIR 2647 - 34th and Cleveland City/County: Stark Sampling Date: November 23, 2016  
Applicant/Owner: The East Ohio Gas Company State: OH Sampling Point: SP-2  
Investigator(s): R. Warren, E. Kennedy Section, Township, Range: \_\_\_\_\_  
Landform (hillslope, terrace, etc.): depression Local Relief (concave, convex, none): concave Slope (%): 3  
Subregion (LRR or MLRA): LRR N, MLRA 124 Lat: 40.754345 Long: -81.389958 Datum: WGS-84  
Soil Map Unit Name: Sb - Sebring silt loam NWI classification: N/A  
Are climatic/hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks.)  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present?  
Yes X No \_\_\_\_\_  
Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? <u>Wetland W-2</u>
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:  PEM		

### HYDROLOGY

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

**VEGETATION (Five Strata) - Use scientific names of plants.**

 Sampling Point: SP-2

Tree Stratum	Absolute % Cover	Dominant Species?	Indicator Status	
(Plot size: <u>30</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
<b>Sapling Stratum:</b> (Plot Size: <u>15</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
<b>Shrub Stratum:</b> (Plot Size: <u>15</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
<b>Herb Stratum:</b> (Plot size: <u>5</u> )				
1. <u>Phalaris arundinacea</u>	85	Yes	FACW	
2. <u>Lysimachia nummularia</u>	10	No	FACW	
3. <u>Cinna arundinacea</u>	5	No	FACW	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
12. _____	_____	_____	_____	
	<u>100</u>	= Total Cover		
<b>Woody Vine Stratum:</b> (Plot size: <u>15</u> )				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
	<u>0</u>	= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.)				

**Dominance Test worksheet:**

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

Species Across All Strata: \_\_\_\_\_ (B)

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

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**Prevalence Index worksheet:**

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

Prevalence Index = B/A = \_\_\_\_\_

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**Hydrophytic Vegetation Indicators:**

  X   1 - Rapid Test for Hydrophytic Vegetation

       2 - Dominance Test is >50%

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

       4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)

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

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

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**Definitions of Four Vegetation Strata:**

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

**Sapling** - Woody plants, excluding woody vines, approximately 20 ft (6 m) or more in height and less than 3 in. (7.6 cm) DBH.

**Shrub** - Woody plants, excluding woody vines, approximately 3 to 20 ft (1 to 6 m) in height.

**Herb** - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3 28 ft tall.

**Woody Vines** - All woody vines greater than 3 28 ft in height.

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**Hydrophytic Vegetation Present?**      Yes   X        No



## SOIL

Sampling Point: SP-2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/1						mucky clay	
2-10	10YR 2/1						clay	
10-14	10YR 2/1	90	10YR 5/8	10	C	M	clay	redox concentrations

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Dark Surface (S7)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>MLRA 147, 148</b> )
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) ( <b>MLRA 147, 148</b> )
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR N</b> )	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Mucky Mineral (S1) ( <b>LRR N, MLRA 147, 148</b> )	<input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR N, MLRA 136</b> )
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Umbric Surface (F13) ( <b>MLRA 136, 122</b> )
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 148</b> )
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (F21) ( <b>MLRA 127, 147</b> )

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

<input type="checkbox"/> 2 cm Muck (A10) ( <b>MLRA 147</b> )
<input type="checkbox"/> Coast Prairie Redox (A16)
<input type="checkbox"/> ( <b>MLRA 147, 148</b> )
<input type="checkbox"/> Piedmont Floodplain Soils (F19)
<input type="checkbox"/> ( <b>MLRA 136, 147</b> )
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

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

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

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

**Hydric Soil Present?** Yes ☒ No ☐

Remarks:

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: PIR 2647 - 34th and Cleveland City/County: Stark Sampling Date: 11/23/16  
 Applicant/Owner: The East Ohio Gas Company State: OH Sampling Point: SP-3  
 Investigator(s): R. Warren, E. Kennedy Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex Slope (%): 2  
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 40.7568/03 Long: -81.382244 Datum: WGS-84  
 Soil Map Unit Name: LaF - Latham silt loam, 18 to 25 percent slopes NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes _____ No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Maintained Lawn	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ 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 on 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)		<u>Secondary Indicators (minimum of two required)</u> _____ 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)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



**VEGETATION** – Use scientific names of plants.

 Sampling Point: SP-3

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Quercus rubra</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)																
2. <u>Catalpa speciosa</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
3. <u>Acer saccharum</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
		<u>50</u>	=Total Cover	<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>150</u></td> <td>x 4 = <u>600</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>150</u> (A)</td> <td><u>600</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A = <u>4.00</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>150</u>	x 4 = <u>600</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>150</u> (A)	<u>600</u> (B)	Prevalence Index = B/A = <u>4.00</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>150</u>	x 4 = <u>600</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>150</u> (A)	<u>600</u> (B)																			
Prevalence Index = B/A = <u>4.00</u>																				
Sapling/Shrub Stratum (Plot size: <u>15'</u> )																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>  </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
		=Total Cover																		
Herb Stratum (Plot size: <u>5'</u> )																				
1. <u>Poa pratensis</u>	<u>85</u>	<u>Yes</u>	<u>FACU</u>																	
2. <u>Taraxacum officinale</u>	<u>10</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Plantago lanceolata</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____	<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
		<u>100</u>	=Total Cover																	
Woody Vine Stratum (Plot size: <u>30'</u> )																				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <u>  </u> No <u>  X  </u>																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
		=Total Cover																		

