

Letter of Notification for the South Canton – Torrey 138 kV Transmission Line Project



An **AEP** Company

BOUNDLESS ENERGY™

PUCO Case No. 23-0475-EL-BLN

Submitted to:
The Ohio Power Siting Board
Pursuant to Ohio Administrative Code
Section 4906-6-05

Submitted by:
AEP Ohio Transmission Company, Inc.

May 12, 2023

LETTER OF NOTIFICATION FOR THE SOUTH CANTON-TORREY 138 KV TRANSMISSION LINE PROJECT

Letter of Notification

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Transmission Line Project

4906-6-05

AEP Ohio Transmission Company, Inc. (“AEP Ohio Transco” or the “Company”) is providing the following information to the Ohio Power Siting Board (“OPSB”) in accordance with the accelerated application requirements of Ohio Administrative Code (“OAC”) Section 4906-6-05.

4906-6-05(B) General Information

B(1) Project Description

The applicant shall provide the name of the project and applicant’s reference number, names and reference number(s) of resulting circuits, a brief description of the project, and why the project meets the requirements for a Letter of Notification or Construction Notice application.

The Company proposes to construct the South Canton-Torrey 138 kilovolt (“kV”) Transmission Line Project (the “Project”) in Stark County, Ohio. The Project consists of rebuilding approximately 3.4 miles of the existing Philo-Torrey 138 kV Transmission Line (South Canton – Torrey) primarily within the Company’s existing right-of-way (“ROW”) between Structure 294 (approximately 2,000 feet east of the South Canton Substation) and the Torrey Substation. The existing steel lattice towers will be replaced with steel monopoles. The location of the Project is shown on a United States Geological Survey (“USGS”) topographic map as **Exhibit 1** in **Appendix A**.

The Project meets the requirements for a Letter of Notification (“LON”) because it is consistent with Item (2)(b) of 4906-1-01 *Appendix A Application Requirement Matrix For Electric Power Transmission Lines* as the Project involves replacing structures with a different type of structure for more than 2 miles. Item (2)(b) of 4906-1-01 *Appendix A* states:

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

(b) More than two miles.

The Project has been assigned PUCO Case No. 23-0475-EL-BLN.

B(2) Statement of Need

If the proposed project is an electric power transmission line or natural gas transmission line, a statement explaining the need for the proposed facility.

The Company proposes to rebuild nine miles of aging 138 kV transmission lines in the Canton, Ohio area to address equipment material condition, performance, and risk needs. The Philo-Canton 138 kV Transmission Line (South Canton – Sunnyside) was constructed in 1923 and most structures,

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conductors, and hardware are original. Insulator assemblies are showing corrosion and deterioration, which could lead to failures, power outages, and safety hazards. Current open conditions include broken insulators and disconnected ground wire. The Philo-Canton 138 kV Transmission Line (South Canton – Sunnyside) will be filed under a separate case number, No. 23-0474-EL-BLN.

The Philo-Torrey 138 kV Transmission Line (South Canton – Torrey), the subject of this filing, was constructed in 1942 and the transmission line does not meet current grounding and shielding requirements due to the condition and advanced age of the original shield wire, the obsolete wire size (159 ACSR), and the inadequate line shielding angle. The line is grounded with grillage foundations, which do not meet current Company standards. Current open conditions include broken suspension insulators and missing signage.

The overall deterioration of the two transmission lines is an indicator of the need to rebuild the assets rather than conduct repairs. Retirement of these lines is not feasible because a portion of the Philo-Canton 138 kV Transmission Line directly serves the Faircrest Street distribution substation, which serves over 2,700 local AEP Ohio customers. In addition, the Philo-Torrey 138 kV Transmission Line provides a critical source to two customers which serve upwards of 240 MW of industrial load and serve as a major employer for the area. Failure to move forward with this Project could expose customers served from the lines to outages as the assets continue to deteriorate. It could also be detrimental to the major industrial customers' operations, as high levels of power system reliability are essential for their business operations.

The need and solution for the supplemental Project was presented and reviewed with stakeholders at the March 19, 2020 and October 15, 2021 PJM Subregional RTEP-West meetings and subsequently assigned PJM identifier s2651. The Project was listed in the Company's 2023 Long-Term Forecast Report on page 49-50, see **Appendix B**.

B(3) Project Location

The applicant shall provide the location of the project in relation to existing or proposed lines and substations shown on an area system map of sufficient scale and size to show existing and proposed transmission facilities in the project area.

The Project is located in Stark County, Ohio. The Project begins approximately 2,000 feet east of the South Canton Substation at Structure 294 (40.714 longitude, -81.408 latitude) and extends approximately 3.4 miles northwest to the Torrey Substation north of Shepler Church Avenue (40.763 latitude, -81.413 longitude).

Exhibit 1 in **Appendix A** shows the proposed Project relative to existing, nearby transmission facilities on a USGS topographic map (Bolivar and Canton West quadrangles). **Exhibit 2** in **Appendix A** shows the Project components on aerial imagery (2020/2021).

B(4) Alternatives Considered

The applicant shall describe the alternatives considered and reasons why the proposed location or route is best suited for the proposed facility. The discussion shall include, but not be limited to, impacts associated with socioeconomic, ecological, construction, or engineering aspects of the project.

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The Project is proposing to rebuild on or near the centerline of the existing Philo-Torrey 138 kV Transmission Line, primarily within existing ROW. Abandoning the existing ROW for a new greenfield route is neither practical nor necessary for the Project. As such, no other alternatives were considered for the Project. Any greenfield-based route alternative would likely add additional length to the Project, and likely more (or new) impacts to the human and natural environment and land use. Slight line shifts will be necessary during construction to allow for installation of the new structures while reducing operational interruptions for the existing transmission line. However, these shifts are minor and do not impact any additional landowners, wetlands, streams, or known cultural resources. Therefore, this Project represents the most suitable location and is the most appropriate solution for meeting the Project needs.

B(5) Public Information Program

The applicant shall describe its public information program to inform affected property owners and tenants of the nature of the project and the proposed timeframe for project construction and restoration activities.

The Company will inform affected property owners and tenants about this Project through several different mediums. Within seven days of filing this LON, the Company will issue a public notice in a newspaper of general circulation in the Project area. The notice will comply with all requirements of OAC Section 4906-6-08(A) (1-6). Further, the Company has mailed (or will mail) a letter, via first class mail, to affected landowners, tenants, contiguous owners and any other landowner the Company may approach for an easement necessary for the construction, operation, or maintenance of the Project. The letter will comply with all requirements of OAC Section 4906-6-08(B). The Company maintains a website (<http://aeptransmission.com/ohio/>), which provides the public access to an electronic copy of this LON and the public notice for this LON. An electronic copy of the LON will be served to the public library in each political subdivision for this Project. The Company retains ROW land agents that discuss Project timelines, construction and restoration activities and convey information to affected owners and tenants throughout the Project.

B(6) Construction Schedule

The applicant shall provide an anticipated construction schedule and proposed in-service date of the project.

Construction of the Project is planned to begin in November 2023, and the anticipated in-service date will be March 2025.

B(7) Area Map

The applicant shall provide a map of at least 1:24,000 scale clearly depicting the facility with clearly marked streets, roads, and highways, and an aerial image.

Exhibit 1 in **Appendix A** shows the location of the Project area on a USGS 1:24,000 quadrangle map (Bolivar and Canton West quadrangles). **Exhibit 2** in **Appendix A** consists of an aerial imagery map (2020/2021) of the Project area.

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To visit the Project starting point from Columbus, take Interstate (“I-”) 71 N for approximately 68.3 miles. From I-71 N take exit 176 to merge onto U.S. Highway (“US-”) 30 E toward Wooster for approximately 54.2 miles. Then take exit 190 for Ohio Route (“OH-”) 297/Whipple Avenue toward Raff Avenue for approximately 0.8 miles. Turn right onto 246/Gambrinus Avenue SW/Raff Road SW and continue for approximately 1.2 miles. Then turn left onto Shepler Church Avenue SW and continue for approximately 0.3 miles and Torrey Substation will be on your left.

B(8) Property Agreements

The applicant shall provide a list of properties for which the applicant has obtained easements, options, and/or land use agreements necessary to construct and operate the facility and a list of the additional properties for which such agreements have not been obtained.

A list of properties for which the Company will need to obtain easements/options is provided below.

Property Parcel Number	Agreement Type	Easement Agreement/Option Obtained (Yes/No)
4909409*	Easement Not Required	N/A
4909419*	Easement Not Required	N/A
4909407*	Easement Not Required	N/A
1380170*	Easement Not Required	N/A
1312110*	Easement Not Required	N/A
1380174*	Easement Not Required	N/A
8300013*	Easement Not Required	N/A
8300023*	Easement Not Required	N/A
1314964*	Easement Not Required	N/A
8300015*	Easement Not Required	N/A
4909700	Supplemental Easement	No
4900718	Supplemental Easement	No
4900840	Supplemental Easement	No
4909529	Supplemental Easement	No

* Parcel is owned by the Company or the State of Ohio, Department of Transportation, and therefore does not require an easement.
N/A = not applicable

B(9) Technical Features

The applicant shall describe the following information regarding the technical features of the project:

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B(9)(a) Operating characteristics, estimated number and types of structures required, and right-of-way and/or land requirements.

The South Canton – Torrey 138 kV Transmission Line Project is estimated to include the following:

- Voltage: 138 kV
- Conductors: Single Circuit, 1033KCM ACSR 54/7 Strand, CURLEW
- Static Wire: (1) AFL OPGW DNO-12739 S1-36/101/646 0.646 144 Fiber
- Insulators: Polymer
- ROW Width: 100-foot
- Structure Type: Two monopole double circuit dead-end structures,
Four monopole single circuit dead-end structure,
Two monopole steel running angle structures, and
10 monopole steel tangent structures.

B(9)(b) Electric and Magnetic Fields

For electric power transmission lines that are within one hundred feet of an occupied residence or institution, the production of electric and magnetic fields during the operation of the proposed electric power transmission line.

There is one residence and one church within 100 feet of the centerline for this Project. Three loading conditions were examined: (1) Normal Maximum Loading, (2) Emergency Loading, and (3) Winter Normal Conductor Rating, consistent with the OPSB requirements. Normal Maximum Loading represents the peak flow expected with all system facilities in service; daily/hourly flows fluctuate below this level. Emergency loading is the maximum current flow during unusual (contingency) conditions, which exist only for short periods of time. Winter normal (“WN”) conductor rating represents the maximum current flow that a line, including its terminal equipment, can carry during winter conditions. It is not anticipated that this line would operate at its WN rating in the foreseeable future.

Electromagnetic frequency (“EMF”) levels were computed 1 meter above ground under the line and at the ROW edges (50/50 feet, left/right, of centerline).

Results calculated below use EPRI’s EMF Workstation 2015 software.

South Canton – Torrey 138 kV Transmission Line Structure 1/ Structure 2					
Condition	Load (A)	Phasing Arrangements	Ground Clearance (feet)	Electric Field (kV/m)*	Magnetic Field (mG)*
(1) Normal Max. Loading[^]	544.53/544.53	A-B-C / A-B-C	53.9/53.9	(0.40/0.53/0.28) / (0.06/0.41/0.12)	(16.86/29.93/16.61) / (3.3/14.89/10.12)
(2) Emergency Line Loading^{^^}	867.05/867.05	A-B-C / A-B-C	25.0/25.0	(0.54/2.0/0.46) / (0.06/0.91/0.05)	(47.68/197.35/47.55) / (5.53/60.85/27.92)
(3) Winter Conductor Rating^{^^^}	1570.75/1570.75	A-B-C / A-B-C	53.9/53.9	(0.40/0.53/0.28) / (0.06/0.41/0.12)	(48.63/86.35/47.92) / (9.53/42.94/29.2)

For power-frequency EMF, IEEE Standard C95.6TM-2002 recommends the following limits:

General Controlled
Public Environment

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Electric Field Limit (kV/m)	5.0	20.0
Magnetic Field Limit (mG)	9040	27,100

The above EMF levels are well within the limits specified in IEEE Standard C95.6TM-2002. Those limits have been established to "prevent harmful effects in human beings exposed to electromagnetic fields in the frequency range of 0-3 kHz."

B(9)(c) Project Costs

The estimated capital cost of the project.

The capital cost estimate for the proposed Project, which is comprised of applicable tangible and capital costs, is approximately \$7,500,000 based on a Class 4 estimate. Pursuant to the PJM Open Access Transmission Tariff ("OATT"), the costs for this Project will be recovered in the Company's Federal Energy Regulatory Commission ("FERC") formula rate (Attachment H-20 to the PJM OATT) and allocated to the AEP Zone.

B(10) Social and Ecological Impacts

The applicant shall describe the social and ecological impacts of the project.

B(10)(a) Land Use Characteristics

Provide a brief, general description of land use within the vicinity of the proposed project, including a list of municipalities, townships, and counties affected.

The Project is located in Canton and Pike Townships in Stark County, Ohio. Land use observed within the Project area includes undeveloped land, agricultural land, and low-density residential developments. The Project has one place of worship and no airports identified within 1,000 feet of the Project. There is one residence identified within 100 feet of the Project.

B(10)(b) Agricultural Land Information

Provide the acreage and a general description of all agricultural land, and separately all agricultural district land, existing at least sixty days prior to submission of the application within the potential disturbance area of the project.

Approximately 25.2 acres of agricultural land is located within the 100-foot ROW corridor where construction activities are planned. This general agricultural land includes a mix of cropland, fallow fields, and pastures.

The Stark County Auditor's Office provided a list of parcels registered as Agricultural District Land in March 2023. Approximately 3.2 acres of Agricultural District Land is located within the 100-foot ROW corridor where construction activities are planned. Impacts to Agricultural District Land will be limited to the footprint of the monopole structures.

B(10)(c) Archaeological and Cultural Resources

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Provide a description of the applicant's investigation concerning the presence or absence of significant archeological or cultural resources that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

A Phase I Archaeological Investigation was conducted for the Project and the report, *Phase I Archaeological Investigation for the 5.6 km (3.5 mi) South Canton – Torrey 138kV Transmission Line Rebuild in Canton and Pike Townships, Stark County, Ohio*, was provided to the Ohio State Historic Preservation Office (“SHPO”) for consultation. SHPO correspondence was provided on February 8, 2023, see **Appendix C**. No previously identified archaeological sites are within the project area; however, one newly identified archaeological site, Ohio Archaeology Inventory #33ST1185, was discovered. The SHPO concurred with the report’s conclusions that Site 33ST1185 is not eligible for listing on the National Register of Historic Places (“NRHP”) and that no further work is recommended.

The Company’s consultant conducted additional investigations within an addendum project area and provided a report, *Addendum Archaeological Investigation for the 5.6 km (3.5 mi) South Canton – Torrey 138kV Transmission Line Rebuild in Canton and Pike Townships, Stark County, Ohio*, to the SHPO for review. SHPO responded on February 22, 2023 and concurred that because there were no previously identified sites and no newly identified sites within the addendum Project area, no further work is recommended.

Additionally, the Company’s consultant conducted a review and field survey of historic structure resources along the Project. The report, *History/Architecture Investigations for the 5.6 km (3.5 mi) South Canton – Torrey 138kV Transmission Line Rebuild in Canton and Pike Townships, Stark County, Ohio*, was reviewed by the SHPO and their comment letter was received on February 8, 2023. The SHPO concurred that the project as proposed will have no adverse effect on the identified historic properties. A copy of the SHPO’s correspondence letters is provided in **Appendix C**.

B(10)(d) Local, State, and Federal Agency Correspondence

Provide a list of the local, state, and federal governmental agencies known to have requirements that must be met in connection with the construction of the project, and a list of documents that have been or are being filed with those agencies in connection with siting and constructing the project.

A Notice of Intent will be filed with the Ohio Environmental Protection Agency for authorization of construction storm water discharges under General Permit OHC000006. The Company will implement and maintain best management practices (“BMPs”), as outlined in the project-specific Storm Water Pollution Prevention Plan (“SWPPP”), to minimize erosion and control sediment to protect surface water quality during storm events.

The Stark County Soil and Water Conservation District requires a Project-specific SWPPP approval and an Earth Disturbance Permit. The Company will obtain the required SWPPP approval and Earth Disturbance Permit prior to commencement of the Project.

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The Company's consultant completed a wetland delineation and stream identification field review of the existing and planned ROW for the Project (**Appendix D**). A total of 17 wetlands and 9 streams were delineated within the environmental survey corridor. One wetland will be temporarily impacted by matting for construction access. Appropriate permits will be obtained. The remaining identified wetlands and streams are located within or adjacent to the planned transmission line ROW and are proposed to be aerially spanned by the Project or avoided. Therefore, impacts to aquatic resources are not anticipated and Clean Water Act Section 401/404 permits will not be necessary.

According to the Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Map ("FIRM"), the Project does not cross a FEMA 100-year floodplain.

There are no other known local, state, or federal requirements that must be met prior to commencement of the Project.

B(10)(e) Threatened, Endangered, and Rare Species

Provide a description of the applicant's investigation concerning the presence or absence of federal and state designated species (including endangered species, threatened species, rare species, species proposed for listing, species under review for listing, and species of special interest) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

Coordination with Ohio Department of Natural Resources-Division of Wildlife ("ODNR-DOW") was initiated on August 18, 2021, to obtain Environmental Review and Ohio Natural Heritage Database records. ODNR-DOW's response was received on September 13, 2021 (**Appendix C**). In addition, a technical assistance request letter was submitted to the U.S. Fish and Wildlife Service ("USFWS") on August 18, 2021, with a response received on August 30, 2021. Copies of the agency's correspondence letters are provided in **Appendix C**.

Based on consultation from the USFWS, the Project area lies within the vicinity of Northern long-eared bat (threatened) and Indiana bat (endangered) hibernaculum buffers and roost tree buffers. The USFWS recommended avoiding tree removal, wherever possible. If trees ≥ 3 inches diameter at breast height ("dbh") cannot be avoided, USFW recommended removal of any trees ≥ 3 inches dbh only take place between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bat species. If implementation of seasonal tree cutting is not possible, USFWS indicated that a summer presence/absence survey may be conducted for Indiana bats. Based upon survey results, tree clearing may occur during any time of the year. USFW also indicated that summer mist net surveys can only take place between June 1 and August 15. The Company intends to clear trees between October 1st and March 31st. If summer tree clearing is required, further coordination with USFWS will be conducted to avoid impacts to this species.

ODNR-DOW stated that the entire state of Ohio is within the range of the Indiana bat (*Myotis Sodalis*), a state endangered and federally endangered species, the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species, the little brown bat (*Myotis lucifugus*), a state endangered species, and the tricolored bat (*Perimyotis subflavus*), a state endangered species. If trees within the Project area must be cut, the ODNR-DOW recommends cutting take place only from October 1 to March 31, conserving roost trees with loose, shaggy bark and/or

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crevices holes, or cavities and trees with dbh \geq 20 inches where possible. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with ODNR. The company intends to clear trees between October 1st and March 31st. If summer tree clearing is required, further coordination with ODNR-DOW will be conducted to avoid impacts to this species.

ODNR-DOW recommended a desktop habitat assessment be conducted to determine the presence of bat hibernacula within 0.25 mile of the Project area. The company's consultant completed a desktop habitat assessment (in accordance with the 2020 Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines). The desktop assessment identified abandoned underground mines within 0.25 mile of the Project area. However, no suitable bat hibernacula were observed within the Project area during the field surveys. Due to the desktop finding of underground mines within 0.25 mile of the Project area, the Company's consultant will pursue further coordination with ODNR-DOW for Project recommendations.

The ODNR-DOW stated that the Project is within the range of the long-solid (*Fusconaia maculata maculata*), a state endangered mussel. ODNR-DOW stated that due to the location, and no proposed in-water work in a perennial stream of sufficient size, the Project is not likely to impact this species. The Company anticipates no impact to this species due to no proposed in-water work.

The ODNR-DOW stated that the Project is within that range of the Iowa darter (*Etheostoma exile*), a state endangered fish. The ODNR-DOW recommended no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this or other aquatic species. The Company anticipates no impact to this species due to no proposed in-water work.

The ODNR-DOW stated that the Project also lies within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species is known to inhabit fens, bogs and marshes, wet prairies, meadows, pond edges, wet woods, and the shallow, sluggish waters of small streams and ditches. Due to the location, the type of habitat within the Project area and the type of work proposed, the Project is not likely to impact this species. The Company anticipates no impact to this species due to the type of work proposed.

Lastly, the ODNR-DOW stated that the Project is within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. This is a common migrant and winter species. Nesters are rare, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies on the ground or on top of mounds. Harriers hunt over grasslands. The ODNR-DOW recommended construction be avoided in this habitat during the species' nesting period of April 15 to July 31. However, no suitable nesting habitat for the Northern Harrier was observed within the Project area during field surveys (unfragmented grasslands or wetlands). Therefore, the Project is not likely to impact this species and nesting season avoidance dates are not applicable.

The ODNR-DOW correspondence letter included species data from the Natural Heritage Database that was located at or within a 1-mile radius of the Project area. The Natural Heritage Database list included the following species: Shore-growing peat moss and Brush-tipped emerald. The ODNR-DOW recommended that impacts to streams, wetlands, and other water resources be avoided and minimized,

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and BMPs be implemented to minimize erosion and sedimentation. However, no suitable habitat was observed for these species during field surveys. Therefore, the Project is not likely to impact these species.

B(10)(f) Areas of Ecological Concern

Provide a description of the applicant's investigation concerning the presence or absence of areas of ecological concern (including national and state forests and parks, floodplains, wetlands, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

The coordination letter received from the USFWS did not indicate any federal wilderness areas, wildlife refuges, or designated critical habitat within the vicinity of the Project. The ODNR-DOW's response letter also indicated no known unique ecological sites, geologic features, scenic rivers, state wildlife areas, state natural preserves, state or national parks, national forests, or national wildlife refuges within the Project area. The Natural Heritage Database identified the Bolivar Reservoir, managed by the Muskingum Watershed Conservancy District within a one-mile radius of the Project Area. No impacts to the reservoir are expected due to the distance from the reservoir. As outlined above in B(10)(e) Threatened, Endangered, and Rare Species, several federal and state listed species were identified to potentially occur within the Project area. Based on the nature of the proposed project activities and habitat characteristics of the surrounding vicinity, construction impacts to protected species are not anticipated.

The Company's consultant prepared an Ecological Resource Survey Report which outlines the presence or absence of areas of ecological concern, including but not limited to wetlands, waterbodies and wildlife habitats. The Ecological Resource Survey Report and Addendum are provided in **Appendix D**. Wetland delineation, stream delineation, and terrestrial habitat field surveys were completed within the existing ROW in April 2022. A total of 17 wetlands and nine streams were delineated within the environmental survey corridor. No open waters were identified within the environmental survey corridor. The Company will utilize erosion and sediment control BMPs to avoid or minimize impacts to natural resources where possible.

Based on the FIRM, the Project does not cross a FEMA floodway or FEMA-mapped 100-year floodplain (FIRM Panel ID numbers 39151C0360F and 39151C0218E). These resources are shown on **Figure 2** in **Appendix D**.

B(10)(g) Unusual Conditions

Provide any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

To the best of the Company's knowledge, no unusual conditions exist that would result in significant environmental, social, health, or safety impacts.

