CASE NO. 15-488-GA-BLN LETTER OF NOTIFICATION MATALCO INC. MLX PROJECT NEW PIPELINE CONSTRUCTION

ATTACHMENT J

U.S. FISH AND WILDLIFE SERVICE COORDINATION AND CORRESPONDENCE

Dominion Resources Services, Inc. 320 Springside Drive, Ste. 320, Akron, OH 44333 Dominion

Web Address: www.dom.com February 13, 2015

BY FED-EX

Dr. Mary Knapp United States Fish and Wildlife Service Ecological Services Field Office 4625 Morse Road, Suite 104 Columbus, Ohio 43230

RE: The East Ohio Gas Company
Section 7 Endangered Species Act Consultation
Matalco Inc. MLX

Dear Dr. Knapp:

Please review the following information regarding the East Ohio Gas Company (EOG) Matalco Inc. MLX project. To assist with your review of the project, site maps and photographs are enclosed.

Project Purpose and Location

EOG is proposing to install approximately 8,500 feet of new natural gas pipeline (sixteen [16]-inch diameter) in order to provide service to a new industrial facility. The new pipeline will extend along Tait Road and Tod Avenue SW to the Matalco plant located at 5120 Tod Avenue.

The Matalco Inc. MLX is located in Lordstown, Trumbull County. The project is located within existing EOG easements in the road right-of-ways (ROW) of Tait Road, Tod Avenue SW (State Route 45), and 8th Street. The work corridor varies from twenty (20) feet wide to a maximum of fifty (50) feet wide along the road ROW. The latitude and longitude coordinates for the project center point are 41.18727, -80.84614. The project area is indicated on an excerpt of the Warren, Ohio USGS 7.5-minute topographic map, and the project area map, located in Attachment A. Representative photographs of the project area are included in Attachment B.

Project Area Description

The project area was surveyed on June 2, 2014. This survey was performed to collect information on potential wetlands, streams, and protected species habitat. The project area is located within residential, industrial, agricultural, and rural areas with land covers of mowed grass, lawn trees, agricultural fields, successional woods, and emergent wetlands.

Matalco Inc. MLX USFWS Section 7 Endangered Species Act Consultation Page 2 of 4

Four (4) wetlands are located within the project area.

Wetland A is an emergent wetland abutting Stream 1 (Little Duck Creek).

Wetland B is a small emergent, scrub/shrub, and forested wetland that is mostly outside of the project area. Areas within the road ROW have emergent vegetation. This wetland drains northeast, entering Stream 1 (Little Duck Creek) well north of the project area.

Wetlands C and D extend south outside the project area. Areas within the road ROW have emergent vegetation. These wetlands drain to Stream 1(Little Duck Creek) east of the project area.

Stream 1 (Little Duck Creek) crosses Tait Road within the project area. This is a small, channelized, perennial stream that flows through agricultural fields.

To install the pipeline for this project, it is necessary to temporarily impact Stream 1 (Little Duck Creek) and Wetland A. Following installation of the pipeline, the disturbed areas will be restored to pre-construction grade and the streambanks will be stabilized and re-vegetated. All Best Management Practices will be utilized to minimize sedimentation and erosion. No permanent impacts to these water resources will occur with the installation of pipeline for this project. Photographs of the water resources are included in Attachment B.

Federally Listed Species

Federally listed species within **Trumbull** County are discussed below:

- All counties in Ohio are within the range of the **Indiana bat** (*Myotis sodalis*), a Federally-listed endangered species; and the **northern long-eared bat** (*Myotis septentrionalis*), a species that is currently proposed for listing as federally endangered. Summer habitat requirements for these species are not well defined, but the following are considered important: dead or live trees and snags with peeling or exfoliating bark, split tree trunk and/or branches, or cavities, which may be used as maternity roost areas; live trees (such as shagbark hickory and oaks) which have exfoliating bark; and stream corridors, riparian areas, and upland woodlots which provide forage sites. Occasionally the northern long-eared bat may roost in structures like barns and sheds. The project area was evaluated for potential habitat for these bats. There are no sheds or barns within the project area and no trees were identified with characteristics that may potentially provide habitat for these bats
- The **eastern massasauga** (*Sistrurus catenatus*), a small, docile rattlesnake is currently a federal candidate species. The massasauga may be found in wet prairies, marshes, fens, and low areas along rivers and lakes. Although the wetlands within the project area are dominated by emergent, marsh

vegetation, these wetlands are adjacent to an active road and are regularly mowed. Because of these regular disturbances, this rattlesnake would not be expected to occur in or near these disturbed, roadside wetlands.

- The proposed project is within the range of the federally endangered **clubshell** (*Pleurobema clava*). The clubshell is a mussel that is found in coarse sand and gravel areas of runs and riffles within streams and small rivers. Stream 1 (Little Duck Creek) has substrate composed primarily of muck and detritus. No mussels were observed within this stream.
- The bald eagle (Haliaeetus leucocephalus), a species of concern, is protected under the Bald and Golden Eagle Protection Act. Bald eagle nests are found in Trumbull County within the townships of Bazetta, Bloomfield, Bristol, Farmington, Fowler, Greene, Gustavus, Hartford, Johnston, Kinsman, Lordstown, Mecca, Mesopotamia, Vernon, and Weathersfield. Matalco Inc. MLX is found in Lordstown Township within Trumbull County. Bald eagle habitat includes areas adjacent to water bodies that provide suitable feeding (lakes, rivers, oceans) and must include large trees appropriate for roosting and nesting. The Mahoning River is the closest body of water with a potential source of food for the bald eagle, but it is located approximately 2.5 miles offsite to the east of the project site. No bald eagles or nest sites were observed during fieldwork. In addition, Allen Charles of the United States Fish and Wildlife Service (USFWS) indicated via email December 16, 2014 that no known bald eagle nests are in or near the area of construction.

Request for Finding

Considering the information above, we are requesting a finding from the USFWS regarding any adverse effect to federally listed, threatened or endangered species in the project area.

A timely response is respectfully requested to ensure compliance with the Endangered Species Act prior to initiating activities. Please forward your response at the earliest possible convenience to the attention of:

Tara Miletti, Environmental Specialist 320 Springside Drive, Suite 320 Akron, Ohio 44333 Tara.E.Miletti@dom.com Matalco Inc. MLX USFWS Section 7 Endangered Species Act Consultation Page 4 of 4

If you have any questions or need additional information, please contact Tara Miletti at (330) 664-2579.

Sincerely,

Amanda B. Tornabene

Director, Gas Environmental Services

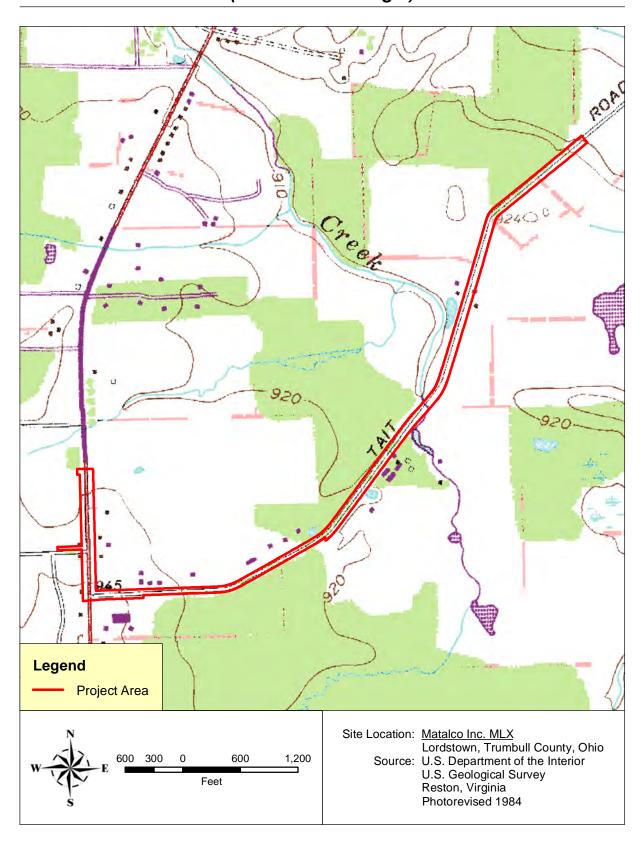
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Enclosures

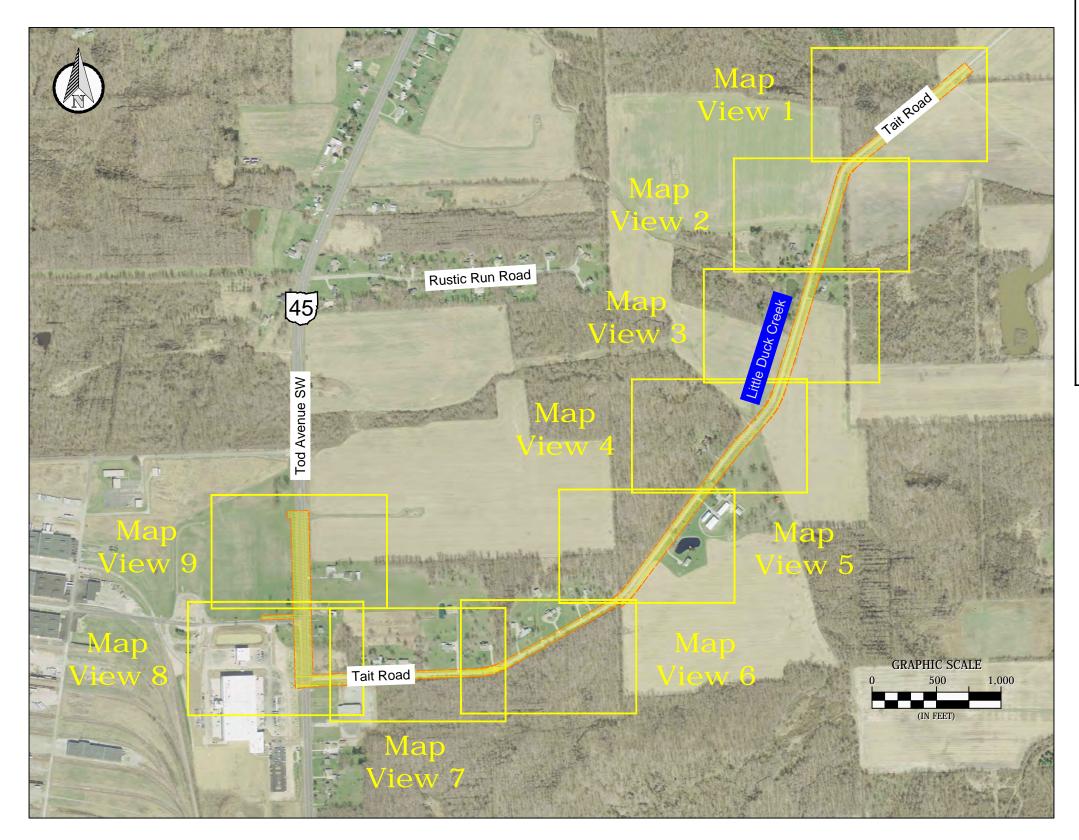
cc: Tara Miletti

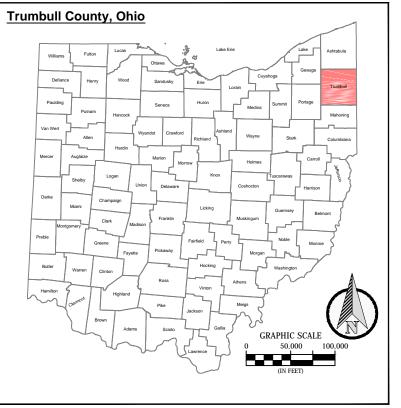
Attachment A Site Maps

Location of Project Area on USGS 7.5-Minute Topographic Map (Warren Quadrangle)



Map View Location Map





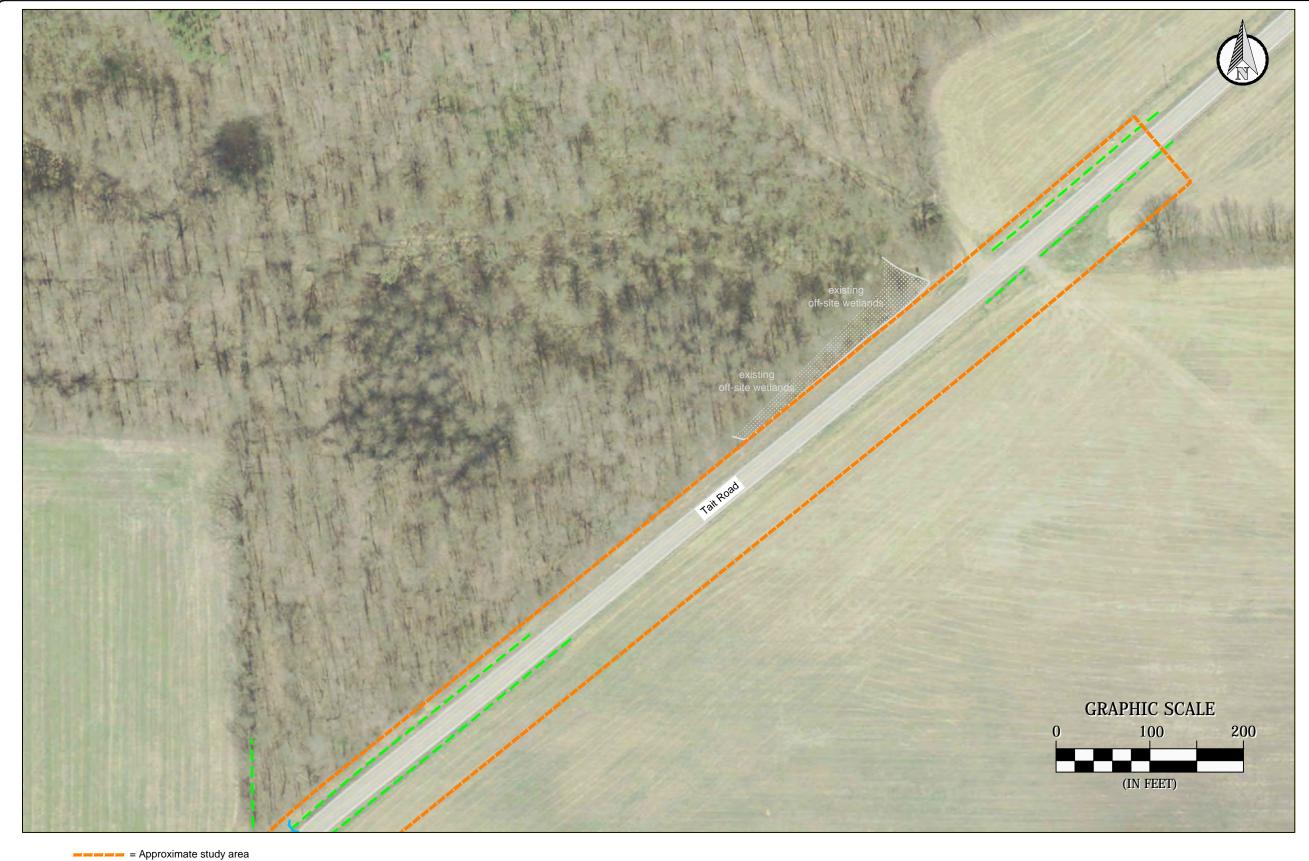
= Approximate study area

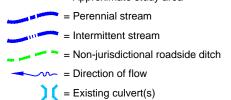


The East Ohio Gas Company Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



Map View 1 of 9





Prepared by

DAVEY

RESOURCE GROUP

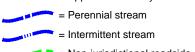
A Dickins of The Dawn Tree Report Company

The East Ohio Gas Company Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



Map View 2 of 9





= Non-jurisdictional roadside ditch

= Direction of flow = Existing culvert(s)

= Areas of wetlands delineated within study area (0.11 acre)



The East Ohio Gas

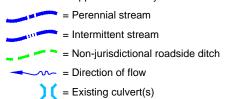
Company

Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



Map View 3 of 9





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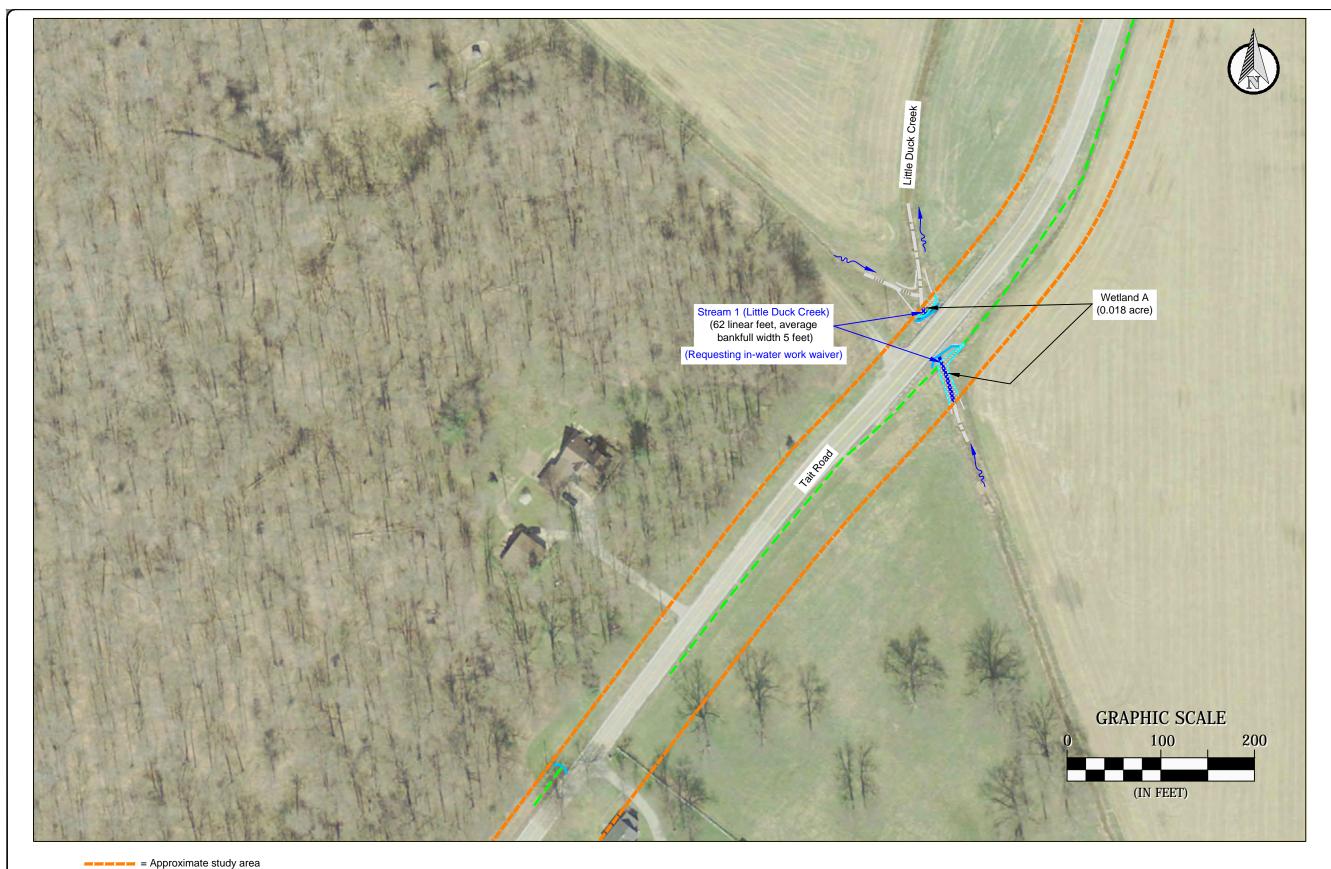
RESOURCE GROUP

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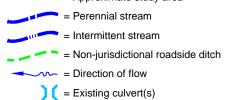
The East Ohio Gas Company Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



<u>Map View</u> <u>4 of 9</u>



= Areas of wetlands delineated within study area (0.11 acre)



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DAVEY

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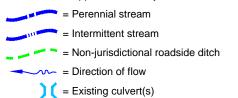
The East Ohio Gas Company <u>Matalco Inc. MLX</u> Pipeline Installation Project Lordstown, Trumbull County, Ohio



Map View 5 of 9



= Areas of wetlands delineated within study area (0.11 acre)



Prepared by

DAVEY

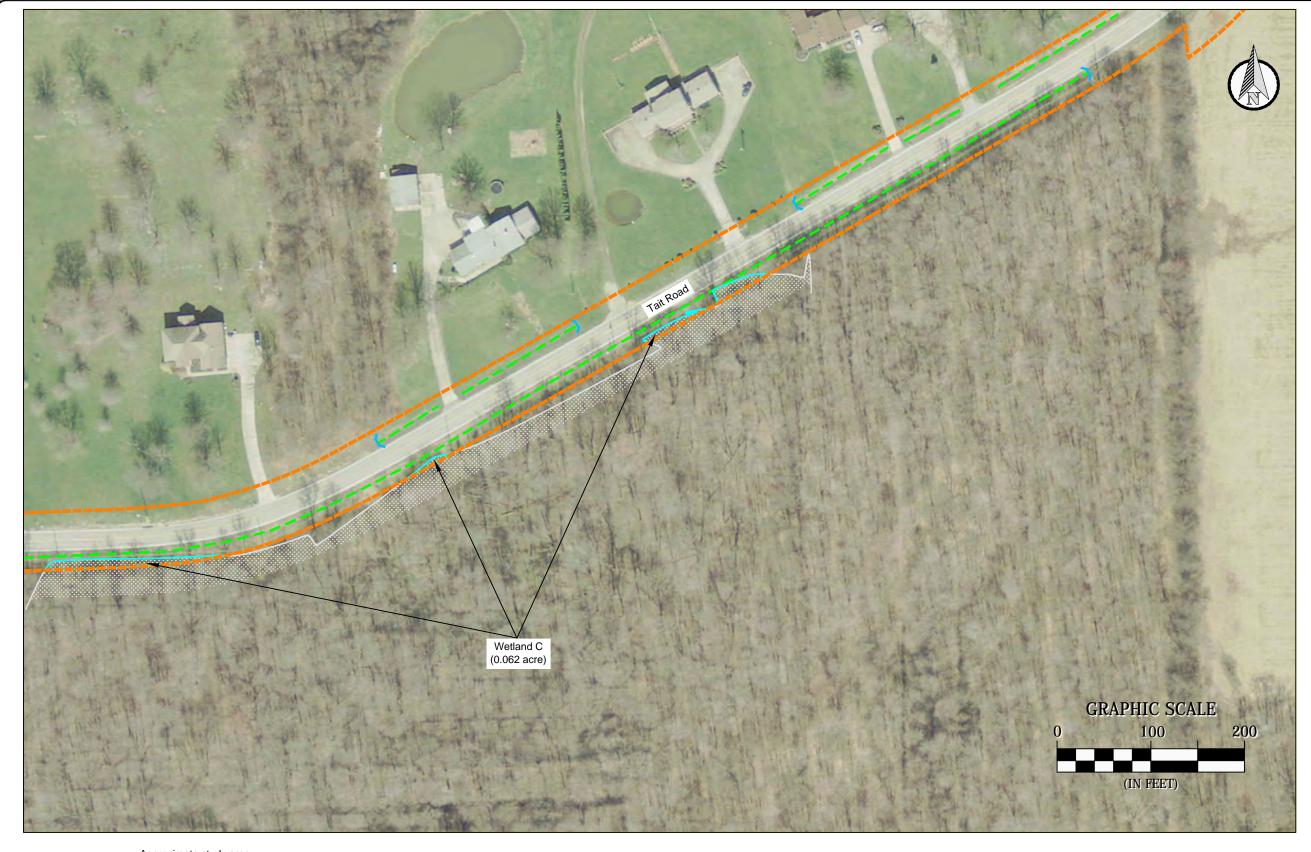
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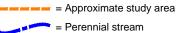
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The East Ohio Gas Company Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



Map View 6 of 9





= Perennial stream
= Intermittent stream

= Non-jurisdictional roadside ditch

= Direction of flow

| = Existing culvert(s)

= Areas of wetlands delineated within study area (0.11 acre)

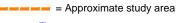


The East Ohio Gas Company Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



<u>Map View</u> <u>7 of 9</u>





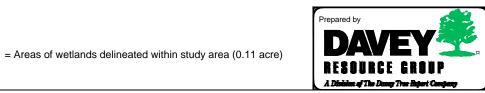
= Perennial stream

Intermittent stream

= Non-jurisdictional roadside ditch

= Direction of flow

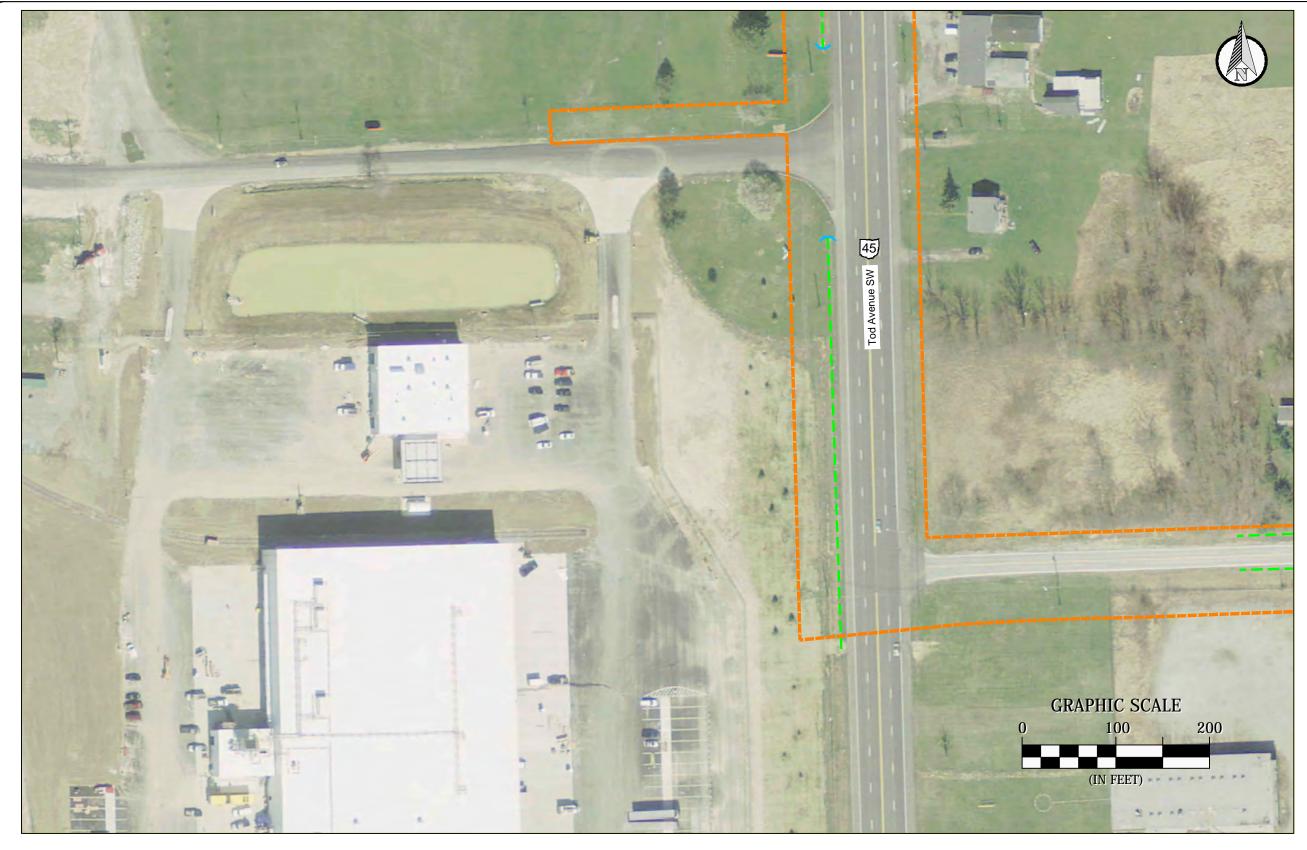
= Existing culvert(s)

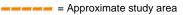


The East Ohio Gas Company

Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio

<u>Map View</u> 8 of 9





= Perennial stream

= Intermittent stream

= Non-jurisdictional roadside ditch

= Direction of flow

= Existing culvert(s)

= Areas of wetlands delineated within study area (0.11 acre)

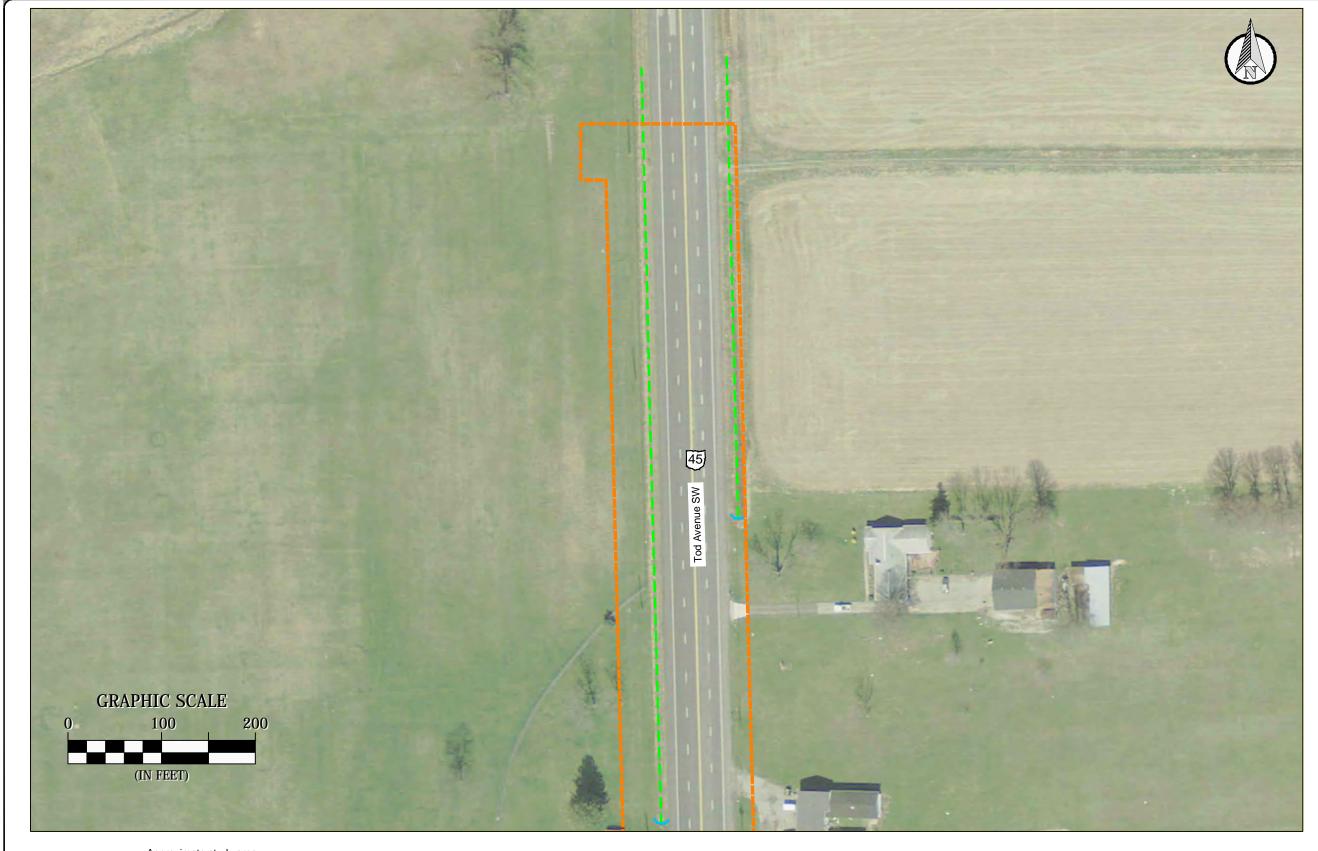


The East Ohio Gas Company

Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



<u>Map View</u> 9 of 9



= Areas of wetlands delineated within study area (0.11 acre)



Prepared by

DAVEY

RESOURCE GROUP

A Diskins of The Davy Tree Indust Company

The East Ohio Gas Company Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio

Data used to produce this map were collected on June 2, 2014 Sheet 10 of 10

Attachment B Photographs



Photograph 1. Mowed fields and industrial buildings are located at the intersection of Tod Avenue SW and Tait Road, adjacent to the Matalco Inc. MLX project area.