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

## SOIL

Sampling Point: SP-3

[illegible]

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: PIR 1647 - 34th and Cleveland City/County: Stark Sampling Date: 11/23/16  
 Applicant/Owner: The East Ohio Gas Company State: OH Sampling Point: SP-4  
 Investigator(s): R. Warren, E. Kennedy Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): hillside Local relief (concave, convex, none): none Slope (%): 0  
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 40.756667 Long: -81.380833 Datum: WGS-84  
 Soil Map Unit Name: Sb - Sebring silt loam NWI classification: N/A

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

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u> If yes, optional Wetland Site ID: _____
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: (Explain alternative procedures here or in a separate report.) Open Field	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ 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 on 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)		<u>Secondary Indicators (minimum of two required)</u> _____ 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)
<b>Field Observations:</b> Surface Water Present? Yes _____ No _____ Depth (inches): _____ Water Table Present? Yes _____ No _____ Depth (inches): _____ Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



**VEGETATION** – Use scientific names of plants.

 Sampling Point: SP-4

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)																
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover				<b>Prevalence Index worksheet:</b>  <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>75</u></td> <td>x 2 = <u>150</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>23</u></td> <td>x 4 = <u>92</u></td> </tr> <tr> <td>UPL species <u>12</u></td> <td>x 5 = <u>60</u></td> </tr> <tr> <td>Column Totals: <u>110</u> (A)</td> <td><u>302</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>2.75</u></td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>75</u>	x 2 = <u>150</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>23</u>	x 4 = <u>92</u>	UPL species <u>12</u>	x 5 = <u>60</u>	Column Totals: <u>110</u> (A)	<u>302</u> (B)	Prevalence Index = B/A = <u>2.75</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
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Column Totals: <u>110</u> (A)	<u>302</u> (B)																			
Prevalence Index = B/A = <u>2.75</u>																				
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u>)</b>																				
1. <u>Amelanchier arborea</u>	<u>10</u>	<u>Yes</u>	<u>FACU</u>																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
5. _____	_____	_____	_____																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
=Total Cover																				
<b>Herb Stratum (Plot size: <u>5'</u>)</b>																				
1. <u>Phalaris arundinacea</u>	<u>75</u>	<u>Yes</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b>  <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  <u>        </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>Galium aparine</u>	<u>5</u>	<u>No</u>	<u>FACU</u>																	
3. <u>Lamium purpureum</u>	<u>10</u>	<u>No</u>	<u>UPL</u>																	
4. <u>Dipsacus fullonum</u>	<u>8</u>	<u>No</u>	<u>FACU</u>																	
5. <u>Fragaria vesca</u>	<u>2</u>	<u>No</u>	<u>UPL</u>																	
6. _____	_____	_____	_____																	
7. _____	_____	_____	_____																	
8. _____	_____	_____	_____																	
9. _____	_____	_____	_____																	
10. _____	_____	_____	_____																	
11. _____	_____	_____	_____																	
12. _____	_____	_____	_____																	
=Total Cover																				
<b>Woody Vine Stratum (Plot size: <u>30'</u>)</b>																				
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
=Total Cover																				

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

Sampling Point: SP-4

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

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

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

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Histosol (A1)                     | <input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR R</b> ,      | <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR K, L, MLRA 149B</b> )       |
| <input type="checkbox"/> Histic Epipedon (A2)              | <input type="checkbox"/> <b>MLRA 149B</b> )                                 | <input type="checkbox"/> Coast Prairie Redox (A16) ( <b>LRR K, L, R</b> )     |
| <input type="checkbox"/> Black Histic (A3)                 | <input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR R, MLRA 149B</b> ) | <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) ( <b>LRR K, L, R</b> )  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)             | <input type="checkbox"/> High Chroma Sands (S11) ( <b>LRR K, L</b> )        | <input type="checkbox"/> Polyvalue Below Surface (S8) ( <b>LRR K, L</b> )     |
| <input type="checkbox"/> Stratified Layers (A5)            | <input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>LRR K, L</b> )       | <input type="checkbox"/> Thin Dark Surface (S9) ( <b>LRR K, L</b> )           |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Loamy Gleyed Matrix (F2)                           | <input type="checkbox"/> Iron-Manganese Masses (F12) ( <b>LRR K, L, R</b> )   |
| <input type="checkbox"/> Thick Dark Surface (A12)          | <input type="checkbox"/> Depleted Matrix (F3)                               | <input type="checkbox"/> Piedmont Floodplain Soils (F19) ( <b>MLRA 149B</b> ) |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)          | <input type="checkbox"/> Redox Dark Surface (F6)                            | <input type="checkbox"/> Mesic Spodic (TA6) ( <b>MLRA 144A, 145, 149B</b> )   |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)          | <input type="checkbox"/> Depleted Dark Surface (F7)                         | <input type="checkbox"/> Red Parent Material (F21)                            |
| <input type="checkbox"/> Sandy Redox (S5)                  | <input type="checkbox"/> Redox Depressions (F8)                             | <input type="checkbox"/> Very Shallow Dark Surface (TF12)                     |
| <input type="checkbox"/> Stripped Matrix (S6)              | <input type="checkbox"/> Marl (F10) ( <b>LRR K, L</b> )                     | <input type="checkbox"/> Other (Explain in Remarks)                           |
| <input type="checkbox"/> Dark Surface (S7)                 |   |   |