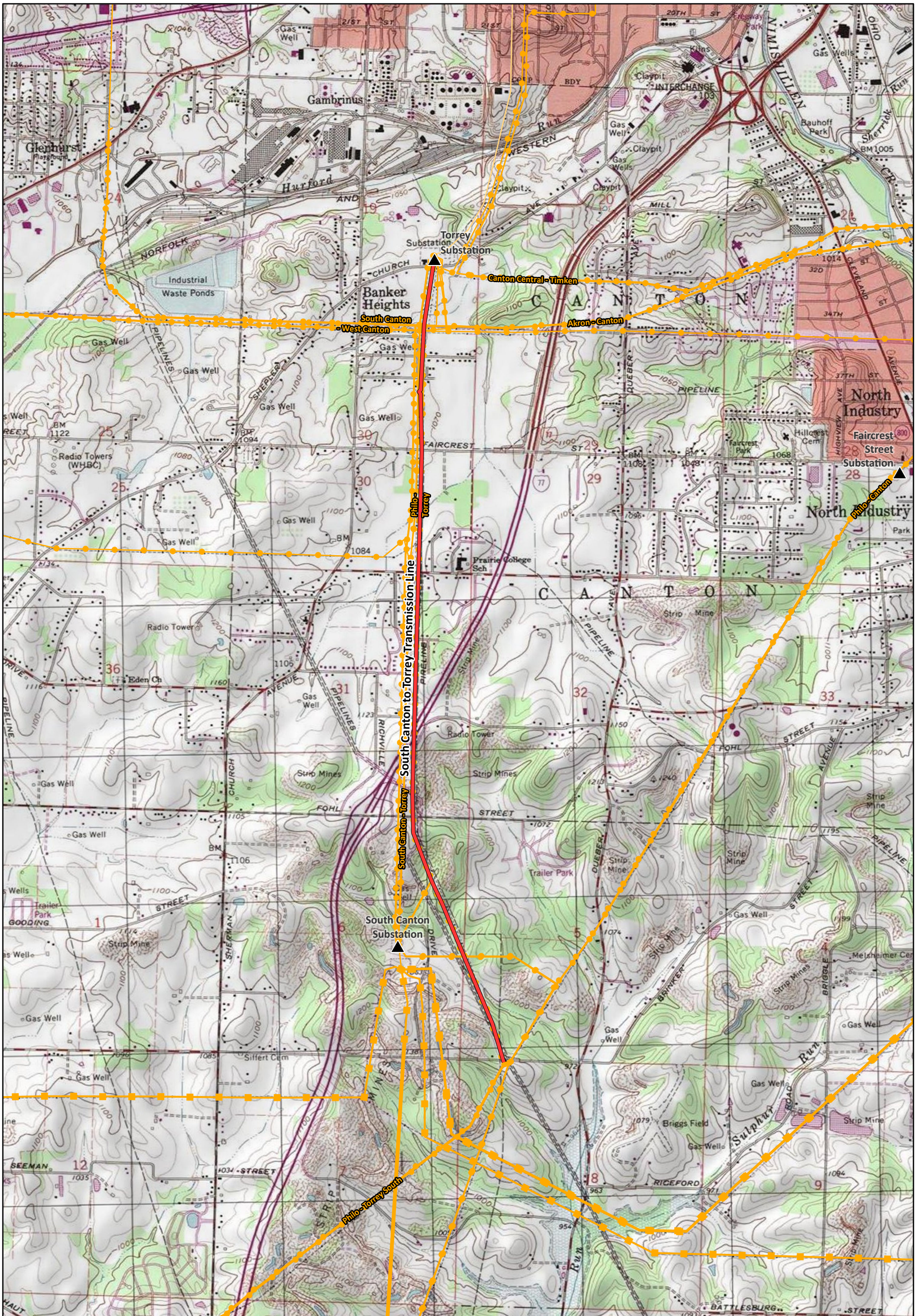
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Appendix A Project Maps



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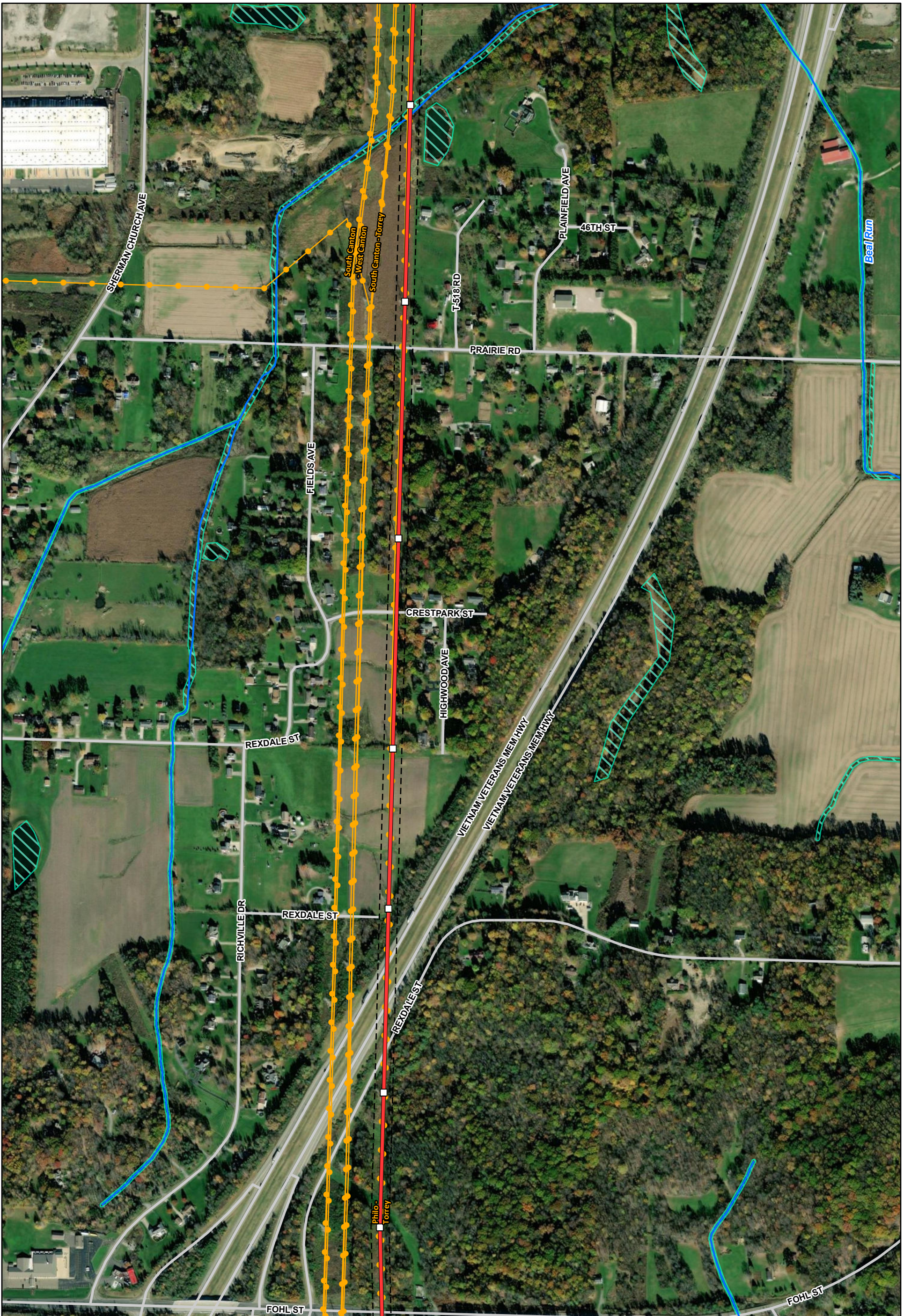
BOUNDLESS ENERGY™





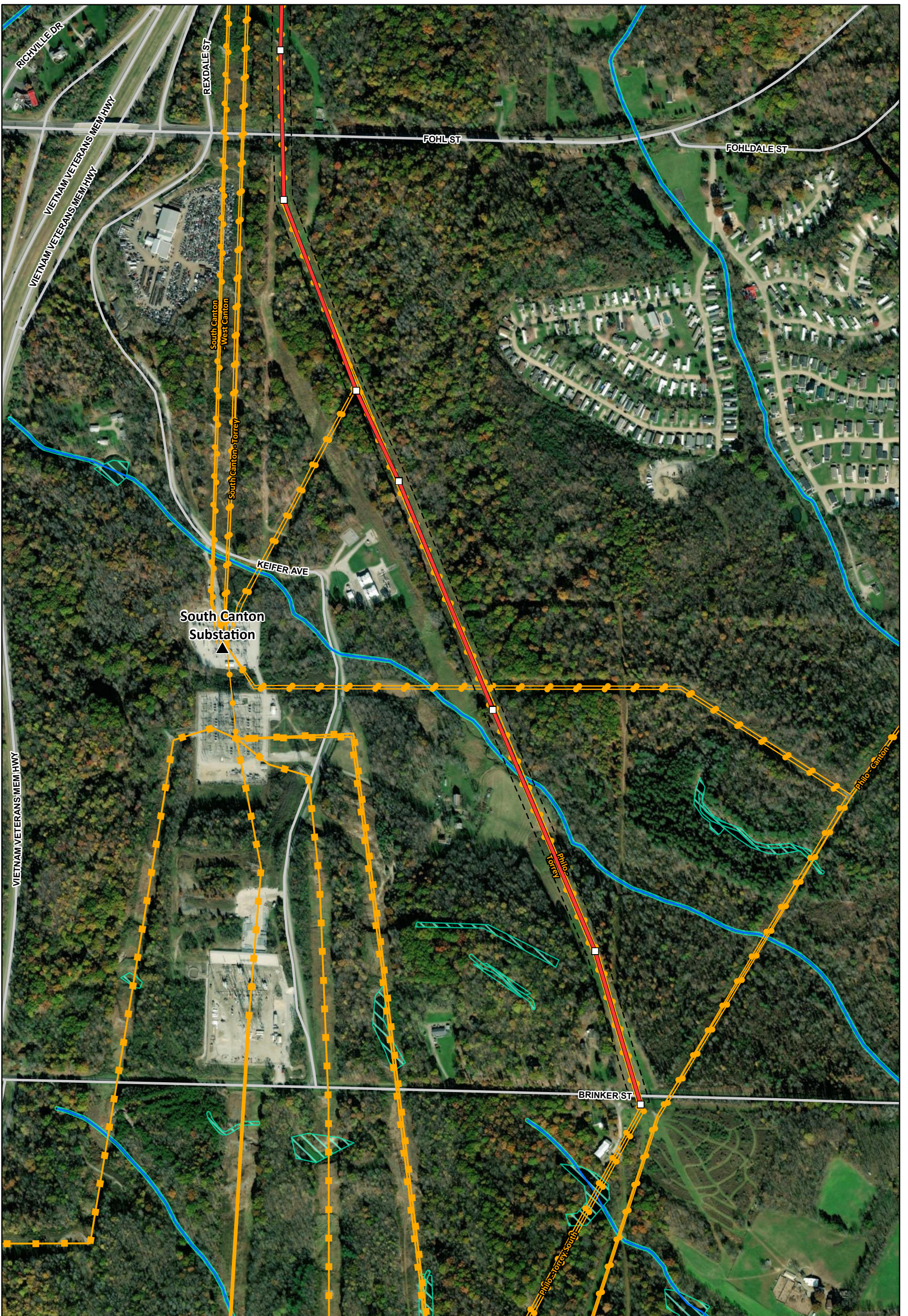
<p>Legend</p> <ul style="list-style-type: none"> — Proposed Route ▲ Existing Substation — Existing Transmission Line Unknown Voltage — Existing 138 kV Transmission Line — Existing 345 kV Transmission Line — Existing 765 kV Transmission Line 	<p>Base Map Source: ESRI USGS Topographic (May 2020) Quads: Bolivar, Canton West</p> <p>Coordinate System: State Plane Ohio South FIPS 3402 (US Feet) Datum: NAD 1983 Scale: 1:24,000</p> <p>May 09, 2023</p>		<p style="text-align: center;">Figure 1 TOPOGRAPHIC OVERVIEW</p> <p style="text-align: right;">South Canton - Torrey 138 kV Transmission Line Project Stark County, OH</p> <p style="text-align: center;"> 0 0.25 0.5 Miles </p>
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<p>Legend</p> <ul style="list-style-type: none"> □ Proposed Structure Location — Proposed Transmission Line ▭ Right of Way ▲ Existing Substation 	<ul style="list-style-type: none"> — Existing Transmission Line Unknown Voltage — Existing 138 kV Transmission Line — Road — NHD Stream ▨ NWI Wetland 	<p>Base Map Source: ESRI World Imagery (2020/2021)</p> <p>Coordinate System: State Plane Ohio South FIPS 3402 (US Feet) Datum: NAD 1983 Scale: 1:10,000</p> <p>May 10, 2023</p>	<p>Stark County</p>	<p>Figure 2 AERIAL MAP</p> <p>AEP OHIO TRANSMISSION COMPANY An AEP Company BOUNDLESS ENERGY</p> <p>South Canton - Torrey 138 kV Transmission Line Project Stark County, OH</p> <p>0 500 1,000 Feet</p>
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<p>Legend</p> <ul style="list-style-type: none"> □ Proposed Structure Location — Proposed Transmission Line ▭ Right of Way ● Existing 138 kV Transmission Line — Road — NHD Stream ▨ NWI Wetland 	<p>Base Map Source: ESRI World Imagery (2020/2021)</p> <p>Coordinate System: State Plane Ohio South FIPS 3402 (US Feet) Datum: NAD 1983 Scale: 1:10,000</p> <p>May 10, 2023</p>			<p>Figure 2 AERIAL MAP</p> <p>AEP OHIO TRANSMISSION COMPANY An AEP Company BOUNDLESS ENERGY</p> <p>South Canton - Torrey 138 kV Transmission Line Project Stark County, OH</p> <p>0 500 1,000 Feet</p>
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<p>Legend</p> <ul style="list-style-type: none"> □ Proposed Structure Location — Proposed Transmission Line ▭ Right of Way ▲ Existing Substation ● Existing 138 kV Transmission Line — Existing 345 kV Transmission Line — Existing 765 kV Transmission Line — Road — NHD Stream ▭ NWI Wetland 	<p>Base Map Source: ESRI World Imagery (2020/2021)</p> <p>Coordinate System: State Plane Ohio South FIPS 3402 (US Feet) Datum: NAD 1983 Scale: 1:10,000</p> <p>May 10, 2023</p>		 <p>Stark County</p>	<p>Figure 2 AERIAL MAP</p> <p>AEP OHIO TRANSMISSION COMPANY An AEP Company BOUNDLESS ENERGY</p> <p>South Canton - Torrey 138 kV Transmission Line Project Stark County, OH</p> <p>0 500 1,000 Feet</p>
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LETTER OF NOTIFICATION FOR THE SOUTH CANTON-TORREY 138 KV TRANSMISSION LINE PROJECT

Appendix B

LTFR Reference and PJM Interconnection Submittal

13.	MISCELLANEOUS:	
1.	LINE NAME AND NUMBER:	Carrothers - Founders - Greenlawn s2637 TP2020011
2.	POINTS OF ORIGIN AND TERMINATION	Carrothers - Founders - Greenlawn INTERMEDIATE STATIONS - North Bloomville Switch, Bloomville, St Stephen Switch
3.	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	0.83 mi / 60 ft / 2 circuit (of new construction)
4.	VOLTAGE: DESIGN / OPERATE	69 kV /69 kV
5.	APPLICATION FOR CERTIFICATE:	N/A
6.	CONSTRUCTION:	2023 - 2024
7.	CAPITAL INVESTMENT:	\$2.4 M
8.	PLANNED SUBSTATION:	Founders
9.	SUPPORTING STRUCTURES:	Steel
10.	PARTICIPATION WITH OTHER UTILITIES	N/A
11.	PURPOSE OF THE PLANNED TRANSMISSION LINE	This is a rebuild / reconfiguration of the existing line to connect into founders station while also removing several switches.
12.	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Risk of operational/reliability issues
13.	MISCELLANEOUS:	
1.	LINE NAME AND NUMBER:	South Canton - Southeast Canton 138kV S2651 TP2020224
2.	POINTS OF ORIGIN AND TERMINATION	South Canton - Southeast Canton; INTERMEDIATE STATIONS - Faircrest Street
3.	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	7.2 mi / 100 ft / 1 circuit (Only 4.2 mi is being rebuilt)
4.	VOLTAGE: DESIGN / OPERATE	138 kV / 138 kV
5.	APPLICATION FOR CERTIFICATE:	5/19/2023
6.	CONSTRUCTION:	2024 - 2025
7.	CAPITAL INVESTMENT:	\$10.8M
8.	PLANNED SUBSTATION:	N/A
9.	SUPPORTING STRUCTURES:	Steel
10.	PARTICIPATION WITH OTHER UTILITIES	N/A
11.	PURPOSE OF THE PLANNED TRANSMISSION LINE	Rebuild of existing 138 kV line

12.	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Increased risk of equipment failure, reliability, and operational issues
13.	MISCELLANEOUS:	
1.	LINE NAME AND NUMBER:	Southeast Canton - Sunnyside 138kV S2651 TP2020224
2.	POINTS OF ORIGIN AND TERMINATION	Southeast Canton - Sunnyside INTERMEDIATE STATIONS N/A
3.	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	3.19 mi / 100 ft / 1 circuit (Only 0.9 mi is being rebuilt)
4.	VOLTAGE: DESIGN / OPERATE	138 kV / 138 kV
5.	APPLICATION FOR CERTIFICATE:	5/19/2023
6.	CONSTRUCTION:	2024 - 2025
7.	CAPITAL INVESTMENT:	\$2.32M
8.	PLANNED SUBSTATION:	N/A
9.	SUPPORTING STRUCTURES:	Steel
10.	PARTICIPATION WITH OTHER UTILITIES	N/A
11.	PURPOSE OF THE PLANNED TRANSMISSION LINE	Rebuild of existing 138 kV line
12.	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Increased risk of equipment failure, reliability, and operational issues
13.	MISCELLANEOUS:	
1.	LINE NAME AND NUMBER:	North Intertie - South Canton 138kV S2651 TP2020224
2.	POINTS OF ORIGIN AND TERMINATION	North intertie - South Canton INTERMEDIATE STATIONS Bolivar
3.	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	15.24 mi / 100 ft / 1 circuit (Only 0.4 mi is being rebuilt)
4.	VOLTAGE: DESIGN / OPERATE	138 kV / 138 kV
5.	APPLICATION FOR CERTIFICATE:	10/2/2023
6.	CONSTRUCTION:	2024 - 2025
7.	CAPITAL INVESTMENT:	\$1.03M
8.	PLANNED SUBSTATION:	N/A
9.	SUPPORTING STRUCTURES:	Steel
10.	PARTICIPATION WITH OTHER UTILITIES	N/A
11.	PURPOSE OF THE PLANNED TRANSMISSION LINE	Rebuild of existing 138 kV line

Need Number: AEP-2020-OH052

Process Stage: Solution Meeting 10/15/2021

Previously Presented: Need Meeting 3/19/2020

Supplemental Project Driver:

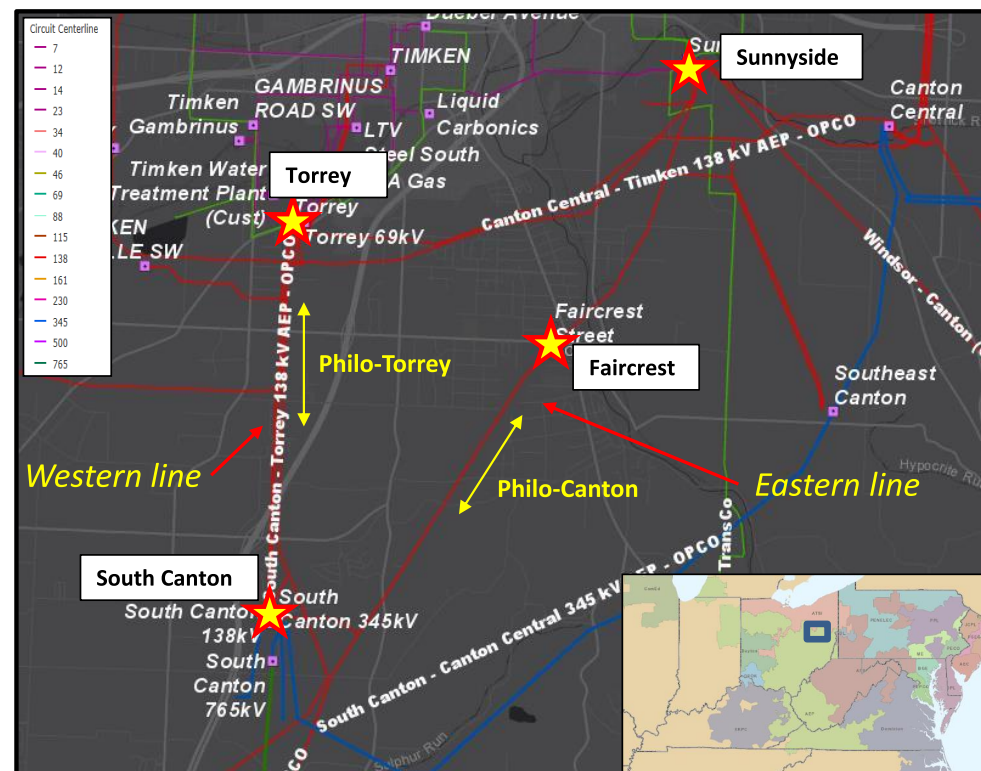
Equipment Material Condition, Performance and Risk; Operational Flexibility & Efficiency

Specific Assumption Reference:

AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions Slide 8), AEP Presentation on Pre-1930s Lines

Problem Statement:

- The South Canton - Sunnyside eastern 138kV transmission line is 5.5 miles long, originally constructed in 1923. The vast majority of the structures are still original, as well as the six-wired 336 ACSR conductor, insulators, and hardware. This line is made up of several circuits connected between South Canton and Sunnyside stations.
- Insulator assemblies are showing corrosion and deterioration, which could lead to additional failures and safety concerns.
- This line has experienced 3 momentary outages and 1 sustained outages over the past 10 years (2008/2018).



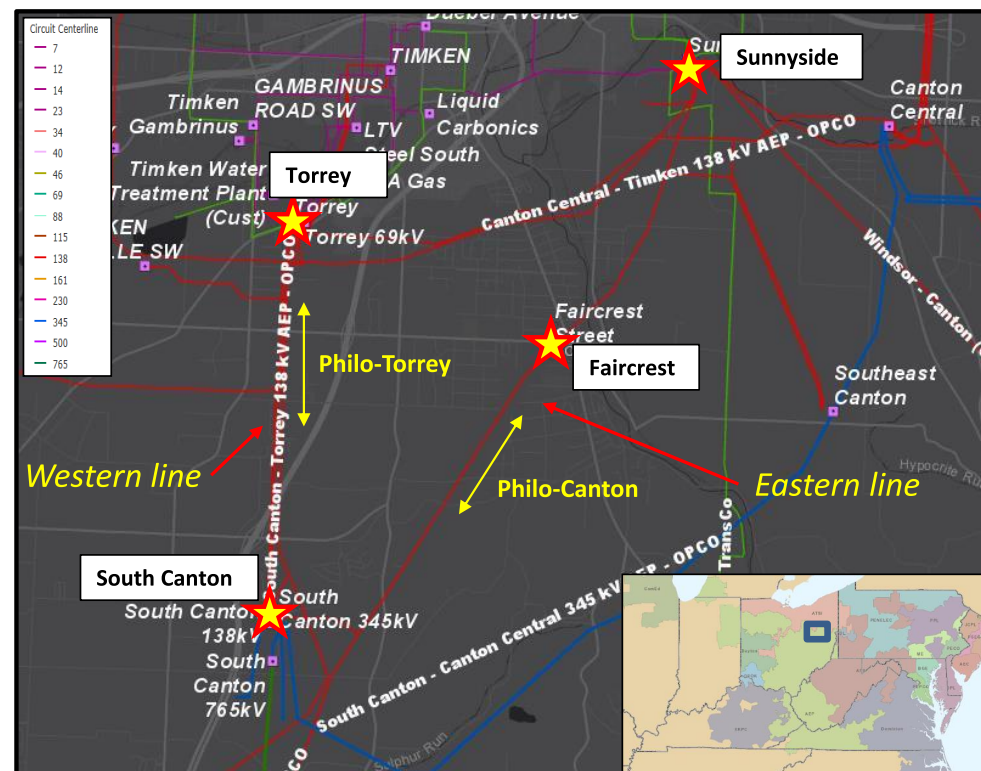
Need Number: AEP-2020-OH052

Process Stage: Solution Meeting 10/15/2021

Previously Presented: Need Meeting 3/19/2020

Problem Statement, continued:

- The South Canton-Torrey western 138kV transmission line is 3.5 miles long and consists of portions of the following circuits: Philo-South Canton (0.9 miles of the total circuit length of 75 miles)); South Canton-Timken Richville (2.0 of 3.5 miles), and Timken Richville-Timken (0.6 of 3.4 miles). The line was originally built in 1942 with steel lattice towers. The conductor is 6-wired single-circuit, with one side installed in 1942 (397 ACSR) and the other side installed in 1954 (477 ACSR). The line does not meet current grounding and shielding requirements, due to the condition of the obsolete shield wire size (159 ACSR), and the line shielding angle being inadequate. This T-line exhibits similar conditions as the examples listed in AEP's 1930's steel lattice tower line presentation.
- The 2- 138kV line switches at Faircrest station (part of S.Canton-SE Canton circuit) are barely functional, difficult to open/close, and date to 1971.
- The protection equipment on the Southeast Canton-Sunnyside 138kV circuit consists of legacy electromechanical relays and pilot wire communications channel. Electromechanical relays lack vendor support, don't have SCADA, and lack fault data collection capabilities. Aging pilot wire is increasingly prone to failure and increased maintenance, leading to risk of having to rely on backup protection methods.





AEP Transmission Zone M-3 Process Canton, Ohio

Need Number: AEP-2020-OH052

Process Stage: Solution Meeting 10/15/2021

Proposed Solution:

Rebuild the Philo-Torrey 138kV transmission line between South Canton and Torrey (3.5 miles). The circuits affected are South Canton-Timken Richville and Timken Richville-Timken 138kV. **Estimated Cost: \$7.64M**

Rebuild the Philo-Canton 138kV transmission line between South Canton and Sunnyside (5.5 miles). The circuits affected are South Canton-Southeast Canton and Southeast Canton-Sunnyside 138kV. **Estimated Cost: \$14.22M**

Replace the 138kV switches at Faircrest Street station to accommodate the new line structures. **Estimated Cost: \$0.12 M**

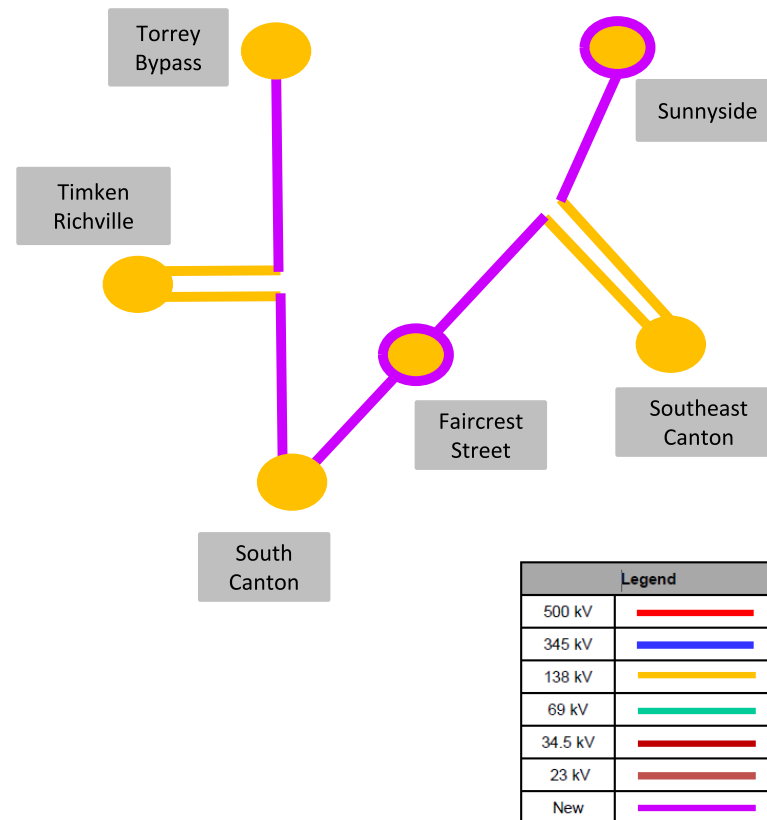
At Sunnyside, upgrade the relays on the 138kV circuit to Southeast Canton. The control building needs expanded to accommodate the new relay panels. **Estimated Cost: \$0.73 M**

Total Estimated Transmission Cost: \$22.71 Million

Alternatives Considered: No viable alternatives. The two transmission lines serve a number of customer stations in the Canton area, and are physically distant, so neither line can be retired.