Photograph 2. Residential areas are found along Tait Road and Tod Avenue SW.



Photograph 3. Agricultural fields are found along Tait Road and Tod Avenue SW.



Photograph 4. Wetland A is a small emergent wetland abutting Stream 1 (Little Duck Creek).



Photograph 5. Wetland B is located along Tait Road. The portion of the wetland that falls within the road ROW is covered with emergent vegetation.



Photograph 6. Wetland C contains emergent, scrub/shrub, and forested vegetation. Only emergent vegetation occurs within the road ROW.



Photograph 7. The portions of Wetland D within the road ROW are emergent.



Photograph 8. This is a view of Stream 1 (Little Duck Creek) looking downstream at the Tait Road bridge.

Tara E Miletti (Services - 6)

From: susan_zimmermann@fws.gov on behalf of Ohio, FW3 [ohio@fws.gov]

Sent: Friday, February 27, 2015 9:03 AM

To: Tara E Miletti (Services - 6)

Cc: nathan.reardon@dnr.state.oh.us; Jenny Norris

Subject: EOG - Matalco Inc. MLX - Natural Gas Pipeline, Lordstown, Trumbull Co. OH



UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. Fish and Wildlife Service
Ecological Services Office
4625 Morse Road, Suite 104
Columbus, Ohio 43230
(614) 416-8993 / Fax (614) 416-8994



TAILS# 03E15000-2015-TA-0762

Dear Ms. Miletti,

We have received your recent correspondence requesting information about the subject proposal. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. The following comments and recommendations will assist you in fulfilling the requirements for consultation under section 7 of the Endangered Species Act of 1973, as amended (ESA).

The Service recommends that proposed developments avoid and minimize water quality impacts and impacts to high quality fish and wildlife habitat (e.g., forests, streams, wetlands). Additionally, natural buffers around streams and wetlands should be preserved to enhance beneficial functions. If streams or wetlands will be impacted, the Corps of Engineers should be contacted to determine whether a Clean Water Act section 404 permit is required. Best management practices should be used to minimize erosion, especially on slopes. All disturbed areas should be mulched and revegetated with native plant species. Prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

LISTED SPECIES COMMENTS: All projects in the State of Ohio lie within the range of the Indiana bat (Myotis sodalis), a federally listed endangered species. Since first listed as endangered in 1967, their population has declined by nearly 60%. Several factors have contributed to the decline of the Indiana bat, including the loss and degradation of suitable hibernacula, human disturbance during hibernation, pesticides, and the loss and degradation of forested habitat, particularly stands of large, mature trees. Fragmentation of forest habitat may also contribute to declines. During winter, Indiana bats hibernate in caves and abandoned mines. Summer habitat requirements for the species are not well defined but the following are considered important:

- (1) dead or live trees and snags with peeling or exfoliating bark, split tree trunk and/or branches, or cavities, which may be used as maternity roost areas;
- (2) live trees (such as shagbark hickory and oaks) which have exfoliating bark;
- (3) stream corridors, riparian areas, and upland woodlots which provide forage sites.

Should the proposed site contain trees or associated habitats exhibiting any of the characteristics listed above and/or the site contains any caves or abandoned mines, we recommend that the habitat and surrounding trees be saved wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if surveys are warranted. Any survey should be designed and conducted in coordination with the Endangered Species Coordinator for this office. If no caves or abandoned mines are present and tree removal is unavoidable, any tree removal should only occur between October 1 and March 31.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing on any portion of the parcel should occur until consultation under section 7 of the ESA, between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat, for our review and concurrence.

PROPOSED SPECIES COMMENTS: The proposed project lies within the range of the northern long-eared bat (Myotis septentrionalis), a species that is currently proposed for listing as federally endangered under the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). The final listing decision for the northern long-eared bat will occur no later than April 2, 2015. No critical habitat has been proposed at this time. Recently white-nose syndrome (WNS), a novel fungal pathogen, has caused serious declines in the northern long-eared bat population in the northeastern U.S. WNS has also been documented in Ohio, but the full extent of the impacts from WNS in Ohio is not yet known.

During winter, northern long-eared bats hibernate in caves and abandoned mines. Summer habitat requirements for the species are not well defined but the following are considered important:

- (1) Roosting habitat in dead or live trees and snags with cavities, peeling or exfoliating bark, split tree trunk and/or branches, which may be used as maternity roost areas;
- (2) Foraging habitat in upland and lowland woodlots and tree lined corridors;
- (3) Occasionally they may roost in structures like barns and sheds.

Pursuant to section 7(a)(4) of the ESA, federal action agencies are required to confer with the Service if their proposed action is likely to jeopardize the continued existence of the northern long-eared bat (50 CFR 402.10(a)). Federal action agencies may also voluntarily confer with the Service if the proposed action may affect a proposed species. Nevertheless, species proposed for listing are not afforded protection under the ESA; however as soon as a listing becomes effective, the prohibition against jeopardizing its continued existence and "take" applies regardless of an action's stage of completion. If the federal agency retains any discretionary involvement or control over on-the-ground actions that may affect the species after listing, section 7 applies.

The proposed project is in the vicinity of one or more confirmed records of northern long-eared bats. Therefore, we recommend that trees exhibiting any of the characteristics listed above, as well as any wooded areas or tree lined corridors be saved wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring surveys are warranted. If no caves or abandoned mines are present and trees must be cut, we

recommend that any tree removal occur between October 1 and March 31 to avoid impacts to northern long-eared bats. Incorporating these conservation measures into your project at this time may avoid significant future project delays should the listing become official.

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

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Endangered Species Act of 1973 (ESA), as amended, and are consistent with the intent of the National Environmental Policy Act of 1969 and the U. S. Fish and Wildlife Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species. Contact John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@dnr.state.oh.us.

Sincerely,

Dan Everson

Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW Jennifer Norris, ODNR-DOW

Tara E Miletti (Services - 6)

From: Allen, Charles [charles_allen@fws.gov]
Sent: Tuesday, December 16, 2014 8:14 AM

To: Tara E Miletti (Services - 6)

Subject: Line 3119 and OCC

Good Morning,

Thank you for the coordinates of the two construction sites. After looking in our data base we have found: Project site **Line 3119 Exposure #1 #2**, has no potential Bald Eagle nest in or near the area of construction. Project site **OCC MLK**, has no potential Bald Eagle nests in or near the area of construction. Please continue with your projects taking the correct measures needed.

Thank you, Charlie Allen

--

Charlie Allen
Contractor/Biologist
U.S. Fish and Wildlife Service
Ohio Field Office
4625 Morse Rd. Suite 104
Columbus, OH 43230

Phone: 614-416-8993 Ex. 29

CASE NO. 15-488-GA-BLN LETTER OF NOTIFICATION MATALCO INC. MLX PROJECT NEW PIPELINE CONSTRUCTION

ATTACHMENT K

DAVEY RESOURCE GROUP'S WATER RESOURCES REPORT



Water Resources Determination Report

Matalco Inc. MLX Pipeline Installation Project Lordstown, Trumbull County, Ohio

January 2015

Prepared for: The East Ohio Gas Company 320 Springside Drive, Suite 320 Akron, Ohio 44333

Prepared by:
Davey Resource Group
A Division of The Davey Tree Expert Company
1500 North Mantua Street
Kent, Ohio 44240
800-828-8312



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Davey Resource Group i January 2015

Introduction

Project Area Description and Location

The Matalco Inc. MLX – Pipeline Installation Project is located in Lordstown, Trumbull County, Ohio (Appendix A). The project is located within existing EOG easements in the road right-of-ways (ROW) of Tait Road, Tod Avenue SW (State Route 45), and 8th Street (Appendix B). The work corridor extends beyond the ROW in non-forested areas on the south side of Tait Road, the west side of Tod Avenue SW, and the north side of 8th Street. The extended work corridor, including the road ROW, is a maximum of fifty (50) feet wide along Tait Road and Tod Avenue SW, and thirty-five (35) feet wide along 8th Street. The work corridor along the forested portion of Tait Road is a maximum of twenty (20) feet wide.

The project area is located within residential, industrial, agricultural, and rural areas with land covers of mowed grass, lawn trees, agricultural fields, successional woods, and emergent wetlands.

Four (4) wetlands and one (1) stream are located within the project area. Stream 1 (Little Duck Creek) flows north out of the study area, eventually entering Duck Creek, which flows north into the Mahoning River. The Mahoning River has a watershed area of 1,133 square miles.

Secondary Source Information

The property is shown on an excerpt of the Warren Quadrangle of the United States Geological Survey (USGS) 7.5-minute topographic map (Appendix C). Elevations range from approximately 920 to 945 feet across the project area.

The National Wetlands Inventory (NWI) map (Warren Quadrangle) is in Appendix D. Numerous wetlands are mapped close to, but not within, the project area.

A map accessed from the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey shows the soil types located on and adjacent to the project area. See the Soils Map and the list of soil types mapped for the project area in Appendix E.

The Hydric Soils of the United States (1991) was reviewed to determine potential hydric soils identified within the study area. Canadice silty clay loam; Lorain silty clay loam, loamy substratum; and Sebring silt loam were identified as hydric soils. In addition, FcA (Fitchville silt loam, 0 to 2 percent slopes), MgB (Mahoning silt loam, 2 to 6 percent slopes), MhA (Mahoning silt loam, shale substratum, 0 to 2 percent slopes), and WbA (Wadsworth silt loam, 0 to 2 percent slopes) are listed as having hydric inclusions when occurring within depressions.

Methodology

The Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory, 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (U.S. Army Corps of Engineers, 2012) were used in delineating wetlands within the study area. The water resources were delineated and surveyed on June 2, 2014. The water resources delineation fieldwork, boundary mapping, and data analysis were performed by Todd Crandall. Jeff Petit prepared the vegetation, soils, and wetlands maps using AutoCAD® Map 2012 software and the maps included in Appendices C–H using ArcGIS® v.9.3. Judith Mitchell and Valerie Locker provided technical oversight and quality control.

Davey Resource Group 5 January 2015

Streams are identified as linear, flowing water features with a defined bed and bank. Streams are classified as ephemeral, intermittent, or perennial based upon flow regime. Ephemeral streams have flowing water only during, and for a short duration after, precipitation events. Intermittent streams have flowing water during certain times of the year, when groundwater and rainfall provide water for stream flow. During dry periods, intermittent streams may not have flowing water. Perennial streams have flowing water year-round, receiving water from groundwater and rainfall runoff.

Wetlands are identified based on three criteria: vegetation, soils, and hydrology. An area must meet all three criteria to be considered a jurisdictional wetland. A total of 8 sampling points were established in the field to determine wetlands boundaries. Data sheets reporting the results of soils, vegetation, and hydrology analyses were completed for each sample station and are located in Appendix G.

Soil samples were obtained to determine the extent of hydric soils within the project area. A standard Munsell soil color chart was used to determine the hue, value, and chroma of each soil sample. Soil samples were taken to a depth to adequately make a hydric soil determination. Criteria established by the National Technical Committee for Hydric Soils (1991) were used to determine hydric soils.

Wetland hydrology was characterized during this water resources delineation. Inundation and/or soil saturation were noted for each sample point. Other hydrological indicators, including watermarks, drift lines, sediment deposits, wetlands drainage patterns, blackened leaves, morphological indicators, iron/manganese concretions, and oxidized root zones within the upper soil layers, were documented, if observed.

Quantitative vegetation data were collected at each sampling point. Dominance was estimated by percent areal cover. Four strata were considered for each sample point—trees, saplings/shrubs, herbs, and woody vines. Trees were defined as any woody plant having a diameter at breast height (DBH) greater than 3.0 inches. Saplings and shrubs were those woody plants with a DBH of less than 3.0 inches and greater than 3.2 feet in height. For each stratum, plant species within a plot were identified and percent areal cover was estimated for each species. Thirty-foot-radius plots were used for trees and vines; 15-foot-radius plots were used for saplings and shrubs; and 5-foot-radius plots were used for herbs.

Any species within a stratum comprising 20% or more of the total plot areal cover was considered to be dominant. Dominant species within all strata were then added to determine the percentage of wetlands vegetation for each sample point. The wetlands vegetation criterion was met if greater than 50% of the dominant vegetation was indicative of wetlands conditions.

Species identifications were based on Braun (1989) and Newcomb (1977). Lichvar (2012) was used to assign indicator statuses to each identified species.

Plants with an indicator status of obligate (OBL), facultative wetland (FACW), or facultative (FAC) were considered to be indicative of wetlands conditions. Plants with an indicator status of facultative upland (FACU) or upland (UPL) were considered to be indicative of upland conditions. Plants that could only be identified to genus were sometimes assigned an indicator status based on the professional judgment of Davey Resource Group. These plants were classified as wetlands indicator species (WIS) or upland indicator species (UIS).

Survey flags were placed at necessary points around each wetland to accurately depict the wetland upland boundary. The location of each flag was surveyed using a GeoXHTM Trimble[®] GeoExplorer[®] 6000 series Dual-frequency Global Navigation Satellite System or GNSS (GPS, GLONASS, SBAS [WAAS]) receiver and antenna with EverestTM multipath rejection technology and Floodlight technology with 220 channels, running professional TerraSyncTM software capable of decimeter (10–75cm) accuracy after differential correction.

Trimble[®] GPS Pathfinder[®] Office software was used for postprocessing the GNSS field collected data incorporating Trimble[®] DeltaPhase[™] differential correction technology using GPS data collected from an appropriate base station. The corrected GPS latitude-longitude positions were exported into a compatible coordinate system as an AutoCAD[®] drawing interchange file (DXF). The vegetation, soils, and wetlands maps included in this report were prepared using AutoCAD Map[®] 2012 software.

Ohio Rapid Assessment Method (ORAM) forms (version 5.0) were completed for each wetland (Appendix I). The 10-page ORAM long form is included for each wetland. The ORAM evaluates the ecological quality of wetlands using a scoring form containing multiple questions. Wetlands are classified into categories as shown in Table 4. As part of the ORAM process, a review of the Ohio Biodiversity database was initiated to determine if any rare, threatened, or endangered species are location within or near the project area. Results of the database search will be presented as they become available.

ORAM Score	Wetland Category
0-29.9	1
30-34.9	1 or 2 gray zone
35-44.9	modified 2
45-59.9	2
60-64.9	2 or 3
65-100	3

Table 1. ORAM Scoring Breakpoints for Wetland Regulatory Categories

Results

Water Resources-Wetlands

Four wetlands are located within the project area, as indicated on the Water Resource Map in Appendix H.

Wetland A is an emergent wetland abutting Stream 1 (Little Duck Creek). This wetland has been modified by mowing and stream channelization and is dominated by invasive plant species including *Phalaris arundinacea* (reed canary grass) and *Typha angustifolia* (narrow-leaf cat-tail). For these reasons, Wetland A scored 29 using the ORAM, placing it within the range of Category 1.

Wetland B is a small emergent, scrub/shrub, and forested wetland but the portion of the wetland within the project area is dominated by emergent vegetation. This wetland has been modified by roadside ditches, mowing, and filling by adjacent property owners. For these reasons, Wetland B scored 35.5 on the ORAM form, placing it within the range of modified Category 2. This wetland drains northeast, entering Stream 1 (Little Duck Creek) well north of the project area.

Wetlands C and D extend south outside the project area. Areas within the road ROW have emergent vegetation. Both of these wetlands have been modified by mowing, filling, and ditching along Tait Road. Past farming has created ridge and swale topography in portions of these areas. These wetlands drain east to Stream 1 (Little Duck Creek) east of the project area.

Wetland C scored 44 on the ORAM form, placing it within modified Category 2. Wetland D is smaller and has less diverse plant communities and, as such, this wetland scored 35 on the ORAM, also placing it within modified Category 2.

Because of surface water connections to Stream 1 (Little Duck Creek), all of the wetlands are non-isolated. Wetland A is abutting Stream 1 (Little Duck Creek) and the remaining wetlands are adjacent to this stream. Little Duck Creek is a tributary to Duck Creek, which in turn flows into the Mahoning River, a traditional navigable water (TNW).

Photographs of the wetlands are included in Appendix F. Wetland hydrology, soils, and vegetation have been noted on the Data Sheets included in Appendix G. The ORAM forms are included in Appendix I.

Water Resources-Streams

One stream was identified within the project area. Stream 1 (Little Duck Creek) is a small perennial stream that drains through agricultural fields. The dominant substrate types of this stream are muck and detritus. This stream drains to Duck Creek and to the Mahoning River.

Endangered Species Evaluation

Federally listed species within Trumbull County are the endangered Indiana bat (*Myotis sodalis*); the proposed as endangered northern long eared bat (*Myotis septentrionalis*); the federal candidate species, the Eastern massasauga (*Sistrurus catenatus*); and the federally endangered clubshell (*Pluerobema clava*). The project area was examined for suitable habitat for these species.

- The eastern massasauga, a small, docile rattlesnake is currently a Federal candidate species. The massasauga may be found in wet prairies, marshes, fens, and low areas along rivers and lakes. Although the wetlands within the project area are dominated by emergent, marsh vegetation, these wetlands are adjacent to an active road and are regularly mowed. Because of these regular disturbances, this rattlesnake would not be expected to occur in or near these disturbed, roadside wetlands.
- Summer roosting habitat for the Indiana bat includes large trees that contain characteristics such as exfoliating bark, dead wood, crevices, and cavities. To support a maternity colony, trees with these habitat features need to have good solar exposure. Indiana bats tend to inhabit trees at the edges of woodlots and along watercourses where they can travel and forage. The project area was evaluated for trees that could provide habitat for the Indiana bat. No trees were identified that have characteristics that may provide habitat and/or support maternity roosts for the bat.
- The northern long-eared bat utilizes habitat similar to the Indiana bat, although the northern long-eared bat may occasionally roost in structures like barns and sheds. There are no sheds or barns in the project area and no potential maternity or roost habitat trees for either bat species are located within the project area.
- The clubshell is found in coarse sand and gravel areas of runs and riffles within small streams and rivers. The substrate of Stream 1 (Little Duck Creek) is dominated by muck and fine detritus and so does not have suitable substrates for this mussel. No mussels were observed within this stream.

Conclusions

A map showing the locations of the water resources identified on the property is shown in Appendix H. Four wetland areas totaling 0.110 acre were found within the project area (Table 2). One stream was found within the project area for a total of 62 linear feet of stream (Table 3).

Table 2. Wetlands Delineated within PIR Matalco Inc. MLX-Pipeline Installation Project

Wetland	Wetland Area (ac) within Project Area	Land Cover within Project Area	ORAM	Category
A	0.018	emergent	29	1
В	0.018	emergent	35.5	modified 2
C	0.062	emergent	44	modified 2
D	0.012	emergent	35	modified 2
Total	0.110			

Table 3. Drainageways Delineated within Matalco Inc. MLX-Pipeline Replacement Project

Stream	Stream Length (lf) within Project Area	Bankfull Width (ft)	Flow Regime	Substrate Type(s)
1 (Little Duck Creek)	62	5	perennial	muck, detritus
Total	62			

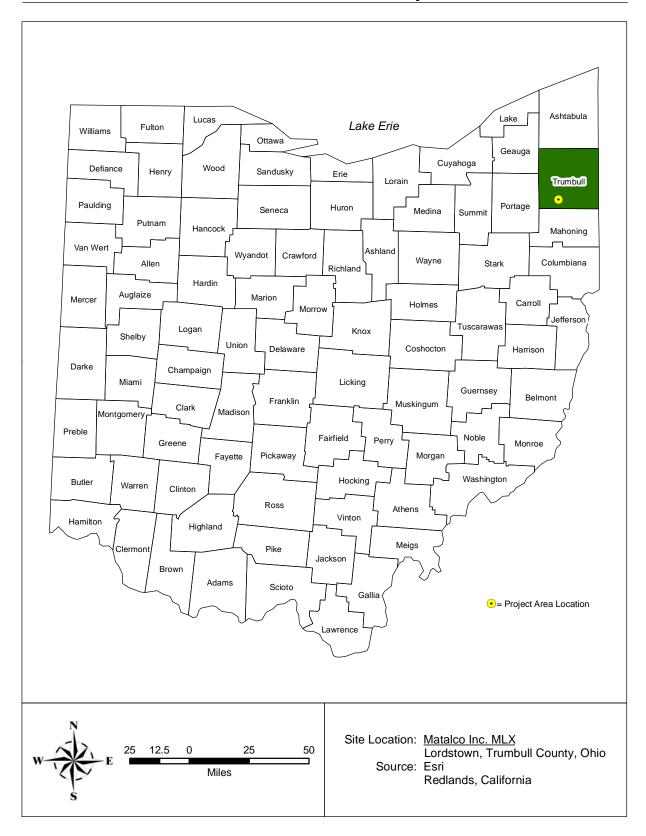
Davey Resource Group is confident that all jurisdictional wetlands and drainageways were identified within the project area. No unusual or problem areas were found. All wetlands studies conducted by Davey Resource Group are objective and based strictly on professional judgment. Davey Resource Group and its employees have no vested interest in this property or the proposed project. Appendix J contains references used in the creation of this report, and Appendix K provides profiles of all Davey Resource Group personnel who contributed to this report.

All wetlands delineations must be verified by the U.S. Army Corps of Engineers to be considered official. This wetlands delineation is reflective of environmental conditions at the time the fieldwork was performed. Wetlands are dynamic natural systems; therefore, boundaries may change slightly over time. Wetlands delineations performed during extremely wet or dry weather conditions are subject to slight seasonal changes.