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

Hydric Soil Present?      Yes      No      ☒

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils version 7.0 March 2013 Errata. ([http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_051293.docx](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx))

# WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: PIR 2647 - 34th and Cleveland City/County: Stark Sampling Date: 11/23/16  
 Applicant/Owner: The East Ohio Gas Company State: OH Sampling Point: SP-5  
 Investigator(s): R. Warren, E. Kennedy Section, Township, Range: \_\_\_\_\_  
 Landform (hillside, terrace, etc.): floodplain terrace Local relief (concave, convex, none): concave Slope (%): 2  
 Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 40.757424 Long: -81.372102 Datum: WGS-84  
 Soil Map Unit Name: SI - Sloan silt loam NWI classification: PFO1C

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 X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <u>X</u> No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____ If yes, optional Wetland Site ID: <u>Wetland W-3</u>
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks: (Explain alternative procedures here or in a separate report.) PEM	

## HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Indicators (minimum of one is required; check all that apply)</u> _____ Surface Water (A1) _____ Water-Stained Leaves (B9) _____ High Water Table (A2) _____ Aquatic Fauna (B13) <u>X</u> Saturation (A3) _____ Marl Deposits (B15) _____ Water Marks (B1) _____ Hydrogen Sulfide Odor (C1) _____ Sediment Deposits (B2) _____ Oxidized Rhizospheres on 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)		<u>Secondary Indicators (minimum of two required)</u> _____ 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) <u>X</u> Geomorphic Position (D2) _____ Shallow Aquitard (D3) _____ Microtopographic Relief (D4) <u>X</u> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes _____ No <u>X</u> Depth (inches): _____ Water Table Present? Yes _____ No <u>X</u> Depth (inches): _____ Saturation Present? Yes <u>X</u> No _____ Depth (inches): <u>3"</u> (includes capillary fringe)	<b>Wetland Hydrology Present?</b> Yes <u>X</u> No _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		



**VEGETATION** – Use scientific names of plants.

 Sampling Point: SP-5

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status																																																				
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b>  Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																																																			
2. _____	_____	_____	_____																																																				
3. _____	_____	_____	_____																																																				
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7. _____	_____	_____	_____																																																				
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<b>Herb Stratum (Plot size: <u>5'</u>)</b> <table style="width: 100%;"> <tr> <td>1. <u>Phalaris arundinacea</u></td> <td style="text-align: center;">70</td> <td style="text-align: center;">Yes</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>2. <u>Carex lacustris</u></td> <td style="text-align: center;">10</td> <td style="text-align: center;">No</td> <td style="text-align: center;">OBL</td> </tr> <tr> <td>3. <u>Verbesina alternifolia</u></td> <td style="text-align: center;">10</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FACW</td> </tr> <tr> <td>4. <u>Dipsacus fullonum</u></td> <td style="text-align: center;">5</td> <td style="text-align: center;">No</td> <td style="text-align: center;">FACU</td> </tr> <tr> <td>5. <u>Artemisia vulgaris</u></td> <td style="text-align: center;">5</td> <td style="text-align: center;">No</td> <td style="text-align: center;">UPL</td> </tr> <tr><td>6. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>7. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>8. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>9. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>10. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>11. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr><td>12. _____</td><td>_____</td><td>_____</td><td>_____</td></tr> <tr> <td colspan="2" style="text-align: right;">100</td> <td colspan="2" style="text-align: right;">=Total Cover</td> </tr> </table>				1. <u>Phalaris arundinacea</u>	70	Yes	FACW	2. <u>Carex lacustris</u>	10	No	OBL	3. <u>Verbesina alternifolia</u>	10	No	FACW	4. <u>Dipsacus fullonum</u>	5	No	FACU	5. <u>Artemisia vulgaris</u>	5	No	UPL	6. _____	_____	_____	_____	7. _____	_____	_____	_____	8. _____	_____	_____	_____	9. _____	_____	_____	_____	10. _____	_____	_____	_____	11. _____	_____	_____	_____	12. _____	_____	_____	_____	100		=Total Cover	
1. <u>Phalaris arundinacea</u>	70	Yes	FACW																																																				
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11. _____	_____	_____	_____																																																				
12. _____	_____	_____	_____																																																				
100		=Total Cover																																																					
<b>Woody Vine Stratum (Plot size: <u>30'</u>)</b> 1. _____ 2. _____ 3. _____ 4. _____ _____ =Total Cover																																																							