Projected In-Service: 11/01/2025

Project Status: Scoping



LETTER OF NOTIFICATION FOR THE SOUTH CANTON-TORREY 138 KV TRANSMISSION LINE PROJECT

Appendix C

Agency Correspondence



In reply, refer to
2023-STA-56787

February 8, 2023

Mr. Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212

RE: South Canton-Torrey 138kV Transmission Line Rebuild Project, Canton and Pike Townships, Stark County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received January 10, 2023 regarding the proposed South Canton-Torrey 138kV Transmission Line Rebuild Project, Canton and Pike Townships, Stark County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I Archaeological Investigations for the 5.6 km (3.5 mi) South Canton-Torrey 138kV Transmission Line Rebuild Project in Canton and Pike Townships, Stark County, Ohio* by Ryan J. Weller (Weller & Associates, Inc., 2022).

A literature review, visual inspection, surface collection, shovel probe, and shovel test unit excavation was completed as part of the investigations. No previously identified archaeological site is located within the project area. One (1) new archaeological site was identified during survey, Ohio Archaeological Inventory (OAI) #33ST1185. The site is recommended not eligible for listing in the National Register of Historic Places (NRHP). Our office agrees with this recommendation and no further archaeological survey is necessary.

The following comments pertain to the *History/Architecture Investigations for the 5.6 km (3.5 mi) South Canton-Torrey 138kV Transmission Line Rebuild Project in Canton and Pike Townships, Stark County, Ohio* by Scott McIntosh (Weller & Associates, Inc., 2022).

A literature review and field survey were completed as part of the investigations. A total of eighty-six (86) resources fifty years of age or older were identified within the Area of Potential Effects (APE). Weller recommends these properties are not eligible for listing in the NRHP. Our office agrees with Weller's recommendations of eligibility. Therefore, we agree that there will be no effect on historic resources as a result of the project.

The following comments pertain to the *Addendum Archaeological Investigations for the South Canton-Torrey 138kV Rebuild Project in Canton and Pike Townships, Stark County, Ohio* by Ryan J. Weller (Weller & Associates, Inc., 2023).

A literature review, visual inspection, surface collection, shovel probe, and shovel test unit excavation was completed as part of the investigations. No previously identified archaeological site is located within the addendum project area and no new archaeological sites were identified during survey. Our office agrees no further archaeological survey is necessary for the access roads. No additional architectural resources or buildings were surveyed during this addendum work.

Based on the information provided, we agree that the project as proposed will have no effect on historic properties. No further coordination with this office is necessary, unless the project changes or unless new or additional historic properties are discovered during implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me at (614) 298-2022, or by e-mail at khorrocks@ohiohistory.org, or Joy Williams at jwilliams@ohiohistory.org. Thank you for your cooperation.

Sincerely,



Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1096376, 1096377, 1096378

OHIO HISTORY CONNECTION

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



In reply, refer to
2023-STA-56787

February 22, 2023

Mr. Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212

RE: South Canton-Torrey 138kV Transmission Line Rebuild Project, Canton and Pike Townships, Stark County, Ohio – Addendum 2

Dear Mr. Weller:

This letter is in response to the correspondence received January 16, 2023 regarding the proposed South Canton-Torrey 138kV Transmission Line Rebuild Project, Canton and Pike Townships, Stark County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Addendum 2 Archaeological Investigations for a small Access Road reroute for the South Canton-Torrey 138kV Rebuild Project in Canton and Pike Townships, Stark County, Ohio* by Ryan J. Weller (Weller & Associates, Inc., 2023).

A visual inspection was completed as part of the investigations as the entirety of the addendum project area was disturbance from previous activities. No previously identified archaeological site is located within the addendum project area and no new archaeological sites were identified during survey. Our office agrees no further archaeological survey is necessary. No additional architectural resources or buildings were surveyed during this addendum work.

Based on the information provided, we agree that the project as proposed will have no effect on historic properties. No further coordination with this office is necessary, unless the project changes or unless new or additional historic properties are discovered during implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me at (614) 298-2022, or by e-mail at khorrocks@ohiohistory.org. Thank you for your cooperation.

Sincerely,

A handwritten signature in blue ink, appearing to read "Krista Horrocks".

Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1096984



Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate

John Kessler, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6621
Fax: (614) 267-4764

September 13, 2021

Daniel Godec
Stantec Consulting Services Inc.
11687 Lebanon Road
Cincinnati, Ohio 45241

Re: 21-0792; South Canton - Torrey 138 kV Line Rebuild Project

Project: The proposed project involves rebuilding approximately 3.5 miles of existing 138 kV transmission line between existing structure number 294 and Torrey Station.

Location: The proposed project is located in Canton and East Sparta, Stark County, Ohio.

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

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

Shore-growing peat moss (*Sphagnum riparium*), E
Brush-tipped emerald (*Somatochlora walshii*), E
Bolivar Reservoir – Muskingum Watershed Conservancy District

The review was performed on the project area specified in the request as well as an additional one mile radius. Records searched date from 1980. This information is provided to inform you of features present within your project area and vicinity. Additional comments on some of the features may be found in pertinent sections below.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

Statuses are defined as: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federal endangered, and FT = federal threatened.

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

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

The portion of the project from Crestpark Street Southwest to the southern terminus is within the vicinity of records for the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Erin Hazelton at Erin.hazelton@dnr.ohio.gov).

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

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS “*Range-wide Indiana Bat Survey Guidelines*.” If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Erin Hazelton for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the long-solid (*Fusconaia maculata maculata*), a state endangered mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact this species.

The project is within the range of the Iowa darter (*Etheostoma exile*), a state endangered fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this or other aquatic species.

The project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but also is known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

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

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

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf

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

Mike Pettegrew
Environmental Services Administrator (Acting)

From: [Ohio, FW3](#)
To: [Godec, Daniel](#)
Cc: nathan.reardon@dnr.state.oh.us; [Parsons, Kate](#)
Subject: AEP South Canton - Torrey 138 kV Line Rebuild, Stark County, Ohio
Date: Monday, August 30, 2021 9:37:16 AM



TAILS# 03E15000-2021-TA-2144

Dear Mr. Godec,

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

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

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥ 3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see <http://www.fws.gov/midwest/endangered/mammals/nleb/index.html>), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are assumed present.

If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the

Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer mist net surveys may only be conducted between June 1 and August 15.

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

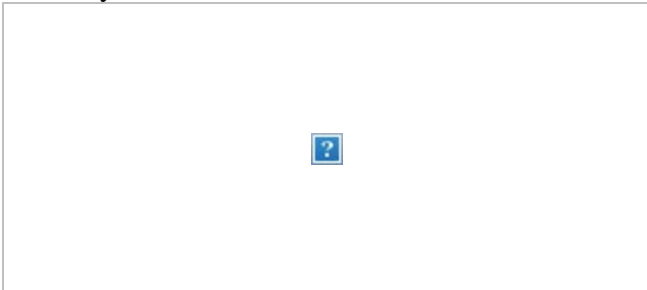
Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus it is important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing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

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

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

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

Sincerely,



Patrice M. Ashfield

Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW
Kate Parsons, ODNR-DOW

LETTER OF NOTIFICATION FOR THE SOUTH CANTON-TORREY 138 KV TRANSMISSION LINE PROJECT

Appendix D Ecological Survey Report



**South Canton-Torrey 138 kV Line
Rebuild Project, Stark County,
Ohio**

Ecological Survey Report

Prepared for:

AEP Ohio Transmission Company, Inc.
8600 Smiths Mill Road
New Albany, OH 43054

Prepared by:

Stantec Consulting Services, Inc.
11687 Lebanon Road
Cincinnati, OH 45241

March 16, 2023

Sign-off Sheet

This document entitled Ecological Survey Report, South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of AEP Ohio Transmission Company, Inc. Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by Kate Bomar
(signature)

Kate Bomar

Reviewed by Daniel J. Godec
(signature)

Dan Godec

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Introduction
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1.0 INTRODUCTION

AEP Ohio Transmission Company, Inc. (AEP) is proposing construction activities associated with the South Canton-Torrey 138 kV Line Rebuild Project. The Project includes rebuilding approximately 3.5 miles of the existing South Canton-Torrey 138 kV transmission line. The Project will begin near East Sparta, Stark County, Ohio at existing structure number 294 (located south of Brinker Street) and will end at the existing Torrey Station facility near Canton, Stark County, Ohio (Figure 1, Appendix A). The Project area was surveyed for wetlands, waterbodies, open water features, and potential threatened, endangered, and rare species habitat by Stantec Consulting Services Inc. (Stantec) biologists on April 4-6, 2022. The approximate locations of features located up to 50 feet outside of the Project area were also recorded during the field surveys, where landowner access was permitted. However, no data forms were collected on features that did not extend into the Project area. The approximate locations of these features are shown on the Figure 2 maps in Appendix A as “approximate” wetlands, streams (waterways), open waters, and upland drainage features.

Methods
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2.0 METHODS

2.1 WETLAND DELINEATION

Prior to completing the field surveys, a desktop review of the Project area was conducted using U.S. Geological Survey (USGS) topographic mapping, National Wetlands Inventory (NWI) maps, U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey data, and aerial imagery mapping. Stantec completed a wetland delineation study in accordance with the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)* (USACE 2012b) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0)* (USACE 2012a). Wetland categories were classified using the Ohio Rapid Assessment Method (ORAM) for Wetlands Version 5.0 (Mack 2001).

2.2 STREAM DELINEATION

Streams that demonstrated a continuously defined channel (bed and bank), ordinary high water mark (OHWM), and the disturbance of terrestrial vegetation were delineated within the Project area, per the protocols outlined in the USACE's *Guidance on Ordinary High Water Mark Identification* (Regulatory Guidance Letter, No. 05-05) (USACE 2005). Delineated streams were classified as ephemeral, intermittent, or perennial per definitions in the *Federal Register/Vol. 67, No. 10* (USACE 2002). Functional assessment of streams within the Project area was based on completion of the Ohio Environmental Protection Agency's (OEPA) *Headwater Habitat Evaluation Index (HHEI; OEPA 2018)* and/or *Qualitative Habitat Evaluation Index (QHEI; OEPA 2006)*. The centerline of each waterway and/or the OHWM of each waterway was identified and surveyed using a handheld sub-meter accuracy global positioning system (GPS) unit and mapped with geographic information system (GIS) software. Additionally, the locations of ponds/open water features and upland drainage features (which lacked a continuously defined bed and bank/OHWM) identified within the Project area were also recorded with a sub-meter accuracy GPS unit during the field surveys.

2.3 RARE SPECIES

Prior to conducting the field surveys, Stantec contacted the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) for information regarding rare, threatened, or endangered species and their habitats of concern within the vicinity of the Project area (Appendix B – Agency Correspondence). To assess potential impacts to rare, threatened, or endangered species, Stantec scientists conducted a pedestrian reconnaissance of the proposed Project area, collected information on existing habitats within the Project area, and assessed the potential for these habitats to be used by federally listed or state-listed species that have the potential to occur within Stark County.

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3.0 RESULTS

3.1 TERRESTRIAL HABITAT

Stantec completed field surveys for threatened and endangered species or their habitats on April 4-6, 2022. Figure 3 (Appendix A) shows the vegetation communities/habitats identified within the Project area and the locations of any identified rare, threatened, or endangered species habitat observed within the Project area during the time of the habitat assessment surveys. Representative photographs of the vegetation communities/habitats and land cover types identified within the Project area are included in Appendix C of this report (photo locations are shown on Figure 3, Appendix A). Information regarding the vegetation communities/habitats/land cover types identified within the Project area is provided in Table 1.

Table 1. Vegetation Communities and Land Cover Found within the South Canton-Torrey 138 kV Line Rebuild Project Area, Stark County, Ohio

Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
Agricultural Field	Extreme Disturbance/Ruderal Community dominated by planted row crop species such as corn (<i>Zea mays</i>) and soybean (<i>Glycine max</i>).	No	14.8
Old Field	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders and/or native highly tolerant taxa). Common plant species included Fuller's teasel (<i>Dipsacus fullonum</i>), Allegheny blackberry (<i>Rubus allegheniensis</i>), Amur honeysuckle (<i>Lonicera maackii</i>), reed canarygrass (<i>Phalaris arundinacea</i>), giant ironweed (<i>Vernonia gigantea</i>), Canada goldenrod (<i>Solidago canadensis</i>), poison hemlock (<i>Conium maculatum</i>), broomsedge bluestem (<i>Andropogon virginicus</i>), multiflora rose (<i>Rosa multiflora</i>), Japanese bristlegrass (<i>Setaria faberi</i>), American pokeweed (<i>Phytolacca americana</i>), Queen Anne's lace (<i>Daucus carota</i>), common evening primrose (<i>Oenothera biennis</i>), deertongue (<i>Dichanthelium clandestinum</i>), Indianhemp (<i>Apocynum cannabinum</i>), hairy white oldfield aster (<i>Symphotrichum pilosum</i>), common selfheal (<i>Prunella vulgaris</i>), lesser burdock (<i>Arctium</i>	No	10.0

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Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
	<i>minus</i>) and purpletop tridens (<i>Tridens flavus</i>).		
New Field	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders and/or native highly tolerant taxa). Common plant species included reed canarygrass, Canada goldenrod, tall fescue (<i>Schedonorus arundinaceus</i>), common milkweed (<i>Asclepias syriaca</i>), broomsedge bluestem, timothy (<i>Phleum pratense</i>), Kentucky bluegrass (<i>Poa pratensis</i>), smooth brome (<i>Bromus inermis</i>), curly dock (<i>Rumex crispus</i>), and common mullein (<i>Verbascum thapsus</i>).	No	6.9
Pasture	Extreme Disturbance/Ruderal Community (dominated by opportunistic invaders and/or native highly tolerant taxa). Common plant species included tall fescue, Kentucky bluegrass, white clover (<i>Trifolium repens</i>), red clover (<i>Trifolium pratense</i>), common dandelion (<i>Taraxacum officinale</i>), Canada thistle (<i>Cirsium arvense</i>), common milkweed, Carolina horsenettle (<i>Solanum carolinense</i>), and Japanese bristlegrass.	No	4.2
Residential Lawn	Extreme Disturbance/Ruderal Community (dominated by planted non-native species, opportunistic invaders, and/or native highly tolerant taxa). Common plant species included bermudagrass (<i>Cynodon dactylon</i>), common dandelion, white clover, Kentucky bluegrass, narrowleaf plantain (<i>Plantago lanceolata</i>), tall fescue, and perennial ryegrass (<i>Lolium perenne</i>).	No	1.7
Existing Paved Roadway/Surface	Extreme Disturbance/existing gravel or paved road.	No	1.1
Early Successional Deciduous Forest	Moderate Disturbance/Natural Community (dominated by native woody and herbaceous species and/or opportunistic invaders). Common plant species included multiflora rose, glossy buckthorn (<i>Frangula alnus</i>), silky dogwood (<i>Cornus amomum</i>), Allegheny blackberry, Morrow's honeysuckle (<i>Lonicera morrowii</i>),	No	2.5

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Vegetation Communities and Land Cover Types within the Project Area	Degree of Human-Related Ecological Disturbance	Unique, Rare, or High Quality?	Approximate Acreage Within Project Area
	Canada wildrye (<i>Elymus canadensis</i>), American pokeweed, honeylocust (<i>Gleditsia triacanthos</i>), and American hazelnut (<i>Corylus americana</i>).		
Mixed Early Successional/ Second Growth Deciduous Forest	Moderate Disturbance/Natural Community (dominated by native woody and herbaceous species and/or opportunistic invaders). Common plant species included multiflora rose, Allegheny blackberry, Morrow's honeysuckle, red maple (<i>Acer rubrum</i>), black cherry (<i>Prunus serotina</i>), white oak (<i>Quercus alba</i>), and northern red oak (<i>Quercus rubra</i>).	No	0.3
Industrial Land	Extreme Disturbance/Ruderal Community (little to no vegetation is present in these habitats).	No	0.4
Palustrine Emergent Wetland	Moderate Disturbance/Natural Community (dominated by native herbaceous species and/or opportunistic invaders). Common plant species included reed canarygrass, broadleaf cattail (<i>Typha latifolia</i>), common rush (<i>Juncus effusus</i>), fowl bluegrass (<i>Poa palustris</i>), deertongue, Frank's sedge (<i>Carex frankii</i>), woolgrass (<i>Scirpus cyperinus</i>), giant goldenrod (<i>Solidago gigantea</i>), skunk cabbage (<i>Symplocarpus foetidus</i>), sensitive fern (<i>Onoclea sensibilis</i>), and curly dock.	No	2.7
Palustrine Scrub-Shrub Wetland	Moderate Disturbance/Natural Community (dominated by native shrub, tree, and herbaceous species and/or opportunistic invaders). Common plant species included silky dogwood, giant goldenrod, pin oak (<i>Quercus palustris</i>), and switchgrass (<i>Panicum virgatum</i>).	No	0.2
TOTAL			44.8

3.2 WETLANDS

Stantec completed field surveys within the Project area on April 4-6, 2022, for wetlands. As a result of the field surveys, Stantec identified 13 wetlands within the Project area. Figure 2 (Appendix A) shows the wetlands

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identified by Stantec within the Project area. Representative photographs of the wetlands identified within the Project area are included in Appendix C of this report (photo locations are shown on Figure 2, Appendix A). Completed wetland determination data forms and ORAM data forms are included in Appendix D. Information regarding the Cowardin classification and ORAM categories of wetlands identified within the Project area is provided in Table 2. A summary of the disposition of NWI-mapped wetlands within the Project area is provided in Table 3.

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Table 2. Summary of Wetland Resources Found within the South Canton-Torrey 138 kV Line Rebuild Project Area, Stark County, Ohio

Wetland ID	Location		Isolated ? ¹	Habitat Type ²	Delineated Area (acre)	ORAM		Nearest Proposed Structure Number	Existing Structure Number in Wetland	Proposed Structure Number in Wetland	Structure Installation Method	Proposed Impacts	
	Latitude	Longitude				Score	Category					Temporary Matting Area (acre)	Permanent Impact Area (acre)
Wetland 1	40.752206	-81.414079	No	PEM	0.07	11	1	305	N/A	N/A	N/A	0	0
Wetland 2	40.716826	-81.409434	No	PEM	0.08	29	1	295	N/A	N/A	N/A	0	0
Wetland 3	40.718414	-81.410126	No	PEM	0.15	33	2	295	N/A	N/A	N/A	0	0
Wetland 4	40.719564	-81.410812	No	PEM	0.13	34	2	296	N/A	N/A	N/A	0	0
Wetland 5	40.722331	-81.412075	No	PEM	0.05	28	1	297	N/A	N/A	N/A	0	0
Wetland 6	40.724380	-81.413169	No	PEM	0.03	28	1	297	N/A	N/A	N/A	0.005	0
Wetland 7	40.725804	-81.414049	No	PEM	0.26	28	1	297A	N/A	N/A	N/A	0	0
Wetland 8	40.731863	-81.415266	No	PEM	0.07	23	1	300	N/A	N/A	N/A	0	0
Wetland 9	40.748683	-81.414322	No	PEM	0.99	27	1	304	N/A	N/A	N/A	0	0
Wetland 10	40.746445	-81.414411	No	PEM	0.27	15	1	304	N/A	N/A	N/A	0	0
Wetland 11	40.742528	-81.414655	No	PEM	0.39	26	1	302	N/A	N/A	N/A	0	0
	40.743085	-81.414740	No	PSS	0.23			303	N/A	N/A	N/A	0	0
Wetland 12	40.740205	-81.414856	No	PEM	0.09	19	1	302	N/A	N/A	N/A	0	0
Wetland 13	40.740997	-81.414661	No	PEM	0.12	21	1	302	N/A	N/A	N/A	0	0
TOTAL					2.94							0.005	0.000
¹ Preliminary jurisdictional determinations were made in concurrence with the U.S. Supreme Court decision following Rapanos v United States, prior to the establishment of the Navigable Waters Protection Rule. ² Wetland classification is based on Cowardin et al. (1979). ³ PEM = Palustrine Emergent Wetland ⁴ PSS = Palustrine Scrub-Shrub Wetland ⁵ PFO = Palustrine Forested Wetland													

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Table 3. Summary of NWI Disposition within the South Canton-Torrey 138 kV Line Rebuild Project Area, Stark County, Ohio

NWI Code	NWI Description	Figure 2 Page Number	Related Field Inventoried Resource(s)	Comments
R4SBC	Riverine, intermittent, streambed, seasonally flooded	2	Stream 2	Stream 2 was identified within the NWI feature. Representative photographs are included in Appendix C and HHEI data form is included in Appendix D.
R2UBF	Riverine, lower perennial, unconsolidated bottom, semi permanently flooded	8	Stream 8	Stream 8 was identified within the NWI feature. Representative photographs are included in Appendix C and HHEI data form is included in Appendix D.
R4SBC	Riverine, intermittent, streambed, seasonally flooded	10	Stream 1	Stream 1 was identified within the NWI feature. Representative photographs are included in Appendix C and HHEI data form is included in Appendix D.

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3.3 STREAMS

Stantec completed field surveys for streams (waterways) within the Project area on April 4-6, 2022. Figure 2 (Appendix A) shows the locations of streams identified by Stantec within the Project area. Representative photographs of the streams are included in Appendix C of this report (photo locations are shown on Figure 2, Appendix A). Completed QHEI and HHEI data forms for the identified streams are included in Appendix D. Information regarding the identified streams is provided in Table 4.

Table 4. Summary of Stream Resources Found within the South Canton-Torrey 138 kV Line Rebuild Project Area, Stark County, Ohio

Stream ID	Location		Stream Type	Stream Name ¹	Delineated Length (feet)	Bankfull Width (feet)	OHWM Width (feet)	Field Evaluation			Ohio EPA 401 Eligibility	Stream Crossing?	Proposed Impacts	
	Latitude	Longitude						Method	Score ^{2,3}	Category/ Rating/ OAC Use Designation ^{2,3,4}			Fill Type	Area (acre)
Stream 1	40.759539	-81.413717	Intermittent	UNT to Beal Run	106	9.8	7	HHEI	42	Modified Class II PHW	Eligible	No	N/A	N/A
Stream 2	40.719197	-81.410541	Intermittent	UNT to Bear Run	242	9.5	7	QHEI/ HHEI	41.5/ 66	Modified Class II PHW	Eligible	No	N/A	N/A
Stream 3	40.719434	-81.410816	Intermittent	UNT to Bear Run	41	2.5	1	HHEI	24	Modified Class I PHW	Eligible	No	N/A	N/A
Stream 4	40.722226	-81.412119	Ephemeral	UNT to Bear Run	202	1.6	0.75	HHEI	24	Modified Class I PHW	Eligible	Yes	N/A	N/A
Stream 5	40.724261	-81.413398	Ephemeral	UNT to Bear Run	28	3.2	1.5	HHEI	18	Modified Class I PHW	Eligible	No	N/A	N/A
Stream 6	40.725547	-81.413918	Intermittent	UNT to Bear Run	162	6.6	4.5	HHEI	63	Modified Class II PHW	Eligible	No	N/A	N/A
Stream 7	40.731965	-81.415077	Ephemeral	UNT to Bear Run	38	4.9	2.5	HHEI	52	Modified Class II PHW	Eligible	No	N/A	N/A

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Stream ID	Location		Stream Type	Stream Name ¹	Delineated Length (feet)	Bankfull Width (feet)	OHWM Width (feet)	Field Evaluation			Ohio EPA 401 Eligibility	Stream Crossing?	Proposed Impacts	
	Latitude	Longitude						Method	Score ^{2,3}	Category/ Rating/ OAC Use Designation ^{2,3,4}			Fill Type	Area (acre)
Stream 8	40.747403	-81.414372	Perennial	UNT to Beal Run	143	10	8	QHEI/ HHEI	46.5/ 66	Modified Class II PHW	Eligible	No	N/A	N/A
Stream 9	40.747286	-81.414227	Ephemeral	UNT to Beal Run	132	4.9	1.5	HHEI	29	Modified Class I PHW	Eligible	No	N/A	N/A
TOTAL:					1,094									
¹ UNT = Unnamed Tributary ² Based on the designated use evaluation presented in the Field Methods for Evaluating Primary Headwater Habitat Streams in Ohio, Version 4.0 (OEPA 2018). ³ Based on the designated use evaluation presented in the Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (OEPA 2006). ⁴ Based on Ohio Administrative Code (OAC) 3745-1-16.														

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3.4 OPEN WATERS

No open waters were identified within the Project area during the field surveys that took place on April 4-6, 2022.