Appendix A Location of Trumbull County, Ohio

Davey Resource Group January 2015

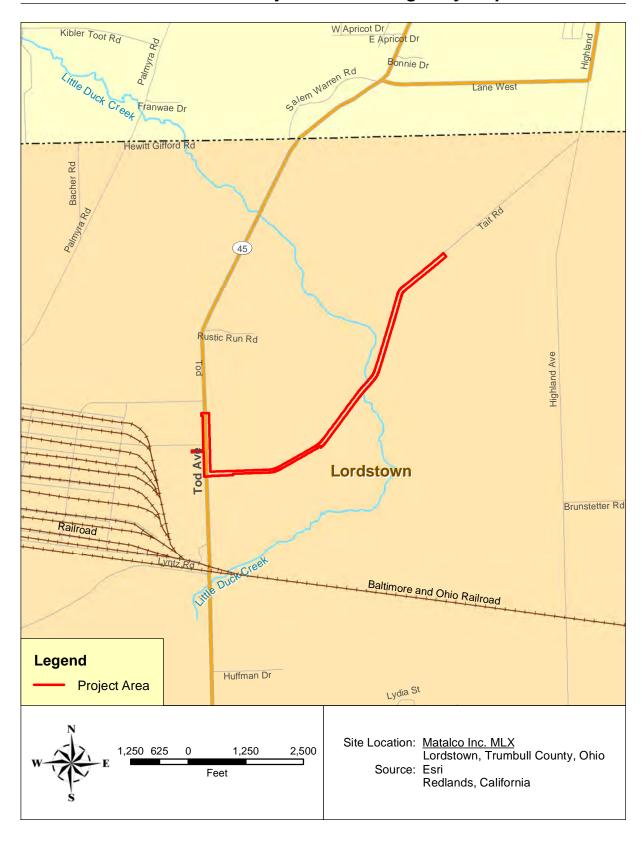
Location of Trumbull County, Ohio



Appendix B Location of Project Area on Highway Map

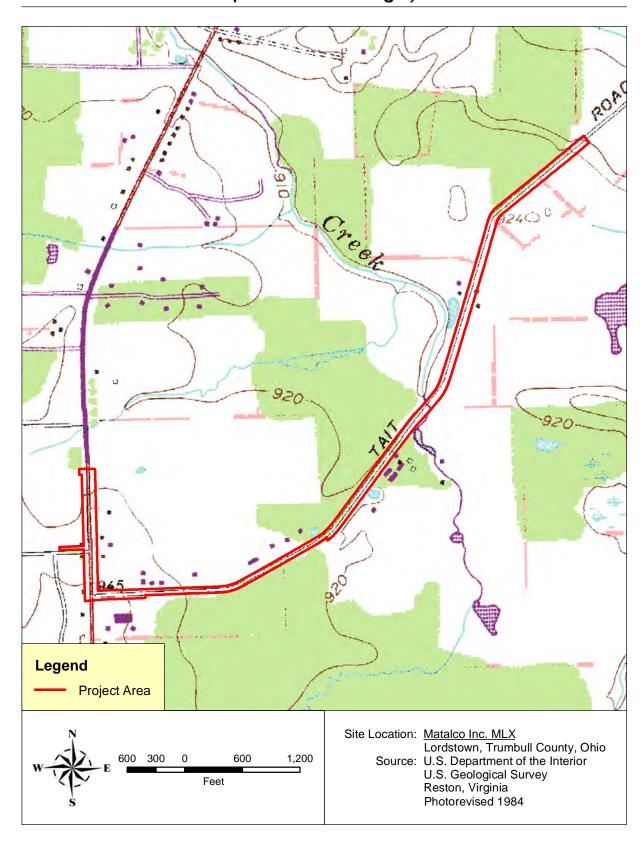
Davey Resource Group January 2015

Location of Project Area on Highway Map



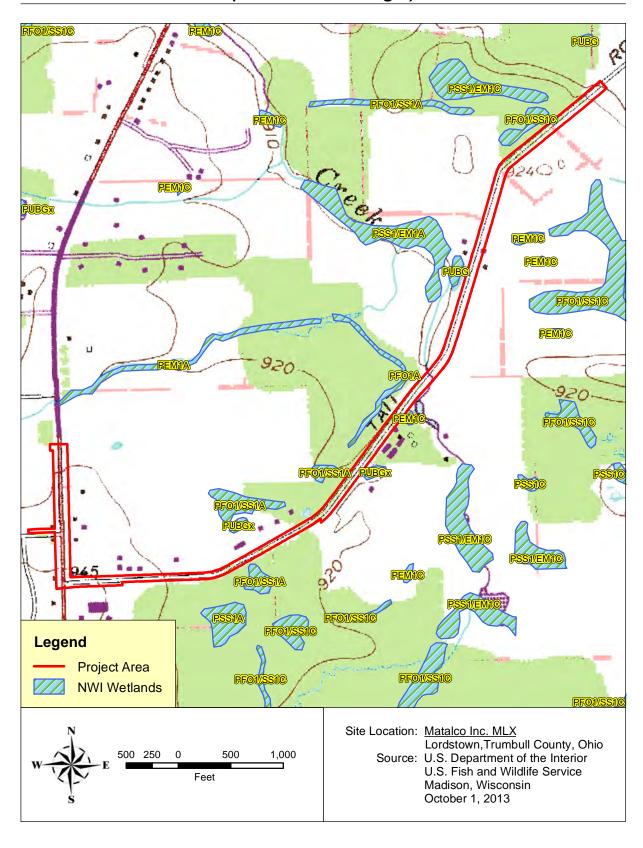
Appendix C Location of Project Area on USGS 7.5-Minute Topographic Map (Warren Quadrangle)

Location of Project Area on USGS 7.5-Minute Topographic Map (Warren Quadrangle)



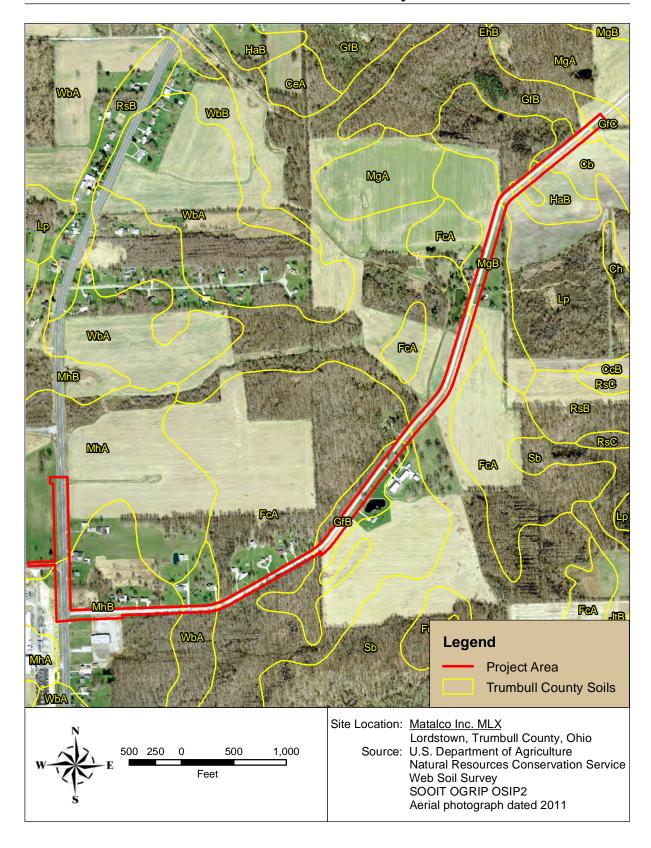
Appendix D Location of Project Area on National Wetlands Inventory Map (Warren Quadrangle)

Location of Project Area on National Wetlands Inventory Map (Warren Quadrangle)



Appendix E Location of Project Area on Soils Map and Soil Types Mapped in Project Area

Soils Information for Project Area

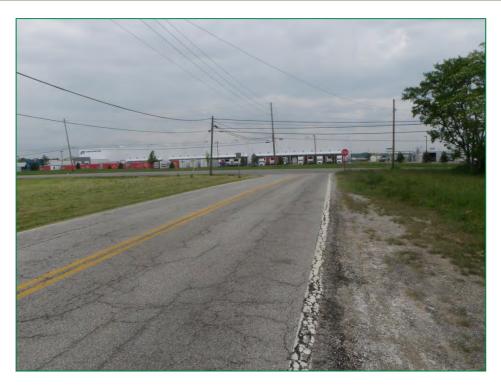


Soil Types Mapped for Matalco Inc. MLX – Pipeline Replacement Project

Map Unit	Soil Description
Cb	Canadice silty clay loam ²
FcA	Fitchville silt loam, 0 to 2 percent slopes ¹
GfB	Glenford silt loam, 2 to 6 percent slopes
GfC	Glenford silt loam, 6 to 12 percent slopes
HaB	Haskins loam, 2 to 6 percent slopes
Lp	Lorain silty clay loam, loamy substratum ²
MgB	Mahoning silt loam, 2 to 6 percent slopes ¹
MhA	Mahoning silt loam, shale substratum, 0 to 2 percent slopes ¹
MhB	Mahoning silt loam, shale substratum, 2 to 6 percent slopes ¹
Sb	Sebring silt loam ²
WbA	Wadsworth silt loam, 0 to 2 percent slopes ¹

¹ Non-hydric soil with hydric inclusions ² Hydric soils

Appendix F Photographs of Project Area



Photograph 1. This photograph shows mowed fields and industrial buildings at the intersection of State Route 45 and Tait Road, adjacent to the Matalco Inc. MLX project area.



Photograph 2. Residential areas are found along Tait Road.



Photograph 3. Agricultural fields are also found along Tait Road and ditches are in the road right-of-way.



Photograph 4. Wetland A is a small emergent wetland abutting Stream 1 (Little Duck Creek).



Photograph 5. Wetland B is found along Tait Road. The portion of the wetland that falls within the study area is covered with emergent vegetation.



Photograph 6. Wetland C contains emergent, scrub/shrub, and forested vegetation. Only emergent vegetation occurs within the study area.



Photograph 7. The portions of Wetland D within the study area are emergent.



Photograph 8. This is a view of Stream 1 (Little Duck Creek) looking upstream. The stream is surrounded by herbaceous vegetation.



Photograph 9. This is a view of Stream 1 looking downstream at the Tait Road bridge.



Photograph 10. Muck and detritus are the dominant substrate types within Stream 1.

Appendix G Vegetation, Hydrology, and Soils Data Sheets

Project/Site: Ohio Commerce Center MLX	City/Co	ounty: Lordstown, Trumb	ull County Sampling	Date: 02-Jun-14
Applicant/Owner: The East Ohio Gas Company		State:	Sampling Point:	01
Investigator(s): Todd Crandall	Sec	tion, Township, Range:		R.
Landform (hillslope, terrace, etc.): Undulating	Local r	elief (concave, convex, n	one): concave	Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR R	Lat.:	Long		Datum:
Soil Map Unit Name: Mahoning silt loam, shale	substratum		NWI classification:	
Are climatic/hydrologic conditions on the site t	ypical for this time of year?	Yes 💿 No 🔾	(If no, explain in Remarks	.)
Are Vegetation 🗸 , Soil 🗌 , or Hydro	logy 🗌 significantly distu	rbed? Are "Normal	Circumstances" present?	Yes No
Are Vegetation , Soil , or Hydro	logy naturally problem	atic? (If needed, e	explain any answers in Ren	narks.)
Summary of Findings - Attach site	e map showing sampl	-		-
Hydrophytic Vegetation Present? Yes •	No O			
Hydric Soil Present? Yes •	No O	Is the Sampled Area within a Wetland?	Yes No	
Wetland Hydrology Present? Yes •	No O			
Hydrology				
Wetland Hydrology Indicators:			Secondary Indicators (minimum	um of 2 required)
Primary Indicators (minimum of one required Surface Water (A1)			☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10)	
High Water Table (A2)			Moss Trim Lines (B16)	
Saturation (A3)	Marl Deposits (B15)		Dry Season Water Table	(C2)
☐ Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)	
✓ Sediment Deposits (B2)	✓ Oxidized Rhizospheres alor	g Living Roots (C3)	Saturation Visible on Aer	ial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron	(C4)	Stunted or Stressed Plan	ts (D1)
Algal Mat or Crust (B4)	Recent Iron Reduction in T	illed Soils (C6)	Geomorphic Position (D2	2)
Iron Deposits (B5)	Thin Muck Surface (C7)		Shallow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)		✓ Microtopographic Relief (✓ FAC-neutral Test (D5)	(D4)
Sparsely vegetated coricave surface (bb)			FAC-fleutial fest (D3)	
Field Observations: Surface Water Present? Yes No No	Donth (inches)			
Water Table Present? Yes No •	Depth (inches):			
	Depth (inches):	Wetland Hydr	ology Present? Yes	No O
(includes capillary fringe) Yes V	Depth (inches):			
Describe Recorded Data (stream gauge, monit	coring well, aerial photos, previ	ious inspections), if avail	able:	
Demarks				
Remarks:				

VEGETATION - Use scientific names of plants

	Absolute	Dominant		Dominance Test worksheet:
	% Cover	Species?	Status	Number of Dominant Species
1	0			That are OBL, FACW, or FAC:1(A)
2	0			
3	0			Total Number of Dominant
	-			Species Across All Strata: (B)
4				Percent of dominant Species
5				That Are OBL, FACW, or FAC: 100.0% (A/B)
6				· · ·
7	0			Prevalence Index worksheet:
	0 =	= Total Cover	•	Total % Cover of: Multiply by:
	•			OBL species 90 x 1 = 90
1				FACW species0 x 2 =0
2				FAC species x 3 =
3	0			FACU species $10 \times 4 = 40$
4	0			· · · · · · · · · · · · · · · · · · ·
5	0			·
6				Column Totals: <u>100</u> (A) <u>130</u> (B)
7	0			Prevalence Index = B/A =1.300
	0 =	= Total Cover		
Herb Stratum (Plot size: 5 feet)				Hydrophytic Vegetation Indicators:
1 Scirpus atrovirens	80	✓	OBL	✓ Rapid Test for Hydrophytic Vegetation
2. Carex vulpinoidea	10	$\overline{\Box}$	OBL	✓ Dominance Test is > 50%
O. Ber westered	10		FACU	✓ Prevalence Index is ≤3.0 ¹
		П	17100	☐ Morphological Adaptations ¹ (Provide supporting
4				data in Remarks or on a separate sheet)
5				☐ Problematic Hydrophytic Vegetation ¹ (Explain)
6				1 7 1 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
7				Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8	0			
9	0			Definitions of Vegetation Strata:
10	0			Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11				at breast height (DBH), regardless of height.
12				
. – .		= Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall
Woody Vine Stratum (Plot size:)				greater than 3.20 it (1111) tall
1	0			Herb - All herbaceous (non-woody) plants, regardless of
2.	0			size, and woody plants less than 3.28 ft tall.
3	0			We are the size of All was a dress in a constant the are 2.00 ft in
Λ	0			Woody vine - All woody vines greater than 3.28 ft in height.
4		- Total Cover		noight.
	=	= Total Cover		
				Under that
				Hydrophytic Vegetation
				Present? Yes No
Remarks: (Include photo numbers here or on a separate shee	et.)	-		
Regularly mowed	,			
Regularly mowed				

Sampling Point: 01

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 01

Profile Desc Depth	ription: (De	scribe to Matrix	the depth	needed to d		t the indi dox Feat		nfirm the	absence of indicators.)		
(inches)	Color ((moist)	%	Color (%	Type ¹	Loc ²	Texture	Remarks	
0-7	10YR	4/2							Silt Loam		
7-14	10YR	5/2	90	10YR	5/6	10	С	M	Silt Loam		
									-		
									-		
						_					
		-			-	_					
						_					
¹ Type: C=Cor	centration. D	=Depletio	n. RM=Red	uced Matrix,	CS=Cover	ed or Coat	ed Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=M	atrix	
Hydric Soil	Indicators:								Indicators for Proble	ematic Hydric Soil	ls: ³
Histosol	(A1)					w Surface	(S8) (LRR F	ι,		LRR K, L, MLRA 149	
	pedon (A2)			_	4 149B)	(CO) (IDD D MIC	A 140D)		x (A16) (LRR K, L, F	
Black His				_			(LRR R, MLF 1) LRR K, L)			or Peat (S3) (LRR K,	
	Sulfide (A4))		_		Matrix (F2			Dark Surface (S7)	(LRR K, L, M)	
	Layers (A5)	Curfoco (A	11\	_	eted Matri		-)		Polyvalue Below Si	urface (S8) (LRR K,	L)
	Below Dark S rk Surface (A		111)			urface (F6)			Thin Dark Surface		
	uck Mineral (S			☐ Depl	eted Dark	Surface (F	- 7)			lasses (F12) (LRR K,	
_ `	eyed Matrix (•		Redo	x Depres	sions (F8)				in Soils (F19) (MLRA	
	edox (S5)								Red Parent Materia) (MLRA 144A, 145, al (F21)	1496)
Stripped	Matrix (S6)								Very Shallow Dark	` '	
☐ Dark Sur	face (S7) (LR	R R, MLRA	A 149B)						Other (Explain in R		
³ Indicators o	f hydrophytic	vegetatio	n and wetla	nd hydrology	must be	present, ui	nless disturb	ed or probl	ematic.	-	
Restrictive L	ayer (if obs	served):									
Type:											
Depth (inc	ches):								Hydric Soil Present?	Yes No	\circ
Remarks:											

Project/Site: Ohio Commerce Center MLX		ity/County: Lordstown, Trumbull County Sampling Date: 02-Jun-14				
Applicant/Owner: The East Ohio Gas Compa	any	State:	Sampling Point:	02		
Investigator(s): Todd Crandall		Section, Township, Range:	S. T.	R.		
Landform (hillslope, terrace, etc.): Undu	ulating	Local relief (concave, convex, n	one): convex	Slope: 0.0 % / 0.0 °		
Subregion (LRR or MLRA): LRR R	Lat.:	Long	j.:	Datum:		
Soil Map Unit Name: Mahoning silt loam,	shale substratum		NWI classification:			
Are climatic/hydrologic conditions on the	site typical for this time of ye	ar? Yes • No 🔾	(If no, explain in Remarks.)		
Are Vegetation $lacksquare$, Soil \Box , or	Hydrology significantly	y disturbed? Are "Normal	Circumstances" present?	Yes No		
Are Vegetation , Soil , , or	Hydrology 🗌 naturally pr	roblematic? (If needed,	explain any answers in Rem	arks.)		
Summary of Findings - Attack	n site map showing sa	ampling point location	s, transects, import	tant features, etc		
Hydrophytic Vegetation Present? Yes	s O No 💿					
Hydric Soil Present? Yes	s O No 💿	Is the Sampled Area within a Wetland?	Yes O No 💿			
Wetland Hydrology Present? Yes	s O No 💿					
Hydrology						
Wetland Hydrology Indicators:			Secondary Indicators (minimu	m of 2 required)		
Primary Indicators (minimum of one rec Surface Water (A1)		(00)	Surface Soil Cracks (B6)			
High Water Table (A2)	Water-Stained Leav☐ Aquatic Fauna (B13	• •	☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16)			
Saturation (A3)	Marl Deposits (B15)		Dry Season Water Table ((C2)		
Water Marks (B1)	Hydrogen Sulfide O		Crayfish Burrows (C8)	ζ- /		
Sediment Deposits (B2)		res along Living Roots (C3)	Saturation Visible on Aeria	al Imagery (C9)		
Drift deposits (B3)	Presence of Reduce		Stunted or Stressed Plant	s (D1)		
☐ Algal Mat or Crust (B4)	Recent Iron Reduct	ion in Tilled Soils (C6)	Geomorphic Position (D2))		
☐ Iron Deposits (B5)	Thin Muck Surface	(C7)	Shallow Aquitard (D3)			
Inundation Visible on Aerial Imagery (B7)		emarks)	Microtopographic Relief (I	D4)		
Sparsely Vegetated Concave Surface (B8)			FAC-neutral Test (D5)			
Field Observations: Surface Water Present? Yes N	Depth (inches):					
	. (
	Depth (inches):	Wetland Hydi	ology Present? Yes	No 💿		
(includes capillary fringe) Yes V	O Depth (inches):					
Describe Recorded Data (stream gauge,	monitoring well, aerial photos	s, previous inspections), if avai	able:			
Remarks:						
No hydrological indicators						

VEGETATION - Use scientific names of plants

VEGETATION - Ose scientific fiames of plan	1103			Sampling Point: 02
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?	Indicator Status	
			Julus	Number of Dominant Species That are ORL FACILY or FACILY
1				That are OBL, FACW, or FAC:0(A)
2				Total Number of Dominant
3				Species Across All Strata:1(B)
4				
5	0			Percent of dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)
6	0			That Are ODE, TACW, OF FAC.
7	0			Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size:)	0 =	Total Cover		Total % Cover of: Multiply by:
	0			OBL species 0 x 1 = 0
1				FACW species 0 x 2 = 0
2				FAC species x 3 =
3				FACU species $90 \times 4 = 360$
4	0			l ' .
5	0			· ·
6	0			Column Totals: 90 (A) 360 (B)
7				Prevalence Index = B/A = 4.000
(District of Front	0 =	Total Cover		Hydrophytic Vegetation Indicators:
Herb Stratum (Plot size: 5 feet)				Rapid Test for Hydrophytic Vegetation
1 _ Erigeron annuus	10		FACU	
2. Poa pratensis	60	✓	FACU	☐ Dominance Test is > 50%
3. Taraxacum officinale	10		FACU	Prevalence Index is ≤3.0 ¹
4. Plantago lanceolata			FACU	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5				
				Problematic Hydrophytic Vegetation ¹ (Explain)
6				¹ Indicators of hydric soil and wetland hydrology must
7				be present, unless disturbed or problematic.
8				Definitions of Vegetation Strata:
9				Definitions of Vegetation Strata.
10	0			Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11	0			at breast height (DBH), regardless of height.
12	0			Sapling/shrub - Woody plants less than 3 in. DBH and
(5)	90 =	Total Cover		greater than 3.28 ft (1m) tall
1	0			Herb - All herbaceous (non-woody) plants, regardless of
2	0			size, and woody plants less than 3.28 ft tall.
3	0			Woody vine - All woody vines greater than 3.28 ft in
4	0			height.
	0 =	Total Cover		
				Hydrophytic
				Vegetation Present? Yes ○ No ●
				Present? Yes V No V
Remarks: (Include photo numbers here or on a separate she	et.)			
Festuca sp. (fescue) also present. Regularly mowed				

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 02

Profile Descr Depth			the depth	needed to doc	ument the ind Redox Feat		firm the a	absence of indicators.)	
(inches)	Color (r	Matrix moist)	%	Color (mo		Type ¹	Loc ²	Texture	Remarks
0-9	10YR	4/2						Silt Loam	
9-14	10YR	4/3						Silt Loam	
								one Louin	
								-	
									_
									_
Type: C=Con	centration. D:	=Depletion	n. RM=Redi	uced Matrix. CS=	-Covered or Coa	ted Sand Grain	ns ² l oca	tion: PL=Pore Lining. M=	
Hydric Soil 1		э оргоног							
Histosol (Dohazlu	ie Below Surface	(S8) (I DD D			blematic Hydric Soils: ³
`	pedon (A2)			MLRA 14		. (30) (LIXIX IX,) (LRR K, L, MLRA 149B)
Black Hist				Thin Da	rk Surface (S9)	(LRR R, MLRA	149B)		dox (A16) (LRR K, L, R)
	Sulfide (A4)			Loamy N	Mucky Mineral (F	1) LRR K, L)			at or Peat (S3) (LRR K, L, R)
	Layers (A5)			Loamy (Gleyed Matrix (F	2)		Dark Surface (S	
	Below Dark S	Surface (A1	1)	Deplete	d Matrix (F3)				Surface (S8) (LRR K, L)
_	k Surface (A1		,	Redox D	Oark Surface (F6)			ce (S9) (LRR K, L)
_	ıck Mineral (S			Deplete	d Dark Surface (F7)			e Masses (F12) (LRR K, L, R)
_ ′	eyed Matrix (S	•		Redox D	Depressions (F8)				olain Soils (F19) (MLRA 149B)
Sandy Re		,							A6) (MLRA 144A, 145, 149B)
_	Matrix (S6)							Red Parent Mate	eriai (F21) irk Surface (TF12)
_	ace (S7) (LRR	R R, MLRA	149B)					Other (Explain in	
3Indicators of	f bydrophytic	vogotation	and wotla	nd hydrology mu	ict ha procept i	inlace dieturba	d or proble		i Kemarks)
			i aliu wella	na nyarology mic	ist be present, t	iriiess disturbe	u or proble	induc.	
	ayer (if obse	erved):							
Type:								Hydric Soil Present?	Yes ○ No •
Depth (inc	hes):							Trydric Son Fresent:	
Remarks:									

Project/Site: Ohio Commerce Center MLX	City/Co	City/County: Lordstown, Trumbull County Sampling Date: 02-Jun-1					
Applicant/Owner: The East Ohio Gas Company		State:	Sampling Point:	03			
Investigator(s): Todd Crandall	Sec	ction, Township, Range:	S. T.	R.			
Landform (hillslope, terrace, etc.): Undulating	Local r	elief (concave, convex, n	one): concave	Slope: 0.0 % / 0.0 °			
Subregion (LRR or MLRA): LRR R	Lat.:	Long	j.:	Datum:			
Soil Map Unit Name: Fitchville siilt loam			NWI classification:				
Are climatic/hydrologic conditions on the site t	ypical for this time of year?	Yes 💿 No 🔾	(If no, explain in Remarks	.)			
Are Vegetation 🗸 , Soil 🗌 , or Hydro	logy 🗌 significantly distu	rbed? Are "Normal	Circumstances" present?	Yes No			
Are Vegetation , Soil , or Hydro	logy naturally problem	atic? (If needed, e	explain any answers in Ren	narks.)			
Summary of Findings - Attach site	e map showing sampl	-		-			
Hydrophytic Vegetation Present? Yes O	No O						
Hydric Soil Present? Yes Yes	No O	Is the Sampled Area within a Wetland?	Yes No				
Wetland Hydrology Present? Yes •	No O						
Hydrology							
Wetland Hydrology Indicators:			Secondary Indicators (minim	um of 2 required)			
Primary Indicators (minimum of one required Surface Water (A1)			Surface Soil Cracks (B6) Drainage Patterns (B10)				
High Water Table (A2)			Moss Trim Lines (B16)				
Saturation (A3)	Marl Deposits (B15)		Dry Season Water Table	(C2)			
☐ Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)	` ,			
✓ Sediment Deposits (B2)	✓ Oxidized Rhizospheres alor	ng Living Roots (C3)	Saturation Visible on Aer	ial Imagery (C9)			
Drift deposits (B3)	Presence of Reduced Iron	(C4)	Stunted or Stressed Plan	ts (D1)			
Algal Mat or Crust (B4)	Recent Iron Reduction in T	illed Soils (C6)	Geomorphic Position (D2	2)			
Iron Deposits (B5)	Thin Muck Surface (C7)		Shallow Aquitard (D3)				
Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks))	✓ Microtopographic Relief✓ FAC-neutral Test (D5)	(D4)			
Sparsely vegetated concave surface (bb)			FAC-fleutral Test (D5)				
Field Observations: Surface Water Present? Yes No No	Depth (inches):						
Water Table Present? Yes No •							
	Depth (inches):	Wetland Hydr	ology Present? Yes	No O			
(includes capillary fringe) Yes V NO	Depth (inches):						
Describe Recorded Data (stream gauge, monit	coring well, aerial photos, prev	ious inspections), if avail	able:				
Remarks:							
Remarks.							

VEGETATION - Use scientific names of plants

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover		Status	Number of Dominant Species
1	0			That are OBL, FACW, or FAC:
2	0			
3		H		Total Number of Dominant
	-			Species Across All Strata: 2 (B)
4				Percent of dominant Species
5		\sqcup		That Are OBL, FACW, or FAC: 100.0% (A/B)
6	0			That the OBE, Thom, or the
7	0			Prevalence Index worksheet:
- II	0 =	= Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 40 x 1 = 40
1	0			FACW species 0 x 2 = 0
2	0			
3				FAC species $40 \times 3 = 120$
4				FACU species $10 \times 4 = 40$
				UPL species $0 \times 5 = 0$
5				Column Totals: 90 (A) 200 (B)
6				
7				Prevalence Index = B/A = 2.222
Herb Stratum (Plot size: 5 feet)	0 =	= Total Cover		Hydrophytic Vegetation Indicators:
Herb Stratum (1 lot size)				Rapid Test for Hydrophytic Vegetation
1 _ Equisetum arvense	30	✓	FAC	✓ Dominance Test is > 50%
2. Carex squarrosa	40	\checkmark	OBL	l — .
3. Comus foemina	10		FAC	✓ Prevalence Index is ≤3.0 ¹
4. Poa pratensis	10		FACU	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5				Problematic Hydrophytic Vegetation ¹ (Explain)
6				Problematic Hydrophytic Vegetation (Explain)
				¹ Indicators of hydric soil and wetland hydrology must
7				be present, unless disturbed or problematic.
8				Definitions of Vegetation Strata:
9				
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11	0			at breast height (DBH), regardless of height.
12	0			 Sapling/shrub - Woody plants less than 3 in. DBH and
		= Total Cover		greater than 3.28 ft (1m) tall
Woody Vine Stratum (Plot size:)				3
1	0			Herb - All herbaceous (non-woody) plants, regardless of
2	0			size, and woody plants less than 3.28 ft tall.
3	0			Woody vine - All woody vines greater than 3.28 ft in
1	0			height.
T.,	0 =	= Total Cover		, nangan
		- Total Cover		
				Hadanahada
				Hydrophytic Vegetation
				Present? Yes No
Danielle (Taskida ukata umukana kana ayan a sananta shara	-4 \			
Remarks: (Include photo numbers here or on a separate shee	et.)			