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

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

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

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

## SOIL

Sampling Point: SP-5

[illegible]

**Appendix D:**  
**Ohio Rapid Assessment Method for**  
**Wetlands v. 5.0 Rating Forms**



## Background Information

<b>Name:</b> Reiss Warren, Emma Kennedy	
<b>Date:</b> 11/23/16	
<b>Affiliation:</b> EnviroScience, Inc	
<b>Address:</b> 5070 Stow Road, Stow Ohio, 44224	
<b>Phone Number:</b> (330) 688-0111	
<b>e-mail address:</b> rwarren@EnviroScienceInc.com, ekennedy@EnviroScienceInc.com	
<b>Name of Wetland:</b> Wetland W-1 and Wetland W-2	
<b>Vegetation Communit(ies):</b> PEM/PSS/PFO	
<b>HGM Class(es):</b> Depressional	
<b>Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.</b>  <div style="border: 1px solid black; padding: 10px; text-align: center; margin: 20px auto; width: fit-content;">Refer to site wetlands and water resources map.</div>	
Lat/Long or UTM Coordinate	W-1 (40.754385, -81.390298), W-2 (40.754347, -81.389304)
USGS Quad Name	Canton West
County	Stark
Township	Canton
Section and Subsection	
Hydrologic Unit Code	05040001
Site Visit	11/23/16
National Wetland Inventory Map	<input checked="" type="checkbox"/>
Ohio Wetland Inventory Map	
Soil Survey	<input checked="" type="checkbox"/>
Delineation report/map	<input checked="" type="checkbox"/>



## 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
<b>Step 1</b>	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Step 2</b>	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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Step 3</b>	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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Step 4</b>	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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Step 5</b>	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Step 6</b>	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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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



## Narrative Rating

Site: Wetland W-1 and Wetland W-2

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

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

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

Site: Wetland W-1 and Wetland W-2

**Table 1. Characteristic plant species.**

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

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



<b>Site:</b> Wetland W-1 and Wetland W-2	<b>Rater(s):</b> R. Warren, E. Kennedy	<b>Date:</b> 11/23/16
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2	2
max 6 pts.	subtotal

### Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☐ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☒ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

12	14
max 14 pts.	subtotal

### Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☒ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☐ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☐ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

14.5	28.5
max 30 pts.	subtotal

### Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☒ Seasonal/Intermittent surface water (3)
- ☐ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☐ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☐ 100 year floodplain (1)
- ☒ Between stream/lake and other human use (1)
- ☐ Part of wetland/upland (e.g. forest), complex (1)
- ☐ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☒ Seasonally inundated (2)
- ☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed	
<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)
<input type="checkbox"/> tile	<input type="checkbox"/> filling/grading
<input type="checkbox"/> dike	<input type="checkbox"/> road bed/RR track
<input type="checkbox"/> weir	<input type="checkbox"/> dredging
<input type="checkbox"/> stormwater input	<input checked="" type="checkbox"/> other utility easement

10.5	39
max 20 pts.	subtotal

### Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☒ Recovered (3)
- ☐ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☐ Moderately good (4)
- ☒ Fair (3)
- ☐ Poor to fair (2)
- ☐ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☒ Recovered (6)
- ☒ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed	
<input checked="" type="checkbox"/> mowing	<input type="checkbox"/> shrub/sapling removal
<input type="checkbox"/> grazing	<input type="checkbox"/> herbaceous/aquatic bed removal
<input checked="" type="checkbox"/> clearcutting	<input type="checkbox"/> sedimentation
<input type="checkbox"/> selective cutting	<input type="checkbox"/> dredging
<input type="checkbox"/> woody debris removal	<input type="checkbox"/> farming
<input type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment

39
subtotal this page

<b>Site:</b> Wetland W-1 and Wetland W-2	<b>Rater(s):</b> R. Warren, E. Kennedy	<b>Date:</b> 11/23/16
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39

subtotal first page

0	39
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max 10 pts.

subtotal

## Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

4	43
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max 20 pts.

subtotal

## Metric 6. Plant communities, interspersions, microtopography.

### 6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ 1 Emergent
- ☐ 1 Shrub
- ☐ 1 Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other

### 6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☐ Moderate (3)
- ☒ Moderately low (2)
- ☐ Low (1)
- ☐ None (0)

### 6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☐ Absent (1)

### 6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ Vegetated hummocks/tussucks
- ☐ Coarse woody debris >15cm (6in)
- ☐ 1 Standing dead >25cm (10in) dbh
- ☐ 1 Amphibian breeding pools

### Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

### Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

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**End of Quantitative Rating. Complete Categorization Worksheets.**

# ORAM Summary Worksheet

		circle answer or insert score		Result
Narrative Rating	Question 1. Critical Habitat	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 1.
	Question 6. Bogs	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 7. Fens	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES <input type="checkbox"/>	NO <input type="checkbox"/>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input type="checkbox"/>	NO <input type="checkbox"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3
Question 11. Relict Wet Prairies	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	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	14.5		
	Metric 4. Habitat	10.5		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersions, microtopography	4		
	TOTAL SCORE	43		Category based on score breakpoints Modified Category 2