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3.5 RARE, THREATENED, OR ENDANGERED SPECIES HABITAT

Table 5. Summary of Potential Federally Listed and Ohio State-Listed Species within the South Canton-Torrey 138 kV Line Rebuild Project Area, Stark County, Ohio

Common Name/Scientific Name	State Listed Status ^{1,2}	Federally Listed Status ^{1,3}	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
Plants						
Shore-growing Peat Moss/ <i>Sphagnum riparium</i>	E	N/A	Typically found in weakly to moderately base-rich springs, flushes and in poor fens (BBS 2022).	No suitable habitat was observed within the Project area.	ODNR – The Natural Heritage Database has records of this species within a one-mile radius of the Project area; No other comments received. USFWS – No comments received.	According to the State Listed Wildlife and Plant Species by County List for Stark County (ODNR 2022a), shore-growing peat moss is not found within Stark County. Additionally, no suitable habitat was observed within the Project area. Therefore, impacts to this species are not anticipated and avoidance activities are not applicable.
Insects						
Brush-tipped Emerald/ <i>Somatochlora walshii</i>	E	N/A	The habitat preference for the brush-tipped emerald includes small, slow-flowing streams that flow through open bogs, sedge fens, marshes, and meadows. This species can also be found at lake or pond outlets (Dunkle 2000; Paulson 2009).	No suitable habitat was observed within the Project area.	ODNR – The Natural Heritage Database has records of this species within a one-mile radius of the Project area; No other comments received. USFWS – No comments received.	No suitable habitat was observed within the Project area and no work within perennial streams is anticipated to be required for the Project. Therefore, no impacts are anticipated, and avoidance dates are not applicable.
Reptiles						
Spotted Turtle/ <i>Clemmys guttata</i>	E	N/A	Spotted turtles inhabit mostly unpolluted, shallow bodies of water with a soft bottom and aquatic vegetation, such as small marshes, marshy pastures, bogs, fens, woodland streams, swamps, small ponds, vernal pools, and lake margins; in some areas they occur in brackish tidal streams. Ponds surrounded by relatively undisturbed meadow or undergrowth are most favorable. These turtles favor waters with a soft bottom and aquatic vegetation (NatureServe 2022).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the spotted turtle. Due to the location, the type of habitat within the Project area, and the type of work proposed, this Project is not likely to impact this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Therefore, no impacts are anticipated, and avoidance dates are not applicable.
Fishes						

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Common Name/Scientific Name	State Listed Status ^{1,2}	Federally Listed Status ^{1,3}	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
Iowa Darter/ <i>Etheostoma exile</i>	E	N/A	This species is typically found in natural lakes and very sluggish streams or marshes with dense aquatic vegetation and clear waters over sandy substrates. In Ohio, this species has been found in pothole or kettle lakes (ODNR 2018).	No suitable habitat was observed within the Project area.	ODNR – The Project is within the range of the Iowa darter. ODNR recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this Project is not likely to impact this species. USFWS – No comments received.	No suitable habitat for this species was observed within the Project area and no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Mussels						
Long solid/ <i>Fusconaia maculata maculata</i>	E	N/A	This species is found in medium to large rivers with a strong current and often in sand and gravel (NatureServe 2022).	No suitable habitat was observed within the Project area	ODNR – The Project area is within the range of the long-solid mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this Project is not likely to impact this species. USFWS – No comments received.	No suitable habitat was observed within the Project area. Additionally, no in-water work in perennial streams is proposed by AEP. Therefore, impacts to this species are not anticipated and avoidance dates are not applicable.
Mammals						
Indiana Bat/ <i>Myotis sodalis</i>	E	E	The Indiana bat is likely distributed over the entire State of Ohio, though not uniformly. This species generally forages in openings and edge habitats within upland and floodplain forest, but they also forage over old fields and pastures (Brack et al. 2010). Natural roost structures include trees (live or dead) with exfoliating bark, and exposure to solar radiation. Other important factors for roost trees include relative location to other trees, a permanent water source and foraging areas; Dead trees are preferred as maternity roosts; however, live trees are often used as secondary roosts depending on microclimate conditions (USFWS 2007; USFWS 2022). Roosts have also occasionally been found to consist of cracks and hollows in trees, utility poles, buildings, and bat boxes. Primarily use caves for hibernacula, although are also known to hibernate in abandoned underground mines (Brack et al. 2010).	Potentially suitable summer roosting and foraging habitat was observed within mixed early successional/second growth deciduous forest habitats within the Project area (Figure 3, Appendix A). No potentially suitable hibernacula were observed within the Project area.	ODNR - The entire state of Ohio is within the range of the Indiana bat. If trees are present within the Project area and trees must be cut the ODNR recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 if possible. In addition, ODNR recommends a desktop habitat assessment, followed by field a field assessment if needed, to determine if there are potential hibernacula present within the Project area. If a habitat assessment finds that potential hibernacula are present within 0.25 miles of the Project area, please send this information to Erin Hazelton for project recommendations. USFWS - Should the proposed project site contain trees ≥3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, we recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to	Potentially suitable summer roosting and foraging habitat was observed within mixed early successional/second growth deciduous forest habitat areas within the Project area. AEP intends to clear trees between October 1 and March 31. If any summer tree clearing is required, AEP will proceed accordingly with agency recommendations to avoid impacts to this species. Additionally, a desktop bat hibernacula habitat assessment was completed by Stantec (Figure 4, Appendix B). The assessment identified abandoned underground mines within 0.25 miles of the Project area. No potentially suitable hibernacula were observed within the Project area during the field surveys completed by Stantec. Avoidance Dates: April 1 – September 30

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Common Name/Scientific Name	State Listed Status ^{1,2}	Federally Listed Status ^{1,3}	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
					Indiana bats. If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year.	
Northern Long-eared Bat/ <i>Myotis septentrionalis</i>	E	T	The northern long-eared bat is found throughout Ohio. This species generally forages in forested habitat and openings in forested habitat and utilizes cracks, cavities, and loose bark within live and dead trees, as well as buildings as roosting habitat (Brack et al. 2010; USFWS 2020). The species utilizes caves and abandoned mines as winter hibernacula. Various sized caves are used providing they have a constant temperature, high humidity, and little to no air current (Brack et al. 2010).	Potentially suitable summer roosting and foraging habitat was observed within mixed early successional/second growth deciduous forest habitats within the Project area (Figure 3, Appendix A). No potentially suitable hibernacula were observed within the Project area.	ODNR - The portion of the Project from Fohl Street Southwest to the southern terminus at existing Structure 282 is within the vicinity of records for the northern long-eared bat. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with ODNR. (Contact Erin Hazelton at Erin.hazelton@dnr.ohio.gov). USFWS - Should the proposed project site contain trees ≥3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥3 inches dbh cannot be avoided, we recommend removal of any trees ≥3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats. Incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule.	Potentially suitable summer roosting and foraging habitat was observed within mixed early successional/second growth deciduous forest habitat areas within the Project area. AEP intends to clear trees between October 1 and March 31. If any summer tree clearing is required, AEP will proceed accordingly with agency recommendations to avoid impacts to this species. Additionally, a desktop bat hibernacula habitat assessment was completed by Stantec. The assessment identified abandoned underground mines within 0.25 miles of the Project area. No potentially suitable hibernacula were observed within the Project area during the field surveys completed by Stantec. Avoidance Dates: April 1 – September 30
Little Brown Bat/ <i>Myotis lucifugus</i>	E	N/A	The little brown bat is found throughout Ohio. This species seems to prefer to forage over water but also forages among trees in rather open areas (Harvey et al. 1999). During summer, it typically inhabits buildings, attics, church belfries, barns and outbuildings, and occasionally more natural habitats such as sloughing bark of a dead tree. During summer, two types of roosts are utilized: day roosts and night roosts. Day roosts are the maternity colony roost, while little brown bats often roost in	Potentially suitable summer roosting and foraging habitat was observed within mixed early successional/second growth deciduous forest habitat areas within the Project area (Figure 3, Appendix A). No	ODNR - The entire state of Ohio is within the range of the little brown bat. If trees are present within the Project area and trees must be cut the ODNR recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 if possible. In addition, ODNR recommends a desktop habitat assessment, followed by field a field assessment if needed, to determine if there are potential hibernacula present within the Project area. If a habitat assessment finds that potential hibernacula are present within 0.25 miles of the	Potentially suitable summer roosting and foraging habitat was observed within mixed early successional/second growth deciduous forest habitat areas within the Project area. AEP intends to clear trees between October 1 and March 31. If any summer tree clearing is required, AEP will proceed accordingly with agency recommendations to avoid impacts to this species. Additionally, a desktop bat hibernacula habitat assessment was completed by Stantec. The assessment identified abandoned underground mines within 0.25 miles of the Project area. No potentially suitable hibernacula were

ECOLOGICAL SURVEY REPORT, SOUTH CANTON-TORREY 138 KV LINE REBUILD PROJECT, STARK COUNTY, OHIO

Results
March 16, 2023

Common Name/Scientific Name	State Listed Status ^{1,2}	Federally Listed Status ^{1,3}	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
			other areas where they rest and congregate to digest their food in between foraging bouts. In Ohio, this species typically utilizes caves and mines as hibernacula, although at least one hibernaculum was found to be located in an attic of an old building (Brack et al. 2010).	potentially suitable hibernacula were observed within the Project area.	Project area, please send this information to Erin Hazelton for project recommendations. USFWS – No comments received.	observed within the Project area during the field surveys completed by Stantec. Avoidance Dates: April 1 – September 30
Tri-colored Bat/ <i>Perimyotis subflavus</i>	E	N/A	The tricolored bat is found throughout Ohio. This species has been found to forage above and within a variety of habitats, including woodlands, agricultural fields, grassy areas, and over streamside vegetation (Sparks et al. 2011). Maternity colonies have often been found within clusters of dead leaves, hanging in trees. Maternity colonies have also been found in or on buildings. Little is known of male tri-colored bats in summer, but it is thought that they are probably solitary and spend their days in similar situations, as well as crevices, caves and mines (Brack et al. 2010). In Ohio, this species typically utilizes caves and mines as hibernacula, utilizing a variety of situations, including very cold areas near cave entrances to deeper passages that seem to be too warm for other species of bats (Brack et al. 2010).	Potentially suitable summer roosting and foraging habitat was observed within mixed early successional/second growth deciduous forest habitat areas within the Project area (Figure 3, Appendix A). No potentially suitable hibernacula were observed within the Project area.	ODNR - The entire state of Ohio is within the range of the tri-colored bat. If trees are present within the Project area and trees must be cut the ODNR recommends cutting only occur from October 1 through March 31, conserving trees with loose, shaggy bark and/or crevices, holes, or cavities, as well as trees with dbh ≥ 20 if possible. In addition, ODNR recommends a desktop habitat assessment, followed by field a field assessment if needed, to determine if there are potential hibernacula present within the Project area. If a habitat assessment finds that potential hibernacula are present within 0.25 miles of the Project area, please send this information to Erin Hazelton for project recommendations. USFWS – No comments received.	Potentially suitable summer roosting and foraging habitat was observed within mixed early successional/second growth deciduous forest habitat areas within the Project area. AEP intends to clear trees between October 1 and March 31. If any summer tree clearing is required, AEP will proceed accordingly with agency recommendations to avoid impacts to this species. Additionally, a desktop bat hibernacula habitat assessment was completed by Stantec. The assessment identified abandoned underground mines within 0.25 miles of the Project area. No potentially suitable hibernacula were observed within the Project area during the field surveys completed by Stantec. Avoidance Dates: April 1 – September 30
Birds						
Northern Harrier/ <i>Circus hudsonius</i>	E	N/A	Harriers hunt low over grasslands, with wings held in a distinctive dihedral (V-shape). This is a common migrant and winter species; nesters are much rarer, although they occasionally breed in large marshes and grasslands (ODNR 2018). Northern harriers appear to be associated with large tracts of undisturbed habitat. They are uncommon in blocks of contiguous grassland less than 100 hectares (Slater and Rock 2005).	No suitable nesting habitat was observed within the Project area.	ODNR – The Project is within the range of the northern harrier. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this Project is not likely to impact this species. USFWS - No comments received.	Northern harriers require large tracts of wetlands and/or grasslands that are 100 hectares (247 acres) or more for suitable breeding/nesting habitat (Slater and Rock 2005). No suitable nesting habitat (large tracts of wetland and/or grasslands) were observed within the Project area. Therefore, no impacts are anticipated, and avoidance dates are not applicable.
¹ E=Endangered; T=Threatened; N/A= Not Applicable ² According to ODNR, State Listed Wildlife and Plant Species by County (ODNR 2022a).						

ECOLOGICAL SURVEY REPORT, SOUTH CANTON-TORREY 138 KV LINE REBUILD PROJECT, STARK COUNTY, OHIO

Results
March 16, 2023

Common Name/Scientific Name	State Listed Status ^{1,2}	Federally Listed Status ^{1,3}	Typical Habitat	Habitat Observed	Agency Comments (Appendix B)	Potential Impacts and Avoidance Dates
³ According to USFWS (2018).						

4.0 CONCLUSIONS AND RECOMMENDATIONS

Stantec conducted a wetland and waterbodies delineation and a preliminary habitat assessment for threatened and endangered species within the Project area on April 4-6, 2022. Twelve PEM wetlands totaling approximately 2.32 acres and one mixed PEM/PSS wetland totaling approximately 0.62 acres were identified within the Project area. Four ephemeral streams totaling approximately 400 linear feet in length, four intermittent streams totaling approximately 551 linear feet in length, and one perennial stream totaling approximately 143 linear feet in length were identified within the Project area. Data forms for the identified wetland and stream features are provided in Appendix D and representative photographs are provided in Appendix C.

The information provided by Stantec regarding wetland and stream boundaries is based on an analysis of the wetland and upland conditions present within the Project area at the time of the field work. The delineations were performed by experienced and qualified professionals using regulatory agency-accepted practices and sound professional judgment.

An ODNR Ohio Natural Heritage Program data request and environmental review request letter was sent to the ODNR Office of Real Estate on August 18, 2021. The ODNR Office of Real Estate response dated September 13, 2021 (Appendix B) states that there are records of the shore-growing peat moss (state listed endangered) and brush-tripped emerald (state listed endangered) within a one-mile radius of the Project area. There was no potential habitat for either of these species observed within the Project area and the ODNR State Listed Wildlife and Plant Species by County list indicates shore-growing peat moss is not known to occur in Stark County (ODNR 2022a). Therefore, no impacts to these species are anticipated.

Additionally, a search for unique ecological sites, scenic rivers, state nature preserves, wildlife areas, parks or forests, national wildlife refuges, and other protected natural areas indicated Bolivar Reservoir, managed by the Muskingum Watershed Conservancy District, occurs within a one-mile radius of the Project area. The Project will not impact this reservoir.

The ODNR stated that the portion of the Project area from Fohl Street to existing Structure 282 is within the vicinity of records for the northern long-eared bat. Because presence of a state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting outside this buffer may be acceptable after further consultation with Erin Hazelton at ODNR.

According to the ODNR, the entire state of Ohio is within the range of the Indiana bat, northern long-eared bat, little brown bat, and the tri-colored bat. If trees are present within the Project area and trees must be cut, the ODNR Division of Wildlife (DOW) recommends cutting only occur from October 1 – March 31, conserving trees with loose, shaggy bark and/or crevices holes, or cavities as well as trees with diameter at breast height (dbh) \geq 20 inches if possible.

ECOLOGICAL SURVEY REPORT, SOUTH CANTON-TORREY 138 KV LINE REBUILD PROJECT, STARK COUNTY, OHIO

Conclusions and Recommendations

March 16, 2023

The ODNR also recommended that a desktop habitat assessment be conducted, followed by a field assessment if needed, to determine if there are potential bat hibernacula present within 0.25 miles of the Project area. Stantec completed a desktop habitat desktop assessment in accordance with the 2022 Range-wide Indiana Bat Survey Guidelines (USFWS 2022) utilizing available ODNR websites, including data on known abandoned or active mines (ODNR 2022b) and locations of known or suspected karst geology (ODNR 2022c). The desktop assessment identified abandoned underground mines within 0.25 miles of the Project area. However, no potential bat hibernacula were observed by Stantec within the Project area during the field surveys.

The ODNR states that the Project is within the range of the following state-listed and federally listed threatened and endangered species: long solid, Iowa darter, spotted turtle, and the northern harrier. Due to the location, the type of habitat within the Project area, and the type of work proposed, the ODNR concluded that this Project is not like to impact the long solid, Iowa darter, or the spotted turtle.

The ODNR recommends that nesting habitats for the northern harrier be avoided during their nesting period. However, no suitable northern harrier nesting habitat (large tracts of grasslands or wetlands) is present within the Project area for this species. Grassland and wetland habitats within the Project area were fragmented and not in the large tracts of undisturbed habitat that the northern harrier requires for nesting habitat (Slater and Rock 2005). Therefore, this Project is not likely to impact this species and nesting season avoidance dates are not applicable.

A technical assistance request letter was also submitted to the USFWS on August 18, 2021. The USFWS response letter dated August 30, 2021, recommends that impacts to wetlands and other water resources be avoided or minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation (Appendix B).

According to the USFWS response, all projects in the State of Ohio lie within range of the federally endangered Indiana bat and the federally threatened northern long-eared bat. In Ohio, presence of these species is assumed wherever suitable habitat occurs unless a presence/probable absence survey has been performed to document probable absence. The USFWS response letter states that, should the Project site contain trees ≥ 3 inches dbh, the USFWS recommends trees be saved whenever possible. If any caves or abandoned mines may be disturbed, further coordination is requested. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, the USFWS recommends that removal of trees ≥ 3 inches dbh only occur between October 1 and March 31 in order to avoid adverse effects to these species. If implementation of seasonal tree clearing is not possible, the USFWS recommends summer presence/probable absence surveys be conducted between June 1 and August 15 (however the ODNR response stated that additional summer surveys would not constitute presence/absence, as there are records of northern long-eared bat captures within the vicinity of the Project area).

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Conclusions and Recommendations
March 16, 2023

Additionally, the USFWS states that they do not anticipate adverse effects to any other federally endangered, threatened, proposed or candidate species due to the Project type, size, and location.

References
March 16, 2023

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Appendix A FIGURES

A.1 FIGURE 1 – PROJECT LOCATION MAP



Figure No.

1

Title

Project Location Map

Client/Project 193708516
 AEP Ohio Transmission Company, Inc.
 South Canton-Torrey
 138 kV Line Rebuild Project

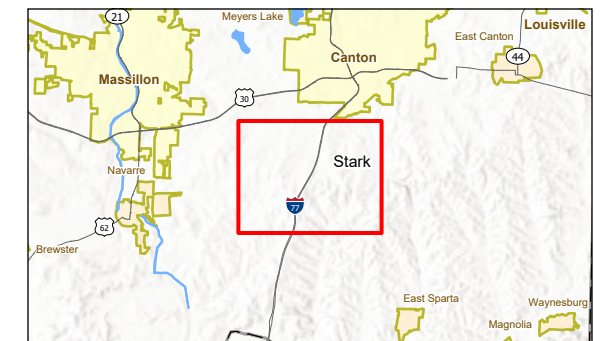
Project Location Stark County, Ohio Prepared by J.LH on 2022-10-17
 TR by KLB on 2023-03-9
 IR by A.JK on 2023-03-13



0 1,000 2,000 Feet
 (At original document size of 11x17)
 1:24,000

Legend

- AEP Substation
- Existing Structure to be Replaced
- ◇ Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- - - Proposed 138 kV Transmission Line
- ▭ Project Area



Notes
 1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
 3. Background: USGS 7.5' Topographic Quadrangles - Canton West, OH (1986) and Bolivar, OH (1978)



A.2 FIGURE 2 – WETLAND AND WATERBODY DELINEATION MAP

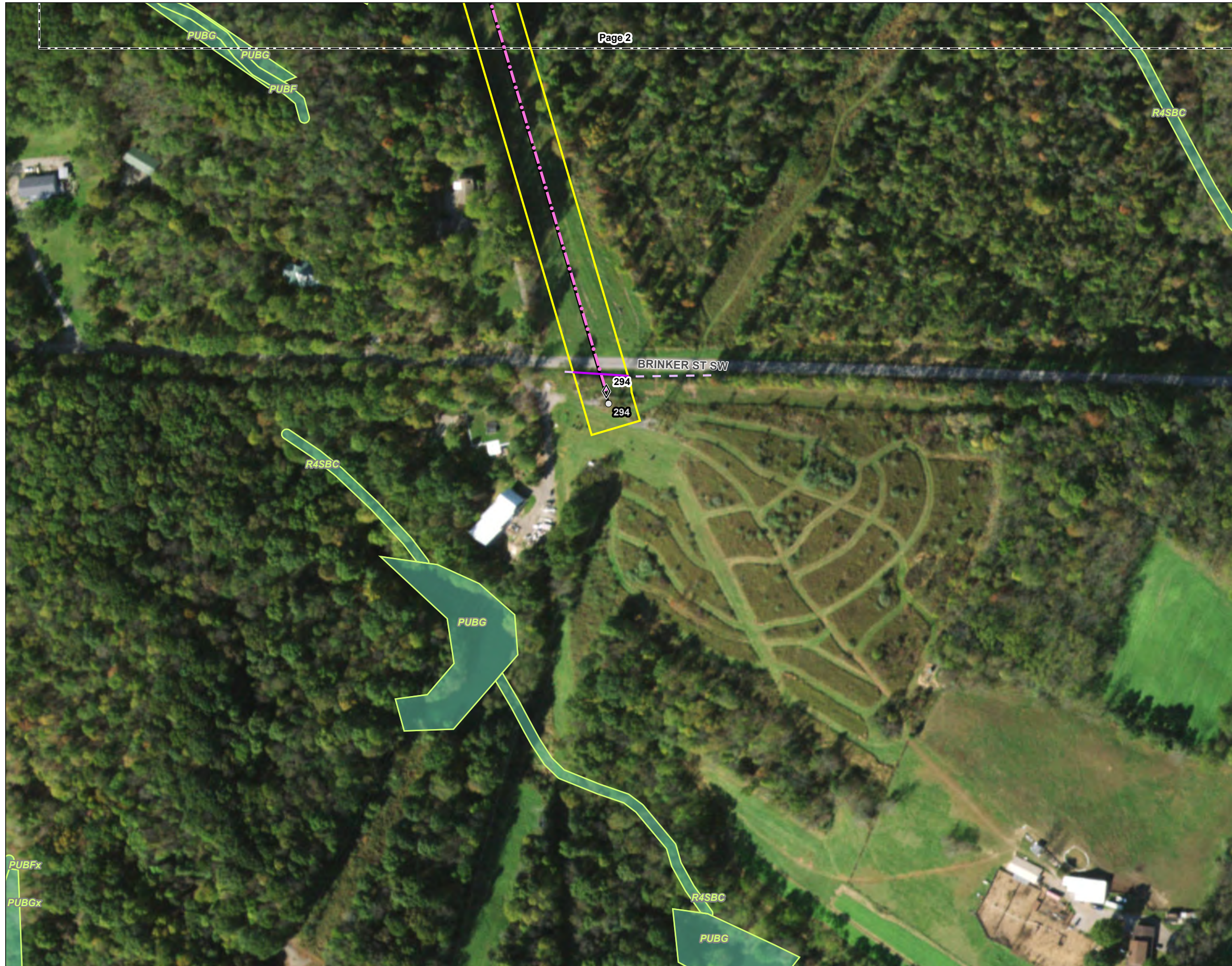


Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project 193708516
 AEP Ohio Transmission Company, Inc.
 South Canton-Torrey
 138 kV Line Rebuild Project

Project Location Stark County, Ohio Prepared by JLH on 2022-10-17
 TR by KLB on 2023-03-09
 IR by AJK on 2023-03-13

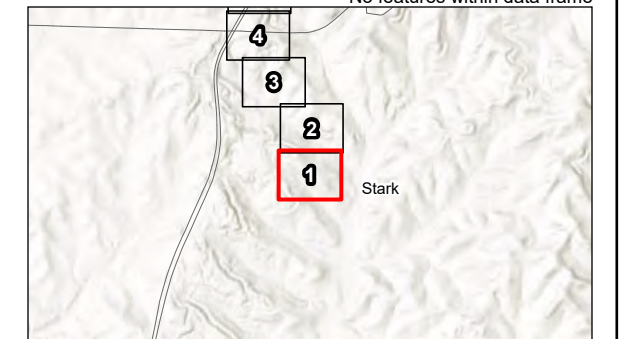


0 100 200 Feet
 (At original document size of 11x17)
 1:2,400

Legend

- AEP Substation
- Existing Structure to be Replaced
- ◇ Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Project Area
- Photo Location
- △ Existing Culvert
- Wetland
- Determination Sample Point
- Upland Drainage Feature
- Approximate Upland Drainage Feature
- Field Delineated Waterway
- Approximate Waterway
- Field Delineated Emergent Wetland
- Field Delineated Scrub-Shrub Wetland
- Approximate Wetland
- National Wetlands Inventory Feature
- FEMA Flood Hazard Area*
- 100-year Floodplain
- Floodway

*No features within data frame



Notes
 1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



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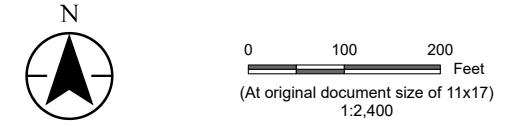
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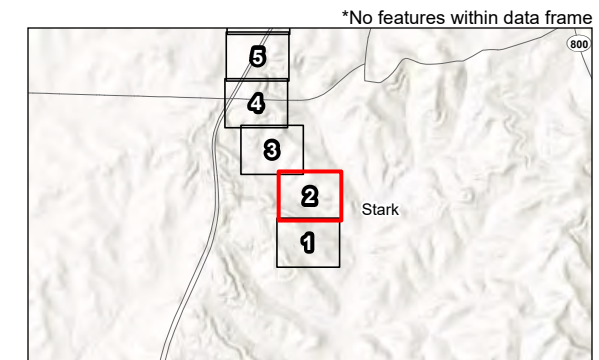
Figure No. **2**
Title **Wetland and Waterbody Delineation Map**