Sampling Point: 03

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 03

(inches) Color (moist) 9/6 Color (moist) 9/6 Type 1 Loc2 Texture Remarks 0-4 10YR 4/2 90 10YR 5/8 10 C M Silt Loam Silt Loam ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2 Location: PL=Pore Lining, M=Matrix ydric Soil Indicators: Histosol (A1) Pelyvalue Below Surface (S8) (LRR R, MLRA 1498) Histic Epipedon (A2) MLRA 1498) Histic (A3) Inhi Dark Surface (S9) (LRR R, MLRA 1498) Hydrogen Sulfide (A4) Loamy Mucky Mineral (F1) LRR K, L) Depleted Below Dark Surface (A11) Redox Dark Surface (F6) Thick Dark Surface (A12) Redox Dark Surface (F6) Thick Dark Surface (A12) Redox Dark Surface (F7) Sandy Muck Mineral (S1) Redox Dark Surface (F7) Sandy Muck Mineral (S1) Redox Dark Surface (F7) Sandy Muck Mineral (S1) Redox Dark Surface (F7) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 1498) Stratified Layers (A5) Redox Dark Surface (F7) Dark Surface (F7) LRR R, MLRA 1498) Hydrogen Muck Mineral (S1) Redox Dark Surface (F7) Dark Surface (F7) (LRR R, MLRA 1498) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (F7) (LRR R, MLRA 1498) Thick Dark Surface (F7) (LRR R, MLRA 1498) There is the surface (F7) (LRR R, MLRA 1498) Dark Surface (F7) (LRR R, MLRA 1498) Hydric Soil Present? Yes No Hydric Soil Present? Yes No Hydric Soil Present? Yes No		Matrix			edox Featur					
ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains yper: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains yper: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains yper: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains yper: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains yper: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains yper: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains yper: C=Concentration. D=Depletion. RM=Reduced Matrix yper: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains yper: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains yper: C=Concentration. D=Depletion. RM=Reduced Matrix yper: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains yper: C=Concentration. D=Depletion. RM=Reduced Matrix yper: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains yper: C=Concentration. D=Depletion. RM=Reduced Matrix yper: C=Concentration. PL=Pore Lining. M=Matrix yper: C=Concentration. PL=Pore Lining. M=Matrix your line line line line line line line line				Color (moist)		Type ¹	Loc ²		Rem	arks
ype: C=Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains ²Location: PL=Pore Lining. M=Matrix ydric Soil Indicators: Histosol (A1)	0-4 1	0YR 4/2						Silt Loam		
Histosol (A1)	4-12 1	0YR 4/2	90	10YR 5/8		С	<u>M</u>	Silt Loam		
Histosol (A1)										
Histosol (A1)										
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Histosol (A1)										
Histosol (A1)										
Histosol (A1)										
Histosol (A1)	Type: C=Concentra	ation. D=Depletic	n. RM=Red	uced Matrix, CS=Cove	ered or Coated	I Sand Gra	ins ² Loca	tion: PL=Pore Lining. M=Ma	atrix	
Histosol (A1) Histosol (A2) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, L) Dark Surface (TF12) Stripped Matrix (S6) Dark Surface (S7) (LRR R, L) Hydric Soil Present? Hydric Soil Present? Polyvalue Below Cark (A10) (LRR K, L, M) Dark Surface (A10) (LRR K, L, M) Dark Surface (S7) (LRR K, L) Dark Surface (S9) (LRR K, L) Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Tripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No No				<u> </u>						Soils: 3
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, R) Hydric Soil Present? Hydric Soil Present? No Coast Prairie Redox (A16) (LRR K, L, R) Som Mucky Peat or Peat (S3) (LRR K, L, R) Dark Surface (S7) (LRR K, L, M) Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Popth (inches): Hydric Soil Present? Yes No	Histosol (A1)			Polyvalue Bel	ow Surface (S	8) (LRR R	,			
Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, M) Mesic Spodic (TA6) (MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, M) Folyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L, R) Folyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L, R) Folyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) (LRR K, L, R) Folyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (S9) Thin Dark Surface (Histic Epipedor	ı (A2)			· (60) (15					
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Redox Depressions (F8) Depleted Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Tron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L, M) Polyvalue Below Surface (S8) (LRR K, L) Tron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Poepth (inches): Hydric Soil Present? Yes No							A 149B)			
Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A12) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Polyvalue Below Surface (S8) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144B) Redox Depressions (F8) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Poepth (inches): Hydric Soil Present? Yes No	_					LRR K, L)				
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes No	_							Polyvalue Below Su	ırface (S8) (LR	R K, L)
Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Muck Mineral (S1) Redox Depressions (F8) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Sandy Redox (S5)	\neg		،11)					Thin Dark Surface	(S9) (LRR K, L	-)
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	_)		☐ Iron-Manganese M	asses (F12) (L	RR K, L, R)
Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Sandy Redox (S5) Red Parent Material (F21) Stripped Matrix (S6) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed):	_					,		Piedmont Floodplai	n Soils (F19) (MLRA 149B)
Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Pestrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	_				(/			Mesic Spodic (TA6)	(MLRA 144A,	145, 149B)
Dark Surface (S7) (LRR R, MLRA 149B) Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Pestrictive Layer (if observed): Type: Depth (inches): Type: Depth (inches): Type: Depth (inches):										
Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Type: Typ	_		149R))
Estrictive Layer (if observed): Type: Depth (inches): Type: Depth (inches):				and hydrology must be	nresent unle	es disturb	ed or proble		emarks)	
Type:			Trana Weda	ina nyarology mast be	present, and	.55 distails	ca or probit	- Indice		
Separt (mence).		(_
								Hydric Soil Present?	Yes 💿	No O
emarks:	Туре:							I.		
	Type: Depth (inches):									
	Type: Depth (inches):									
	Type: Depth (inches):									
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	Type: Depth (inches):									
	Type: Depth (inches):									
	Type: Depth (inches):									

Project/Site: Ohio Commerce Center MLX		City/County: Lordstown, Trumb	oull County Sampling	Date: 02-Jun-14
Applicant/Owner: The East Ohio Gas Comp	pany	State:	Sampling Point:	04
Investigator(s): Todd Crandall		Section, Township, Range:	S. T.	R.
Landform (hillslope, terrace, etc.): Und	lulating	Local relief (concave, convex, r		Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR R	Lat.:	Long	 g.:	Datum:
Soil Map Unit Name: Fitchville siilt loam			NWI classification:	
Are climatic/hydrologic conditions on the	e site typical for this time of y	rear? Yes No	(If no, explain in Remarks.)	
Are Vegetation $lacksquare$, Soil \Box , or	r Hydrology 🔲 significant	tly disturbed? Are "Normal	Circumstances" present?	Yes No
Are Vegetation , Soil , or	r Hydrology 🔲 naturally p	problematic? (If needed,	explain any answers in Rema	arks.)
Summary of Findings - Attac	h site map showing s	sampling point location	ns, transects, import	ant features, etc
Hydrophytic Vegetation Present? Ye	es O No •			
Hydric Soil Present?	es O No 💿	Is the Sampled Area within a Wetland?	Yes O No 💿	
Wetland Hydrology Present?	es O No 💿			
Mowed field				
Hydrology				
Wetland Hydrology Indicators:			Secondary Indicators (minimum	n of 2 required)
Primary Indicators (minimum of one re			Surface Soil Cracks (B6)	
Surface Water (A1) High Water Table (A2)	Water-Stained Lea☐ Aquatic Fauna (B1	` '	☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16)	
Saturation (A3)	Marl Deposits (B1		Dry Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide		Crayfish Burrows (C8)	<i>02)</i>
Sediment Deposits (B2)	_ , ,	eres along Living Roots (C3)	Saturation Visible on Aeria	l Imagery (C9)
☐ Drift deposits (B3)	Presence of Reduc		Stunted or Stressed Plants	
☐ Algal Mat or Crust (B4)		ction in Tilled Soils (C6)	Geomorphic Position (D2)	
☐ Iron Deposits (B5)	☐ Thin Muck Surface	e (C7)	Shallow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7	7) Other (Explain in F	Remarks)	Microtopographic Relief (D	94)
Sparsely Vegetated Concave Surface (B8	3)		FAC-neutral Test (D5)	
Field Observations:				
	No Depth (inches):			
	No Depth (inches):	Wotland U.d.	rology Present? Yes	No •
Saturation Present? (includes capillary fringe) Yes	No • Depth (inches):	wetiand nyd	rology Present? Tes C	NO C
Describe Recorded Data (stream gauge	, monitoring well, aerial photo	os, previous inspections), if avai	lable:	
Remarks:				
No hydrological indicators				

VEGETATION - Use scientific names of plants

- (Plot cizo:	Absolute	Dominant Species?		Dominance Test worksheet:	
Tree Stratum (Plot size:)	% Cover	Species:	Status	Number of Dominant Species	
1				That are OBL, FACW, or FAC: (A)	
2				Total Number of Dominant	
3	0			Species Across All Strata:3(B)	
4	0				
5	0			Percent of dominant Species That Are OBL FACW or FAC: 0.0% (A/B)	1
6	0			That Are OBL, FACW, or FAC: 0.0% (A/B)	·
7	_			Prevalence Index worksheet:	
C II (CI I C I C I C I C I C I C I C I C	0 =	Total Cover		Total % Cover of: Multiply by:	
Sapling/Shrub Stratum (Plot size:)				OBL species	
1				FACW species 0 x 2 = 0	
2				FAC species 5 x 3 = 15	
3	0			FACU species 80 x 4 = 320	
4	0				
5	0			1 .	
6	0			Column Totals: <u>85</u> (A) <u>335</u> (B))
7	0			Prevalence Index = $B/A = 3.941$	
		Total Cover		Hydrophytic Vegetation Indicators:	
Herb Stratum (Plot size: 5 feet)				Rapid Test for Hydrophytic Vegetation	
1 Poa pratensis	40	✓	FACU	Dominance Test is > 50%	
2. Veronica officinalis	20	✓	FACU		
3. Plantago major	20	✓	FACU	Prevalence Index is ≤3.0 ¹	
4. Ranunculus acris	5		FAC	Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
5				Problematic Hydrophytic Vegetation ¹ (Explain)	
6.					
7				$^{ m 1}$ Indicators of hydric soil and wetland hydrology must	t
8				be present, unless disturbed or problematic.	
9				Definitions of Vegetation Strata:	
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diamete at breast height (DBH), regardless of height.	er
11				at breast height (BBH), regardless of height.	
12		 = Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and	
	=	= Total Cover		greater than 3.28 ft (1m) tall	
1	0			Herb - All herbaceous (non-woody) plants, regardless	of
2	0	$\overline{\Box}$		size, and woody plants less than 3.28 ft tall.	
2	0			N/andraidae Alleganderica annataeth a 0.00 ft is	
Λ	0			Woody vine - All woody vines greater than 3.28 ft in height.	
4	0 =	= Total Cover		l no.g. m	
		- rotal cover			
				Hydrophytic	
				Vegetation V	
				Present? Yes V NO V	
Remarks: (Include photo numbers here or on a separate she	et.)				
Regularly mowed					

Sampling Point: 04

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 04

Profile Description Depth	ription: (De	scribe to Matrix	the depth	needed to d		t the indi dox Feat		onfirm the	absence of indicators.)	
(inches)	Color (%	Color (%	Type_1	Loc2	Texture	Remarks
0-6	10YR	4/2							Silt Loam	
6-12	10YR	4/3	95	10YR	5/8	5		M	Silt Loam	
									· ·	
		-			-	-				
						_			-	
				-	B	_				
-			-	-	-	-	-			
		-			-					
		=Depletio	n. RM=Red	uced Matrix,	CS=Cover	ed or Coat	ted Sand Gra	ains ² Loca	ation: PL=Pore Lining. M=Ma	
Hydric Soil									Indicators for Proble	ematic Hydric Soils: 3
Histosol (/alue Belo A 149B)	w Surface	(S8) (LRR F	ξ,	2 cm Muck (A10) ((LRR K, L, MLRA 149B)
	pedon (A2)				•	ace (S9) ((LRR R, MLR	RA 149B)	Coast Prairie Redo	x (A16) (LRR K, L, R)
Black His									5 cm Mucky Peat o	or Peat (S3) (LRR K, L, R)
	n Sulfide (A4) Layers (A5)					Matrix (F2			Dark Surface (S7)	
	Below Dark S	Surface (A	11)		, , eted Matri		,			urface (S8) (LRR K, L)
	rk Surface (A:		111)			ırface (F6)			Thin Dark Surface	
	uck Mineral (S			☐ Depl	eted Dark	Surface (F	- 7)			lasses (F12) (LRR K, L, R)
	eyed Matrix (•		Redo	x Depress	sions (F8)				in Soils (F19) (MLRA 149B)
Sandy Re		,							Red Parent Materia) (MLRA 144A, 145, 149B)
	Matrix (S6)								Very Shallow Dark	` '
Dark Surf	face (S7) (LRI	R R, MLRA	A 149B)						Other (Explain in R	
³ Indicators o	f hydrophytic	vegetatio	n and wetla	and hydrology	must be j	present, u	nless disturb	ed or probl	` '	ionano,
Restrictive L										
Туре:										
Depth (inc	:hes):								Hydric Soil Present?	Yes O No 💿
Remarks:										_

Project/Site: Ohio Commerce Center MLX	Ci	ity/County: Lordstov	vn, Trumbull County	Sampling Date: 02-Jun-14
Applicant/Owner: The East Ohio Gas Company		St	ate: Samplii	ng Point: 05
Investigator(s): Todd Crandall		Section, Township,	Range: S. T	
Landform (hillslope, terrace, etc.): Undulating		ocal relief (concave, c	convex, none): concav	e Slope: 0.0 % / 0.0
Subregion (LRR or MLRA): LRR R	Lat.:		Long.:	Datum:
Soil Map Unit Name: Glenford silt loam				sification:
Are climatic/hydrologic conditions on the site t	vnical for this time of yea	r? Yes 💿 No	(If no, explain	in Remarks.)
Are Vegetation ✓ , Soil ☐ , or Hydro			"Normal Circumstances	·
Are Vegetation, Soil, or Hydro	·			, presenti
Summary of Findings - Attach sit		`	needed, explain any ans	•
Hydrophytic Vegetation Present? Yes Yes	No O		cations, transect	
	No O	Is the Sample	d Area	
V (a)	No O	within a Wetla	and? Yes • No	\circ
Wetland Hydrology Present? Remarks: (Explain alternative procedures he		_		
Hardrada ma				
Hydrology				
Wetland Hydrology Indicators:	le about all that anniel			cators (minimum of 2 required)
Primary Indicators (minimum of one required Surface Water (A1)	✓ Water-Stained Leaves	c (PO)		l Cracks (B6) atterns (B10)
High Water Table (A2)	Aquatic Fauna (B13)	5 (09)	Moss Trim	
Saturation (A3)	Marl Deposits (B15)			Water Table (C2)
☐ Water Marks (B1)	Hydrogen Sulfide Odd	or (C1)	Crayfish Bu	
✓ Sediment Deposits (B2)		es along Living Roots (C3	3) Saturation	Visible on Aerial Imagery (C9)
☐ Drift deposits (B3)	Presence of Reduced			Stressed Plants (D1)
Algal Mat or Crust (B4)	Recent Iron Reductio		Geomorphi	c Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C	27)	Shallow Aq	uitard (D3)
Inundation Visible on Aerial Imagery (B7)	Other (Explain in Ren	narks)	Microtopog	raphic Relief (D4)
Sparsely Vegetated Concave Surface (B8)			✓ FAC-neutra	l Test (D5)
Field Observations:				
Surface Water Present? Yes No •	Depth (inches):			
Water Table Present? Yes No •	Depth (inches):			
Saturation Present? (includes capillary fringe) Yes No •	Depth (inches):	Wetla	and Hydrology Present?	Yes No
Describe Recorded Data (stream gauge, moni	toring well, aerial photos,	previous inspections), if available:	
Remarks:				
remarker				

VEGETATION - Use scientific names of plants

	Absolute	Dominant		Dominance Test worksheet:
	% Cover	Species?	Status	Number of Dominant Species
1	0			That are OBL, FACW, or FAC:1(A)
2	0			
3.				Total Number of Dominant
	-			Species Across All Strata: (B)
4				Percent of dominant Species
5				That Are OBL, FACW, or FAC: 100.0% (A/B)
6				
7				Prevalence Index worksheet:
	0 =	= Total Cover		Total % Cover of: Multiply by:
	•			OBL species <u>0</u> x 1 = <u>0</u>
1				FACW species <u>80</u> x 2 = <u>160</u>
2				FAC species x 3 =
3	0			FACU species $0 \times 4 = 0$
4	0			·
5	0			· '
6	0			Column Totals: <u>80</u> (A) <u>160</u> (B)
7	0			Prevalence Index = B/A =2.000_
	0 =	= Total Cover		
Herb Stratum (Plot size: 5 feet)				Hydrophytic Vegetation Indicators:
1 Phalaris arundinacea	80	✓	FACW	Rapid Test for Hydrophytic Vegetation
2				✓ Dominance Test is > 50%
				✓ Prevalence Index is ≤3.0 ¹
3				☐ Morphological Adaptations ¹ (Provide supporting
4				data in Remarks or on a separate sheet)
5				☐ Problematic Hydrophytic Vegetation ¹ (Explain)
6				4
7	0			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8	0			
9				Definitions of Vegetation Strata:
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11				at breast height (DBH), regardless of height.
12		H		
12.		= Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and
Woody Vine Stratum (Plot size:)		- rotal cover		greater than 3.28 ft (1m) tall
1	0			Herb - All herbaceous (non-woody) plants, regardless of
2	0	$\overline{\Box}$		size, and woody plants less than 3.28 ft tall.
	0	\Box		
3	0	\Box		Woody vine - All woody vines greater than 3.28 ft in height.
4				neight.
	=	= Total Cover		
				Hydrophytic Vegetation
				Present? Yes • No
Domantes (Include whete numbers have as an a consiste short	a . \			
Remarks: (Include photo numbers here or on a separate shee	et.)			
Regularly mowed				

Sampling Point: 05

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 05

Depth (inches)		Matrix			Po	dox Feati	Iroc						
	Color (ı	Matrix moist)	%	Color (<u>иох геан</u> %	Type ¹	Loc2	Texture	Remarks			
0-2	10YR	3/2							Silt Loam				
2-12	10YR	4/1	95	10YR	5/8	5			Silt Loam				
					-			-	-				
		-				-							
		-			-								
						-		-					
Type: C=Conc	entration. D	=Depletio	n. RM=Red	uced Matrix, (CS=Covere	ed or Coat	ed Sand Gra	ains ² Loca	tion: PL=Pore Lining. M=M	atrix			
lydric Soil Ir	ndicators:								Indicators for Probl	ematic Hydric Soil	s: ³		
Histosol (A						w Surface	(S8) (LRR F	ι,		(LRR K, L, MLRA 149			
Histic Epip	edon (A2)				\ 149B)					x (A16) (LRR K, L, R	-		
Black Histic	c (A3)						LRR R, MLF	-		or Peat (S3) (LRR K,	-		
Hydrogen	Sulfide (A4)				Loamy Mucky Mineral (F1) LRR K, L)				Dark Surface (S7)		L, IV)		
Stratified L	_ayers (A5)					Matrix (F2)		Polyvalue Below Surface (S8) (LRR K, L)				
Depleted E	Below Dark S	Surface (A	11)		eted Matri				☐ Thin Dark Surface (S9) (LRR K, L)				
Thick Dark	Surface (A1	.2)			Redox Dark Surface (F6)					lasses (F12) (LRR K,	L, R)		
Sandy Muc	ck Mineral (S	1)				Surface (F	7)		Piedmont Floodplain Soils (F19) (MLRA 149B)				
Sandy Gle	yed Matrix (S	64)		☐ Redo	x Depress	ions (F8)			Mesic Spodic (TA6) (MLRA 144A, 145, 149B)				
Sandy Red	lox (S5)								Red Parent Material (F21)				
Stripped M									☐ Very Shallow Dark Surface (TF12)				
	CO (C7) (LDE	R R, MLRA	149B)						Other (Explain in I				
Dark Surfa	ice (3/) (LKF			nd hydrology	must be p	resent, ur	nless disturb	ed or proble	ematic.				
Dark Surfa		vegetatio	n and wetta										
Dark Surfa 3 Indicators of	hydrophytic		n and wella										
Dark Surfa Indicators of Aestrictive La	hydrophytic		n and weda										
Dark Surfa Indicators of Estrictive La Type:	hydrophytic		n and weda						Hydric Soil Present?	Yes • No	\circ		
Dark Surfa Indicators of estrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes • No	<u> </u>		
Dark Surfa Indicators of Cestrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes No	<u> </u>		
Dark Surfa Indicators of estrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes • No	0		
Dark Surfa Indicators of estrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes • No	0		
Dark Surfa Indicators of estrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes No	<u> </u>		
Dark Surfa Indicators of estrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes • No	0		
Dark Surfa Indicators of estrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes • No	0		
Dark Surfa Indicators of estrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes • No	<u> </u>		
Dark Surfa Indicators of Iestrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes No	0		
Dark Surfa Indicators of estrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes No	<u> </u>		
Dark Surfa Indicators of estrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes No	0		
Dark Surfa Indicators of Iestrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes • No	<u> </u>		
Dark Surfa Indicators of Iestrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes No			
Dark Surfa ³ Indicators of Restrictive La Type:	hydrophytic		n and weda						Hydric Soil Present?	Yes No			
Dark Surfa ³ Indicators of Restrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes No			
Dark Surfa ³ Indicators of Restrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes No	<u> </u>		
Dark Surfa ³ Indicators of Restrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes No	<u> </u>		
Dark Surfa 3Indicators of Restrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes No			
Dark Surfa ³ Indicators of Restrictive La Type: Depth (inch	hydrophytic		n and weda						Hydric Soil Present?	Yes No			

Project/Site: Ohio Commerce Center	MLX		City/County:	Lordstown, Trumb	ull County	Sampling Da	ite: 02-Jun-14
Applicant/Owner: The East Ohio Gas	Company			State:	Sampling	Point:	06
Investigator(s): Todd Crandall			Section, To	ownship, Range:	S. T.	-	R.
Landform (hillslope, terrace, etc.):	Undulating			oncave, convex, n		SI	ope:0.0% /0.0°
Subregion (LRR or MLRA): LRR R		Lat.:		Long	 j.:		Datum:
Soil Map Unit Name: Glenford silt le	oam				NWI classif	fication:	
Are climatic/hydrologic conditions of	on the site ty	pical for this time of y	rear? Ye	s • No O	(If no, explain in	Remarks.)	
Are Vegetation, Soil	, or Hydrol		tly disturbed?		Circumstances"		′es ● No ○
Are Vegetation, Soil	, or Hydrol		problematic?		explain any answ	•	a)
Summary of Findings - At					• •		•
Hydrophytic Vegetation Present?	Yes O	No •			is, transects	, importai	it reatures, etc
, , , ,	res ⊙ Yes ⊙	No O	Is the	Sampled Area	v)	
Hydric Soil Present?	Yes O	No 💿	withi	n a Wetland?	Yes ○ No •)	
Wetland Hydrology Present? Remarks: (Explain alternative pro							
Hydrology							
Wetland Hydrology Indicators:					Secondary Indicat		of 2 required)
Primary Indicators (minimum of o	ne required;				Surface Soil C		
Surface Water (A1) High Water Table (A2)		Water-Stained Lea	. ,		Drainage Patt		
Saturation (A3)		Aquatic Fauna (B1 Marl Deposits (B1	-		Moss Trim Lin	ies (B16) /ater Table (C2)	
Water Marks (B1)		Hydrogen Sulfide	-		Crayfish Burro		
Sediment Deposits (B2)		Oxidized Rhizosph	` ,	Poots (C3)	= '	sible on Aerial Ir	magery (C9)
Drift deposits (B3)		Presence of Redu		10003 (C3)		ressed Plants (E	
Algal Mat or Crust (B4)		Recent Iron Redu		s (C6)	Geomorphic F	-	/
☐ Iron Deposits (B5)		Thin Muck Surface		5 (55)	Shallow Aquit		
☐ Inundation Visible on Aerial Image	ry (B7)	Other (Explain in	` '		_	phic Relief (D4)	
Sparsely Vegetated Concave Surface	ce (B8)	Other (Explain in	nemarks)		FAC-neutral T		
Field Observations:							
Surface Water Present? Yes		Depth (inches):					
Water Table Present? Yes	No ●	Depth (inches):				v	N- (a)
Saturation Present? (includes capillary fringe) Yes	No ●	Depth (inches):		Wetland Hydr	rology Present?	Yes 🔾	No •
Describe Recorded Data (stream g	auge, monito	oring well, aerial phot	os, previous ins	spections), if avail	lable:		
Remarks:							
No hydrological indicators							

VEGETATION - Use scientific names of plants

- (Plot cizo:	Absolute	Dominant Species?		Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover	<u>Species:</u>	Status	Number of Dominant Species
1				That are OBL, FACW, or FAC:0(A)
2				Total Number of Dominant
3	0			Species Across All Strata: 3 (B)
4	0			
5	0			Percent of dominant Species That Are OBL_FACW_or_FAC: 0.0% (A/B)
6	0			That Are OBL, FACW, or FAC: 0.0% (A/B)
7	_			Prevalence Index worksheet:
(District)	0 =	Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species 0 x 1 = 0
1	0			FACW species
2	0			FAC species $10 \times 3 = 30$
3	0			l '
4	0			l ·
5	0			UPL species $0 \times 5 = 0$
6				Column Totals: 100 (A) 390 (B)
7	0			Prevalence Index = B/A = 3.900
	0 =	Total Cover		
Herb Stratum (Plot size: 5 feet)				Hydrophytic Vegetation Indicators:
1 Plantago lanceolata	20	✓	FACU	Rapid Test for Hydrophytic Vegetation
2. Poa pratensis	40	<u>✓</u>	FACU	Dominance Test is > 50%
3. Erigeron annuus	20	✓	FACU	Prevalence Index is ≤3.0 ¹
A. Circlista amicana	10		FACU	Morphological Adaptations ¹ (Provide supporting
			FAC	data in Remarks or on a separate sheet)
			TAC	Problematic Hydrophytic Vegetation ¹ (Explain)
6				¹ Indicators of hydric soil and wetland hydrology must
7				be present, unless disturbed or problematic.
8				Definitions of Vegetation Strata:
9				Definitions of Vegetation Strata.
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11				at breast height (DBH), regardless of height.
12	0			Sapling/shrub - Woody plants less than 3 in. DBH and
	100 =	Total Cover		greater than 3.28 ft (1m) tall
Woody Vine Stratum (Plot size:)				
1				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
2	0			size, and woody plants less than 3.20 it tall.
3				Woody vine - All woody vines greater than 3.28 ft in
4	0			height.
	0 =	Total Cover		
				Hydrophytic
				Vegetation Yes No
	_			
Remarks: (Include photo numbers here or on a separate she	et.)			
Regularly mowed				