Site: Wetland W-1 and Wetland W-2

**Complete Wetland Categorization Worksheet.**



## Wetland Categorization Worksheet

Choices	Circle one	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES <input type="checkbox"/>  Wetland is categorized as a Category 3 wetland	NO <input checked="" type="checkbox"/>  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 <input type="checkbox"/>  Wetland should be evaluated for possible Category 3 status	NO <input checked="" type="checkbox"/>  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 <input type="checkbox"/>  Wetland is categorized as a Category 1 wetland	NO <input checked="" type="checkbox"/>  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 <input checked="" type="checkbox"/>  Wetland is assigned to the appropriate category based on the scoring range	NO <input type="checkbox"/>  If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES <input type="checkbox"/>  Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO <input checked="" type="checkbox"/>  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 <input type="checkbox"/>  Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO <input checked="" type="checkbox"/>  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.

Site: Wetland W-1 and Wetland W-2

<b>Final Category</b>			
Choose one	<input type="checkbox"/> Category 1	<input checked="" type="checkbox"/> Category 2	<input type="checkbox"/> Category 3

**End of Ohio Rapid Assessment Method for Wetlands.**

## Background Information

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<b>Date:</b> 11/23/16	
<b>Affiliation:</b> EnviroScience, Inc	
<b>Address:</b> 5070 Stow Road, Stow Ohio, 44224	
<b>Phone Number:</b> (330) 688-0111	
<b>e-mail address:</b> rwarren@EnviroScienceInc.com, ekennedy@EnviroScienceInc.com	
<b>Name of Wetland:</b> Wetland W-3	
<b>Vegetation Communit(ies):</b> PEM/PSS/PFO	
<b>HGM Class(es):</b> Depressional	
<b>Location of Wetland:</b> include map, address, north arrow, landmarks, distances, roads, etc.  <div style="border: 1px solid black; padding: 10px; text-align: center; margin: 20px auto; width: 60%;">Refer to site wetlands and water resources map.</div>	
Lat/Long or UTM Coordinate	40.757263, -81.372268
USGS Quad Name	Canton East
County	Stark
Township	Canton
Section and Subsection	
Hydrologic Unit Code	05040001
Site Visit	11/23/16
National Wetland Inventory Map	x
Ohio Wetland Inventory Map	
Soil Survey	x
Delineation report/map	x





## 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
<b>Step 1</b>	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Step 2</b>	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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Step 3</b>	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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Step 4</b>	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.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Step 5</b>	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Step 6</b>	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.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

## Narrative Rating

Site: Wetland W-3

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

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

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

Site: Wetland W-3



**Table 1. Characteristic plant species.**

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

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

<b>Site:</b> Wetland W-3	<b>Rater(s):</b> R. Warren, E. Kennedy	<b>Date:</b> 11/23/16
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<b>3</b>	<b>3</b>
max 6 pts.	subtotal

### Metric 1. Wetland Area (size).

Select one size class and assign score.

- ☐ >50 acres (>20.2ha) (6 pts)
- ☐ 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- ☐ 10 to <25 acres (4 to <10.1ha) (4 pts)
- ☒ 3 to <10 acres (1.2 to <4ha) (3 pts)
- ☐ 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- ☐ 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- ☐ <0.1 acres (0.04ha) (0 pts)

<b>9</b>	<b>12</b>
max 14 pts.	subtotal

### Metric 2. Upland buffers and surrounding land use.

2a. Calculate average buffer width. Select only one and assign score. Do not double check.

- ☐ WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
- ☒ MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
- ☐ NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

2b. Intensity of surrounding land use. Select one or double check and average.

- ☒ VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- ☐ LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- ☒ MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- ☐ HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

<b>17.5</b>	<b>29.5</b>
max 30 pts.	subtotal

### Metric 3. Hydrology.

3a. Sources of Water. Score all that apply.

- ☐ High pH groundwater (5)
- ☐ Other groundwater (3)
- ☒ Precipitation (1)
- ☐ Seasonal/Intermittent surface water (3)
- ☒ Perennial surface water (lake or stream) (5)

3c. Maximum water depth. Select only one and assign score.

- ☐ >0.7 (27.6in) (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2)
- ☒ <0.4m (<15.7in) (1)

3e. Modifications to natural hydrologic regime. Score one or double check and average.

- ☐ None or none apparent (12)
- ☒ Recovered (7)
- ☒ Recovering (3)
- ☐ Recent or no recovery (1)

3b. Connectivity. Score all that apply.

- ☒ 100 year floodplain (1)
- ☒ Between stream/lake and other human use (1)
- ☒ Part of wetland/upland (e.g. forest), complex (1)
- ☒ Part of riparian or upland corridor (1)

3d. Duration inundation/saturation. Score one or dbl check.