Client/Project 193708516
AEP Ohio Transmission Company, Inc.
South Canton-Torrey
138 kV Line Rebuild Project

Project Location Stark County, Ohio Prepared by JLH on 2022-10-17
TR by KLB on 2023-03-09
IR by AJK on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Proposed 138 kV Transmission Line
 - Project Area
 - Photo Location
 - △ Existing Culvert
 - Wetland Determination Sample Point
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Field Delineated Waterway
 - Approximate Waterway
 - Field Delineated Emergent Wetland
 - Field Delineated Scrub-Shrub Wetland
 - Approximate Wetland
 - National Wetlands Inventory Feature
 - FEMA Flood Hazard Area*
 - 100-year Floodplain
 - Floodway



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
3. Orthophotography: 2019 NAIP



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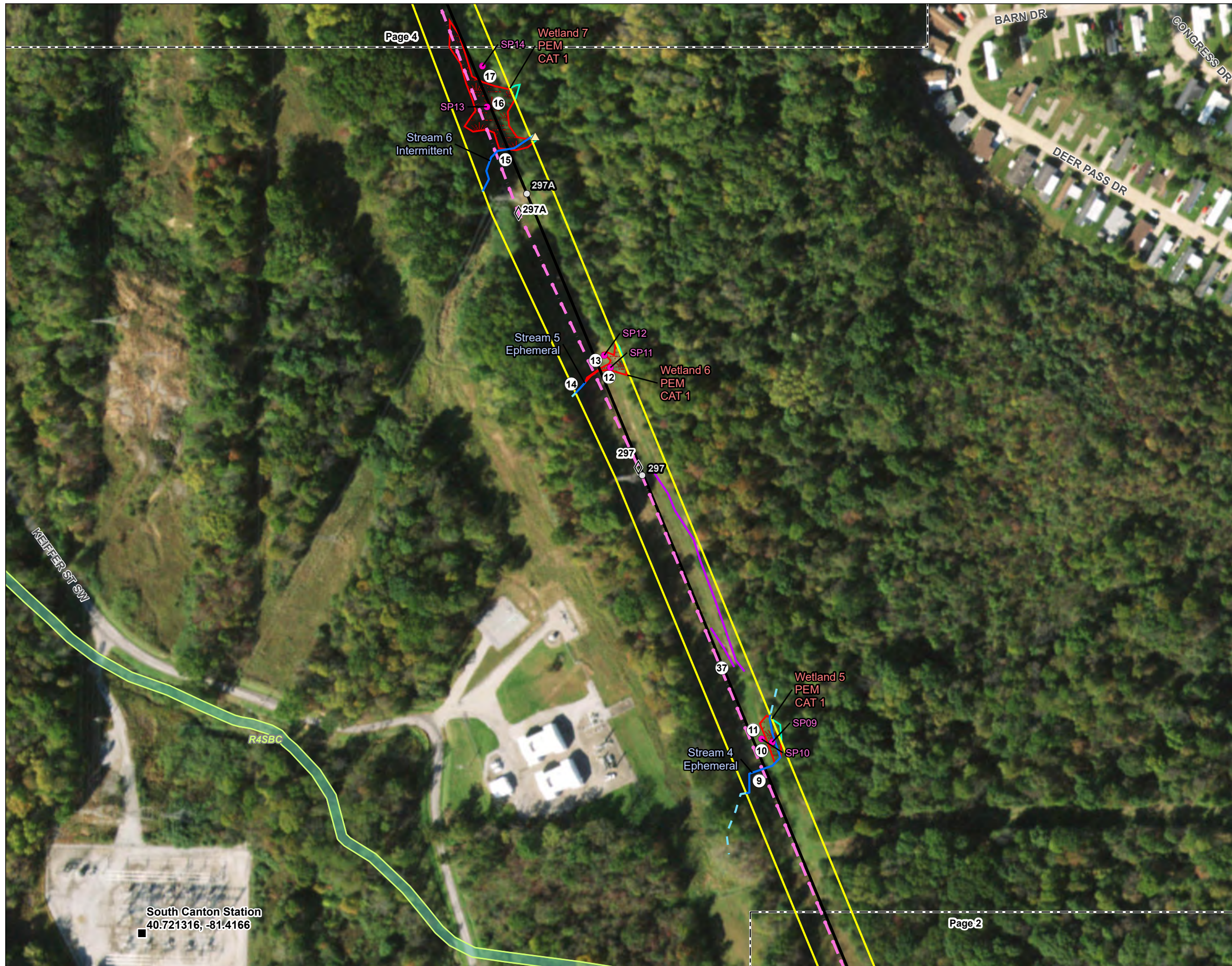
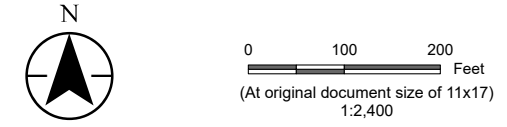
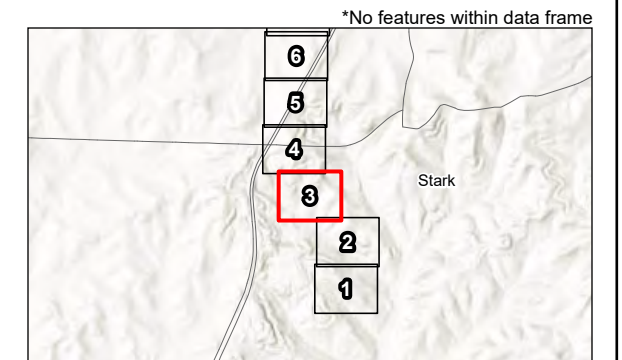


Figure No. **2**
Title **Wetland and Waterbody Delineation Map**

Client/Project 193708516
AEP Ohio Transmission Company, Inc.
South Canton-Torrey
138 kV Line Rebuild Project
Project Location Stark County, Ohio Prepared by JLH on 2022-10-17
TR by KLB on 2023-03-09
IR by AJK on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Proposed 138 kV Transmission Line
 - Project Area
 - Photo Location
 - △ Existing Culvert
 - Wetland Determination Sample Point
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Field Delineated Waterway
 - Approximate Waterway
 - Field Delineated Emergent Wetland
 - Field Delineated Scrub-Shrub Wetland
 - Approximate Wetland
 - National Wetlands Inventory Feature
 - FEMA Flood Hazard Area*
 - 100-year Floodplain
 - Floodway



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
3. Orthophotography: 2019 NAIP





Figure No.

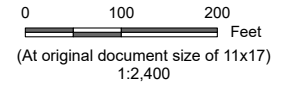
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Title

Wetland and Waterbody Delineation Map

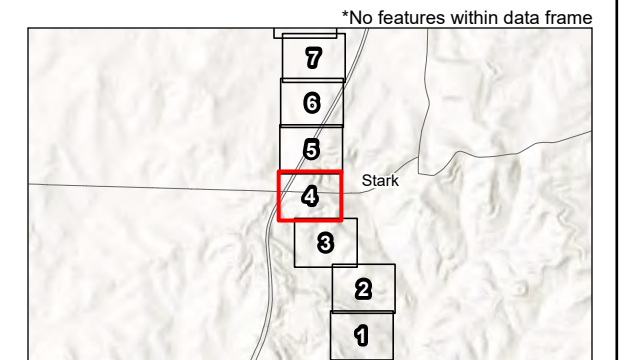
Client/Project 193708516
 AEP Ohio Transmission Company, Inc.
 South Canton-Torrey
 138 kV Line Rebuild Project

Project Location Stark County, Ohio Prepared by JLH on 2022-10-17
 TR by KLB on 2023-03-09
 IR by AJK on 2023-03-13



Legend

- AEP Substation
- Existing Structure to be Replaced
- ◇ Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Project Area
- Photo Location
- △ Existing Culvert
- Wetland Determination Sample Point
- Upland Drainage Feature
- Approximate Upland Drainage Feature
- Field Delineated Waterway
- Approximate Waterway
- Field Delineated Emergent Wetland
- Field Delineated Scrub-Shrub Wetland
- Approximate Wetland
- National Wetlands Inventory Feature
- FEMA Flood Hazard Area*
- 100-year Floodplain
- Floodway



Notes
 1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



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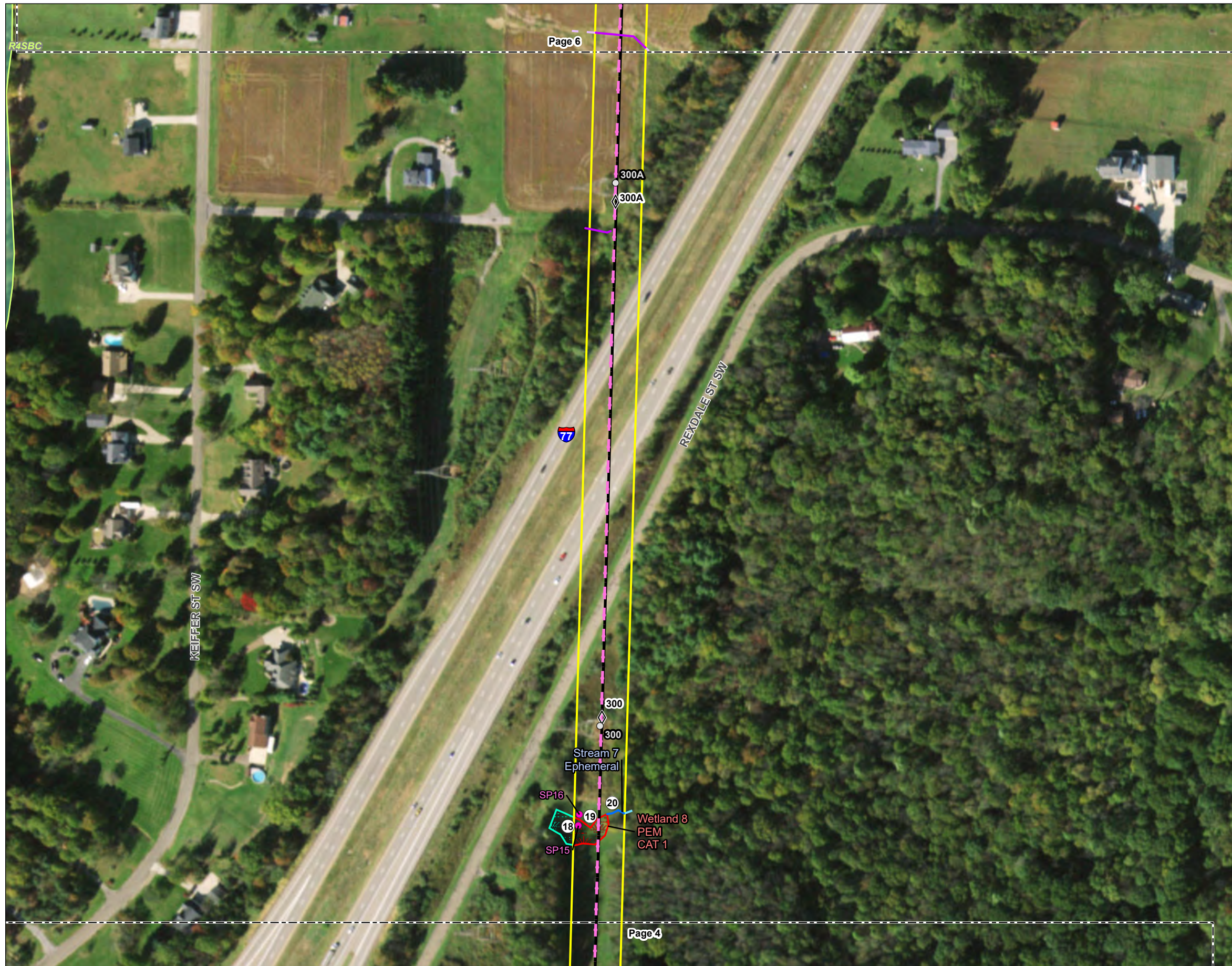
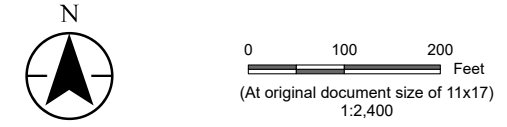
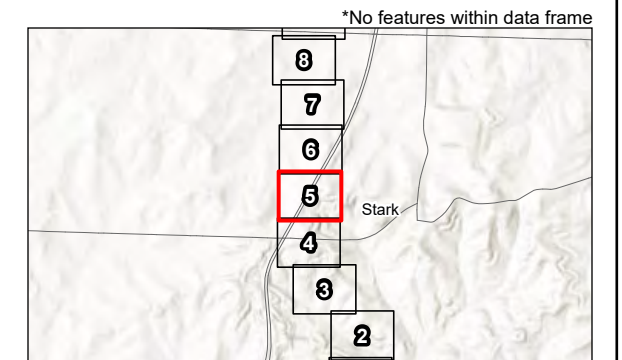


Figure No. **2**
Title **Wetland and Waterbody Delineation Map**

Client/Project 193708516
AEP Ohio Transmission Company, Inc.
South Canton-Torrey
138 kV Line Rebuild Project
Project Location Stark County, Ohio
Prepared by JLH on 2022-10-17
TR by KLB on 2023-03-09
IR by AJK on 2023-03-13



- Legend
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Proposed 138 kV Transmission Line
 - Project Area
 - Photo Location
 - △ Existing Culvert
 - Wetland
 - Determination Sample Point
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Field Delineated Waterway
 - Approximate Waterway
 - Field Delineated Emergent Wetland
 - Field Delineated Scrub-Shrub Wetland
 - Approximate Wetland
 - National Wetlands Inventory Feature
 - FEMA Flood Hazard Area*
 - 100-year Floodplain
 - Floodway



Notes
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2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
3. Orthophotography: 2019 NAIP



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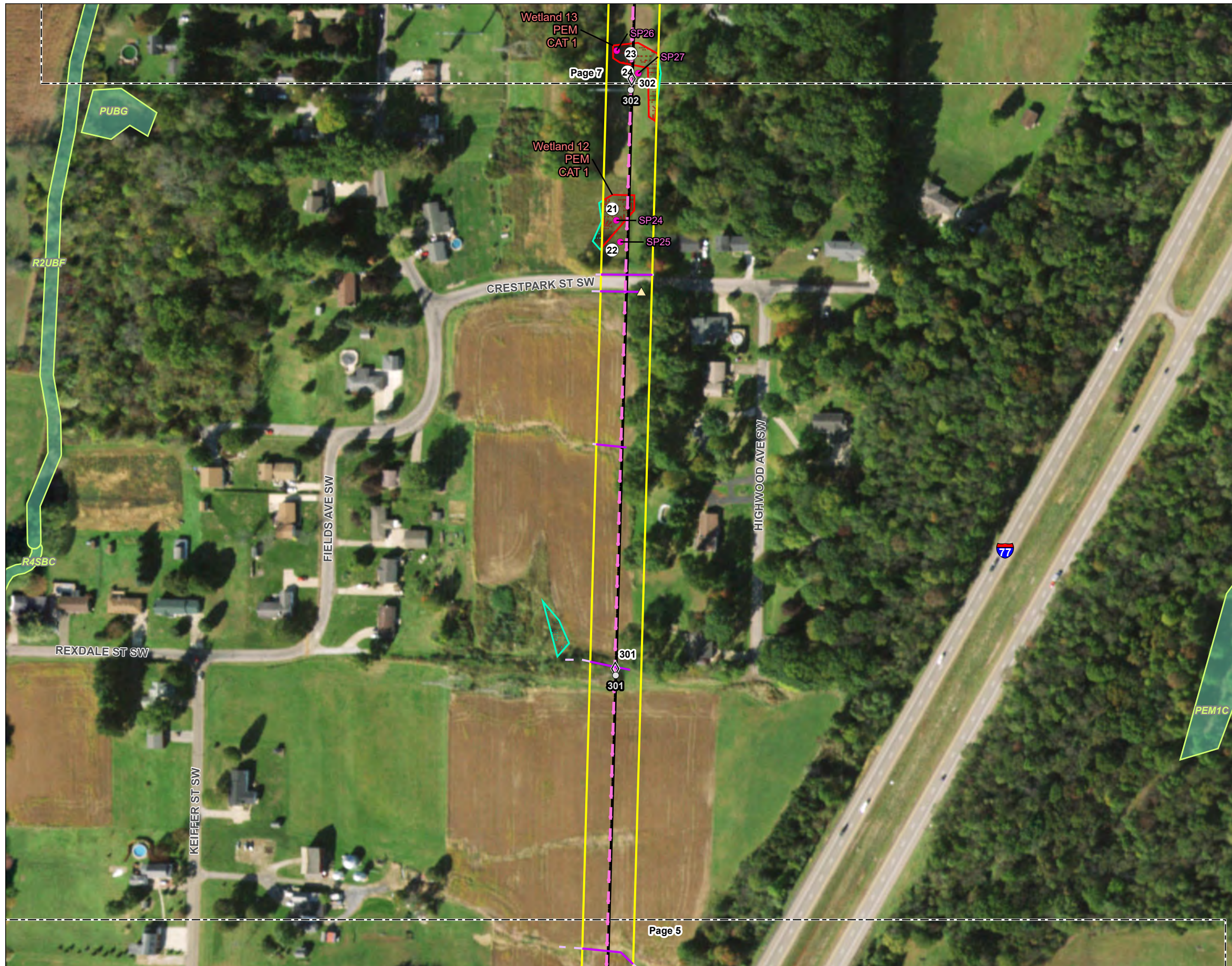


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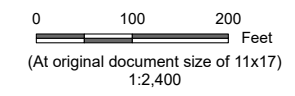
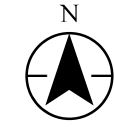
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Title

Wetland and Waterbody Delineation Map

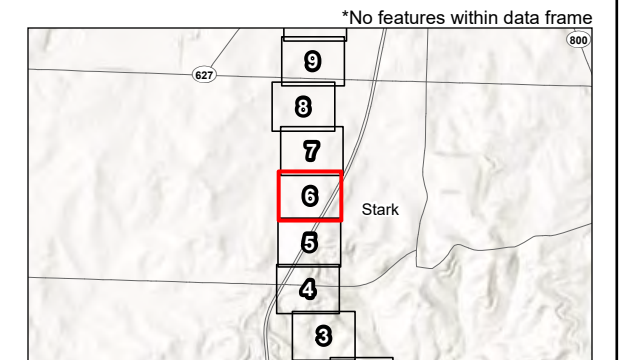
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AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

Project Location
Stark County, Ohio
Prepared by JLH on 2022-10-17
TR by KLB on 2023-03-09
IR by AJK on 2023-03-13



Legend

- AEP Substation
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3. Orthophotography: 2019 NAIP



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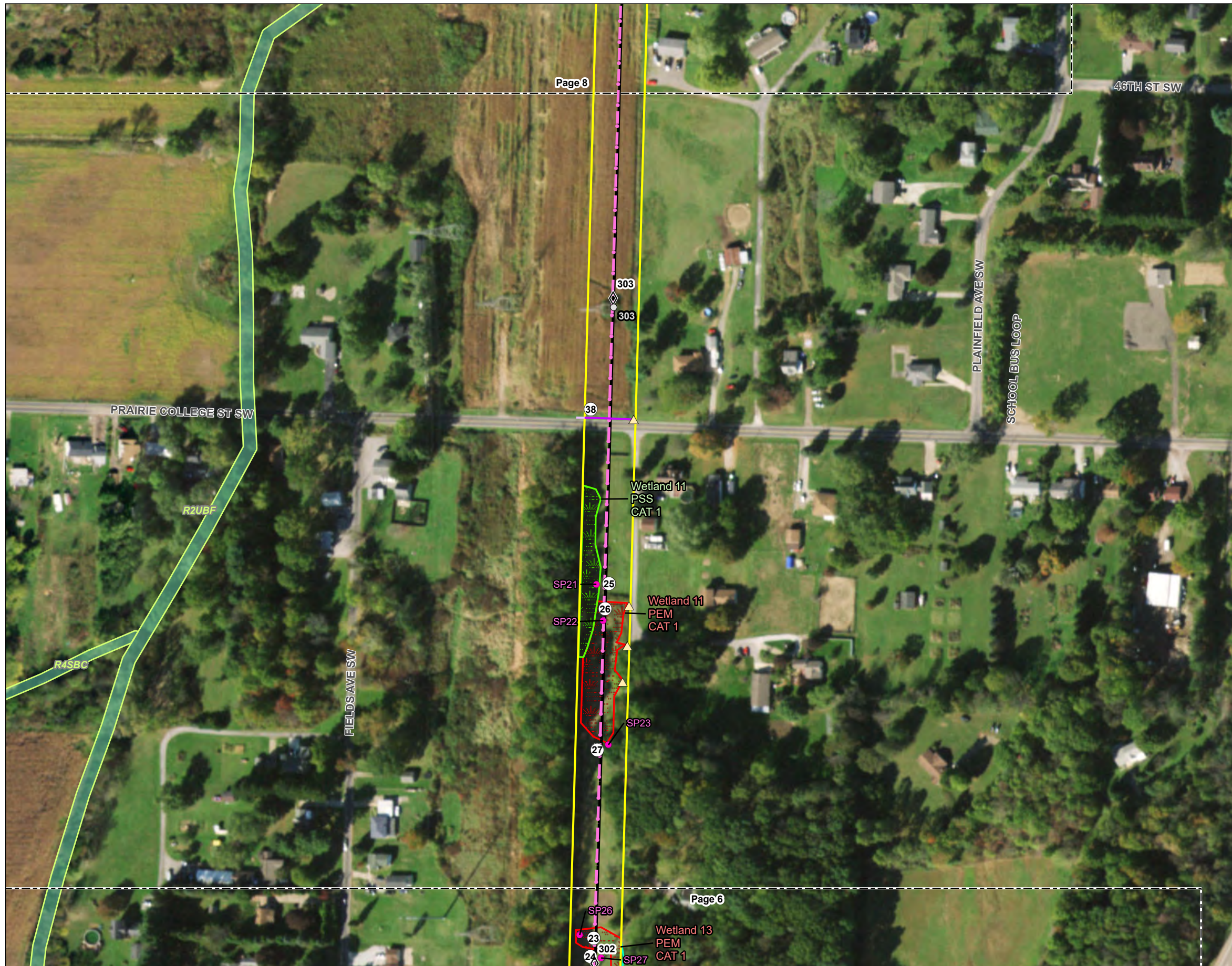
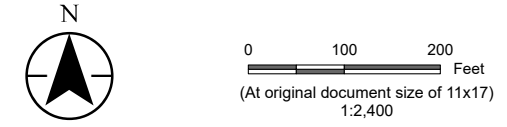


Figure No.
2
Title
Wetland and Waterbody Delineation Map

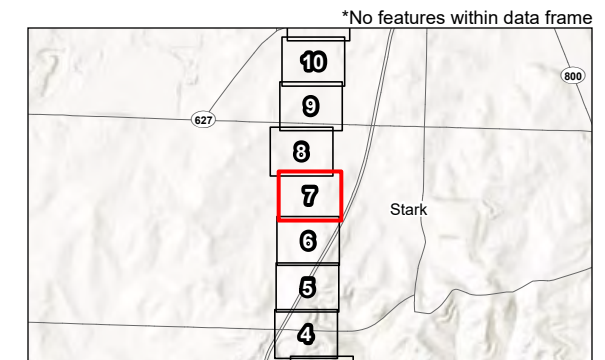
Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

Project Location
Stark County, Ohio

Prepared by JLH on 2022-10-17
TR by KLB on 2023-03-09
IR by AJK on 2023-03-13



- Legend
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 - △ Existing Culvert
 - Wetland
 - Determination Sample Point
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 - Approximate Waterway
 - Field Delineated Emergent Wetland
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 - Approximate Wetland
 - National Wetlands Inventory Feature
 - FEMA Flood Hazard Area*
 - 100-year Floodplain
 - Floodway



Notes
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2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
3. Orthophotography: 2019 NAIP



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Figure No.