Sampling Point: 06

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 06

0-5 10YR 4/3 Silt Loam	Depth	Matrix			Redox Fe				
Dee: C-Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining. M=Matrix ### Afric Soil Indicators: ### Indicators for Problematic Hydric Soils: ### Q cm Muck (A10) (LRR K, L, MIcRA 1498) ### Indicators for Problematic Hydric Soils: ### Q cm Muck (A10) (LRR K, L, MIcRA 1498) ### Indicators for Problematic Hydric Soils: ### Q cm Muck (A10) (LRR K, L, MIcRA 1498) ### Q coast Prable Redox (A16) (LRR K, L, R) ### G coast Prable Redox (A16) (LRR K, L, R) ### Depleted Below Dark Surface (A11) ### Depleted Dark Surface (F6) ### Depleted Below Dark Surface (S8) (LRR K, L) ### Depleted Dark Surface (F7) ### Depleted Matrix (S4) ### Depleted Dark Surface (F7) ### Depleted Matrix (S6) ### Depleted Mat			%	Color (moi	st) %	Type ¹	Loc ²	Texture	Remarks
Dee: C-Concentration. D=Depletion. RM=Reduced Matrix, CS=Covered or Coated Sand Grains 2Location: PL=Pore Lining, M=Matrix Iric Soll Indicators: Histosol (A1)								-	
Histosol (A1)	5-12 10YR	4/2	90	10YR	5/8 10	C		Silt Loam	
Histosol (A1)									
Histosol (A1)	-	-	-		-	-			
Histosol (A1)									
Histosol (A1)							-		
Histosol (A1)		-							
Histosol (A1)									
Histosol (A1)									
Histosol (A1)									
Histosol (A1)									
Histosol (A1)									
Histosol (A1)									
Histosol (A1)									
Histosol (A1) Polyvalue Below Surface (S8) (LRR R, MLRA 149B) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, L, R) Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Redox Dark Surface (TF12) Stripped Matrix (S6) Dark Surface (S7) (LRR R, L, R) Polyvalue Below Surface (S8) (LRR K, L) Dark Surface (S7) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface			n. RM=Redu	iced Matrix, CS=	Covered or Co	oated Sand Gr	ains ² Loca		
Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (LRR R, MLRA 149B) Coast Prairie Redox (A16) (LRR K, L, R) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S9) (LRR K, L, R) Polyvalue Below Surface (S9) (LRR K, L) Thin Dark Surface (F6) Thin Dark Surface (S9) (LRR K, L) Thin Dark Surface (Indicators for Prob	olematic Hydric Soils: 3
Thin Dark Surface (S9) (LRR R, MLRA 149B) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Stratified Layers (A15) Depleted Dark Surface (F8) Redox Depressions (F8) Stratified Layers (A12) Sandy Muck Mineral (S1) Sandy Redox (S5) Stripped Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Charles Redox Depressions (F8) Stripped Matrix (S6) Dark Surface (S7) Depleted Dark Surface (F7) Piedmont Floodplain Soils (F19) (MLRA 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Stripped Matrix (S6) Dark Surface (S7) Wery Shallow Dark Surface (TF12) Other (Explain in Remarks) Hydric Soil Present? Yes No	• •					ce (S8) (LRR I	₹,	2 cm Muck (A10) (LRR K, L, MLRA 149B)
Loamy Mucky Mineral (F1) LRR K, L S cm Mucky Peat or Peat (S3) (LRR K, L, R)					•) (LRR R. MII	RA 149B)	Coast Prairie Rec	dox (A16) (LRR K, L, R)
Stratified Layers (A5) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L) Thick Dark Surface (A12) Sandy Redox Dark Surface (F7) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR K, L) Thin Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Redox Depressions (F8) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) Other (Explain in Remarks) Hydric Soil Present? Yes No	` ,							5 cm Mucky Pea	t or Peat (S3) (LRR K, L, R)
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) Liron-Manganese Masses (F12) (LRR K, L) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. **Type:							,	Dark Surface (S	7) (LRR K, L, M)
Thick Dark Surface (A12) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S9) (LRR K, L) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Mesic Spodic (TA6) (MLRA 144A, 145, 149B) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Redox Dark Surface (S9) Redox Dark Surface (F6) Iron-Manganese Masses (F12) (LRR K, L, R) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Depressions (F8) Other (A12) Other (Explain in Remarks) Piedmont Floodplain Soils (F19) (MLRA 149B) Other (Explain in Remarks) Hydric Soil Present? Yes No			11\			. ,		Polyvalue Below	Surface (S8) (LRR K, L)
Depleted Dark Surface (F7) Sandy Muck Mineral (S1) Sandy Gleyed Matrix (S4) Sandy Redox Depressions (F8) Sendy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) Dark Surface (S7) (LRR R, MLRA 149B) Diated Dark Surface (S7) (LRR R, MLRA 149B) Clicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Crictive Layer (if observed): Sandy Muck Mineral (S1) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Depressions (F8) Red Parent Material (F21) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Cother (Explain in Remarks) Figure Layer (if observed): Sandy Muck Mineral (S1) Piedmont Floodplain Soils (F19) (MLRA 149B) Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Redox Depressions (F8) Re	•	•	111)			=6)			
Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. crictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No									
Sandy Redox (S5) Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. trictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	•								
Stripped Matrix (S6) Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. trictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No		(34)							
Dark Surface (S7) (LRR R, MLRA 149B) dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. trictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	, , ,								
dicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. trictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes • No •	,	RR MIRA	\ 149R)						
trictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes • No •								` '	n Remarks)
Type: Hydric Soil Present? Yes No	dicators of hydrophyti	c vegetatio	n and wetlar	nd hydrology mu:	st be present,	, unless distur	bed or proble	ematic.	
Depth (inches): Hydric Soil Present? Yes • No ·		served):							
Cherton,								Hudric Soil Brosont?	Vac 📵 Na 🔾
narks:	epth (inches):							nyuric Soil Present?	Yes ♥ No ∪
	arks:								

Project/Site: Ohio Commerce Center MLX	City/C	ounty: Lordstown, Trumb	ull County Samplin	g Date: 02-Jun-14
Applicant/Owner: The East Ohio Gas Company		State:	Sampling Point:	07
Investigator(s): Todd Crandall	Sec	ction, Township, Range:		R.
Landform (hillslope, terrace, etc.): Undulatin	g Local r	elief (concave, convex, n	one): concave	Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR R	Lat.:	Long		Datum:
Soil Map Unit Name: Sebring silt loam			NWI classification:	
Are climatic/hydrologic conditions on the site	ypical for this time of year?	Yes 💿 No 🔾	(If no, explain in Remarks	i.)
Are Vegetation $\ \square$, Soil $\ \square$, or Hydro	ology significantly distu	rbed? Are "Normal	Circumstances" present?	Yes No
Are Vegetation , Soil , or Hydro	ology	atic? (If needed, e	explain any answers in Ren	narks.)
Summary of Findings - Attach sit	e map showing sampl	ing point location	s, transects, impor	tant features, etc
Hydrophytic Vegetation Present? Yes •	No O			
Hydric Soil Present? Yes Yes	No O	Is the Sampled Area within a Wetland?	Yes No	
Wetland Hydrology Present? Yes	No O			
Hydrology				
Wetland Hydrology Indicators:			Secondary Indicators (minim	um of 2 required)
Primary Indicators (minimum of one required Surface Water (A1)			✓ Surface Soil Cracks (B6)✓ Drainage Patterns (B10)	
✓ High Water Table (A2)			Moss Trim Lines (B16)	
Saturation (A3)	Marl Deposits (B15)		Dry Season Water Table	(C2)
☐ Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)	, ,
✓ Sediment Deposits (B2)	Oxidized Rhizospheres alor	ng Living Roots (C3)	Saturation Visible on Aer	rial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron	(C4)	Stunted or Stressed Plan	its (D1)
☐ Algal Mat or Crust (B4)	Recent Iron Reduction in T	filled Soils (C6)	Geomorphic Position (D2	2)
Iron Deposits (B5)	☐ Thin Muck Surface (C7)		Shallow Aquitard (D3)	
Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks))	✓ Microtopographic Relief✓ FAC-neutral Test (D5)	(D4)
Sparsely vegetated Colicave Surface (bo)			FAC-neutral Test (D5)	
Field Observations: Surface Water Present? Yes No No	Double (in alcoa)			
	Depth (inches):	•		
	Depth (inches):	Wetland Hydr	ology Present? Yes	No O
(includes capillary fringe) Yes O NO O	Depth (inches):			
Describe Recorded Data (stream gauge, mon	toring well, aerial photos, prev	ious inspections), if avail	able:	
Remarks:				
remarks:				

VEGETATION - Use scientific names of plants

VEGETATION - Ose scientific fiames of pla	1103			Sampling Point: 07
Tree Stratum (Plot size:)	Absolute % Cover		Indicator Status	
			Status	Number of Dominant Species
1				That are OBL, FACW, or FAC:1(A)
2				Total Number of Dominant
3				Species Across All Strata:1(B)
4				
5	0			Percent of dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)
6	0			That Are Obl., I Acw, of I Ac.
7	0			Prevalence Index worksheet:
Sapling/Shrub Stratum (Plot size:)	0 =	Total Cover		Total % Cover of: Multiply by:
1	0			OBL species <u>100</u> x 1 = <u>100</u>
				FACW species x 2 =
2				FAC species $0 \times 3 = 0$
3				FACU species $0 \times 4 = 0$
4				UPL species $0 \times 5 = 0$
5				Column Totals: 100 (A) 100 (B)
6				Column locals: 100 (A) 100 (D)
7				Prevalence Index = B/A = 1.000
Herb Stratum (Plot size: 5 feet)		= Total Cover	•	Hydrophytic Vegetation Indicators:
	100		OPI	Rapid Test for Hydrophytic Vegetation
1 _ Typha angustifolia			OBL	✓ Dominance Test is > 50%
2				✓ Prevalence Index is ≤3.0 ¹
3				Morphological Adaptations ¹ (Provide supporting
4				data in Remarks or on a separate sheet)
5	0			Problematic Hydrophytic Vegetation ¹ (Explain)
6	0			
7	0			Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
8	0			
9				Definitions of Vegetation Strata:
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11				at breast height (DBH), regardless of height.
12				
		= Total Cover		Sapling/shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft (1m) tall
Woody Vine Stratum (Plot size:)				greater triair 3.20 it (1111) tail
1	0			Herb - All herbaceous (non-woody) plants, regardless of
2	0			size, and woody plants less than 3.28 ft tall.
3	0			Woody vine - All woody vines greater than 3.28 ft in
4	0			height.
	0 =	Total Cover		
				Hydrophytic Vegetation
				Present? Yes No
Remarks: (Include photo numbers here or on a separate sho	eet.)			
	•			

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

Soil Sampling Point: 07

Profile Descr Depth	iption: (Des	scribe to Matrix	the depth	needed to doc		: the indic dox Featu		onfirm the	absence of indicators.)		
(inches)	Color (ı		%	Color (mo		%	Type 1	Loc2	Texture	Remarks	
0-5	10YR	3/2							Silt Loam		
5-12	10YR	3/1	95		5/8	5		PL	Silt Loam		
				-							
				-							
		-									
		_									
		-		-							
		=Depletio	n. RM=Red	uced Matrix, CS=	=Covere	ed or Coate	d Sand Gr	ains ² Loca	ation: PL=Pore Lining. M=Mat	trix	
Hydric Soil I									Indicators for Probler	natic Hydric Soils: 3	
Histosol (☐ Polyvalı MLRA 1	ie Belov 49R)	w Surface (S8) (LRR F	₹,	2 cm Muck (A10) (L	RR K, L, MLRA 149B)	
	pedon (A2)				•	ace (S9) (L	RR R MIF	2Δ 149R)	Coast Prairie Redox	(A16) (LRR K, L, R)	
☐ Black Hist						Mineral (F1			5 cm Mucky Peat or	Peat (S3) (LRR K, L, R)	
	Sulfide (A4) Layers (A5)					Matrix (F2)			Dark Surface (S7) (I	LRR K, L, M)	
	Below Dark S	Surface (A	11\	✓ Deplete						face (S8) (LRR K, L)	
	k Surface (A1		11)			rface (F6)			Thin Dark Surface (S		
	ick Mineral (S			Deplete	d Dark	Surface (F	7)			sses (F12) (LRR K, L, R)	
	eyed Matrix (S					ions (F8)				Soils (F19) (MLRA 149B)	
Sandy Rec		<i>31)</i>								(MLRA 144A, 145, 149B)	
	Matrix (S6)								Red Parent Material	` '	
	ace (S7) (LRF	R R, MLRA	149B)						✓ Very Shallow Dark S✓ Other (Explain in Re	` '	
				nd hydrology mi	ict bo r	rocont un	loce dicturk	od or probl		illarks)	
			ii anu weda	na nyarology mi	ust be p	nesent, un	iess distuit	bed of probl	leriiduc.		
Restrictive La	ayer (if obs	erved):									
Type:	L \.								Hydric Soil Present?	Yes No	
Depth (incl	nes):								,	165 0 110 0	
Remarks:											
ı											

Project/Site: Ohio Commerce Center MLX	City/Co	ounty: Lordstown, Trumb	ull County Sampling	Date: 02-Jun-14
Applicant/Owner: The East Ohio Gas Company		State:	Sampling Point:	08
Investigator(s): Todd Crandall	Sec	tion, Township, Range:		R.
Landform (hillslope, terrace, etc.): Undulating		elief (concave, convex, n		Slope: 0.0 % / 0.0 °
Subregion (LRR or MLRA): LRR R	Lat.:	Long	j.:	Datum:
Soil Map Unit Name: Sebring silt loam			NWI classification:	
Are climatic/hydrologic conditions on the site to	pical for this time of year?	Yes 💿 No 🔾	(If no, explain in Remarks	.)
Are Vegetation \square , Soil \square , or Hydro	logy 🔲 significantly distu	rbed? Are "Normal	Circumstances" present?	Yes No
Are Vegetation , Soil , or Hydro	logy naturally problem	atic? (If needed, e	explain any answers in Ren	narks.)
Summary of Findings - Attach site	e map showing sampl	ing point location	s, transects, impor	tant features, etc
Hydrophytic Vegetation Present? Yes	No •			
Hydric Soil Present? Yes	No 💿	Is the Sampled Area within a Wetland?	Yes ○ No •	
Wetland Hydrology Present? Yes	No •	Within a Wedana.		
Remarks: (Explain alternative procedures her Upland old field				
Hydrology Westland Mydrology Indicators				
Wetland Hydrology Indicators: Primary Indicators (minimum of one required	check all that apply)		Secondary Indicators (minimum	um of 2 required)
Surface Water (A1)	Water-Stained Leaves (B9)		Surface Soil Cracks (B6) Drainage Patterns (B10)	
High Water Table (A2)	Aquatic Fauna (B13)		Moss Trim Lines (B16)	
Saturation (A3)	Marl Deposits (B15)		Dry Season Water Table	(C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Crayfish Burrows (C8)	
Sediment Deposits (B2)	Oxidized Rhizospheres alon	ng Living Roots (C3)	Saturation Visible on Aer	ial Imagery (C9)
Drift deposits (B3)	Presence of Reduced Iron ((C4)	Stunted or Stressed Plan	
Algal Mat or Crust (B4)	Recent Iron Reduction in T	illed Soils (C6)	Geomorphic Position (D2	2)
☐ Iron Deposits (B5)☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)		Shallow Aquitard (D3)	(D4)
Sparsely Vegetated Concave Surface (B8)	Other (Explain in Remarks)		☐ Microtopographic Relief (☐ FAC-neutral Test (D5)	(D 1)
Field Observations: Surface Water Present? Water Table Present? Yes No No No No No No No No No No	Depth (inches):		ology Present? Yes) No
Saturation Present? (includes capillary fringe) Yes No •	Depth (inches):		ology Fresent: 105 9	
Describe Recorded Data (stream gauge, monit	oring well, aerial photos, previ	ious inspections), if avail	able:	
Remarks:				
No hydrological indicators				

VEGETATION - Use scientific names of plants

	Absolute	Dominant		Dominance Test worksheet:
	% Cover	Species?	Status	Number of Dominant Species
1	0			That are OBL, FACW, or FAC:0(A)
2	0			
3.				Total Number of Dominant
				Species Across All Strata: 2 (B)
4				Percent of dominant Species
5				That Are OBL, FACW, or FAC: 0.0% (A/B)
6				
7	0			Prevalence Index worksheet:
(Plot size)	0 =	= Total Cover		Total % Cover of: Multiply by:
Sapling/Shrub Stratum (Plot size:)				OBL species
1	0			FACW species 0 x 2 = 0
2	0			
3				FAC species $0 \times 3 = 0$
4				FACU species $100 \times 4 = 400$
5				UPL species $0 \times 5 = 0$
		\Box		Column Totals:100 (A)400 (B)
6				
7				Prevalence Index = B/A = <u>4.000</u>
Herb Stratum (Plot size: 5 feet)	=	= Total Cover	'	Hydrophytic Vegetation Indicators:
				Rapid Test for Hydrophytic Vegetation
1 _ Arctium minus	30	✓	FACU	Dominance Test is > 50%
2. Solidago canadensis	60	✓	FACU	Prevalence Index is ≤3.0 ¹
3. Poa pratensis	10		FACU	
4	0			 Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
5	0			Problematic Hydrophytic Vegetation ¹ (Explain)
6				
7	0			¹ Indicators of hydric soil and wetland hydrology must
8	0	$\overline{\Box}$		be present, unless disturbed or problematic.
				Definitions of Vegetation Strata:
9				
10				Tree - Woody plants, 3 in. (7.6 cm) or more in diameter
11				at breast height (DBH), regardless of height.
12				Sapling/shrub - Woody plants less than 3 in. DBH and
(Plot size:	100 =	= Total Cover		greater than 3.28 ft (1m) tall
Woody Vine Stratum (Plot size:)	_			
1				Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
2	0			size, and woody plants less than 3.26 it tall.
3	0			Woody vine - All woody vines greater than 3.28 ft in
4	0			height.
	0 =	= Total Cover		
				Hydrophytic
				Vegetation
				Present? Yes No •
Remarks: (Include photo numbers here or on a separate shee	et.)			
Festuca sp. (fescue) also present	•			
r cocucia opr (resoure) also present				

Sampling Point: 08

^{*}Indicator suffix = National status or professional decision assigned because Regional status not defined by FWS.

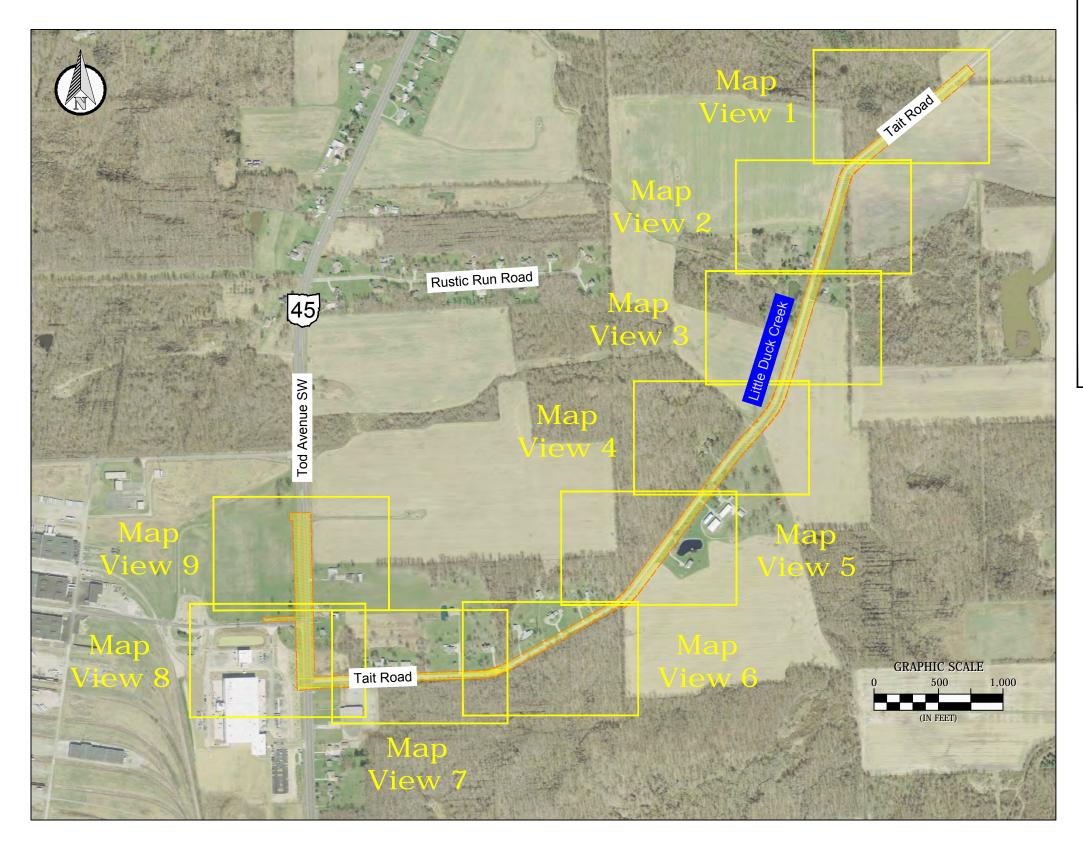
Soil Sampling Point: 08

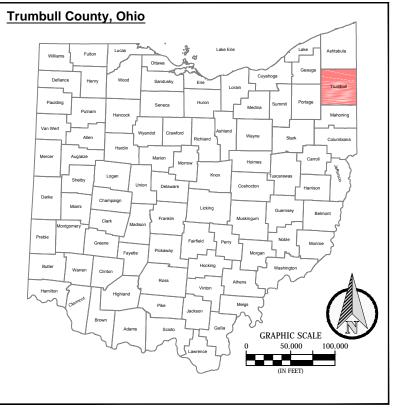
			he depth:	needed to				firm the	absence of indicators.)	
Depth (inches)	Color (r	Matrix	%	Color (Red [moist]	lox Featu %	res Type ¹	Loc2	Texture	Po	marks
0-4	10YR	4/2		Color (illoistj		Турс	LUC	Silt Loam	, inc	illaiks
4-12	10YR	4/3							Silt Loam		
4-12						-			SIIL LOGIII		
				-		-					
				-		-					
										_	
				-							
_											
ivne: C-Conc	centration D	-Depletion	DM-Ded	uced Matrix	CS-Covere	d or Coate	nd Sand Grai	ns 2l oca	ation: PL=Pore Lining. M		
ydric Soil Ir		-Depiction	i. Ki-i-kcui	uccu Platrix,	CJ-COVCIC	u or coate	d Sand Grai	113 LOCA			3
Histosol (A				Doly	value Relov	, Surface /	(S8) (LRR R,		Indicators for Pro		
☐ Histic Epip	•				value below A 149B)	v Juriace (JU) (LKK K,		2 cm Muck (A1		· ·
Black Histic				Thin	Dark Surfa	ce (S9) (I	LRR R, MLRA	149B)	Coast Prairie Re		
_	Sulfide (A4)			Loar	ny Mucky M	1ineral (F1) LRR K, L)		5 cm Mucky Pe		
	Layers (A5)			Loar	ny Gleyed N	Matrix (F2))		Dark Surface (S		
_	Below Dark S	Surface (A1	1)	☐ Dep	leted Matrix	(F3)			Polyvalue Belov		
_	Surface (A1		1)		ox Dark Sur				Thin Dark Surfa		
_	ck Mineral (S			☐ Dep	leted Dark S	Surface (F	7)		☐ Iron-Manganese Masses (F12) (LRR K, L, R) ☐ Piedmont Floodplain Soils (F19) (MLRA 149B)		
_ ´	yed Matrix (S	•		Rede	ox Depressi	ons (F8)					
Sandy Gicy		, T)							Mesic Spodic (TA6) (MLRA 144A, 145, 149B)		
Stripped M									☐ Red Parent Material (F21) ☐ Very Shallow Dark Surface (TF12)		
_	ace (S7) (LRR	R. MIRA	149B)								12)
									Other (Explain	in Remarks)	
Indicators of	hydrophytic	vegetation	and wetla	nd hydrology	must be p	resent, un	less disturbe	ed or proble	ematic.		
estrictive La	yer (if obse	erved):									
Type:									Hydric Soil Present	. v (No 💿
Depth (inch	nes):								nyuric Soil Present	? Yes \cup	NO S
temarks:											

Appendix H Water Resource Map

Davey Resource Group January 2015

Map View Location Map





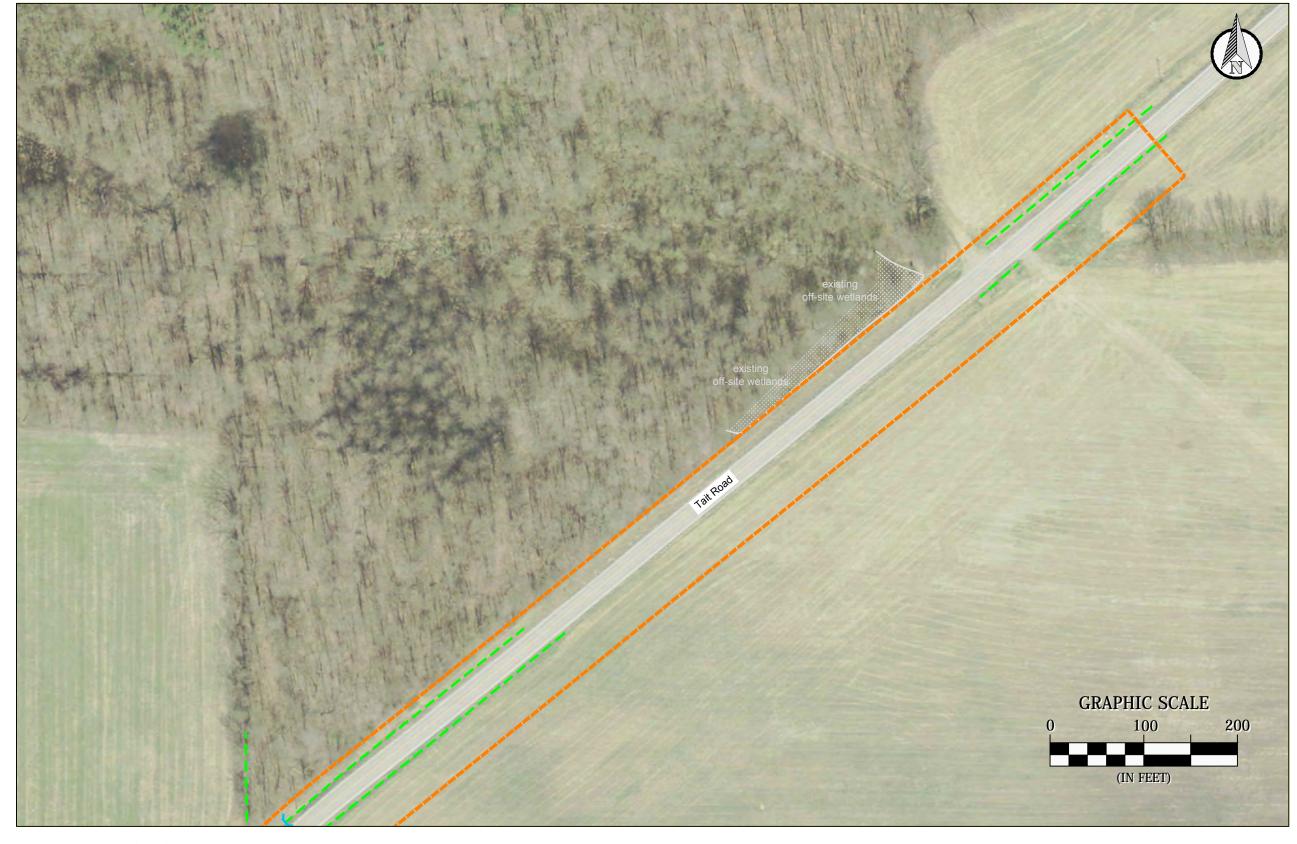
= Approximate study area

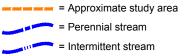


The East Ohio Gas Company <u>Matalco Inc. MLX</u>
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



Map View 1 of 9





= Non-jurisdictional roadside ditch

= Direction of flow

= Existing culvert(s)

1 = Sample point location



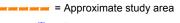


The East Ohio Gas Company Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



Map View 2 of 9





= Perennial stream

= Non-jurisdictional roadside ditch

= Direction of flow

= Existing culvert(s)

1 = Sample point location



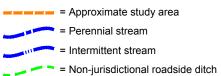


The East Ohio Gas Company Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



Map View 3 of 9

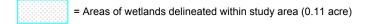




= Direction of flow

= Existing culvert(s)

1 = Sample point location

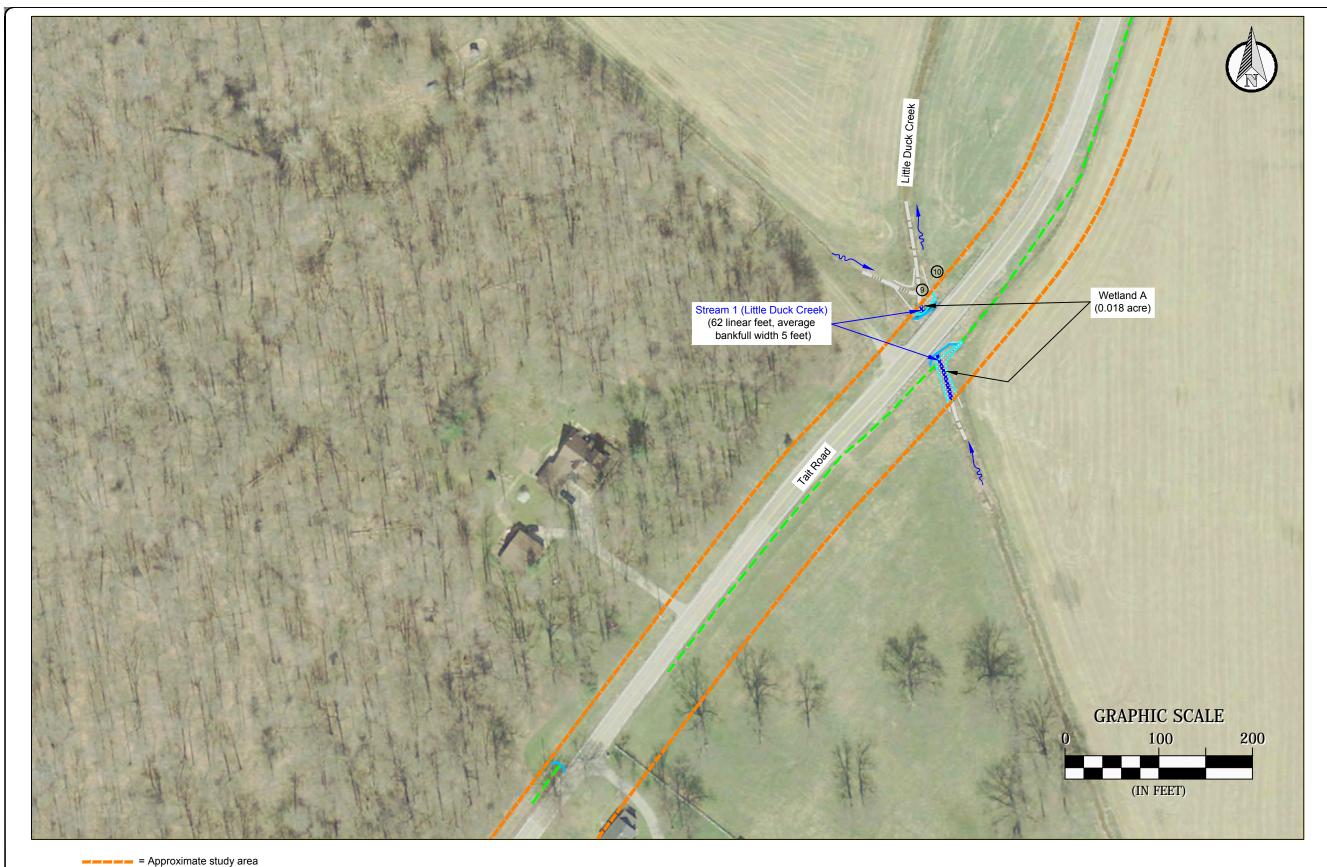


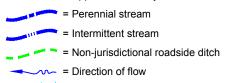


The East Ohio Gas Company Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio

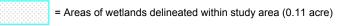


<u>Map View</u> <u>4 of 9</u>





= Direction of flow
= Existing culvert(s)