- ☐ Semi- to permanently inundated/saturated (4)
- ☐ Regularly inundated/saturated (3)
- ☒ Seasonally inundated (2)
- ☒ Seasonally saturated in upper 30cm (12in) (1)

Check all disturbances observed	
<input type="checkbox"/> ditch <input type="checkbox"/> tile <input type="checkbox"/> dike <input type="checkbox"/> weir <input type="checkbox"/> stormwater input	<input type="checkbox"/> point source (nonstormwater) <input checked="" type="checkbox"/> filling/grading <input type="checkbox"/> road bed/RR track <input type="checkbox"/> dredging <input type="checkbox"/> other

<b>11</b>	<b>40.5</b>
max 20 pts.	subtotal

### Metric 4. Habitat Alteration and Development.

4a. Substrate disturbance. Score one or double check and average.

- ☐ None or none apparent (4)
- ☒ Recovered (3)
- ☒ Recovering (2)
- ☐ Recent or no recovery (1)

4b. Habitat development. Select only one and assign score.

- ☐ Excellent (7)
- ☐ Very good (6)
- ☐ Good (5)
- ☒ Moderately good (4)
- ☐ Fair (3)
- ☐ Poor to fair (2)
- ☐ Poor (1)

4c. Habitat alteration. Score one or double check and average.

- ☐ None or none apparent (9)
- ☒ Recovered (6)
- ☒ Recovering (3)
- ☐ Recent or no recovery (1)

Check all disturbances observed	
<input checked="" type="checkbox"/> mowing <input type="checkbox"/> grazing <input checked="" type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants	<input type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input type="checkbox"/> farming <input type="checkbox"/> nutrient enrichment

<b>40.5</b>
subtotal this page

<b>Site:</b> Wetland W-3	<b>Rater(s):</b> R. Warren, E. Kennedy	<b>Date:</b> 11/23/16
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40.5

subtotal first page

0	40.5
max 10 pts.	subtotal

## Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- ☐ Bog (10)
- ☐ Fen (10)
- ☐ Old growth forest (10)
- ☐ Mature forested wetland (5)
- ☐ Lake Erie coastal/tributary wetland-unrestricted hydrology (10)
- ☐ Lake Erie coastal/tributary wetland-restricted hydrology (5)
- ☐ Lake Plain Sand Prairies (Oak Openings) (10)
- ☐ Relict Wet Prairies (10)
- ☐ Known occurrence state/federal threatened or endangered species (10)
- ☐ Significant migratory songbird/water fowl habitat or usage (10)
- ☐ Category 1 Wetland. See Question 1 Qualitative Rating (-10)

8	48.5
max 20 pts.	subtotal

## Metric 6. Plant communities, interspersions, microtopography.

### 6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- ☐ Aquatic bed
- ☐ 1 Emergent
- ☐ 1 Shrub
- ☐ 2 Forest
- ☐ Mudflats
- ☐ Open water
- ☐ Other \_\_\_\_\_

### 6b. horizontal (plan view) Interspersion.

Select only one.

- ☐ High (5)
- ☐ Moderately high(4)
- ☒ Moderate (3)
- ☐ Moderately low (2)
- ☐ Low (1)
- ☐ None (0)

### 6c. Coverage of invasive plants. Refer to Table 1 ORAM long form for list. Add or deduct points for coverage

- ☐ Extensive >75% cover (-5)
- ☒ Moderate 25-75% cover (-3)
- ☐ Sparse 5-25% cover (-1)
- ☐ Nearly absent <5% cover (0)
- ☐ Absent (1)

### 6d. Microtopography.

Score all present using 0 to 3 scale.

- ☐ 1 Vegetated hummocks/tussucks
- ☐ 1 Coarse woody debris >15cm (6in)
- ☐ 1 Standing dead >25cm (10in) dbh
- ☐ 1 Amphibian breeding pools

### Vegetation Community Cover Scale

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

### Narrative Description of Vegetation Quality

low	Low spp diversity and/or predominance of nonnative or disturbance tolerant native species
mod	Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare threatened or endangered spp
high	A predominance of native species, with nonnative spp and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp

### Mudflat and Open Water Class Quality

0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)
2	Moderate 1 to <4ha (2.47 to 9.88 acres)
3	High 4ha (9.88 acres) or more

### Microtopography Cover Scale

0	Absent
1	Present very small amounts or if more common of marginal quality
2	Present in moderate amounts, but not of highest quality or in small amounts of highest quality
3	Present in moderate or greater amounts and of highest quality

48.5

**End of Quantitative Rating. Complete Categorization Worksheets.**



# ORAM Summary Worksheet

		circle answer or insert score		Result
Narrative Rating	Question 1. Critical Habitat	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 1.
	Question 6. Bogs	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 7. Fens	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES <input type="checkbox"/>	NO <input type="checkbox"/>	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input type="checkbox"/>	NO <input type="checkbox"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If yes, Category 3
Question 11. Relict Wet Prairies	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	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	17.5		
	Metric 4. Habitat	11		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	8		
	TOTAL SCORE	48.5		Category based on score breakpoints Category 2