2

Title

Wetland and Waterbody Delineation Map

Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

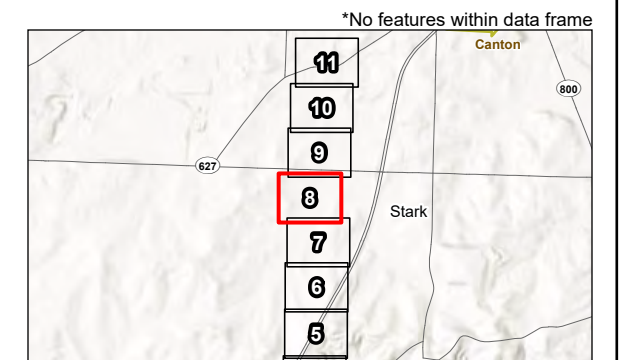
Project Location
Stark County, Ohio
Prepared by JLH on 2022-10-17
TR by KLB on 2023-03-09
IR by AJK on 2023-03-13



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(At original document size of 11x17)
1:2,400

Legend

- AEP Substation
- Existing Structure to be Replaced
- ◇ Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Project Area
- Photo Location
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- Approximate Waterway
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- Notes
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 3. Orthophotography: 2019 NAIP



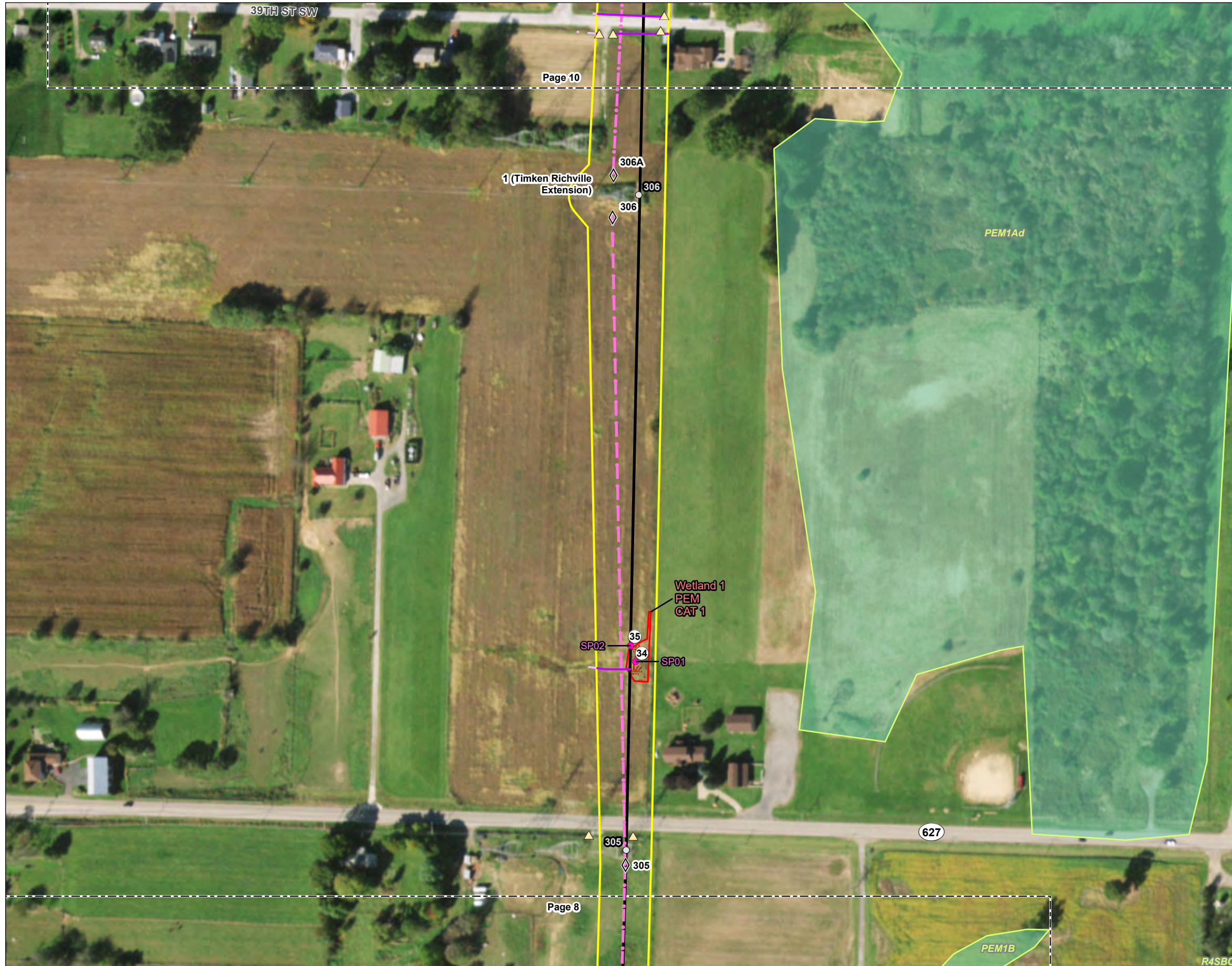
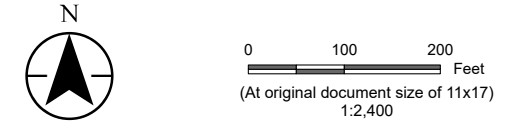


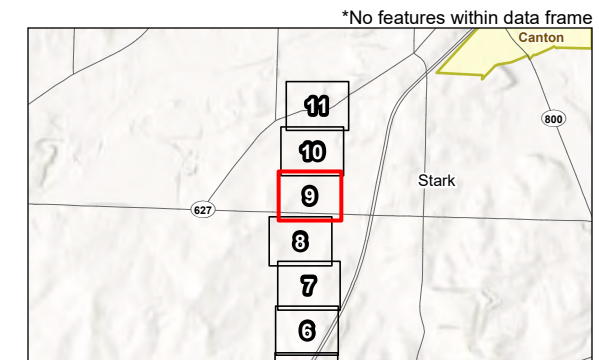
Figure No. **2**
Wetland and Waterbody Delineation Map

Client/Project: AEP Ohio Transmission Company, Inc. 193708516
 South Canton-Torrey
 138 kV Line Rebuild Project

Project Location: Stark County, Ohio
 Prepared by J.L.H. on 2022-10-17
 TR by K.L.B. on 2023-03-09
 IR by A.J.K. on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Proposed 138 kV Transmission Line
 - Project Area
 - Photo Location
 - △ Existing Culvert
 - Wetland Determination Sample Point
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Field Delineated Waterway
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 - 100-year Floodplain
 - Floodway



Notes
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 2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



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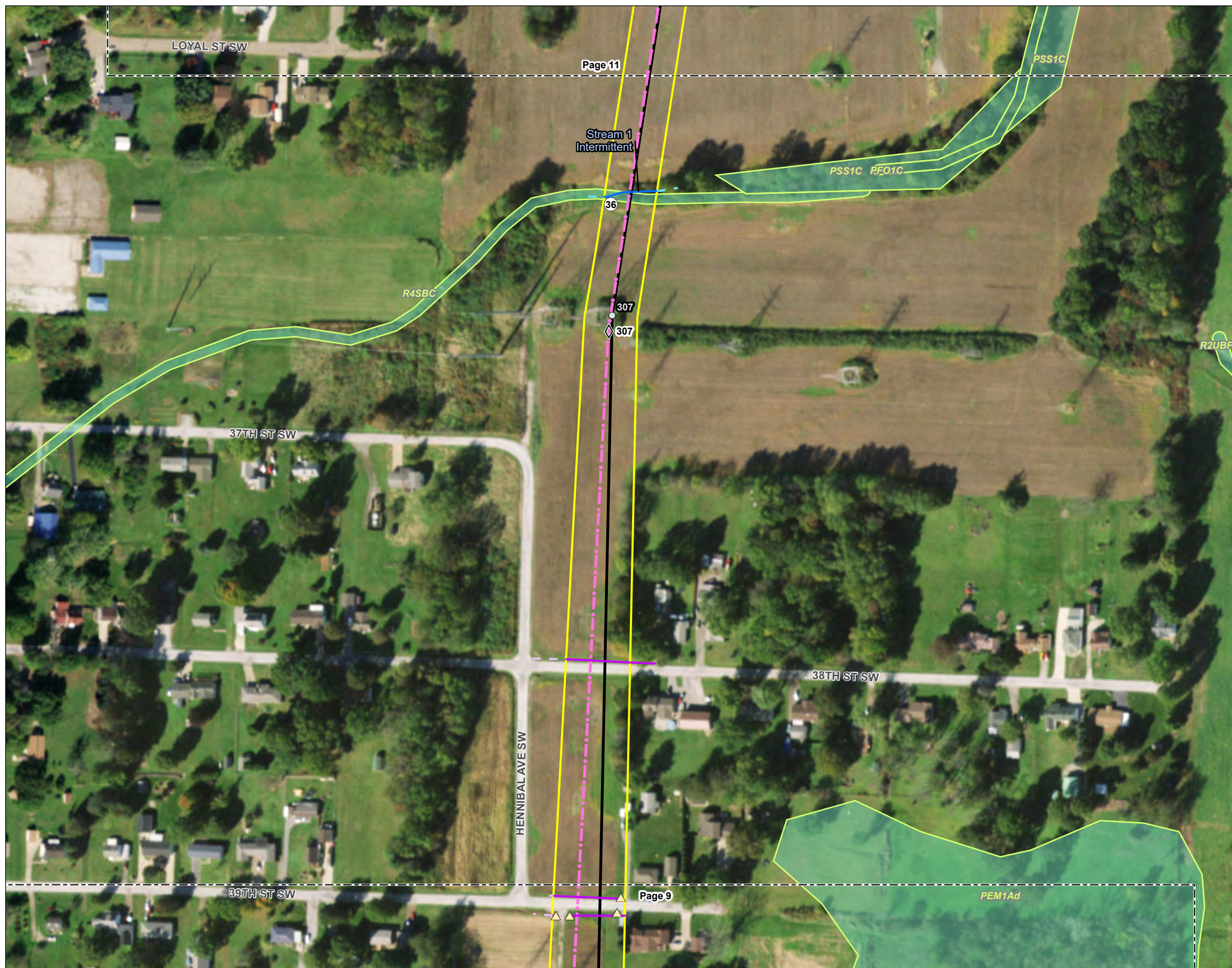
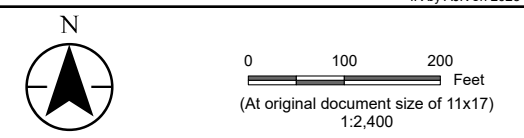
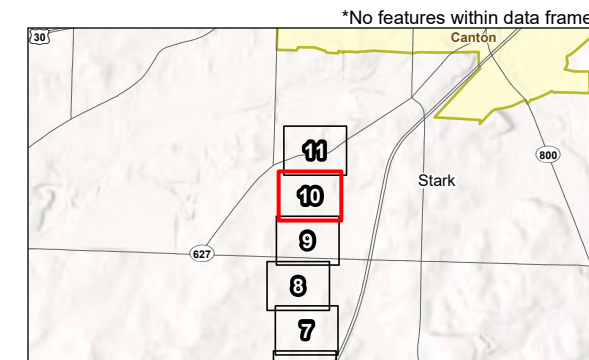


Figure No. **2**
Wetland and Waterbody Delineation Map

Client/Project: AEP Ohio Transmission Company, Inc. 193708516
 South Canton-Torrey
 138 kV Line Rebuild Project
 Project Location: Stark County, Ohio
 Prepared by JLH on 2022-10-17
 TR by KLB on 2023-03-09
 IR by AJK on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Proposed 138 kV Transmission Line
 - Project Area
 - Photo Location
 - △ Existing Culvert
 - Wetland
 - Determination Sample Point
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Field Delineated Waterway
 - Approximate Waterway
 - Field Delineated Emergent Wetland
 - Field Delineated Scrub-Shrub Wetland
 - Approximate Wetland
 - National Wetlands Inventory Feature
 - FEMA Flood Hazard Area*
 - 100-year Floodplain
 - Floodway



Notes
 1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



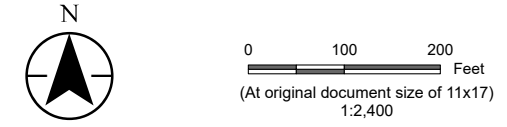
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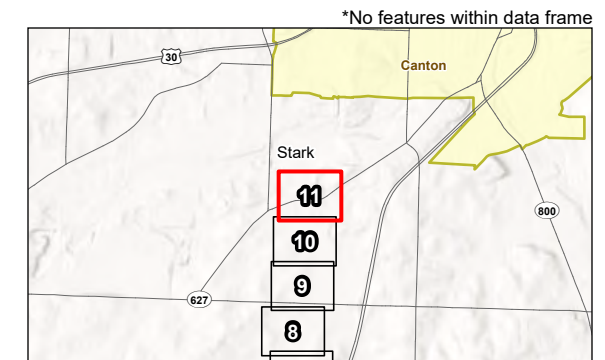


Figure No. **2**
Title **Wetland and Waterbody Delineation Map**

Client/Project 193708516
AEP Ohio Transmission Company, Inc.
South Canton-Torrey
138 kV Line Rebuild Project
Project Location Stark County, Ohio Prepared by JLH on 2022-10-17
TR by KLB on 2023-03-09
IR by AJK on 2023-03-13



- Legend
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Proposed 138 kV Transmission Line
 - Project Area
 - Photo Location
 - △ Existing Culvert
 - Wetland Determination Sample Point
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Field Delineated Waterway
 - Approximate Waterway
 - Field Delineated Emergent Wetland
 - Field Delineated Scrub-Shrub Wetland
 - Approximate Wetland
 - National Wetlands Inventory Feature
 - FEMA Flood Hazard Area*
 - 100-year Floodplain
 - Floodway



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
3. Orthophotography: 2019 NAIP



FIGURE 3 – HABITAT ASSESSMENT MAP

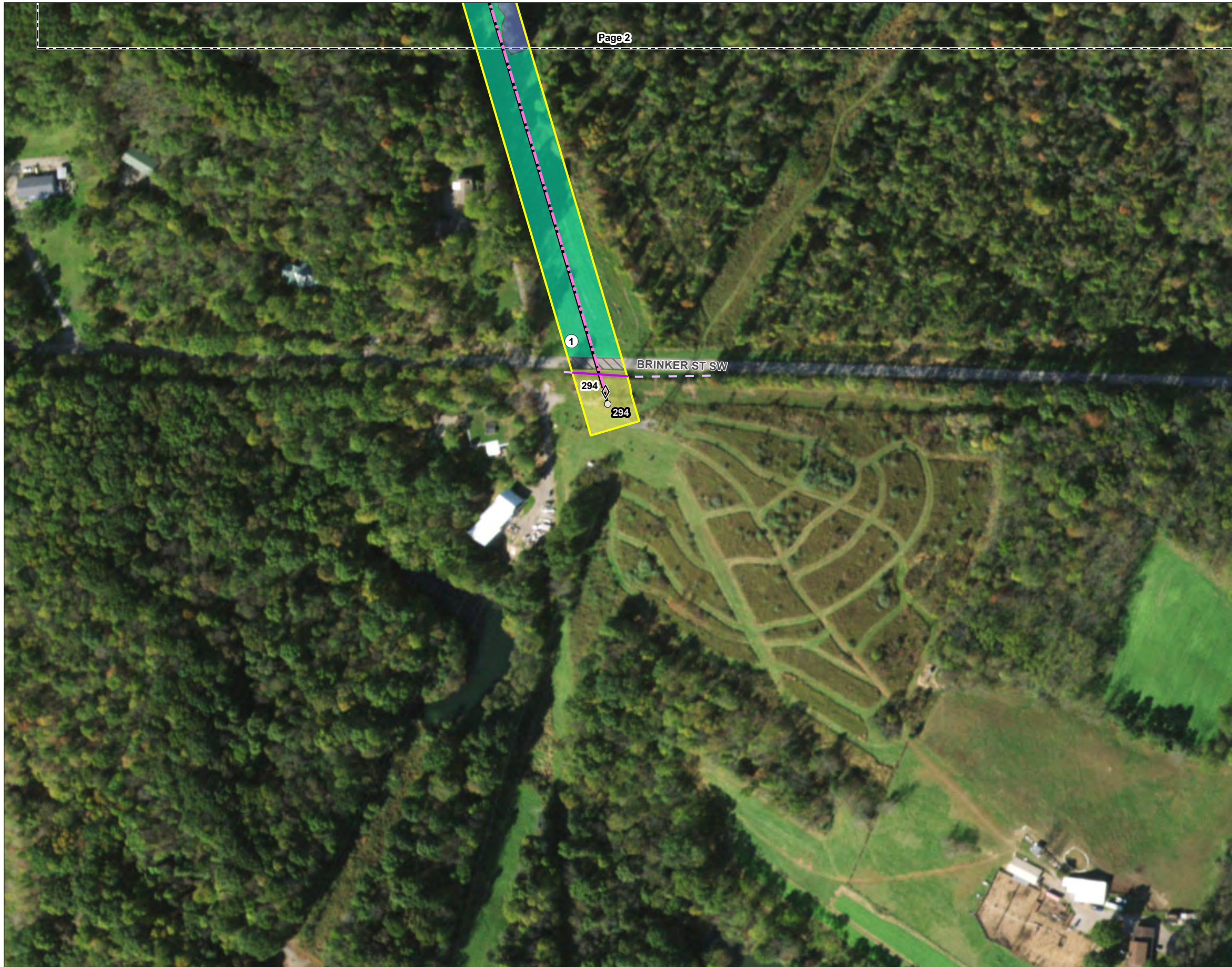


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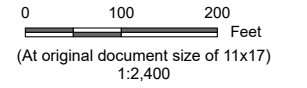
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Title

Habitat Assessment Map

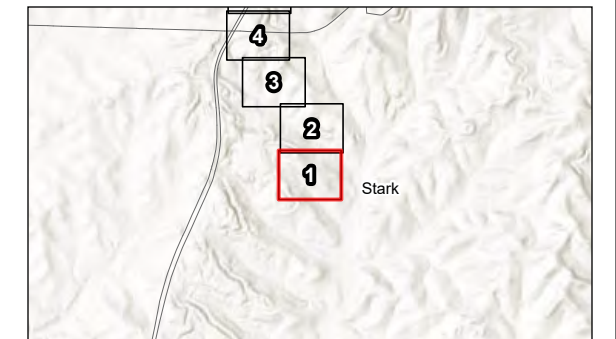
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 South Canton-Torrey
 138 kV Line Rebuild Project

Project Location: Stark County, Ohio
 Prepared by J.L.H. on 2022-04-08
 TR by K.L.B. on 2023-03-09
 IR by A.J.K. on 2023-03-13



Legend

- | | |
|---|---|
| ■ AEP Substation | Field Delineated Emergent Wetland |
| ○ Existing Structure to be Replaced | Field Delineated Scrub-Shrub Wetland |
| ◇ Proposed Structure | Approximate Wetland |
| Existing 138 kV Transmission Line to be Rebuilt | Habitat Area |
| Proposed 138 kV Transmission Line | Agricultural Field |
| Project Area | Old Field |
| ○ Photo Location | New Field |
| △ Existing Culvert | Pasture |
| Upland Drainage Feature | Residential Lawn |
| Approximate Upland Drainage Feature | Early Successional Deciduous Forest |
| Field Delineated Waterway | Mixed Early Successional/Second Growth Deciduous Forest |
| Approximate Waterway | Industrial Land |
| | Existing Paved Roadway/Surface |



Notes
 1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



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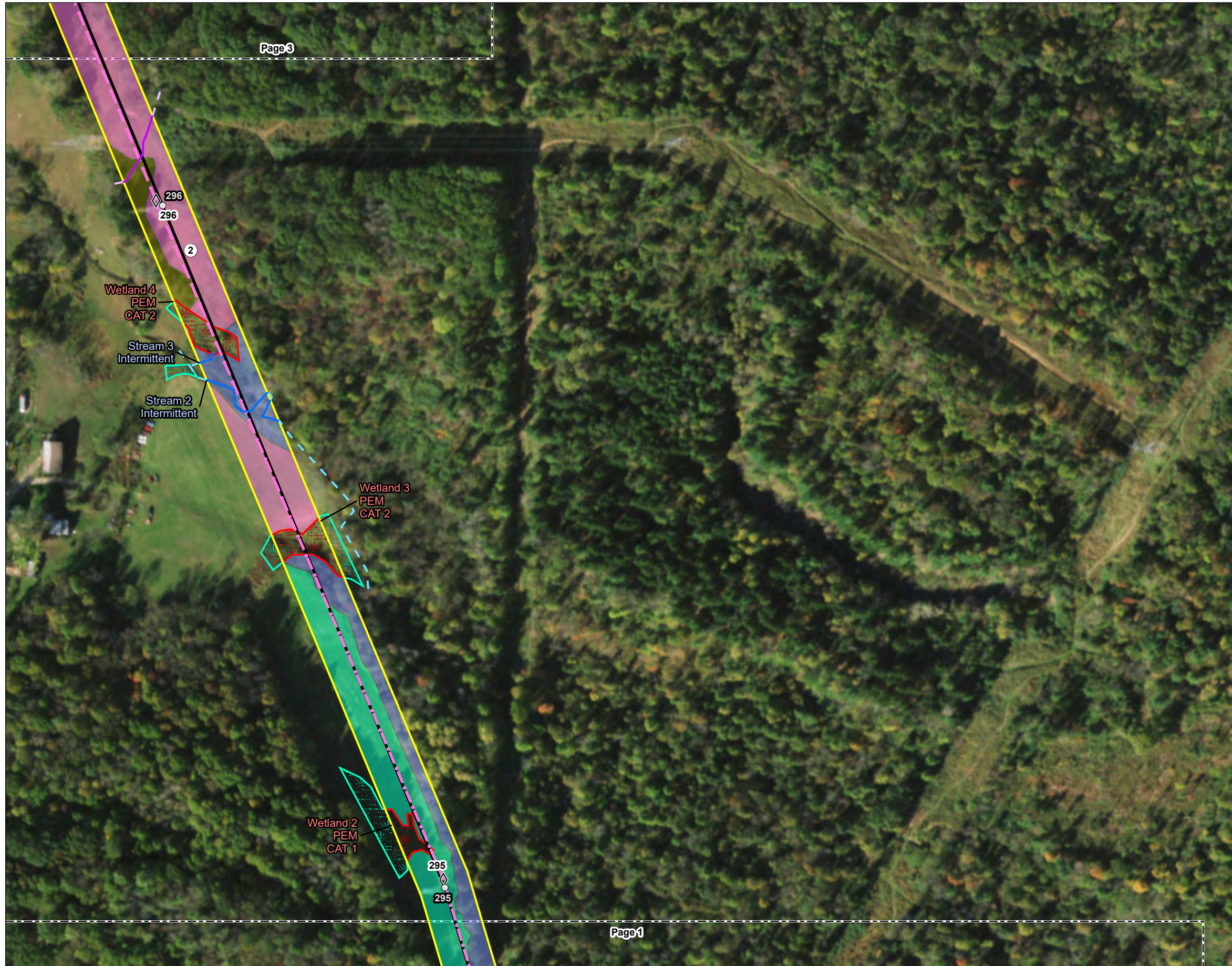


Figure No.

3

Title

Habitat Assessment Map

Client/Project
AEP Ohio Transmission Company, Inc.
South Canton-Torrey
138 kV Line Rebuild Project

193708516

Project Location
Stark County, Ohio

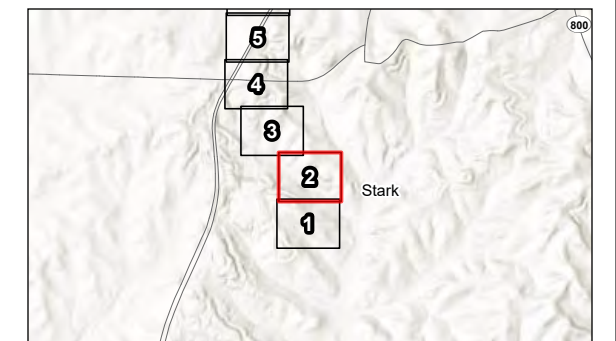
Prepared by JLH on 2022-04-08
TR by KLB on 2023-03-09
IR by AJK on 2023-03-13



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(At original document size of 11x17)
1:2,400

Legend

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- Existing Structure to be Replaced
- ◇ Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Project Area
- Photo Location
- △ Existing Culvert
- Upland Drainage Feature
- Approximate Upland Drainage Feature
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- Approximate Waterway
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- Field Delineated Scrub-Shrub Wetland
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 - Old Field
 - New Field
 - Pasture
 - Residential Lawn
 - Early Successional Deciduous Forest
 - Mixed Early Successional/Second Growth Deciduous Forest
 - Industrial Land
 - Existing Paved Roadway/Surface



- Notes**
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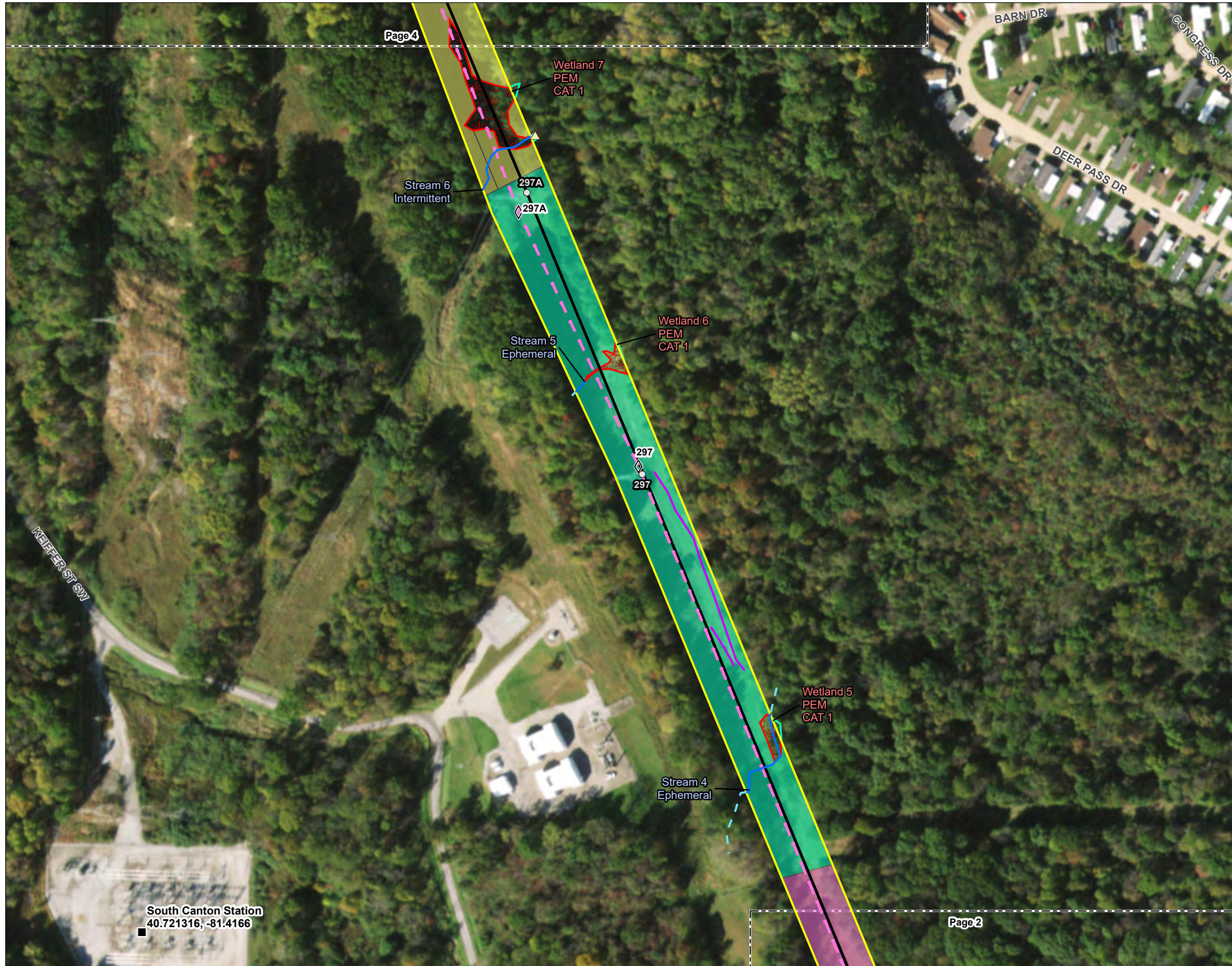


Figure No.