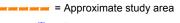


The East Ohio Gas Company Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



<u>Map View</u> <u>5 of 9</u>





= Perennial stream

= Non-jurisdictional roadside ditch

= Direction of flow = Existing culvert(s)

1 = Sample point location



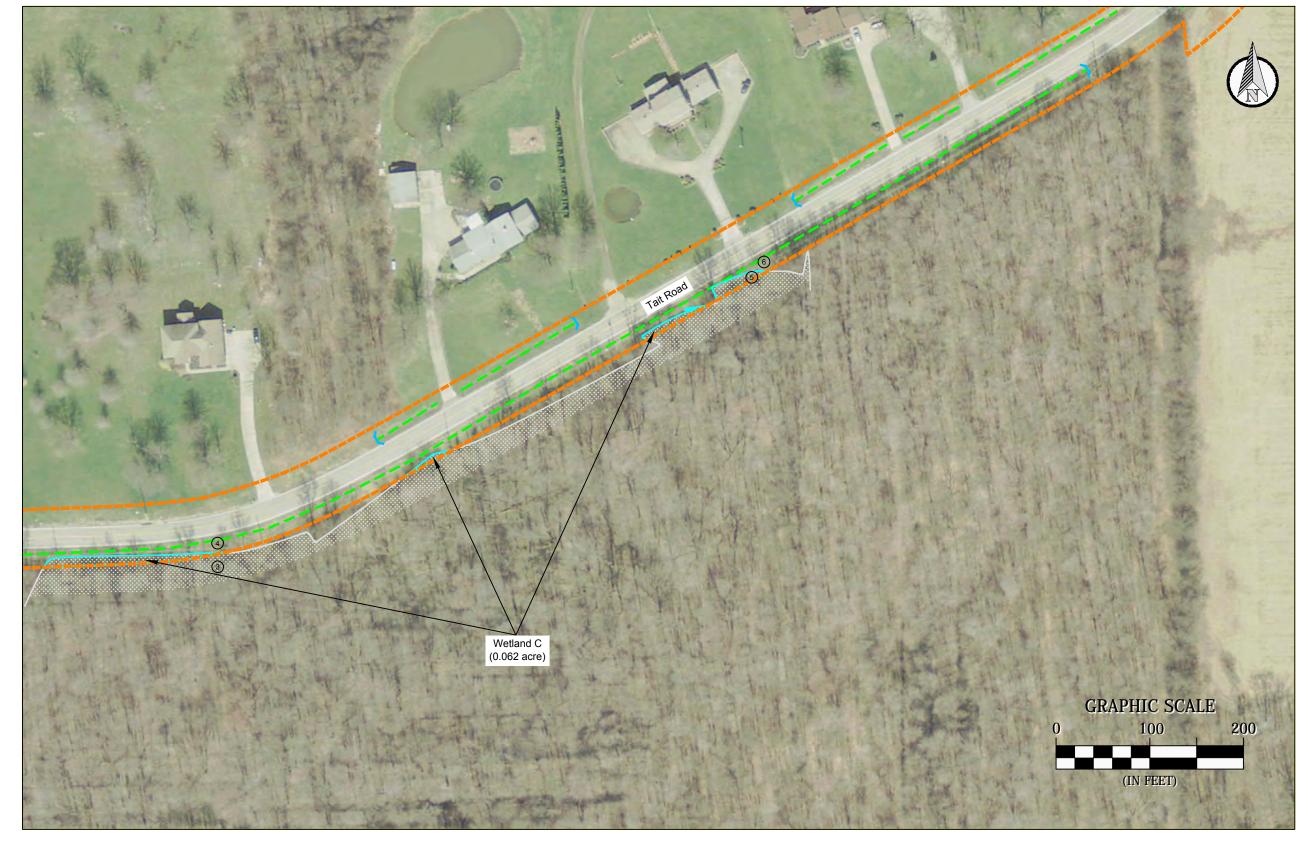


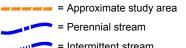
The East Ohio Gas Company

Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



Map View 6 of 9





= Non-jurisdictional roadside ditch

= Direction of flow

= Existing culvert(s)

1) = Sample point location



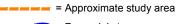


The East Ohio Gas Company Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



<u>Map View</u> <u>7 of 9</u>





= Perennial stream

= Non-jurisdictional roadside ditch

= Direction of flow

= Existing culvert(s)

1 = Sample point location



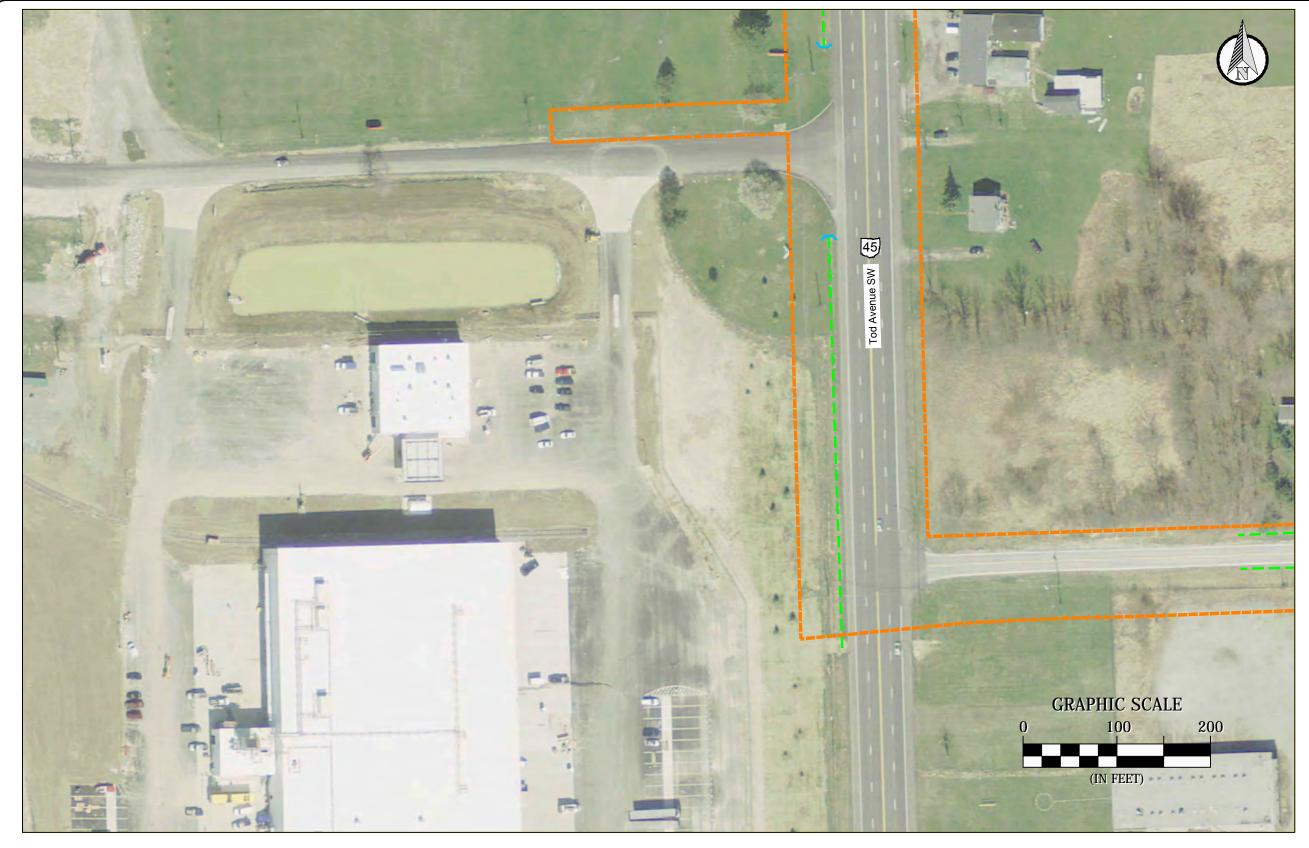


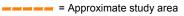
The East Ohio Gas Company

Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



<u>Map View</u> 8 of 9







= Non-jurisdictional roadside ditch

= Direction of flow

= Existing culvert(s)

1 = Sample point location



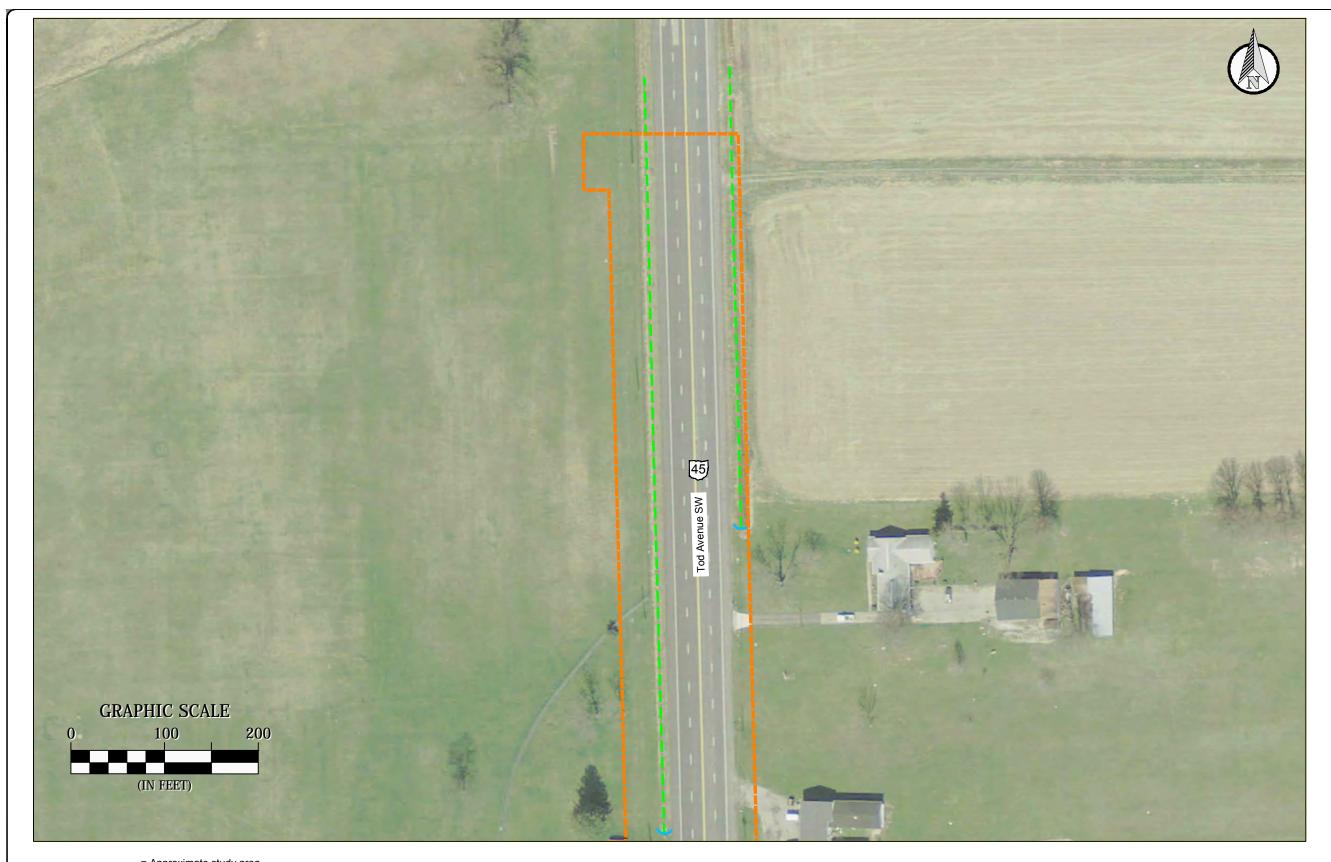


The East Ohio Gas Company

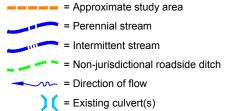
Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



<u>Map View</u> 9 of 9



= Areas of wetlands delineated within study area (0.11 acre)



Prepared by

DAVEY

RESOURCE GROUP

A Distribut of The Damp Tree Report Company

The East Ohio Gas Company Matalco Inc. MLX
Pipeline Installation Project
Lordstown, Trumbull County, Ohio



Appendix I Ohio Rapid Assessment Method (ORAM) Forms

Davey Resource Group January 2015

Background Information

Name:	Todd Crandall	Todd Crandall					
Date:	June 3, 2014						
Affiliation:	Davey Resour	ce Group					
Address:	295 South Wa	iter Street, Suite 300, Kent, Ohio 44240					
Phone Number:	330-673-5685	, ext. 8033					
E-Mail Address:	Todd.crandall	@davey.com					
Name of Wetland:	Wetland A						
Vegetation Commur	nit(ies): Emerge	nt					
HGM Class(es): Riv	erine headwate	r					
Location of Wetland	: Include map, a	address, north arrow, landmarks, distances, roads, etc.					
See Water Resource	es Delineation F	Report					
Lat/Long or UTM Co	ordinate:	41.18853, -80.84466					
USGS Quad Name:		Warren					
County:		Trumbull					
Township:		Lordstown					
Section and Subsec	tion:	n/a					
Hydrologic Unit Cod	e:	05030103					
Site Visit: June 2, 2014							
National Wetland Inventory Map: See Water Resources Delineation Report							
Ohio Wetland Invent	tory Map:	n/a					
Soil Survey:		See Water Resources Delineation Report					
Delineation Report/N	Лар:	See Water Resources Delineation Report					

Name of Wetland:	Wetland A
Wetland Size (acres, hectacres)	0.018 acre
Sketch: Include north arrow, relation	ship with other surface waters, vegetation zones, etc.
See Water Resources Delineation R	
Comments, Narrative Discussion, Ju	ustification of Category Changes:
Final Score: 29	Category: 1

Scoring Boundary Worksheet

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

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

End of Scoring Boundary Determination. Begin Narrative Rating On Next Page.

Narrative Rating

INSTRUCTIONS: Answer each of the following questions. Questions 1, 2, 3, and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), 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	Check One	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5	YES	⊠ NO
	Minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any	Wetland should be	Go to Question 2
	threatened or endangered plant or animal species?	evaluated for possible	
	Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found	Category 3 status.	
	in Ohio, the Indiana Bat has had critical habitat	Go to Question 2	
	designated (50 CFR 17.95(a) and the piping plover has		
	had critical habitat proposed (65 FR 41812 July 6, 2000).		
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented	YES	⊠NO
	occurrences of, federal or state-listed threatened or	Wetland is a Category 3	Go to Question 3
	endangered plant or animal species?	wetland.	
		Go to Question 3	
3	Documented High-Quality Wetland. Is the wetland on record in Natural Heritage Database as a high-quality	YES	⊠NO
	wetland?	Wetland is a Category 3	Go to Question 4
		wetland.	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant	YES	⊠NO
	breeding or nonbreeding waterfowl, neotropical	Wetland is a Category 3	Go to Question 5
	songbird, or shorebird concentration areas?	wetland.	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated	YES	⊠NO
	and either 1) comprised of vegetation that is dominated	Wetland is a Category 1	Go to Question 6
	(greater than 80% areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> ; or 2) an	wetland.	
	acidic pond created or excavated on mined lands that have little or no vegetation>	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that	YES	⊠NO
	has no significant inflows or outflows; 2 supports acidophilic mosses, particularly <i>Sphagnum</i> spp.; 3) the	Watland is a Catagon, 2	Go to Question 7
	acidophilic mosses have >30% cover; 4) at least one	Wetland is a Category 3 wetland.	Go to Question 7
	species from Table 1 is present; and 5) the cover of invasive species (see Table 1) is <25%.		
7	Ferns. Is the wetland a carbon accumulating (peat,	Go to Question 7	NO
'	muck) wetland that is saturated during most of the year,	□ 159	M INO
	primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with	Wetland is a Category 3	Go to Question 8a
	one or more plant species listed in Table 1 and the	wetland.	
	cover of invasive species listed in Table 1 is <25%.	Go to Question 8a	

8a	"Old Growth Forest." Is the wetland a forested wetland	☐ YES	⊠ NO
	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	Wetland is a Category 3 wetland.	Go to Question 8b
	attainable age for a species); little or no evidence of	wettarid.	
	human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multi-layered	Go to Question 8b	
	canopies; aggregations of canopy trees interspersed		
	with canopy gaps; and significant numbers of standing		
8b	dead snags and downed logs? Mature forested wetlands. Is the wetland a forested	YES	NO
OD	wetland with 50% or more of the cover of upper forest		
	canopy consisting of deciduous trees with large	Wetland should be	Go to Question 9a
	diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	groater than room (17.71m) abit.	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the	YES	⊠NO
	wetland located at an elevation less than 575 feet on the		
	USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures	☐YES	□NO
	designed to prevent erosion and the loss of aquatic plants, <i>i.e.</i> , the wetland is partially hydrologically		
	restricted from Lake Erie due to lakeward or landward	Wetland should be	Go to Question 9c
	dikes or other hydrological controls?	evaluated for possible Category 3 status.	
		Category 5 status.	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary	YES	□NO
	hydrological influence, <i>i.e.</i> , the wetland is hydrologically unrestricted (no lakeward or upland border alterations),	Go to Question 9d	Go to Question 10
	or the wetland can be characterized as an "estuarine"	Go to Question 9d	Go to Question to
	wetland with lake and river influenced hydrology. These		
	include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by		
	submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-	☐ YES	□NO
	native or disturbance-tolerant native species can also be	Wetland is a Category 3	Go to Question 9e
	present.	wetland.	Go to Question se
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance-tolerant native plant species within its	YES	□NO
	vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status.	
		Co to Ougation 40	
10	Lake Plain Sand Prairies (Oak Openings). Is the	Go to Question 10	NO
	wetland located in Lucas, Fulton, Henry, or Wood		
	Counties and can the wetland be characterized by the	Wetland is a Category 3	Go to Question 11
	following description: the wetland has a sandy substrate with interspersed organic matter, a water table often	wetland.	
	within several inches of the surface, and often with a	Go to Question 11	
	dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio	Go to Question 11	
	Department of Natural Resources Division of Natural		
	Areas and Preserves can provide assistance in		
11	confirming this type of wetland and its quality. Relict Wet Prairies. Is the wetland a relict wet prairie	YES	⊠NO
' '	community dominated by some or all of the species in	☐ 1E3	
	Table 1. Extensive prairies were formerly located in the	Wetland should be	Complete Quantitative
	Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties),	evaluated for possible	Rating
	northwest Ohio (e.g., Erie, Huron, Lucas, Wood	Category 3 status	
	Counties), and portions of western Ohio Counties (e.g.,	Complete Quantitative	
	Darke, Mercer, Miami, Montgomery, Van Wert, etc.)	Rating	

Table 1. Characteristic Plant Species

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

End of Narrative Rating. Begin Quantitative Rating On Next Page.

ORAM v. 5.0 Field Form Qua									
Site: Ohio Con	nmerce	Center MLX			Dat	Date: June 3, 2014			
Wetlands: W	etland a	A			Rate	er: Todd Crandall			
				00	ORAM				
Wetland Acre	eage:	0.018+	ORAM Score:	28	Category	_{/:} Category 1			
			+			-			
1 4	Motr	ic 1 Wetland	l Area (size). (max	6 ntc)					
Subtotal Points			and assign score.	o pis)					
Oubtotal 1 oillis	00,00		s (>20.2ha) (6 pts)						
			acres (10.1 to <20.2ha) (5 pts)					
		10 to <25	acres (4 to <10.1ha) (4 p	ts)					
			acres (1.2 to <4ha) (3 pts)						
			acres (0.12 to <1.2ha) (2 3 acres (0.04 to <0.12ha)						
			s (0.04ha) (0 pts)	(1 pt)					
			- (
3 2		-	buffers and surrou	_	• •	s)			
Subtotal Points	<u>2a. Ca</u>		buffer width (select one, o						
			uffers average 50m (164f Buffers average 25m to	,					
		-	Buffers average 10m 1						
			RROW. Buffers average						
	<u>2b. In</u>	_	ding land use (select one			- 11- (7)			
			W. 2nd growth or older for d field (>10 years), shruble	-					
					,	n tillage, new fallow field. (3)			
			ban, industrial, open past	•		• • • • • • • • • • • • • • • • • • • •			
23 20		-	gy. (max 30 pts)		3d. Duration inunda				
Subtotal Points	3a. So		Score all that apply.			double check & average)			
			roundwater (5) undwater (3)			permanently inundated/saturated (4) r inundated/saturated (3)			
		x Precipitati				lly inundated (2)			
			/Intermittent surface wate	r (3)		lly saturated in upper 30cm (12in) (1)			
		x Perennial	surface water (lake or str	eam) (5)					
	01 0					natural hydrologic regime.			
	3b. C	onnectivity. Scor	e all that apply. floodplain (1)			double check & average) none apparent (12)			
			stream/lake and other hur	man use (1)	x Recovere				
		-	etland/upland (e.g. forest),	` '	Recoveri	. ,			
		x Part of rip	arian or upland corridor (1	1)	Recent of	or no recovery (1)			
					Chook all dist	urbanass absorved			
	3c. M	aximum water de >0.7 (27.6	pth. Select only 1.		ditch	curbances observed point source (nonstormwater)			
			m (15.7 to 27.6in) (2)		dike	✓ filling/grading			
		<0.4m (<			✓ tile	✓ road bed/RR track			
		`	, ()		weir	✓ dredging			
					stormwater inp	put other- list			
20 7	Motr	ic / Habitat	Alteration and Dev	elonment	(may 20 nts)				
30 7 Subtotal Points			nce. Score one or double	•	,				
Subtotal Follits	4a. O		one apparent (4)	e check and av	erage.				
		x Recovere	11 ()		4c. Habitat alteration	on. Score one or double check and average.			
		Recoverir	ng (2)		None or	none apparent (9)			
		Recent or	no recovery (1)		Recover	• •			
	46 1	1-1-2-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	out Oakatau		x Recoveri				
	4D. H	Excellent			Recent o	r no recovery (1)			
		Very good	``	all disturba	nces observed				
		Good (5)	wow mov			shrub/sapling removal			
			ly good (4) graz	-		herbaceous/aquatic bed removal			
		Fair (3)	clea	rcutting		sedimentation			
		Poor to fa		ctive cutting	<u> </u>				
		x Poor (1)		ody debris remo	oval 🗸				
			toxic	c pollutants		nutrient emrichment			

30 subtotal this page

Site: Ohio Comn	nerce Center MLX		Date: June 3, 2014			
Wetland: Wet	tland A		Rater: Todd Crandall			
30 subtotal first p	age		•			
30 0	Metric 5. Special Wetlands. (max 10	pts.)				
Subtotal Points	Check all that apply and score as indicated					
	Bog (10 pts)					
	Fen (10 pts) Old Growth Forest (10 pts)					
	Mature forested wetland (5 pts)					
	Lake Erie coastal/tributary wetland-	-unrestricted hydrology (10 pts)				
	Lake Erie coastal/tributary wetland-	-	ology (5 pts)			
	Lake Plain Sand Prairies (Oak Oper	nings) (10 pts)				
	Relict Wet Prairies (10 pts) Known occurrence state/federal three	eatened or end	langered species (10)			
	Significant migatory songbird/waterf					
	Category 1 Wetland. See Question					
28 -2 Subtotal Points	Metric 6. Plant Communities, intersp 6a. Wetland Vegetation Communities	persion, mic	crotopography. (max 20 pts.)			
Captotal 1 Ollito	Score all present using 0 to 3 scale	Vegetation	n Community Cover Scale			
	Aquatic bed		Absent or comprises <0.1 ha (0.2471 acres) contiguous area			
	1 Emergent		Present and either comprises small part of wetland's			
	Shrub	1	vegetation and is of moderate quality, or comprises a significant part but is of low quality			
	Forest Mudflats					
	Open water	2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small			
	Other (list)		part and is of high quality			
	6b. Horizontal (plan view) interspersion	3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality			
	Select only one	Norretius F	Description of Variation Ouglity			
	High (5) Moderately high (4)		Description of Vegetation Quality Low spp diversity and/or predominance of nonnative or			
	Moderate (3)	low	disturbance tolerant native species			
	Moderately low (2)		Native spp are dominant component of the vegetation,			
	Low (1)		although nonnative and/or disturbance tolerant native spp			
	x None (0)	moderate	can also be present, and species diversity moderate to moderately high, but generally w/o presence of rare			
	6c. Coverage of invasive plants.		threatened or endangered spp			
	Refer to Table 1 ORAM long		A predominance of native species, with nonnative spp			
	form for list. Add or deduct	high	and/or disturbance tolerant native spp absent or virtually			
	points for coverage	9.1	absent, and high spp diversity and often, but not always, the presence of rare, threatened, or endangered spp			
Phalaris arundinacea	Extensive >75 % cover (-5) x Moderate 25-75% cover (-3)					
Pnalaris arundinacea Typha angustifolia	x Moderate 25-75% cover (-3) Sparse 5-25% cover (-1)	Mudflat an	nd Open Water Class Quality			
	Nearly Absent <5% cover (0)		Absent <0.1 ha (0.2471 acres)			
	Absent (1)	1	Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)			
	Cal. Microscope .		Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)			
	6d. Microtopography Score all present using 0 to 3 scale	3	High 4 ha (9.88 acres) or more			
	Vegetated hummocks/tussocks	Microtopo	ography Cover Scale			
	Coarse woody debris >15 cm (6")		Absent			
	Standing dead > 25 cm (10") dbh Amphibian breeding pools	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			
28 GRAND TO	DTAL (max 100 pts) En	d of Quanti	itative Rating. Complete Categorization Worksheets.			

ORAM Summary Worksheet

		Check Answer	
		or Insert Score	Result
Narrative Rating	Question 1. Critical Habitat	☐ YES ⊠ NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	☐ YES ⊠ NO	If yes, Category 3.
	Question 3. High-Quality Natural Wetland	☐ YES ⊠ NO	If yes, Category 3.
	Question 4. Significant Bird Habitat	☐ YES ⊠ NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	☐ YES ⊠ NO	If yes, Category 1.
	Question 6. Bogs	☐ YES ⊠ NO	If yes, Category 3.
	Question 7. Fens	☐ YES ⊠ NO	If yes, Category 3.
	Question 8a. Old Growth Forest	☐ YES ⊠ NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	☐ YES ⊠ NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands – Restricted	☐ YES ⊠ NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands- Unrestricted with native plants	☐ YES ⊠ NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands – Unrestricted with invasive plants	☐ YES ⊠ NO	If yes, Category 3; may also be 1 or 2
	Question 10. Oak Openings	☐ YES ⊠ NO	If yes, Category 3
	Question 11. Relict Wet Prairies	☐ YES ⊠ NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and surrounding land use	2	
	Metric 3. Hydrology	21	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	-2	
	TOTAL SCORE	29	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

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

	Final Category		
Choose One	☐ Category 2	☐ Category 3	

Background Information

Name:	Todd Crandall				
Date:	June 3, 2014	June 3, 2014			
Affiliation:	Davey Resour	ce Group			
Address:	295 South Wa	ter Street, Suite 300, Kent, Ohio 44240			
Phone Number:	330-673-5685,	, ext. 8033			
E-Mail Address:	Todd.crandall@	@davey.com			
Name of Wetland:	Wetland B				
Vegetation Commun	nit(ies): Emerger	nt			
HGM Class(es): Dep	oression				
Location of Wetland	: Include map, a	ddress, north arrow, landmarks, distances, roads, etc.			
See Water Resource	es Delineation R	Report			
Lat/Long or UTM Co	ordinate:	41.1851, -80.8485			
USGS Quad Name:		Warren			
County:		Trumbull			
Township:		Lordstown			
Section and Subsec	tion:	n/a			
Hydrologic Unit Cod	e:	05030103			
Site Visit:		June 2, 2014			
National Wetland Inv	ventory Map:	See Water Resources Delineation Report			
Ohio Wetland Invent	tory Map:	n/a			
Soil Survey:		See Water Resources Delineation Report			
Delineation Report/N	Лар:	See Water Resources Delineation Report			

Name of Wetland:	Wetland B
Wetland Size (acres, hectacres)	0.018 acre
Sketch: Include north arrow, relation	ship with other surface waters, vegetation zones, etc.
See Water Resources Delineation R	eport
Comments, Narrative Discussion, Ju	ustification of Category Changes:
Final Score: 35.5	Category: modified 2

Scoring Boundary Worksheet

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

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

End of Scoring Boundary Determination. Begin Narrative Rating On Next Page.