Site: Wetland W-3

**Complete Wetland Categorization Worksheet.**

## Wetland Categorization Worksheet

Choices	Circle one	Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions:  Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES <input type="checkbox"/>  Wetland is categorized as a Category 3 wetland	NO <input checked="" type="checkbox"/>  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 <input type="checkbox"/>  Wetland should be evaluated for possible Category 3 status	NO <input checked="" type="checkbox"/>  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 <input type="checkbox"/>  Wetland is categorized as a Category 1 wetland	NO <input checked="" type="checkbox"/>  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 <input checked="" type="checkbox"/>  Wetland is assigned to the appropriate category based on the scoring range	NO <input type="checkbox"/>  If the score of the wetland is located within the scoring range for a particular category, the wetland should be assigned to that category. In all instances however, the narrative criteria described in OAC Rule 3745-1-54(C) can be used to clarify or change a categorization based on a quantitative score.
Does the quantitative score fall with the "gray zone" for Category 1 or 2 or Category 2 or 3 wetlands?	YES <input type="checkbox"/>  Wetland is assigned to the higher of the two categories or assigned to a category based on detailed assessments and the narrative criteria	NO <input checked="" type="checkbox"/>  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 <input type="checkbox"/>  Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	NO <input checked="" type="checkbox"/>  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.

Site: Wetland W-3

### Final Category

Choose one    ☐ Category 1    ☒ Category 2    ☐ Category 3

**End of Ohio Rapid Assessment Method for Wetlands.**

**Appendix E:**  
**Stream Habitat Form (QHEI)**



Stream & Location: S-1 (S12.516.516)RM: — Date: 11/23

STORET #:

Scorer Name & Affiliation: R. Warren, ES

River Code:

Lat./Long.: 40 75 7702 - 81 38 5335Office verified location ☒

1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present

Check ONE (Or 2 &amp; average)

- BEST TYPES**
- ☐ BLDR / SLABS [10] ☐ POOL RIFFLE ☐
- ☐ BOULDER [9] ☐
- ☐ COBBLE [8] ☐
- ☐ GRAVEL [7] ☐
- ☒ SAND [6] ☐
- ☐ BEDROCK [5] ☐

- OTHER TYPES**
- ☐ HARDPAN [4] ☐ POOL RIFFLE ☐
- ☐ DETRITUS [3] ☐
- ☐ MUCK [2] ☐
- ☒ SILT [2] ☐
- ☐ ARTIFICIAL [0] ☐

(Score natural substrates; ignore

- ORIGIN**
- ☐ LIMESTONE [1]
- ☐ OUTWASH [1]
- ☐ WETLANDS [0]
- ☐ HARDPAN [0]
- ☒ SANDSTONE [0]
- ☒ RIP/RAP [0]
- ☐ LACUSTRINE [0]
- ☐ SHALE [-1]
- ☐ COAL FINES [-2]

- QUALITY**
- ☐ HEAVY [-2]
- ☒ MODERATE [-1]
- ☐ NORMAL [0]
- ☐ FREE [1]
- ☒ EXTENSIVE [-2]
- ☒ MODERATE [-1]
- ☐ NORMAL [0]
- ☐ NONE [1]

Substrate  
Maximum  
20  
**5**NUMBER OF BEST TYPES: ☐ 4 or more [2] sludge from point-sources) ☐ 3 or less [0]

Comments

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

AMOUNT

Check ONE (Or 2 &amp; average)

- ☐ UNDERCUT BANKS [1] ☐ POOLS > 70cm [2] ☐ OXBOWS, BACKWATERS [1]
- ☐ OVERHANGING VEGETATION [1] ☐ ROOTWADS [1] ☐ AQUATIC MACROPHYTES [1]
- ☐ SHALLOWS (IN SLOW WATER) [1] ☐ BOULDERS [1] ☐ LOGS OR WOODY DEBRIS [1]
- ☐ ROOTMATS [1] ☐

- ☐ EXTENSIVE >75% [11]
- ☐ MODERATE 25-75% [7]
- ☐ SPARSE 5-25% [3]
- ☒ NEARLY ABSENT <5% [1]

Cover  
Maximum  
20  
**3**

Comments

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 &amp; average)

- SINUOSITY** ☐ HIGH [4] ☐ EXCELLENT [7] ☐ CHANNELIZATION ☐ NONE [6] ☐ STABILITY ☐ HIGH [3]
- ☐ MODERATE [3] ☐ GOOD [5] ☐ RECOVERED [4] ☒ MODERATE [2]
- ☒ LOW [2] ☒ FAIR [3] ☒ RECOVERING [3] ☒ LOW [1]
- ☐ NONE [1] ☒ POOR [1] ☐ RECENT OR NO RECOVERY [1]

Channel  
Maximum  
20  
**8.5**

Comments

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank &amp; average)

- EROSION** ☐ NONE / LITTLE [3] ☐ RIPARIAN WIDTH ☐ WIDE > 50m [4] ☐ FLOOD PLAIN QUALITY ☐ FOREST, SWAMP [3] ☐ CONSERVATION TILLAGE [1]
- ☒ MODERATE [2] ☐ MODERATE 10-50m [3] ☐ SHRUB OR OLD FIELD [2] ☐ URBAN OR INDUSTRIAL [0]
- ☐ HEAVY / SEVERE [1] ☐ NARROW 5-10m [2] ☒ RESIDENTIAL, PARK, NEW FIELD [1] ☐ MINING / CONSTRUCTION [0]
- ☐ VERY NARROW < 5m [1] ☐ FENCED PASTURE [1] ☐ OPEN PASTURE, ROWCROP [0]
- ☒ NONE [0]

Indicate predominant land use(s) past 100m riparian.