3

Title

Habitat Assessment Map

Client/Project
 AEP Ohio Transmission Company, Inc. 193708516
 South Canton-Torrey
 138 kV Line Rebuild Project

Project Location
 Stark County, Ohio

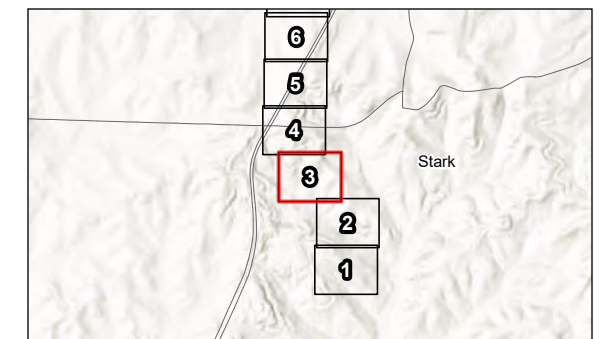
Prepared by JLH on 2022-04-08
 TR by KLB on 2023-03-09
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 (At original document size of 11x17)
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 - Mixed Early Successional/Second Growth Deciduous Forest
 - Industrial Land
 - Existing Paved Roadway/Surface



- Notes**
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 3. Orthophotography: 2019 NAIP





Figure No.

3

Title

Habitat Assessment Map

Client/Project
 AEP Ohio Transmission Company, Inc. 193708516
 South Canton-Torrey
 138 kV Line Rebuild Project

Project Location
 Stark County, Ohio

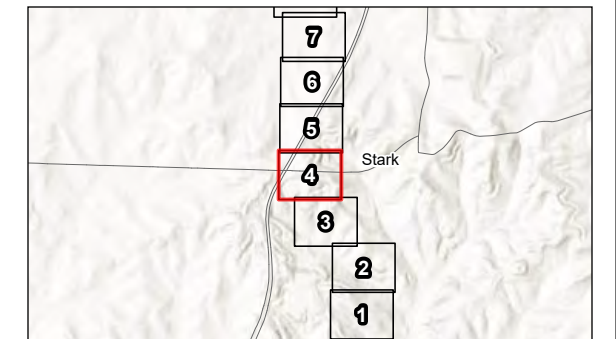
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 TR by K.L.B. on 2023-03-09
 IR by A.J.K. on 2023-03-13



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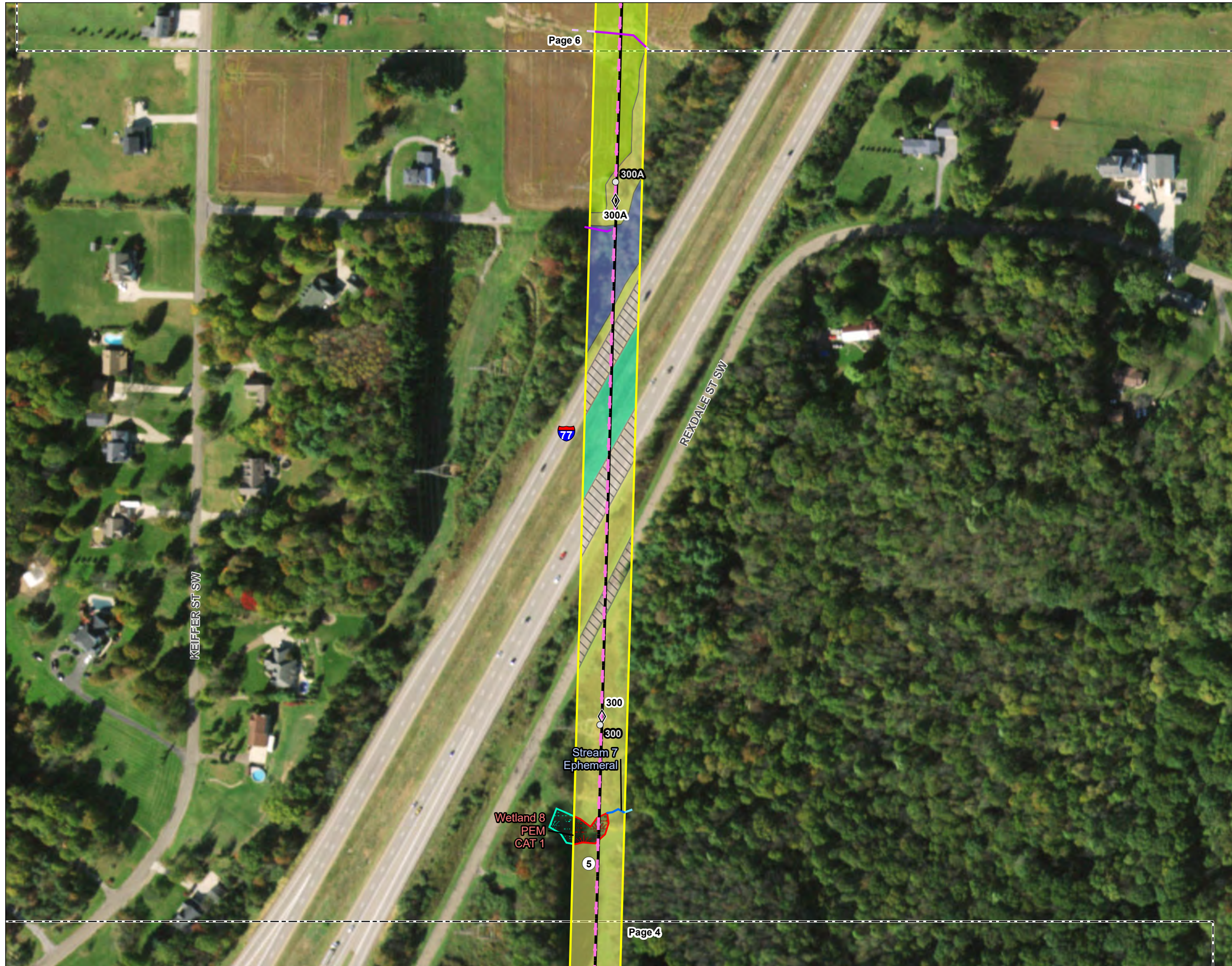


Figure No.

3

Title

Habitat Assessment Map

Client/Project
AEP Ohio Transmission Company, Inc.
South Canton-Torrey
138 kV Line Rebuild Project

193708516

Project Location
Stark County, Ohio

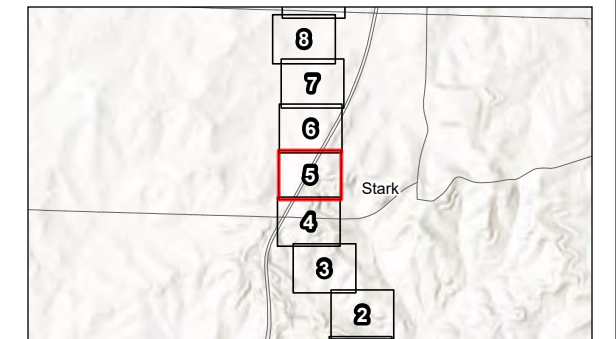
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0 100 200 Feet
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 - Existing Paved Roadway/Surface



- Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



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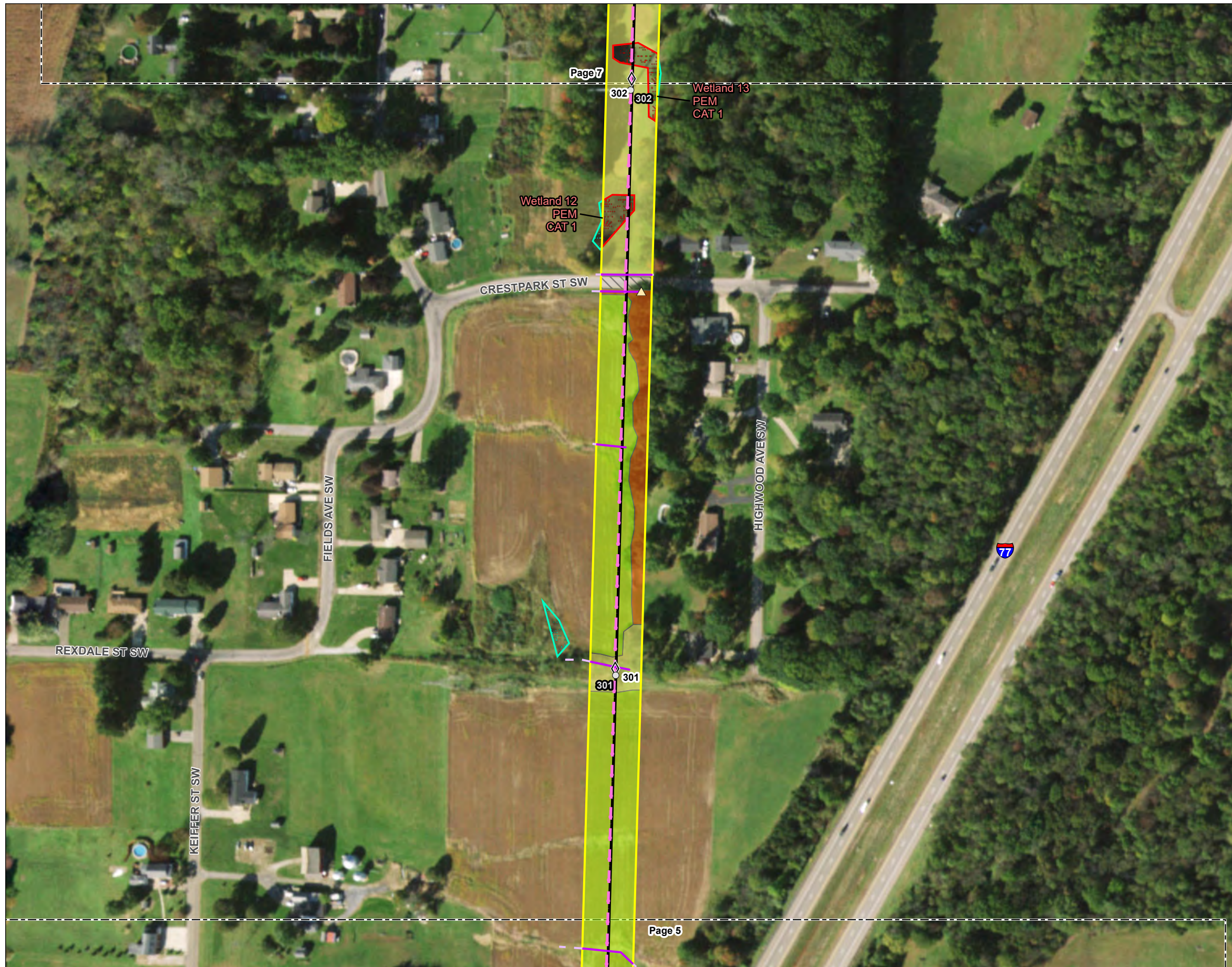
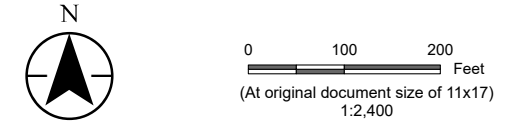


Figure No.
3

Title
Habitat Assessment Map

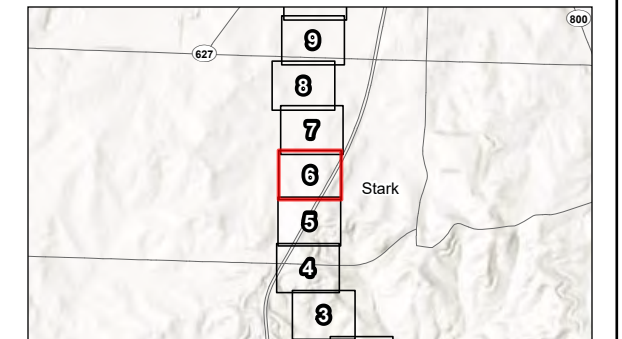
Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

Project Location Stark County, Ohio Prepared by JLH on 2022-04-08
TR by KLB on 2023-03-09
IR by AJK on 2023-03-13



Legend

■ AEP Substation	○ Existing Structure to be Replaced	◇ Proposed Structure	Existing 138 kV Transmission Line to be Rebuilt	Proposed 138 kV Transmission Line	Project Area	○ Photo Location	△ Existing Culvert	Upland Drainage Feature	Approximate Upland Drainage Feature	Field Delineated Waterway	Approximate Waterway	Field Delineated Emergent Wetland	Field Delineated Scrub-Shrub Wetland	Approximate Wetland						
												Habitat Area								
												Agricultural Field	Old Field	New Field	Pasture	Residential Lawn	Early Successional Deciduous Forest	Mixed Early Successional/Second Growth Deciduous Forest	Industrial Land	Existing Paved Roadway/Surface



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
3. Orthophotography: 2019 NAIP



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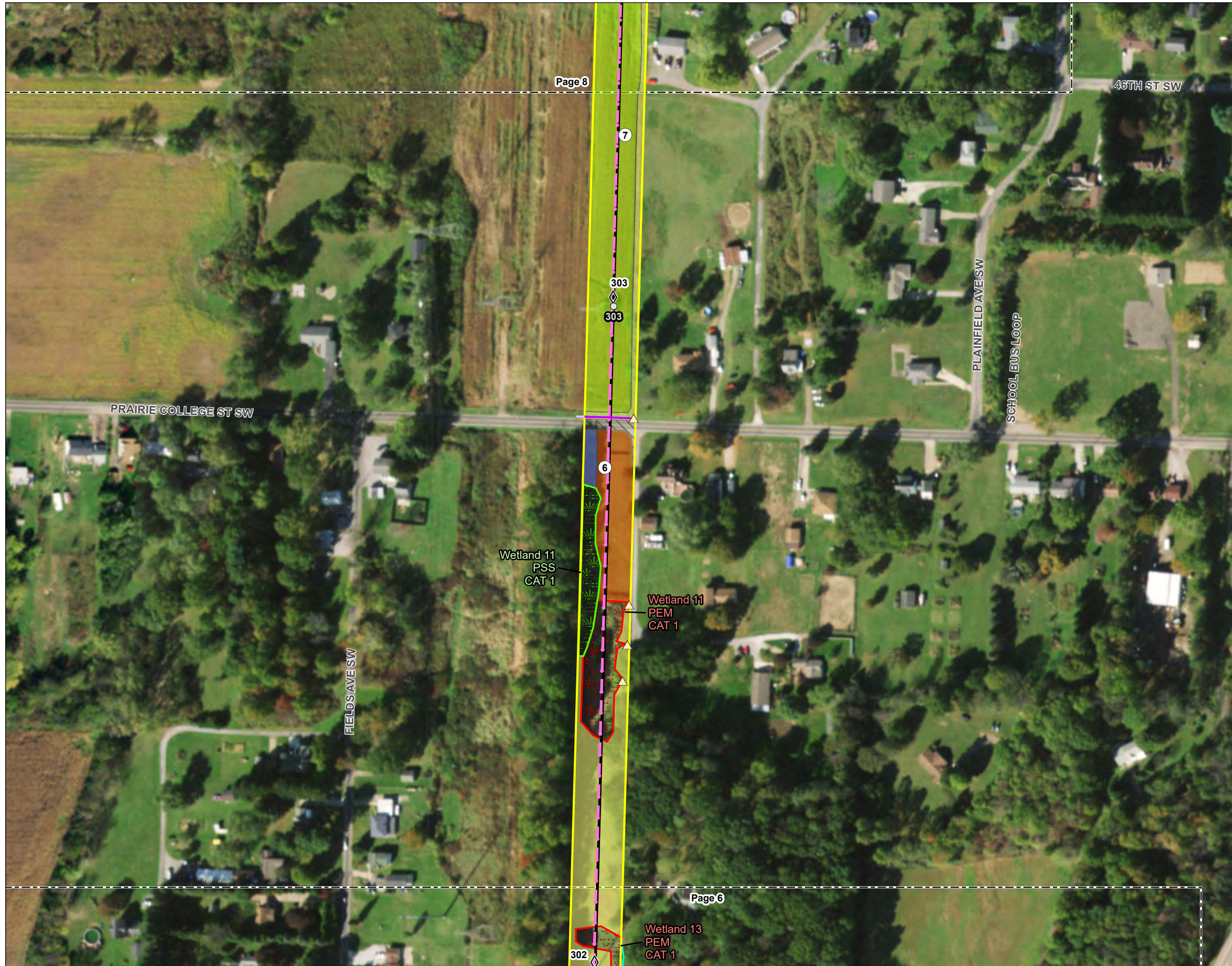


Figure No.

3

Title

Habitat Assessment Map

Client/Project
AEP Ohio Transmission Company, Inc.
South Canton-Torrey
138 kV Line Rebuild Project

193708516

Project Location
Stark County, Ohio

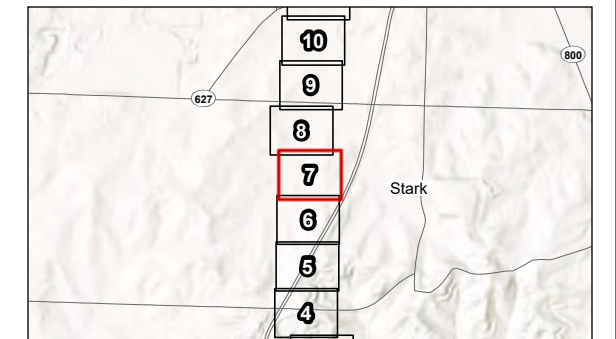
Prepared by JLH on 2022-04-08
TR by KLB on 2023-03-09
IR by AJK on 2023-03-13



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Legend

- AEP Substation
- Existing Structure to be Replaced
- ◇ Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Project Area
- Photo Location
- △ Existing Culvert
- Upland Drainage Feature
- Approximate Upland Drainage Feature
- Field Delineated Waterway
- Approximate Waterway
- Field Delineated Emergent Wetland
- Field Delineated Scrub-Shrub Wetland
- Approximate Wetland
- Habitat Area
 - Agricultural Field
 - Old Field
 - New Field
 - Pasture
 - Residential Lawn
 - Early Successional Deciduous Forest
 - Mixed Early Successional/Second Growth Deciduous Forest
 - Industrial Land
 - Existing Paved Roadway/Surface



- Notes**
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



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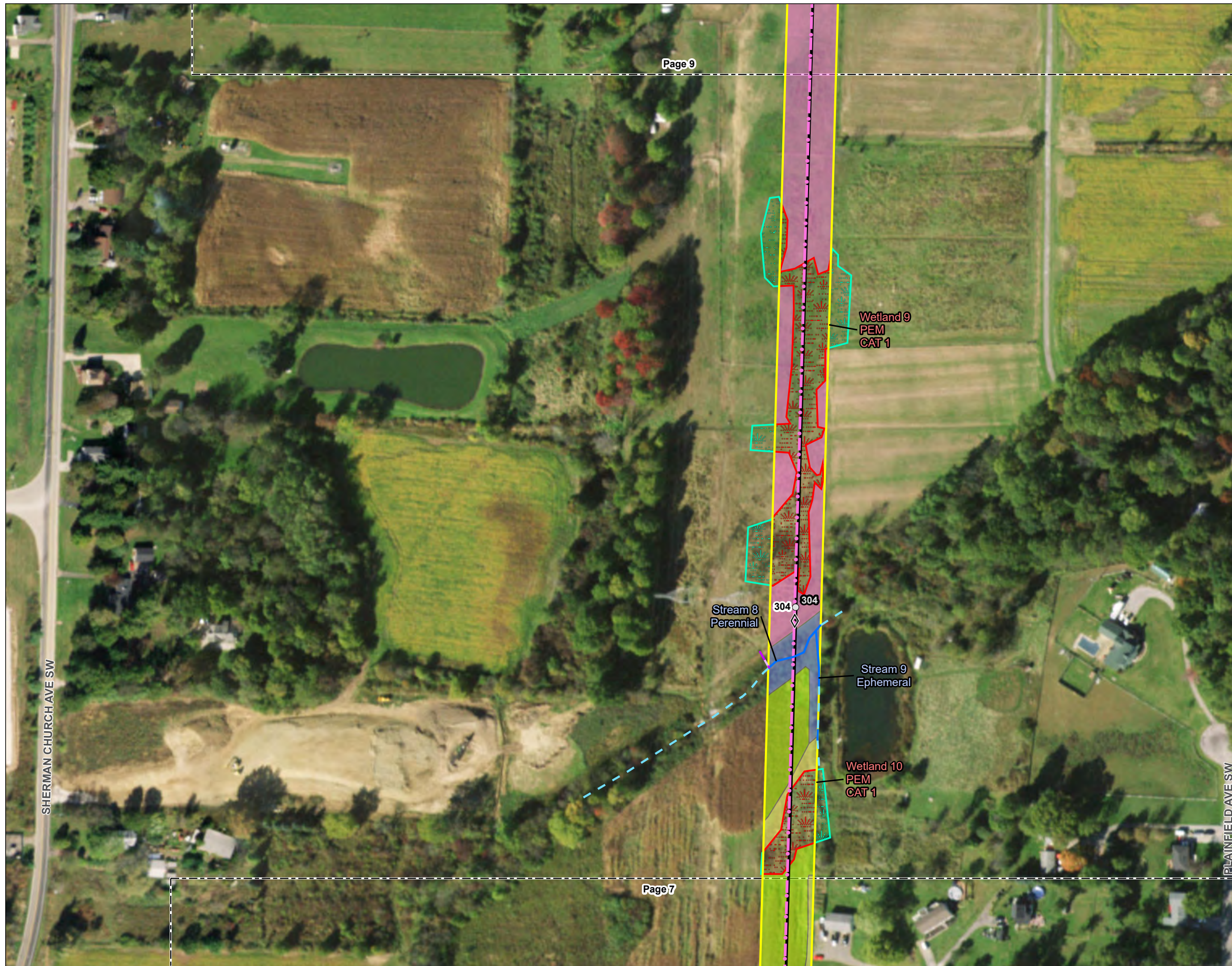


Figure No.

3

Title

Habitat Assessment Map

Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

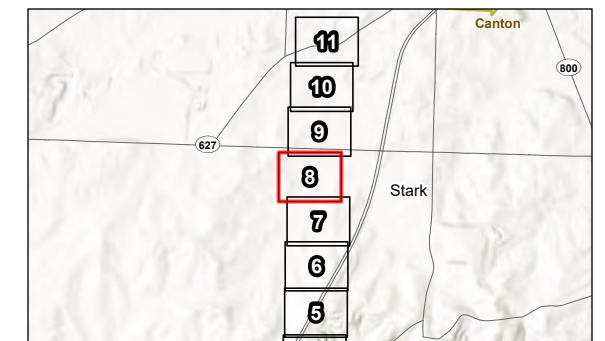
Project Location
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TR by KLB on 2023-03-09
IR by AJK on 2023-03-13



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Legend

- AEP Substation
- Existing Structure to be Replaced
- ◇ Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Project Area
- Photo Location
- △ Existing Culvert
- Upland Drainage Feature
- Approximate Upland Drainage Feature
- Field Delineated Waterway
- Approximate Waterway
- Field Delineated Emergent Wetland
- Field Delineated Scrub-Shrub Wetland
- Approximate Wetland
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- Notes
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 3. Orthophotography: 2019 NAIP



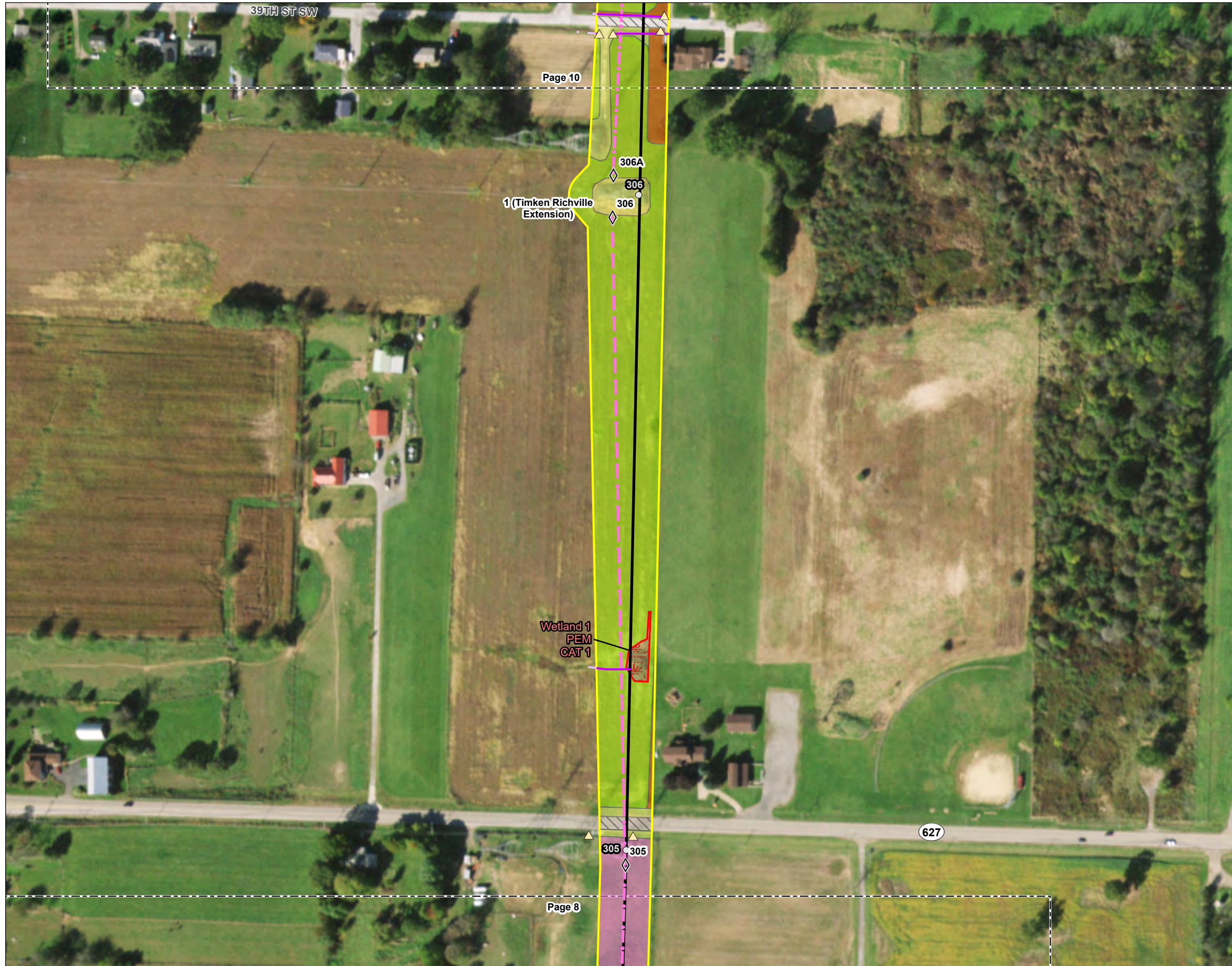


Figure No.