Narrative Rating

INSTRUCTIONS: Answer each of the following questions. Questions 1, 2, 3, and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), 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	Check One	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5	YES	⊠ NO
	Minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any	Wetland should be	Go to Question 2
	threatened or endangered plant or animal species?	evaluated for possible	
	Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found	Category 3 status.	
	in Ohio, the Indiana Bat has had critical habitat	Go to Question 2	
	designated (50 CFR 17.95(a) and the piping plover has		
	had critical habitat proposed (65 FR 41812 July 6, 2000).		
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented	YES	⊠NO
	occurrences of, federal or state-listed threatened or	Wetland is a Category 3	Go to Question 3
	endangered plant or animal species?	wetland.	
		Go to Question 3	
3	Documented High-Quality Wetland. Is the wetland on record in Natural Heritage Database as a high-quality	YES	⊠NO
	wetland?	Wetland is a Category 3	Go to Question 4
		wetland.	
		Go to Question 4	
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant	YES	⊠NO
	breeding or nonbreeding waterfowl, neotropical	Wetland is a Category 3	Go to Question 5
	songbird, or shorebird concentration areas?	wetland.	
		Go to Question 5	
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated	YES	⊠NO
	and either 1) comprised of vegetation that is dominated	Wetland is a Category 1	Go to Question 6
	(greater than 80% areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> ; or 2) an	wetland.	
	acidic pond created or excavated on mined lands that have little or no vegetation>	Go to Question 6	
6	Bogs. Is the wetland a peat-accumulating wetland that	YES	⊠NO
	has no significant inflows or outflows; 2 supports acidophilic mosses, particularly <i>Sphagnum</i> spp.; 3) the	Watland is a Catagon, 2	Go to Question 7
	acidophilic mosses have >30% cover; 4) at least one	Wetland is a Category 3 wetland.	Go to Question 7
	species from Table 1 is present; and 5) the cover of invasive species (see Table 1) is <25%.		
7	Ferns. Is the wetland a carbon accumulating (peat,	Go to Question 7	NO
'	muck) wetland that is saturated during most of the year,	□ 159	M INO
	primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with	Wetland is a Category 3	Go to Question 8a
	one or more plant species listed in Table 1 and the	wetland.	
	cover of invasive species listed in Table 1 is <25%.	Go to Question 8a	

8a	"Old Growth Forest." Is the wetland a forested wetland	☐ YES	⊠ NO
	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	Wetland is a Category 3 wetland.	Go to Question 8b
	attainable age for a species); little or no evidence of	wettarid.	
	human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multi-layered	Go to Question 8b	
	canopies; aggregations of canopy trees interspersed		
	with canopy gaps; and significant numbers of standing		
8b	dead snags and downed logs? Mature forested wetlands. Is the wetland a forested	YES	NO
OD	wetland with 50% or more of the cover of upper forest		
	canopy consisting of deciduous trees with large	Wetland should be	Go to Question 9a
	diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	groater than room (17.71m) abit.	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the	YES	⊠NO
	wetland located at an elevation less than 575 feet on the		
	USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures	☐YES	□NO
	designed to prevent erosion and the loss of aquatic plants, <i>i.e.</i> , the wetland is partially hydrologically		
	restricted from Lake Erie due to lakeward or landward	Wetland should be	Go to Question 9c
	dikes or other hydrological controls?	evaluated for possible Category 3 status.	
		Category 5 status.	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary	YES	□NO
	hydrological influence, <i>i.e.</i> , the wetland is hydrologically unrestricted (no lakeward or upland border alterations),	Go to Question 9d	Go to Question 10
	or the wetland can be characterized as an "estuarine"	Go to Question 9d	Go to Question to
	wetland with lake and river influenced hydrology. These		
	include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by		
	submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-	☐ YES	□NO
	native or disturbance-tolerant native species can also be	Wetland is a Category 3	Go to Question 9e
	present.	wetland.	Go to Question se
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance-tolerant native plant species within its	YES	□NO
	vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status.	
		Co to Ougation 40	
10	Lake Plain Sand Prairies (Oak Openings). Is the	Go to Question 10	NO
	wetland located in Lucas, Fulton, Henry, or Wood		
	Counties and can the wetland be characterized by the	Wetland is a Category 3	Go to Question 11
	following description: the wetland has a sandy substrate with interspersed organic matter, a water table often	wetland.	
	within several inches of the surface, and often with a	Go to Question 11	
	dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio	Go to Question 11	
	Department of Natural Resources Division of Natural		
	Areas and Preserves can provide assistance in		
11	confirming this type of wetland and its quality. Relict Wet Prairies. Is the wetland a relict wet prairie	YES	⊠NO
' '	community dominated by some or all of the species in	☐ 1E3	
	Table 1. Extensive prairies were formerly located in the	Wetland should be	Complete Quantitative
	Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties),	evaluated for possible	Rating
	northwest Ohio (e.g., Erie, Huron, Lucas, Wood	Category 3 status	
	Counties), and portions of western Ohio Counties (e.g.,	Complete Quantitative	
	Darke, Mercer, Miami, Montgomery, Van Wert, etc.)	Rating	

Table 1. Characteristic Plant Species

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

End of Narrative Rating. Begin Quantitative Rating On Next Page.

ORAM v. 5.0 Field Form Qu						
Site: Ohio Con	nmerce	Center MLX			Date	: June 3, 2014
Wetlands: W	etland l	В			Rate	r: Todd Crandall
Wetland Acre	eage:	0.018+	ORAM Score	e: 35.5	ORAM Category	modified 2
1 1 Subtotal Points		>50 acres 25 to <50 a 10 to <25 a 3 to <10 ac 0.3 to <3 a x 0.1 to <0.3	Area (size). (ma dassign score. (>20.2ha) (6 pts) cores (10.1 to <20.2ha cores (4 to <10.1ha) (4 cres (1.2 to <4ha) (3 ptores (0.12 to <1.2ha) acres (0.04 to <0.12h (0.04ha) (0 pts)	a) (5 pts) 4 pts) ts) (2pts)		
8 7 Subtotal Points	<u>2a. Ca</u>	ic 2. Upland be alculate average be WIDE. But X MEDIUM. NARROW. VERY NAR	uffers and surro uffer width (select one fers average 50m (16 Buffers average 25m Buffers average 10n RROW. Buffers avera	e, do not double co 64ft) or more aroun to <50m (82 to <1 n to <25m (32ft to ge <10m (<32ft) a	nd wetland perimeter 164ft) around wetland o <82ft) around wetlan around wetland perime	(7) perimeter (4) d perimeter (1)
	<u>2b. In</u>	VERY LOV x LOW. Old MODERAT	field (>10 years), shru ELY HIGH. Resident	er forest, prairie, sa ubland, young sec tial, fenced pasture	avannah, wildlife area, ond growth forest. (5)	tillage, new fallow field. (3)
19.5 11.5 Subtotal Points		Durces of Water. S High pH gr Other grou X Precipitatio Seasonal/li	y. (max 30 pts) Score all that apply. bundwater (5) ndwater (3) n (1) ntermittent surface wa	, ,	Semi- to p Regularly x Seasonally	ion/saturation. buble check & average) ermanently inundated/saturated (4) inundated/saturated (3) y inundated (2) y saturated in upper 30cm (12in) (1)
	3b. Co	Between st	all that apply. codplain (1) ream/lake and other I and/upland (e.g. fores rian or upland corrido	st), complex (1)	(select one or do	• •
	3c. M	>0.7 (27.6i 0.4 to 0.7m x <0.4m (<15	n) (3) (15.7 to 27.6in) (2)		Check all distu ditch dike tile weir stormwater input	rbances observed point source (nonstormwater) filling/grading road bed/RR track dredging tt other-list
30.5 11 Subtotal Points		x None or no x Recovered Recovering	` '	-	erage. 4c. Habitat alteration	
	4b. H	Abbitat development Excellent (7 Very good Good (5) Moderately X Fair (3) Poor to fair Poor (1)	7) (6) Che good (4) g (2) g k g k g k g k g k g g g	ock all disturbated in the control of the control o	nces observed	shrub/sapling removal herbaceous/aquatic bed removal sedimentation dredging farming nutrient emrichment

30.5 subtotal this page

etland: Wetl				Date:	June 3, 2014
	and B			Rater:	Todd Crandall
0.5 subtotal first pa	990				
o.5 subtotal first pa	ige				
0.5	Metric 5.	Special Wetlands. (max 10) pts.)		
		at apply and score as indicated	,		
		Bog (10 pts)			
		Fen (10 pts)			
		Old Growth Forest (10 pts)			
		Mature forested wetland (5 pts)			
		Lake Erie coastal/tributary wetland			
		Lake Erie coastal/tributary wetland- Lake Plain Sand Prairies (Oak Ope	•	. ,	
		Relict Wet Prairies (10 pts)	illings) (10 pts)		
		Known occurrence state/federal thr	eatened or end	dangered species (10)	
		Significant migatory songbird/water		- : :	
		Category 1 Wetland. See Question	n 1 of Qualitativ	e Rating. (-10 pts)	
		Plant Communities, inters	persion, m	icrotopography. (max 20 pts.)
		d Vegetation Communities	Vegetetie	n Community Co	var Casla
	Score all pre	esent using 0 to 3 scale Aquatic bed	0	n Community Co	<0.1 ha (0.2471 acres) contiguous area
	1	Emergent		· · · · · · · · · · · · · · · · · · ·	mprises small part of wetland's
	0	Shrub	1		of moderate quality, or comprises a
	2	Forest		significant part but	is of low quality
		Mudflats		Present and either cor	mprises significant part of wetland's
		Open water	2		of moderate quality or comprises a small
		Other (list)		part and is of high	
	0		3	Present and comprise vegetation and is o	s significant part, or more, of wetland's
•		ntal (plan view) interspersion		vegetation and is o	in riigii quality
	Select only	High (5)	Narrative	Description of Ve	getation Quality
		Moderately high (4)			/or predominance of nonnative or
		Moderate (3)	low	disturbance tolerar	·
		Moderately low (2)		Native spp are domina	ant component of the vegetation,
	х	Low (1)			and/or disturbance tolerant native spp
		None (0)	moderate	· ·	nt, and species diversity moderate to
				threatened or enda	ut generally w/o presence of rare
		ge of invasive plants. ble 1 ORAM long			
		Add or deduct			tive species, with nonnative spp tolerant native spp absent or virtually
	points for co		high		pp diversity and often, but not always,
	po 10. 00	Extensive >75 % cover (-5)			e, threatened, or endangered spp
Phragmites australis		Moderate 25-75% cover (-3)		1	
Frangula alnus	х	Sparse 5-25% cover (-1)	Mudflat a	nd Open Water Cl	ass Quality
Typha angustifolia		Nearly Absent <5% cover (0)	0	Absent < 0.1 ha (0.247	71 acres)
Phalaris arundinacea		Absent (1)	1		0.2471 acres to 2.47 acres)
			2	1	na (2.47 acres 9.88 acres)
	6d. Microto	pography esent using 0 to 3 scale	3	High 4 ha (9.88 acres)) or more
	Score all pre	Vegetated hummocks/tussocks	Microtopo	ography Cover Sc	ale
	1	Coarse woody debris >15 cm (6")	0	Absent	
		Standing dead > 25 cm (10") dbh			nounts or if more common
	1	Amphibian breeding pools	1	of marginal quality	
		•	2	Present in moderate a	amounts, but not of highest
					amounts of highest quality
			3	Present in moderate of	=
			1	and of highest qua	lity

ORAM Summary Worksheet

		Check Answer	
		or Insert Score	Result
Narrative Rating	Question 1. Critical Habitat	☐ YES ⊠ NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	☐ YES ⊠ NO	If yes, Category 3.
	Question 3. High-Quality Natural Wetland	☐ YES ⊠ NO	If yes, Category 3.
	Question 4. Significant Bird Habitat	☐ YES ⊠ NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	☐ YES ⊠ NO	If yes, Category 1.
	Question 6. Bogs	☐ YES ⊠ NO	If yes, Category 3.
	Question 7. Fens	☐ YES ⊠ NO	If yes, Category 3.
	Question 8a. Old Growth Forest	☐ YES ⊠ NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	☐ YES ⊠ NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands – Restricted	☐ YES ⊠ NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands- Unrestricted with native plants	☐ YES ⊠ NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands – Unrestricted with invasive plants	☐ YES ⊠ NO	If yes, Category 3; may also be 1 or 2
	Question 10. Oak Openings	☐ YES ⊠ NO	If yes, Category 3
	Question 11. Relict Wet Prairies	☐ YES ⊠ NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and surrounding land use	7	
	Metric 3. Hydrology	11.5	
	Metric 4. Habitat	11	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	5	
	TOTAL SCORE	35.5	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

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

Final Category				
Choose One	Category 1		☐ Category 3	

Background Information

Name:	Todd Crandall		
Date:	June 3, 2014		
Affiliation:	Davey Resource Group		
Address:	295 South Water Street, Suite 300, Kent, Ohio 44240		
Phone Number:	330-673-5685, ext. 8033		
E-Mail Address:	Todd.crandall@davey.com		
Name of Wetland C			
Vegetation Communit(ies): Emergent, forested			
HGM Class(es): Depression			
Location of Wetland: Include map, address, north arrow, landmarks, distances, roads, etc.			
See Water Resources Delineation Report			
Lat/Long or UTM Coordinate:		41.1834, -80.8515	
USGS Quad Name:		Warren	
County:		Trumbull	
Township:		Lordstown	
Section and Subsection:		n/a	
Hydrologic Unit Code:		05030103	
Site Visit:		June 2, 2014	
National Wetland Inventory Map:		See Water Resources Delineation Report	
Ohio Wetland Inventory Map:		n/a	
Soil Survey:		See Water Resources Delineation Report	
Delineation Report/Map:		See Water Resources Delineation Report	

Name of Wetland:	Wetland C		
Wetland Size (acres, hectacres)	0.062 acre		
Sketch: Include north arrow, relation See Water Resources Delineation R	ship with other surface waters, vegetation zones, etc.		
Comments, Narrative Discussion, Justification of Category Changes:			
Final Score: 44	Category: modified 2		

Scoring Boundary Worksheet

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

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

End of Scoring Boundary Determination. Begin Narrative Rating On Next Page.

Narrative Rating

INSTRUCTIONS: Answer each of the following questions. Questions 1, 2, 3, and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), 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	Check One	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 Minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	☐ YES Wetland should be evaluated for possible Category 3 status. Go to Question 2	⊠ NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of, federal or state-listed threatened or endangered plant or animal species?	☐ YES Wetland is a Category 3 wetland. Go to Question 3	⊠ NO Go to Question 3
3	Documented High-Quality Wetland. Is the wetland on record in Natural Heritage Database as a high-quality wetland?	☐ YES Wetland is a Category 3 wetland. Go to Question 4	⊠ NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	☐ YES Wetland is a Category 3 wetland. Go to Question 5	⊠ NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than 80% areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis; or 2) an acidic pond created or excavated on mined lands that have little or no vegetation>	YES Wetland is a Category 1 wetland. Go to Question 6	⊠ NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows; 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp.; 3) the acidophilic mosses have >30% cover; 4) at least one species from Table 1 is present; and 5) the cover of invasive species (see Table 1) is <25%.	☐ YES Wetland is a Category 3 wetland. Go to Question 7	⊠ NO Go to Question 7
7	Ferns. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%.	☐ YES Wetland is a Category 3 wetland. Go to Question 8a	⊠ NO Go to Question 8a

8a	"Old Growth Forest." Is the wetland a forested wetland	☐ YES	⊠ NO
	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	Wetland is a Category 3 wetland.	Go to Question 8b
	attainable age for a species); little or no evidence of	wettarid.	
	human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multi-layered	Go to Question 8b	
	canopies; aggregations of canopy trees interspersed		
	with canopy gaps; and significant numbers of standing		
8b	dead snags and downed logs? Mature forested wetlands. Is the wetland a forested	YES	NO
OD	wetland with 50% or more of the cover of upper forest		
	canopy consisting of deciduous trees with large	Wetland should be	Go to Question 9a
	diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	groater than room (17.71m) abit.	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the	YES	⊠NO
	wetland located at an elevation less than 575 feet on the		
	USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	Go to Question 9b	Go to Question 10
9b	Does the wetland's hydrology result from measures	☐YES	□NO
	designed to prevent erosion and the loss of aquatic plants, <i>i.e.</i> , the wetland is partially hydrologically		
	restricted from Lake Erie due to lakeward or landward	Wetland should be	Go to Question 9c
	dikes or other hydrological controls?	evaluated for possible Category 3 status.	
		Category 5 status.	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary	YES	□NO
	hydrological influence, <i>i.e.</i> , the wetland is hydrologically unrestricted (no lakeward or upland border alterations),	Go to Question 9d	Go to Question 10
	or the wetland can be characterized as an "estuarine"	Go to Question 9d	Go to Question to
	wetland with lake and river influenced hydrology. These		
	include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by		
	submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-	☐ YES	□NO
	native or disturbance-tolerant native species can also be	Wetland is a Category 3	Go to Question 9e
	present.	wetland.	Go to Question se
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or disturbance-tolerant native plant species within its	YES	□NO
	vegetation communities?	Wetland should be	Go to Question 10
		evaluated for possible	
		Category 3 status.	
		Co to Ougation 40	
10	Lake Plain Sand Prairies (Oak Openings). Is the	Go to Question 10	NO
	wetland located in Lucas, Fulton, Henry, or Wood		
	Counties and can the wetland be characterized by the	Wetland is a Category 3	Go to Question 11
	following description: the wetland has a sandy substrate with interspersed organic matter, a water table often	wetland.	
	within several inches of the surface, and often with a	Go to Question 11	
	dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio	Go to Question 11	
	Department of Natural Resources Division of Natural		
	Areas and Preserves can provide assistance in		
11	confirming this type of wetland and its quality. Relict Wet Prairies. Is the wetland a relict wet prairie	YES	⊠NO
' '	community dominated by some or all of the species in	☐ 1E3	
	Table 1. Extensive prairies were formerly located in the	Wetland should be	Complete Quantitative
	Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties),	evaluated for possible	Rating
	northwest Ohio (e.g., Erie, Huron, Lucas, Wood	Category 3 status	
	Counties), and portions of western Ohio Counties (e.g.,	Complete Quantitative	
	Darke, Mercer, Miami, Montgomery, Van Wert, etc.)	Rating	

Table 1. Characteristic Plant Species

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

End of Narrative Rating. Begin Quantitative Rating On Next Page.

ORAM v. 5.0 Field Form Qua	antitative Rating				
Site: Ohio Com	merce Center ML>	(Date:	June 3, 2014
Wetlands: W	etland C			Rater: Todd Crandall	
			144	ORAM	
Wetland Acre	eage: 0.062+	ORAM Score:	44	Category:	modified 2
3 3 Subtotal Points	Select one size class >50 ac 25 to < 10 to <	nd Area (size). (max (standard assign score). Tres (>20.2ha) (6 pts) To acres (10.1 to <20.2ha) (4 pts) To acres (4 to <10.1ha) (4 pts) Cares (1.2 to <4ha) (3 pts) Cares (0.12 to <1.2ha) (2 to <0.3 acres (0.04 to <0.12ha) Tres (0.04ha) (0 pts)	5 pts) ts) pts)		
11 8 Subtotal Points	2a. Calculate average WIDE. x MEDIU NARRO VERY I 2b. Intensity of surro VERY L x MODER	d buffers and surroung to buffer width (select one, or Buffers average 50m (164ff M. Buffers average 25m to DW. Buffers average 10m to NARROW. Buffers average 10m to NARROW. Buffers average 20m and 10m and	do not double che t) or more around <50m (82 to <16 to <25m (32ft to < <10m (<32ft) are or double check brest, prairie, sav and, young secon , fenced pasture,	wetland perimeter (7 4ft) around wetland perimeter (82ft) around (erimeter (4) perimeter (1) er (0) etc. (7) age, new fallow field. (3)
23.5 12.5 Subtotal Points	3a. Sources of Water High phother good and Precipit Season Perenn 3b. Connectivity. Source X Between Season Remains Remains Season Remains Season Remains Season Remains Season Remains S	logy. (max 30 pts) ir. Score all that apply. It groundwater (5) iroundwater (3) iation (1) ial/Intermittent surface water ial surface water (lake or structure all that apply. In stream/lake and other hur wetland/upland (e.g. forest),	r (3) eam) (5) 3 man use (1)	Semi- to per Regularly int X Seasonally i X Seasonally se. Modifications to na (select one or dou	ble check & average) manently inundated/saturated (4) undated/saturated (3) nundated (2) saturated in upper 30cm (12in) (1) tural hydrologic regime. ble check & average) ne apparent (12) (7)
	Part of 3c. Maximum water >0.7 (2 0.4 to 0 x <0.4m	riparian or upland corridor (1 depth. Select only 1. 7.6in) (3) 7.7m (15.7 to 27.6in) (2) (<15.7in) (1)		Check all disturby ditch dike tile weir stormwater input	o recovery (1) Dances observed point source (nonstormwater) filling/grading road bed/RR track dredging other- list
36 12.5 Subtotal Points	4a. Substrate disturt None o x Recove Recent 4b. Habitat develop: Excelle Very go x Good (8	ering (2) or no recovery (1) ment. Select one. Int (7) Int (7	e check and aver 4 x all disturbance	c. Habitat alteration. None or not x Recovered x Recovering Recent or not ces observed	• •

36 subtotal this page

36 subtotal first 36 0 ubtotal Points	page Metric 5. Special Wetlands. (max 1		Rater: Todd Crandall
36 0			
36 0			
	Metric 5. Special Wetlands, (max 1		
btotal Points		0 pts.)	
	Check all that apply and score as indicated		
	Bog (10 pts)		
	Fen (10 pts) Old Growth Forest (10 pts)		
	Mature forested wetland (5 pts)		
	Lake Erie coastal/tributary wetland	d-unrestricted hy	vdrology (10 pts)
	Lake Erie coastal/tributary wetland	-	
	Lake Plain Sand Prairies (Oak Op	enings) (10 pts)	
	Relict Wet Prairies (10 pts) Known occurrence state/federal th	reatened or end	dangered species (10)
	Significant migatory songbird/water		
	Category 1 Wetland. See Question	on 1 of Qualitativ	ve Rating. (-10 pts)
44	M		
44 8 ubtotal Points	Metric 6. Plant Communities, inters	spersion, m	icrotopograpny. (max 20 pts.)
ibiolai Poinis	6a. Wetland Vegetation Communities Score all present using 0 to 3 scale	Vegetatio	n Community Cover Scale
	Aquatic bed	0	Absent or comprises <0.1 ha (0.2471 acres) contiguous area
	1 Emergent		Present and either comprises small part of wetland's
	1 Shrub	1	vegetation and is of moderate quality, or comprises a significant part but is of low quality
	2 Forest Mudflats		
	Open water	2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small
	Other (list)		part and is of high quality
		3	Present and comprises significant part, or more, of wetland's
	6b. Horizontal (plan view) interspersion Select only one		vegetation and is of high quality
	High (5)	Narrative	Description of Vegetation Quality
	Moderately high (4)	low	Low spp diversity and/or predominance of nonnative or
	Moderate (3)	-	disturbance tolerant native species
	x Moderately low (2) Low (1)		Native spp are dominant component of the vegetation, although nonnative and/or disturbance tolerant native spp
	None (0)	moderate	can also be present, and species diversity moderate to
			moderately high, but generally w/o presence of rare
	6c. Coverage of invasive plants.		threatened or endangered spp
	Refer to Table 1 ORAM long form for list. Add or deduct		A predominance of native species, with nonnative spp
	points for coverage	high	and/or disturbance tolerant native spp absent or virtually absent, and high spp diversity and often, but not always,
	Extensive >75 % cover (-5)		the presence of rare, threatened, or endangered spp
Phragmites austra	Moderate 25-75% cover (-3)		
Frangula alnı			nd Open Water Class Quality
Typha angustifo Phalaris arundinace	 	1	Absent <0.1 ha (0.2471 acres) Low 0.1 ha to <1 ha (0.2471 acres to 2.47 acres)
rnaians arunumace	Absent (1)	2	Moderate 1 ha to <4 ha (2.47 acres 9.88 acres)
	6d. Microtopography	3	High 4 ha (9.88 acres) or more
	Score all present using 0 to 3 scale		
	Vegetated hummocks/tussocks		ography Cover Scale
	1 Coarse woody debris >15 cm (6") 1 Standing dead > 25 cm (10") dbh		Absent Present very small amounts or if more common
	1 Amphibian breeding pools	1	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

ORAM Summary Worksheet

		Check Answer	Result
		or Insert Score	rooun
Narrative Rating	Question 1. Critical Habitat	☐ YES ⊠ NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	☐ YES ⊠ NO	If yes, Category 3.
	Question 3. High-Quality Natural Wetland	☐ YES ⊠ NO	If yes, Category 3.
	Question 4. Significant Bird Habitat	☐ YES ⊠ NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	☐ YES ⊠ NO	If yes, Category 1.
	Question 6. Bogs	☐ YES ⊠ NO	If yes, Category 3.
	Question 7. Fens	☐ YES ⊠ NO	If yes, Category 3.
	Question 8a. Old Growth Forest	☐ YES ⊠ NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	☐ YES ⊠ NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands – Restricted	☐ YES ⊠ NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands- Unrestricted with native plants	☐ YES ⊠ NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands – Unrestricted with invasive plants	☐ YES ⊠ NO	If yes, Category 3; may also be 1 or 2
	Question 10. Oak Openings	☐ YES ⊠ NO	If yes, Category 3
	Question 11. Relict Wet Prairies	☐ YES ⊠ NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	3	
	Metric 2. Buffers and surrounding land use	8	
	Metric 3. Hydrology	12.5	
	Metric 4. Habitat	12.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	8	
	TOTAL SCORE	44	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

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

		Final Category		
Choose One	☐ Category 1		☐ Category 3	

Background Information

Name:	Todd Crandall					
Date:	June 3, 2014	June 3, 2014				
Affiliation:	Davey Resour	Davey Resource Group				
Address:	295 South Wa	ter Street, Suite 300, Kent, Ohio 44240				
Phone Number:	330-673-5685,	, ext. 8033				
E-Mail Address:	Todd.crandall@	@davey.com				
Name of Wetland: \	Wetland D					
Vegetation Commun	nit(ies): Emerger	nt, forested				
HGM Class(es): Dep	oression					
Location of Wetland	: Include map, a	address, north arrow, landmarks, distances, roads, etc.				
See Water Resource	es Delineation R	Report				
Lat/Long or UTM Co	ordinate:	41.1832, -80.8546				
USGS Quad Name:		Warren				
County:		Trumbull				
Township:		Lordstown				
Section and Subsec	tion:	n/a				
Hydrologic Unit Cod	e:	05030103				
Site Visit:		June 2, 2014				
National Wetland Inventory Map:		See Water Resources Delineation Report				
Ohio Wetland Inventory Map:		n/a				
Soil Survey:		See Water Resources Delineation Report				
Delineation Report/N	Лар:	See Water Resources Delineation Report				

Name of Wetland:	Wetland D
Wetland Size (acres, hectacres)	0.012 acre
Sketch: Include north arrow, relation See Water Resources Delineation R	ship with other surface waters, vegetation zones, etc.
Comments, Narrative Discussion, Ju	ustification of Category Changes:
Final Score: 35	Category: modified 2

Scoring Boundary Worksheet

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

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

End of Scoring Boundary Determination. Begin Narrative Rating On Next Page.