Riparian  
Maximum  
10  
**3.5**

Comments

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH

CHANNEL WIDTH

CURRENT VELOCITY

Check ONE (ONLY)

Check ONE (Or 2 &amp; average)

Check ALL that apply

- ☐ > 1m [6]
- ☐ 0.7-1m [4]
- ☐ 0.4-0.7m [2]
- ☐ 0.2-0.4m [1]
- ☒ < 0.2m [0]

- ☐ POOL WIDTH > RIFFLE WIDTH [2]
- ☒ POOL WIDTH = RIFFLE WIDTH [1]
- ☐ POOL WIDTH < RIFFLE WIDTH [0]

- ☐ TORRENTIAL [-1] ☒ SLOW [1]
- ☐ VERY FAST [1] ☐ INTERSTITIAL [-1]
- ☐ FAST [1] ☐ INTERMITTENT [-2]
- ☐ MODERATE [1] ☐ EDDIES [1]

Indicate for reach - pools and riffles.

Pool /  
Current  
Maximum  
12  
**2**

Comments

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species:

Check ONE (Or 2 &amp; average).

☐ NO RIFFLE (metric=0)

- RIFFLE DEPTH** ☐ BEST AREAS > 10cm [2] ☐ RUN DEPTH ☐ MAXIMUM > 50cm [2] ☐ RIFFLE / RUN SUBSTRATE ☐ STABLE (e.g., Cobble, Boulder) [2] ☐ RIFFLE / RUN EMBEDDEDNESS ☐ NONE [2]
- ☐ BEST AREAS 5-10cm [1] ☒ MAXIMUM < 50cm [1] ☐ MOD. STABLE (e.g., Large Gravel) [1] ☐ LOW [1]
- ☒ BEST AREAS < 5cm [metric=0] ☒ UNSTABLE (e.g., Fine Gravel, Sand) [0] ☒ MODERATE [0] ☒ EXTENSIVE [-1]

Riffle /  
Run  
Maximum  
8  
**0**

Comments

6] GRADIENT (24.7 ft/mi) DRAINAGE AREA (1.14 mi<sup>2</sup>)%POOL: — %GLIDE: —  
%RUN: 80 %RIFFLE: 20Gradient  
Maximum  
10  
**10**

**METHOD**

**SECCHI DEPTH**

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

- ☐ BOAT  
☒ WADE  
☐ L. LINE  
☐ OTHER

1st \_\_\_\_\_ cm  
2nd \_\_\_\_\_ cm

**CANOPY**

- ☐ 0.5 Km  
☐ 0.2 Km  
☐ 0.15 Km  
☐ 0.12 Km  
☒ OTHER  
☐ <10% - CLOSED

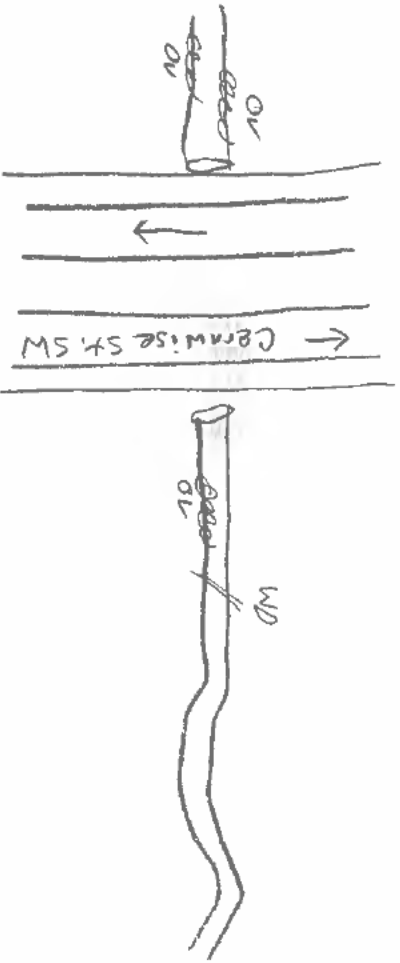
\_\_\_\_\_ meters

Consider maintenance status and basin issues. Write something to aide understanding of overall QHEI score.

**Stream Drawing:**

5/2

flow →



2 →

**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**8/23/2021 4:49:08 PM**

**in**

**Case No(s). 21-0874-GA-BLN**

Summary: Application Dominion Energy Ohio Application Notification Letter for PIR 2647 37th & Cleveland, Canton Township, Start County, Ohio. Part 1 electronically filed by Ms. Valerie A Cahill on behalf of The East Ohio Gas Company d/b/a Dominion Energy Ohio