Narrative Rating

INSTRUCTIONS: Answer each of the following questions. Questions 1, 2, 3, and 4 should be answered based on information obtained from the site visit or the literature *and* by submitting a Data Services Request to the Ohio Department of Natural Resources, Division of Natural Areas and Preserves, Natural Heritage Data Services, 1889 Fountain Square Court, Building F-1, Columbus, Ohio 43224, 614-265-6453 (phone), 614-265-3096 (fax), 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	Check One	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 Minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	☐ YES Wetland should be evaluated for possible Category 3 status. Go to Question 2	⊠ NO Go to Question 2
2	Threatened or Endangered Species. Is the wetland known to contain an individual of, or documented occurrences of, federal or state-listed threatened or endangered plant or animal species?	☐ YES Wetland is a Category 3 wetland. Go to Question 3	⊠ NO Go to Question 3
3	Documented High-Quality Wetland. Is the wetland on record in Natural Heritage Database as a high-quality wetland?	☐ YES Wetland is a Category 3 wetland. Go to Question 4	⊠ NO Go to Question 4
4	Significant Breeding or Concentration Area. Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	☐ YES Wetland is a Category 3 wetland. Go to Question 5	⊠ NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than 80% areal cover) by Phalaris arundinacea, Lythrum salicaria, or Phragmites australis; or 2) an acidic pond created or excavated on mined lands that have little or no vegetation>	YES Wetland is a Category 1 wetland. Go to Question 6	⊠ NO Go to Question 6
6	Bogs. Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows; 2) supports acidophilic mosses, particularly <i>Sphagnum</i> spp.; 3) the acidophilic mosses have >30% cover; 4) at least one species from Table 1 is present; and 5) the cover of invasive species (see Table 1) is <25%.	☐ YES Wetland is a Category 3 wetland. Go to Question 7	⊠ NO Go to Question 7
7	Ferns. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral pH (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%.	☐ YES Wetland is a Category 3 wetland. Go to Question 8a	⊠ NO Go to Question 8a

8a	"Old Growth Forest." Is the wetland a forested wetland	☐ YES	⊠ NO
	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	Wetland is a Category 3 wetland.	Go to Question 8b
	attainable age for a species); little or no evidence of	wettarid.	
	human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multi-layered	Go to Question 8b	
	canopies; aggregations of canopy trees interspersed		
	with canopy gaps; and significant numbers of standing		
8b	dead snags and downed logs? Mature forested wetlands. Is the wetland a forested	YES	NO
OD	wetland with 50% or more of the cover of upper forest		
	canopy consisting of deciduous trees with large	Wetland should be	Go to Question 9a
	diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	evaluated for possible	
	greater than 400m (17.7m) abri.	Category 3 status.	
		Go to Question 9a	
9a	Lake Erie coastal and tributary wetlands. Is the	YES	⊠NO
	wetland located at an elevation less than 575 feet on the		
	USGS map, adjacent to this elevation, or along a	Go to Question 9b	Go to Question 10
9b	tributary to Lake Erie that is accessible to fish? Does the wetland's hydrology result from measures	ΠYES	□NO
	designed to prevent erosion and the loss of aquatic		
	plants, <i>i.e.</i> , the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward	Wetland should be	Go to Question 9c
	dikes or other hydrological controls?	evaluated for possible	
	,	Category 3 status.	
		Go to Question 10	
9c	Are Lake Erie water levels the wetland's primary	YES	□NO
	hydrological influence, <i>i.e.</i> , the wetland is hydrologically		
	unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine"	Go to Question 9d	Go to Question 10
	wetland with lake and river influenced hydrology. These		
	include sandbar deposition wetlands, estuarine		
	wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.		
9d	Does the wetland have a predominance of native	☐YES	□NO
	species within its vegetation communities, although non- native or disturbance-tolerant native species can also be		
	present.	Wetland is a Category 3 wetland.	Go to Question 9e
	•	wettand.	
		Go to Question 10	
9e	Does the wetland have a predominance of non-native or	☐ YES	□NO
	disturbance-tolerant native plant species within its vegetation communities?	Mattend should be	Co to Overtion 10
	vogotation communities.	Wetland should be evaluated for possible	Go to Question 10
		Category 3 status.	
4.0		Go to Question 10	
10	Lake Plain Sand Prairies (Oak Openings). Is the wetland located in Lucas, Fulton, Henry, or Wood	YES	⊠ NO
	Counties and can the wetland be characterized by the	Wetland is a Category 3	Go to Question 11
	following description: the wetland has a sandy substrate	wetland.	23 13 44300001111
	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	Go to Question 11	
	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.		
11	Relict Wet Prairies. Is the wetland a relict wet prairie	YES	⊠ NO
	community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the	Wetland should be	Complete Quantitative
	Darby Plains (Madison and Union Counties), Sandusky	evaluated for possible	Rating
	Plains (Wyandot, Crawford, and Marion Counties),	Category 3 status	- raing
	northwest Ohio (e.g., Erie, Huron, Lucas, Wood Counties), and portions of western Ohio Counties (e.g.,		
	Darke, Mercer, Miami, Montgomery, Van Wert, etc.)	Complete Quantitative Rating	
		i ivaliiu	İ

Table 1. Characteristic Plant Species

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

End of Narrative Rating. Begin Quantitative Rating On Next Page.

Wetland Acraage: 0.012+ ORAM Score: 35	ORAM v. 5.0 Field For	m Quantitative Ra	ating						
Wettand Acreage: 0.012+	Site: Ohio	Commerce	Center MLX			D	ate:	June 3, 2014	
Metric 1. Wetland Area (sizo). (max 6 pts)	Wetlands:	Wetland	D			Ra	ater:	Todd Crandall	
Metric 1. Wetland Area (sizo). (max 6 pts)						ORA	М		
Subtotal Points Select can be seen and eastern access.	Wetland A	Acreage:	0.012+	ORAM Score:	35			modified 2	
Select rane size class and assign score. Select rane size class and assign score. 2 to 4-50 acres (-2.0 to -2.0 2ml) (5 pts) 2 to 4-50 acres (-2.0 to -2.0 2ml) (5 pts) 3 to 4-10 acres (1.0 to -2.0 2ml) (5 pts) 3 to 4-10 acres (1.0 to -2.0 2ml) (5 pts) 0 to -2.5 acres (4.0 to -2.0 2ml) (5 pts) 0 to -0.1 acres (0.0 4 to -0.0 2ml) (5 pts) 10 to -2.5 acres (4.0 to -2.0 2ml) (5 pts) 2 cackolines average buffer with (select one, do not double sheeks) Webric 2. Upland buffers and surrounding land use. (max 14 pts) 2 cackolines average buffer with (select one, do not double sheeks) Webric 2. Upland buffers and surrounding land use. (max 14 pts) 2 cackolines average buffer with (select one do not double sheeks) Webric 2. Upland buffers and surrounding land use. (max 14 pts) 2 cackolines average buffer with (select one acron of visual maximal perimeter (7) x MEDIUM. Buffers average 5 ml (1641) or more around wettern perimeter (4) x MARKOW. Buffers average 5 ml (1641) or more around wettern perimeter (4) x MARKOW. Buffers average 5 ml (641) or more around wettern perimeter (7) x MEDIUM. Buffers average 5 ml (641) or more around wettern perimeter (7) x MEDIUM. Buffers average 5 ml (641) or more around wettern perimeter (7) x MEDIUM. Buffers average 5 ml (641) or more around wettern perimeter (7) x MEDIUM. Buffers average 5 ml (641) or more around wettern perimeter (7) x MEDIUM. Buffers average 5 ml (641) or more around wettern perimeter (9) 2 buffers (1.0 ml or surrounding land use (acet on or double benefit a very land to surrounding land use (acet on or double benefit (4) x MODEFATELY Helfs. Residential, frone pasture, row cropping, mining, construction. (1) x Subtotal Points 4 buffers (1.0 ml or maximal land papty) fight of than, industrial, open pasture, row cropping, mining, construction. (1) x Subtotal Points 4 buffers (1.0 ml or maximal land papty) fight of than at apply. fight of the around land land than at a	E-		-		•		_		
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10 to 2.5 acres (4 to +10 hall) (4 pls)									
So - 10 acres (1.2 to -4ha) (2 pits)				, , ,	. ,				
0.3 to <.3 acres (0.04ha) (0 pts)					ts)				
O. 1 to -0.3 acres (O.04 to -0.1.21a) () pt) -0.1 acres (o.04a) () pts) -0.2 acres (o.04a) () pts					ots)				
Metric 2. Upland buffers and surrounding land use. (max 14 pts) 20. Colculate average buffer width (seeker one, do not double check) Very Louise average buffer width (seeker one, do not double check) Very NARROW. Buffers average 25m to +50m (92 to <164h) around wetland perimeter (1) VERY LOW. 2nd growth or older forest, prairie, avaragen (1) VERY LOW. 2nd growth or older forest, prairie, avaragen (1) VERY LOW. 2nd growth or older forest, prairie, avaragen (1) VERY LOW. 2nd growth or older forest, prairie, avaragen (1) VERY LOW. 2nd growth or older forest, prairie, avaragen (1) VERY LOW. 2nd growth or older forest, prairie, avaragen (1) VERY LOW. 2nd growth or older forest, prairie, avaragen (1) VERY LOW. 2nd growth or older forest, prairie, avaragen (1) VERY LOW. 2nd growth or older forest, prairie, avaragen (1) VERY LOW. 2nd growth or older forest, prairie, avaragen, which is a prairie (1) VERY LOW. 2nd growth or older forest, prairie, avaragen, which is a prairie (1) VERY LOW. 2nd growth or older forest, prairie, avaragen, which is a prairie (1) VERY LOW. 2nd growth or older forest, prairie, avaragen, etc. (7) VERY LOW. 2nd growth or older forest, prairie, avaragen, etc. (7) VERY LOW. 2nd growth or older forest, prairie, avaragen, etc. (7) VERY LOW. 2nd growth or older forest, prairie, avaragen, etc. (7) VERY LOW. 2nd growth or older forest, prairie, avaragen, etc. (7) VERY LOW. 2nd growth or older forest, prairie, avaragen, etc. (7) VERY LOW. 2nd growth or older forest, prairie, avaragen, etc. (7) VERY LOW. 2nd growth or older forest, prairie, avaragen, etc. (7) VERY LOW. 2nd growth or older forest, prairie, avaragen, etc. (7) VERY LOW. 2nd growth or older forest, prairie, avaragen, etc. (7) VERY LOW. 2nd growth or older forest, prairie, avaragen, etc. (7) VERY LOW. 2nd growth or older forest, prairie, avaragen, etc. (7) VERY LOW. 2nd growth or older forest, prairie, etc. (7) VERY LOW. 2nd growth or older forest, prairie, etc. (7) VERY LOW. 2nd gr									
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Subtotal Points	10 8	Metr	ic 2 Unland b	uffers and surrour	nding land u	isa (may 14	nts)		
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2b. Intensity of surrounding land use isselect one or double check & average.				_					
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X LOW. Old field (>10 years), shrubland, young second growth forest. (5)		<u>2b. In</u>	t <u>ensity</u> of surround	ling land use (select one	or double chec	k & average)			
Metric 3. Hydrology. (max 30 pts) Subtotal Points Subtotal P				=	-			tc. (7)	
HiGH. Urban, industrial, open pasture, row cropping, mining, construction. (1) 21.5				, , ,,	,, ,	J	` '	age new fallow field (3)	
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High pH groundwater (5)	<u> </u>								
Other groundwater (3)	Subtotal Points	3a. Se						• /	
Seasonal/Intermittent surface water (3) Perennial surface water (lake or stream) (5) 3e. Modifications to natural hydrologic regime. 3e. Connectivity. Score all that apply. 100 year floodplain (1) Between stream/lake and other human use (1) Part of vietland/upland (e.g. forest), complex (1) Part of riparian or upland corridor (1) 3c. Maximum water depth. Select only 1. 20.7 (27.6in) (3) 0.4 to 0.7m (15.7 to 27.6in) (2) x < 0.4m (<15.7in) (1) 3ditch point source (nonstormwater) dike dike point source (nonstormwater) dike point source (nonsto							-		
Perennial surface water (lake or stream) (5) 3e. Modifications to natural hydrologic regime. 3b. Connectivity. Score all that apply.			x Precipitatio	n (1)		x Seaso	onally ir	nundated (2)	
3b. Connectivity. Score all that apply. 100 year floodplain (1)					. ,	x Seaso	onally s	saturated in upper 30cm (12in) (1)	
3b. Connectivity. Score all that apply. 100 year floodplain (1)			Perennial	surface water (lake or str		3e Modifications	s to nat	tural hydrologic regime	
100 year floodplain (1) Between stream/lake and other human use (1) X Part of wetland/upland (e.g. forest), complex (1) Recovering (3) Recovering (4) Recovering (4) Recovering (5) Recovering (6)		3b. C	onnectivity. Score	all that apply.					
X Part of wetland/upland (e.g. forest), complex (1) Recovering (3) Recent or no recovery (1)			100 year flo	oodplain (1)		None	or nor	ne apparent (12)	
Part of riparian or upland corridor (1) 3c. Maximum water depth. Select only 1.					٠,,		,	,	
3c. Maximum water depth. Select only 1.					,		_		
Subtotal Points P			r art or ripa	nair or apiana comaci (1	,				
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Subtotal Points Substrate disturbance. Score one or double check and average. Substrate disturbance. Score one or double check and average.			· ·	, , ,		=		= '	
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Site: Ohio Co	mmerce	Center MLX		Date:	June 3, 2014
	Wetland I			Rater:	Todd Crandall
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32 0		ric 5. Special Wetlands. (max 1	10 pts.)		
Subtotal Points	Check	R all that apply and score as indicated Bog (10 pts)			
		Fen (10 pts)			
		Old Growth Forest (10 pts)			
		Mature forested wetland (5 pts)			
		Lake Erie coastal/tributary wetlan	-		
		Lake Erie coastal/tributary wetlan			
		Lake Plain Sand Prairies (Oak Op Relict Wet Prairies (10 pts)	penings) (10 pts)	1	
		Known occurrence state/federal to	hreatened or end	dangered species (10)	
		Significant migatory songbird/wat	erfowl habitat or	usage (10 pts)	
		Category 1 Wetland. See Questi	on 1 of Qualitativ	ve Rating. (-10 pts)	
35 3 Subtotal Points		ric 6. Plant Communities, inter	spersion, m	icrotopography.	(max 20 pts.)
Subtotal Points		Vetland Vegetation Communities all present using 0 to 3 scale	Vegetatio	n Community Co	over Scale
		Aquatic bed	0		s <0.1 ha (0.2471 acres) contiguous area
		0 Emergent		Present and either c	omprises small part of wetland's
		0 Shrub	1	vegetation and is significant part bu	of moderate quality, or comprises a
		2 Forest Mudflats			
		Open water	2		omprises significant part of wetland's of moderate quality or comprises a small
		Other (list)		part and is of high	
	<u>6b. H</u>	lorizontal (plan view) interspersion	3	Present and comprise vegetation and is	ses significant part, or more, of wetland's of high quality
	Select	t only one	Namativa	December of W	la matatian Ovality
		High (5) Moderately high (4)	Narrative	· ·	'egetation Quality d/or predominance of nonnative or
		Moderate (3)	low		ant native species
		Moderately low (2)		Native spp are domi	nant component of the vegetation,
		x Low (1)		although nonnativ	ve and/or disturbance tolerant native spp
		None (0)	moderate		ent, and species diversity moderate to but generally w/o presence of rare
	6c C	overage of invasive plants.		threatened or end	
		to Table 1 ORAM long		A predominance of r	native species, with nonnative spp
	form f	or list. Add or deduct	high		te tolerant native spp absent or virtually
	points	for coverage	riigii		spp diversity and often, but not always, are, threatened, or endangered spp
Phragmites austr	ralia	Extensive >75 % cover (-5) Moderate 25-75% cover (-3)		the presence of the	are, illeaterieu, or endangereu spp
Frangula al		x Sparse 5-25% cover (-1)	Mudflat a	nd Open Water C	Class Quality
Typha angustit	folia	Nearly Absent <5% cover (0)	0	Absent <0.1 ha (0.24	471 acres)
Phalaris arundina	cea	Absent (1)	1		(0.2471 acres to 2.47 acres)
	C-l A	diamatan asusuku	2		ha (2.47 acres 9.88 acres)
		dicrotopography all present using 0 to 3 scale	3	High 4 ha (9.88 acre	s) or more
		Vegetated hummocks/tussocks	Microtopo	ography Cover S	cale
		1 Coarse woody debris >15 cm (6")	0	Absent	
		Standing dead > 25 cm (10") dbh Amphibian breeding pools	1	Present very small a of marginal qualit	mounts or if more common y
			2	quality or in small	amounts, but not of highest amounts of highest quality
			3	Present in moderate and of highest qu	=
35 GRAND	TOTAL	(max 100 pts) E	End of Quant	iitative Rating. C	omplete Categorization Worksheets.

ORAM Summary Worksheet

		Check Answer	
		or Insert Score	Result
Narrative Rating	Question 1. Critical Habitat	☐ YES ⊠ NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	☐ YES ⊠ NO	If yes, Category 3.
	Question 3. High-Quality Natural Wetland	☐ YES ⊠ NO	If yes, Category 3.
	Question 4. Significant Bird Habitat	☐ YES ⊠ NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	☐ YES ⊠ NO	If yes, Category 1.
	Question 6. Bogs	☐ YES ⊠ NO	If yes, Category 3.
	Question 7. Fens	☐ YES ⊠ NO	If yes, Category 3.
	Question 8a. Old Growth Forest	☐ YES ⊠ NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	☐ YES ⊠ NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands – Restricted	☐ YES ⊠ NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands- Unrestricted with native plants	☐ YES ⊠ NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands – Unrestricted with invasive plants	☐ YES ⊠ NO	If yes, Category 3; may also be 1 or 2
	Question 10. Oak Openings	☐ YES ⊠ NO	If yes, Category 3
	Question 11. Relict Wet Prairies	☐ YES ⊠ NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
	Metric 2. Buffers and surrounding land use	8	
	Metric 3. Hydrology	11.5	
	Metric 4. Habitat	10.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	3	
	TOTAL SCORE	35	Category based on score breakpoints 2

Complete Wetland Categorization Worksheet

Wetland Categorization Worksheet

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

Final Category					
Choose One	☐ Category 1		☐ Category 3		

Appendix J References

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Appendix K Davey Resource Group Personnel Profiles

Shawn Bruzda is a biologist with Davey Resource Group, having served in this capacity for 10 years. Mr. Bruzda focuses on ecological surveys involving fish and macroinvertebrate identification, amphibian surveys, and data analysis. He is proficient with the Index of Biotic Integrity (IBI), the Modified Index of Well-Being (MIWB), and the Invertebrate Community Index (ICI), all used by Ohio Environmental Protection Agency to set minimum criteria index scores for use designations in water quality standards. He works on large- and small-scale bat survey projects, assisting with mistnet surveys, habitat evaluations, and radio tracking studies to determine foraging patterns; endangered species and habitat studies; invasive species management; and water quality studies. Mr. Bruzda has completed training through Ohio Environmental Protection Agency for conducting the following: Qualitative Habitat Evaluation Index (QHEI); Ohio Rapid Assessment Method (ORAM) v.5; and Vegetation Index of Biotic Integrity (VIBI). Proficient with AutoCAD[®] 2012 and ArcGIS[™] 10 software, Mr. Bruzda creates maps for a wide variety of natural resource projects. He is a Certified Commercial Pesticide Applicator in Ohio (ID# 119080). Mr. Bruzda is a graduate of Kent State University, having received a Bachelor of Science degree in biological sciences with an emphasis in aquatic ecology.

Ana Burns, M.S.E.S., is a biologist and coordinator of ecological services for Davey Resource Group's Natural Resource Consulting group. Ms. Burns has 13 years of experience in the natural resources and environmental planning fields and at Davey Resource Group is responsible for overseeing all ecological surveys and environmental planning studies, as well as the specialized management of ecological and wetlands permitting projects, mitigation bank planning and monitoring projects, and natural resource restoration design projects. She is knowledgeable of state and federal stream and wetlands regulations, all aspects of Section 401 and 404 permitting, isolated wetlands regulations, and the federal mitigation rule for compensatory mitigation and its application to mitigation banking. Ms. Burns has managed multiple Section 401 and 404 permitting projects along with numerous natural resource inventories and planning projects. She has completed the Vegetation Index of Biotic Integrity (VIBI) training through Ohio Environmental Protection Agency. In addition, Ms. Burns has provided assistance with grant writing and managing grant-funded projects. Ms. Burns has coordinated and facilitated public meetings and hearings and has assisted in the development of various planning documents including greenways planning, watershed planning, and urban forestry management plans. With a background in urban and rural planning, she is well versed in working with planning commissions, steering committees, and local political groups and has given many presentations at a variety of venues. Ms. Burns is a board member and secretary of the Tinkers Creek Watershed Partnership and active in the Ohio Lake Management Society. Ms. Burns graduated from Indiana University with a Bachelor of Science degree in biology and holds a Master of Science degree in environmental science from IU's School of Public and Environmental Affairs.

Ken Christensen is a senior biologist with more than 30 years of experience in the natural resource field. Mr. Christensen is involved in all aspects of wetlands and stream restoration projects, including design, planting, and implementation. He is also involved with monitoring of mitigation and restoration projects to ensure that such endeavors reach a successful conclusion. Mr. Christensen assists in plant surveys and wetlands delineations and in the field identification of vertebrate populations, especially amphibians, reptiles, and mammals. Proficient with AutoCAD® software, Mr. Christensen is responsible for managing the Global Navigation Satellite System (GNSS) data collection and AutoCAD® mapping operations for all natural resource studies.

As an International Society of Arboriculture Certified Arborist (OH-0690A), he performs tree appraisals and inventories and also develops tree preservation plans. Mr. Christensen is a LEED® Accredited Professional and has received the following training: American Ecological Engineering Society Wetland Mitigation Design from Virginia Polytechnic Institute and State University; AutoCAD® for Stream Restoration and Monitoring from North Carolina Cooperative Extension; North Carolina Stream Restoration Institute's Stream Classification and Assessment Program and Stream Restoration Design Principles. Mr. Christensen is prequalified by the Ohio Department of Transportation for wetland mitigation. He has also completed training through Ohio Environmental Protection Agency for conducting the following: Headwater Habitat Evaluation Index (HHEI); Qualitative Habitat Evaluation Index (QHEI); Ohio Rapid Assessment Method (ORAM) v.5; and Vegetation Index of Biotic Integrity (VIBI). He is a member of the International Society of Arboriculture, Ecological Landscaping Association, and Northern Ohio Association of Herpetologists. Mr. Christensen holds a Bachelor of Science degree in conservation from Kent State University.

Todd Crandall, M.En., is a senior wetlands scientist with 22 years of experience performing wetlands delineations in Ohio and adjacent states. Mr. Crandall also performs ecological surveys, vegetation cover mapping, plant identification, and Section 401/404 and isolated wetlands permitting. He also contributes to the planning and design of restoration wetlands and prepares wetland mitigation reports. Mr. Crandall is responsible for vegetation monitoring at numerous wetlands mitigation sites throughout Ohio. He has completed large-scale wetlands and natural resource inventories for the Cuyahoga Valley National Park, as well as Cuyahoga, Medina, Portage, and Summit Counties in Northeast Ohio. He is certified to perform wetlands studies by the U.S. Army Wetlands Delineator Certification Program, and is a certified Professional Wetland Scientist through the Society of Wetland Scientists. He has completed the 40-hour OSHA health and safety training (OSHA Standard 29 CFR 1910.120). Mr. Crandall has successfully completed the Ohio Department of Transportation's (ODOT) Ecological Training hosted by the Office of Environmental Services. He is ODOT prequalified for ecological surveys and wetland mitigation. Mr. Crandall has also completed training through the Ohio Environmental Protection Agency for the following: Headwater Habitat Evaluation Index (HHEI); Qualitative Habitat Evaluation Index (QHEI); Ohio Rapid Assessment Method (ORAM) v.5; and Vegetation Index of Biotic Integrity (VIBI). He holds a Bachelor of Science degree from Hiram College in biology and a Master's degree in environmental science from Miami University.

Valerie Locker is a biologist with Davey Resource Group's Natural Resource Consulting group. Ms. Locker has five years of experience in the natural resources field and assists with a variety of fieldwork, including ecological surveys, wetland and stream delineations, ecological surveys, endangered species surveys, wetland vegetation assessments, and compensatory mitigation project monitoring. She also assists with Section 404/401 and Ohio isolated wetland permit applications for private, public, and transportation projects, annual compensatory mitigation monitoring reports, and compensatory mitigation monitoring plans. Ms. Locker previously worked for Davey as a field arborist and quality manager on the Asian Longhorned Beetle (ALB) Program in Worcester, Massachusetts. She identified ALB host trees and completed visual inspection for damage signs of the invasive beetle. In her role as quality manager, she designed and coordinated the quality control program including field survey, data collection, and data preparation for the USDA. She is a certified arborist with the Massachusetts Arborist Association (2405) and the International Society of Arboriculture (NE-6495A). She received the Golden Oak award during the month-long Davey Institute of Tree Sciences training program and completed a wetland delineation certificate through Rutgers University. Ms. Locker graduated from Clark University with a Bachelor of Arts degree in biology (ecology and evolution) and a minor in geography.

Judith Mitchell is a senior project manager with 16 years of experience in the natural resource field. Her experience includes wetland delineations, water resource assessments, endangered species habitat evaluation, mitigation design and monitoring, water resource permitting, and erosion and sediment control plans. She is responsible for developing mitigation designs, supervising wetland and stream mitigation construction, and monitoring the success of wetland and stream restoration projects. She has developed and implemented strategic invasive plant control plans including the use of Visual Evaluation Surveys (VES) and stem counts to determine the success of the projects. She executes a variety of ecological studies including plant surveys, amphibian studies, endangered species habitat surveys, and macroinvertebrate surveys. She has developed Stormwater Pollution Prevention Plans (SWPPP) for many construction projects. She has prepared numerous applications for U.S. Army Corps of Engineers (USACE) nationwide permit authorization, individual 404 USACE permits, individual Ohio EPA 401 Water Quality Certifications, Ohio EPA Isolated wetland permits, mitigation bank authorization, Notice of Intents (NOI) under the National Pollutant Discharge Elimination System (NPDES), and local water resource permitting. Ms. Mitchell is responsible for the oversight of all Dominion East Ohio Gas pipeline projects including scoping, bidding, preparation and review of deliverables, and invoicing. Ms. Mitchell graduated from Kent State University with a Bachelor of Science degree in conservation with an emphasis in water resources.

Jeff Pettit is a field technician with Davey Resource Group. Mr. Pettit contributes to a variety of natural resource consulting projects including invasive species management, restoration planting, erosion control, tree preservation, tree inventories, and ecological surveys. He is proficient with the identification of native Ohio flora and fauna, as well as the identification of non-native invasive plant species. Mr. Pettit has experience with the operation of heavy equipment to complete habitat restoration projects and the utilization of GIS and GPS technologies to develop and interpret maps. Prior to his employment with Davey Resource Group, Mr. Pettit controlled invasive plant populations for the Ohio Chapter of The Nature Conservancy. As a key member of the Grand River Strike Team, he treated over 500 acres of the Grand River watershed in Northeast Ohio to eliminate numerous invasive plant species. Mr. Pettit also contributed to the Cleveland Metroparks Plant Community Assessment Program (PCAP) as a botany technician where he completed extensive plant inventories throughout the park system and evaluated plant communities using the Vegetation Index of Biotic Integrity (VIBI). Mr. Pettit is a retired armed forces veteran with more than nine years of service in the Army National Guard. He graduated from Kent State University with a Bachelor of Science degree in conservation biology.

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Case No(s). 15-0488-GA-BLN

Summary: Application of Dominion East Ohio continued - Attachments J-K electronically filed by Teresa Orahood on behalf of Sally Bloomfield