3

Title

Habitat Assessment Map

Client/Project: AEP Ohio Transmission Company, Inc. 193708516
 South Canton-Torrey
 138 kV Line Rebuild Project

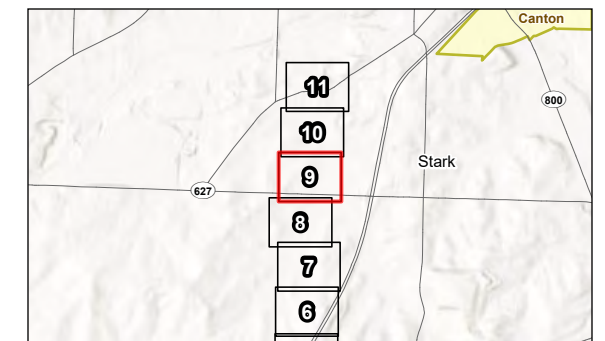
Project Location: Stark County, Ohio
 Prepared by J.L.H. on 2022-04-08
 TR by K.L.B. on 2023-03-09
 IR by A.J.K. on 2023-03-13



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Legend

- AEP Substation
- Existing Structure to be Replaced
- ◇ Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Project Area
- Photo Location
- △ Existing Culvert
- Upland Drainage Feature
- Approximate Upland Drainage Feature
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Notes
 1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
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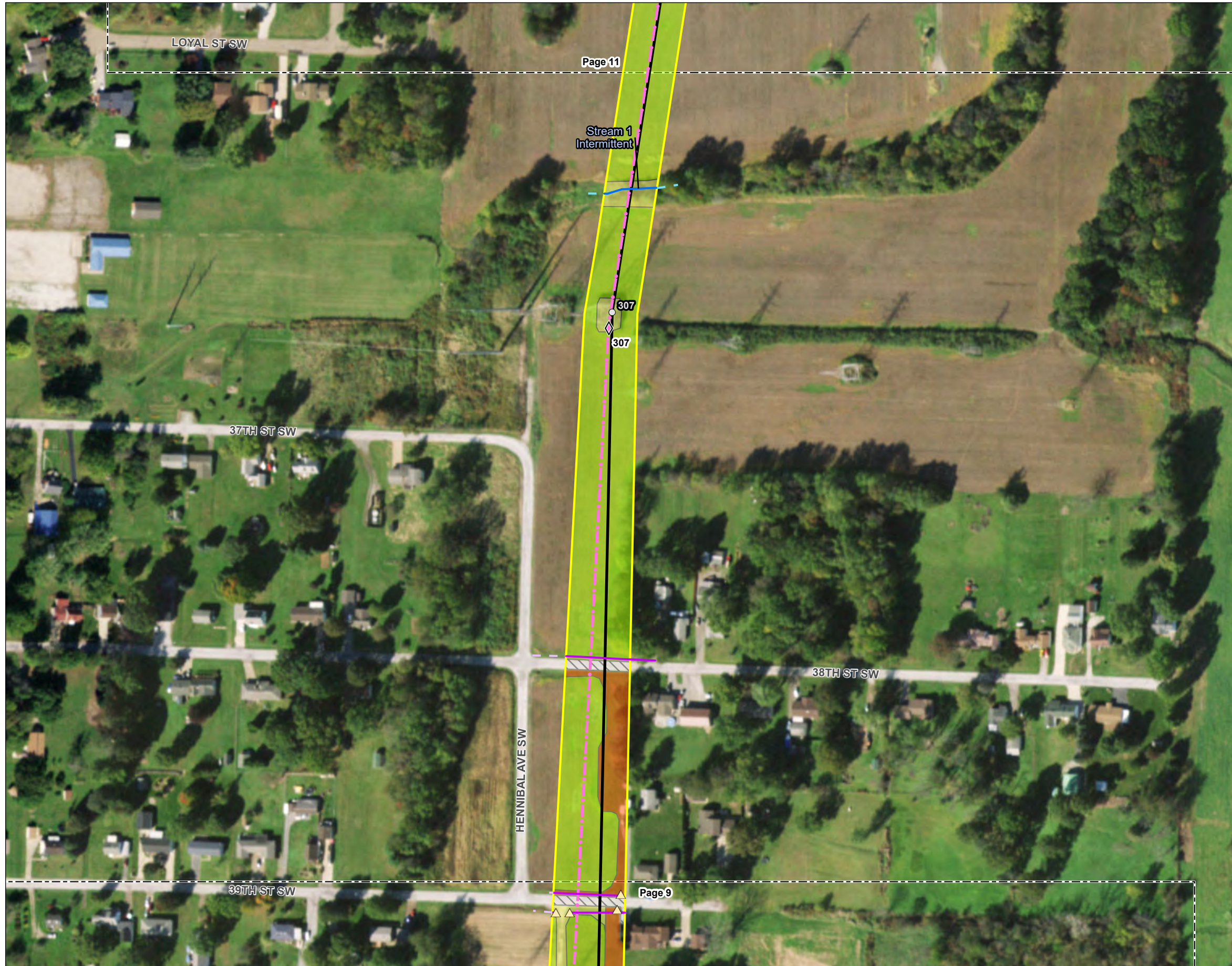


Figure No.

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Title

Habitat Assessment Map

Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

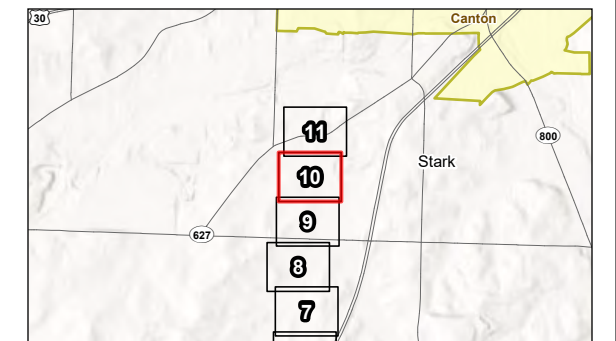
Project Location Stark County, Ohio Prepared by J.L.H. on 2022-04-08
TR by K.L.B. on 2023-03-09
IR by A.J.K. on 2023-03-13



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Legend

- AEP Substation
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- Proposed 138 kV Transmission Line
- Project Area
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- Notes**
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



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Figure No.

3

Title

Habitat Assessment Map

Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

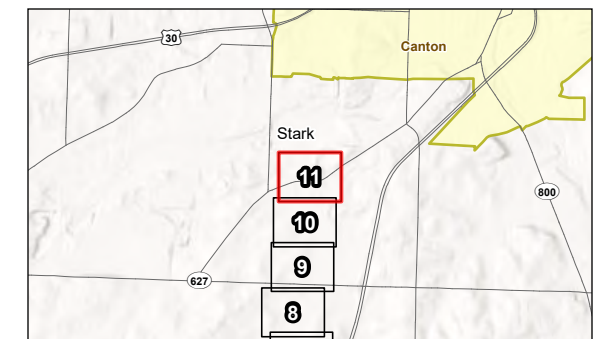
Project Location
Stark County, Ohio
Prepared by JLH on 2022-04-08
TR by KLB on 2023-03-09
IR by AJK on 2023-03-13



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(At original document size of 11x17)
1:2,400

Legend

- AEP Substation
- Existing Structure to be Replaced
- ◇ Proposed Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
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- Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



FIGURE 4 – BAT HIBERNACULA DESKTOP STUDY MAP

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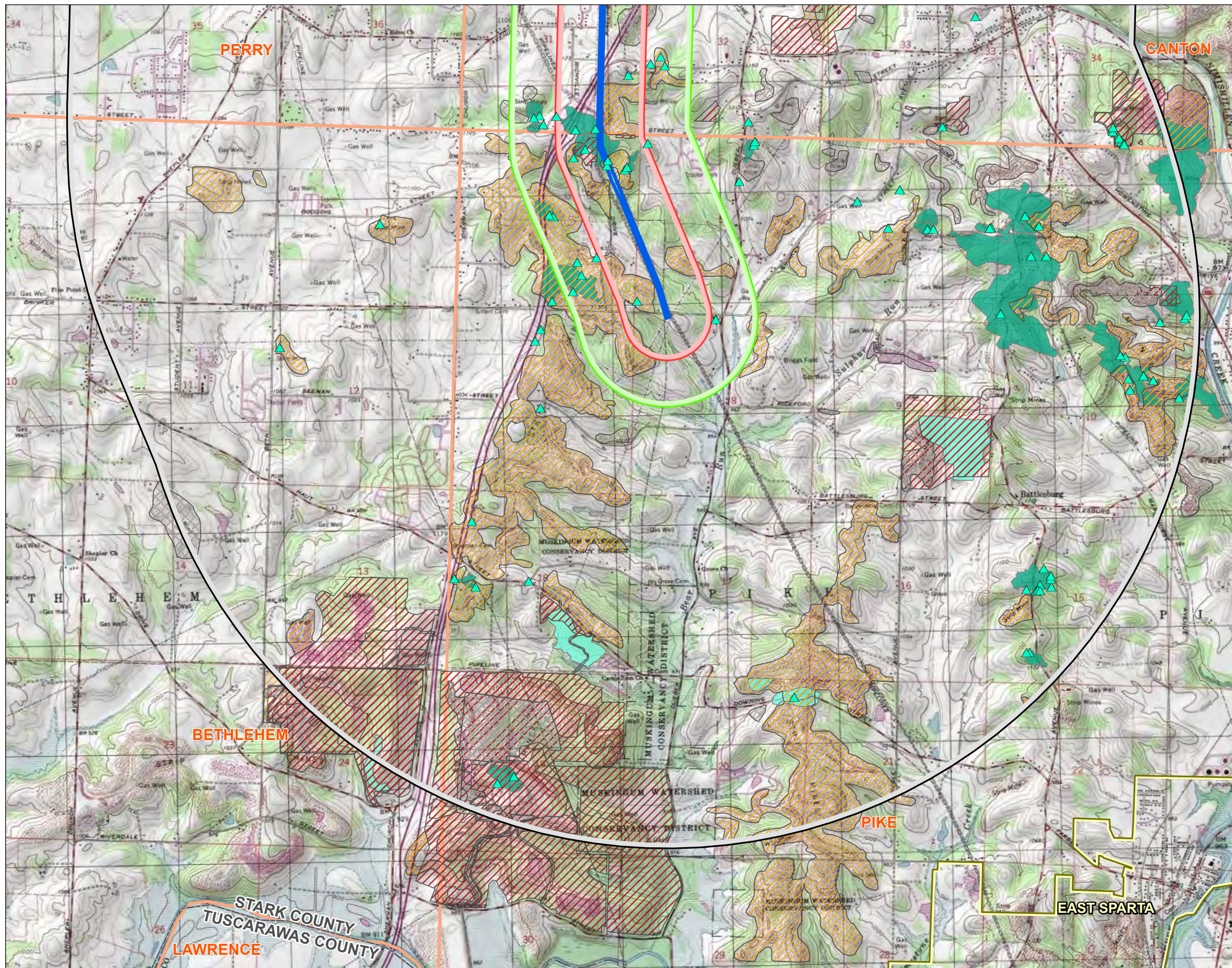
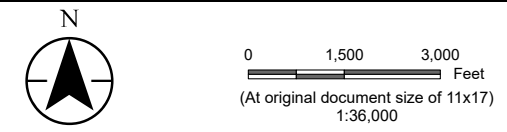
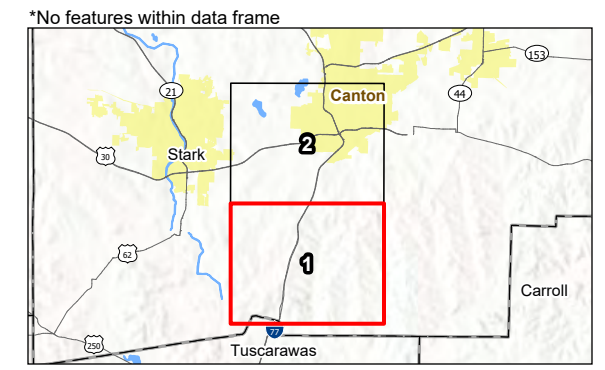


Figure No. **4**
 Title **Bat Hibernacula Desktop Study Map**
 Client/Project **AEP Ohio Transmission Company, Inc.** 193708516
South Canton-Torrey
138 kV Line Rebuild Project
 Project Location **Stark County, Ohio** Prepared by JLH on 2021-09-20
 TR by KB on 2021-10-11
 IR by DJG on 2021-10-11



- Legend**
- Project Area
 - 0.25-Mile Project Area Buffer
 - 0.5-Mile Project Area Buffer
 - 3-Mile Project Area Buffer
 - Township Boundary
 - Municipal Boundary
 - Karst Feature*
 - Area of Karst Geology*
 - Abandoned Underground Mine
 - Inactive Mine*
 - Active Surface Mine
 - Abandoned Surface Mine Area
 - Abandoned Underground Mine Area
 - Inactive Surface Mine Area
 - Active Surface Mine Area
 - Surface Mine Area (Unknown Status)



Notes
 1. Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
 2. Data Sources: Stantec, AEP, USGS, ODNR, NADS
 3. Background: USGS 7.5' Topographic Quadrangles - Canton East, OH (1985), Canton West, OH (1986), Bolivar, OH (1978), and Waynesburg, OH (1978)



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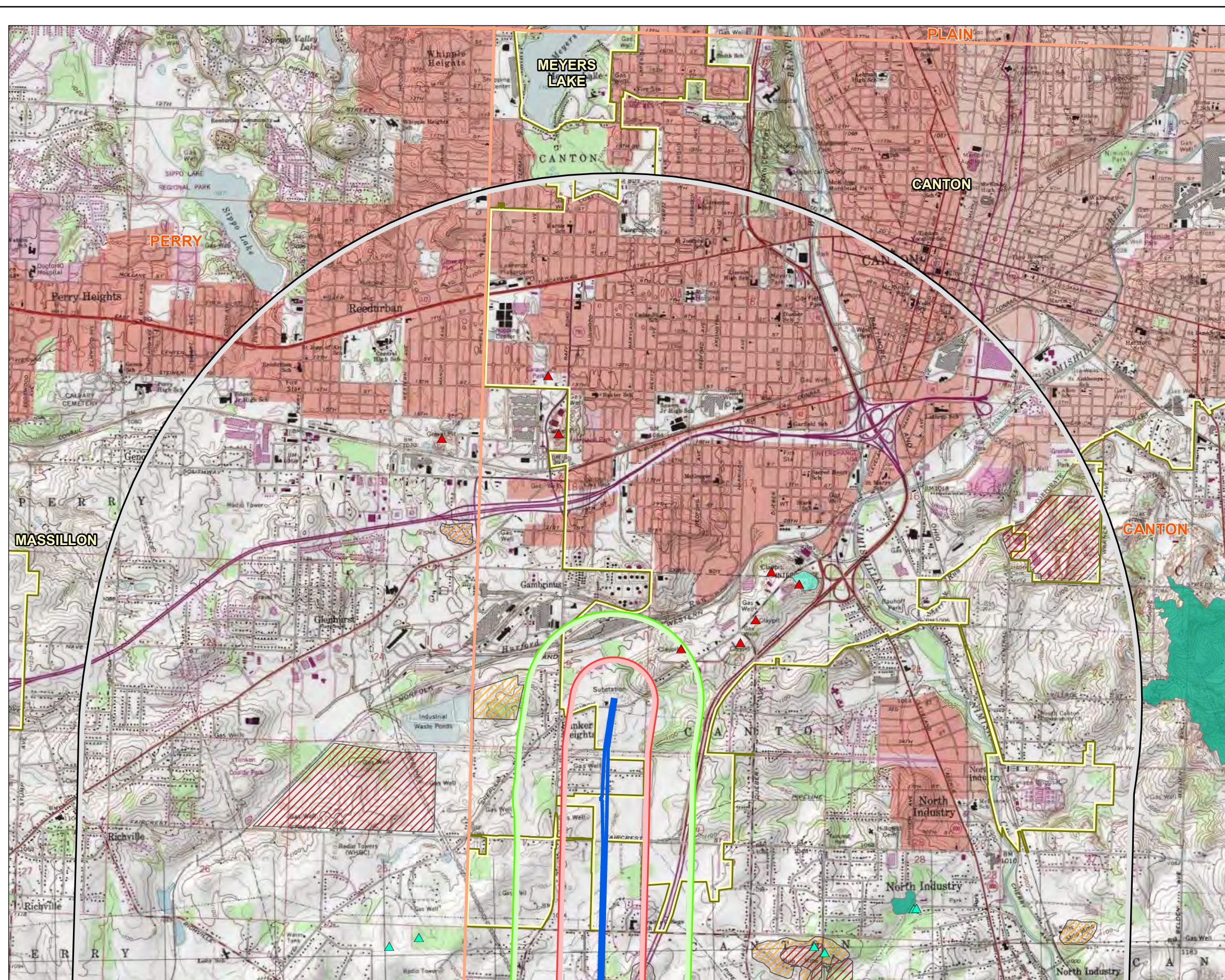
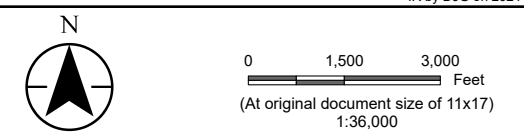


Figure No. **4**
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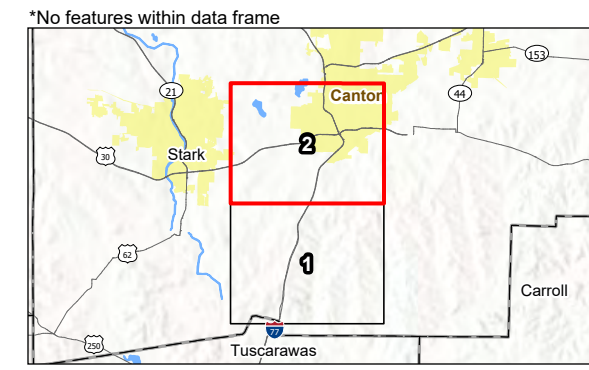
Client/Project
 AEP Ohio Transmission Company, Inc.
 South Canton-Torrey
 138 kV Line Rebuild Project

Project Location
 Stark County, Ohio

193708516
 Prepared by JLH on 2021-09-20
 TR by KB on 2021-10-11
 IR by DJG on 2021-10-11



- Legend**
- Project Area
 - 0.25-Mile Project Area Buffer
 - 0.5-Mile Project Area Buffer
 - 3-Mile Project Area Buffer
 - Township Boundary
 - Municipal Boundary
 - Karst Feature*
 - Area of Karst Geology*
 - Abandoned Underground Mine
 - Inactive Mine*
 - Active Surface Mine
 - Abandoned Surface Mine Area
 - Abandoned Underground Mine Area
 - Inactive Surface Mine Area
 - Active Surface Mine Area
 - Surface Mine Area (Unknown Status)



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio North FIPS 3401 Feet
2. Data Sources: Stantec, AEP, USGS, ODNR, NADS
3. Background: USGS 7.5' Topographic Quadrangles - Canton East, OH (1985), Canton West, OH (1986), Bolivar, OH (1978), and Waynesburg, OH (1978)



Appendix B AGENCY CORRESPONDENCE



Ohio Department of Natural Resources

MIKE DEWINE, GOVERNOR

MARY MERTZ, DIRECTOR

Office of Real Estate

John Kessler, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6621
Fax: (614) 267-4764

September 13, 2021

Daniel Godec
Stantec Consulting Services Inc.
11687 Lebanon Road
Cincinnati, Ohio 45241

Re: 21-0792; South Canton - Torrey 138 kV Line Rebuild Project

Project: The proposed project involves rebuilding approximately 3.5 miles of existing 138 kV transmission line between existing structure number 294 and Torrey Station.

Location: The proposed project is located in Canton and East Sparta, Stark County, Ohio.

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

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

Shore-growing peat moss (*Sphagnum riparium*), E
Brush-tipped emerald (*Somatochlora walshii*), E
Bolivar Reservoir – Muskingum Watershed Conservancy District

The review was performed on the project area specified in the request as well as an additional one mile radius. Records searched date from 1980. This information is provided to inform you of features present within your project area and vicinity. Additional comments on some of the features may be found in pertinent sections below.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

Statuses are defined as: E = state endangered; T = state threatened; P = state potentially threatened; SC = state species of concern; SI = state special interest; U = state status under review; X = presumed extirpated in Ohio; FE = federal endangered, and FT = federal threatened.

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

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

The portion of the project from Crestpark Street Southwest to the southern terminus is within the vicinity of records for the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally threatened species. Because presence of state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree cutting inside this buffer may be acceptable after further consultation with DOW (contact Erin Hazelton at Erin.hazelton@dnr.ohio.gov).

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

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS “*Range-wide Indiana Bat Survey Guidelines*.” If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the project area, please send this information to Erin Hazelton for project recommendations. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance, however, limited summer or winter tree cutting may be acceptable after consultation with the DOW. If no tree cutting or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

The project is within the range of the long-solid (*Fusconaia maculata maculata*), a state endangered mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact this species.

The project is within the range of the Iowa darter (*Etheostoma exile*), a state endangered fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this or other aquatic species.

The project is within the range of the spotted turtle (*Clemmys guttata*), a state threatened species. This species prefers fens, bogs and marshes, but also is known to inhabit wet prairies, meadows, pond edges, wet woods, and the shallow sluggish waters of small streams and ditches. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus hudsonis*), a state endangered bird. This is a common migrant and winter species. Nesters are much rarer, although they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies. The female builds a nest out of sticks on the ground, often on top of a mound. Harriers hunt over grasslands. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through July 31. If this habitat will not be impacted, this project is not likely to impact this species.

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

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

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf

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

Mike Pettegrew
Environmental Services Administrator (Acting)

From: [Ohio, FW3](#)
To: [Godec, Daniel](#)
Cc: nathan.reardon@dnr.state.oh.us; [Parsons, Kate](#)
Subject: AEP South Canton - Torrey 138 kV Line Rebuild, Stark County, Ohio
Date: Monday, August 30, 2021 9:37:16 AM



TAILS# 03E15000-2021-TA-2144

Dear Mr. Godec,

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

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

Seasonal Tree Clearing for Federally Listed Bat Species: Should the proposed project site contain trees ≥ 3 inches dbh, we recommend avoiding tree removal wherever possible. If any caves or abandoned mines may be disturbed, further coordination with this office is requested to determine if fall or spring portal surveys are warranted. If no caves or abandoned mines are present and trees ≥ 3 inches dbh cannot be avoided, we recommend removal of any trees ≥ 3 inches dbh only occur between October 1 and March 31. Seasonal clearing is recommended to avoid adverse effects to Indiana bats and northern long-eared bats. While incidental take of northern long-eared bats from most tree clearing is exempted by a 4(d) rule (see <http://www.fws.gov/midwest/endangered/mammals/nleb/index.html>), incidental take of Indiana bats is still prohibited without a project-specific exemption. Thus, seasonal clearing is recommended where Indiana bats are assumed present.

If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats. If Indiana bats are not detected during the survey, then tree clearing may occur at any time of the year. Surveys must be conducted by an approved surveyor and be designed and conducted in coordination with the

Ohio Field Office. Surveyors must have a valid federal permit. Please note that in Ohio summer mist net surveys may only be conducted between June 1 and August 15.

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

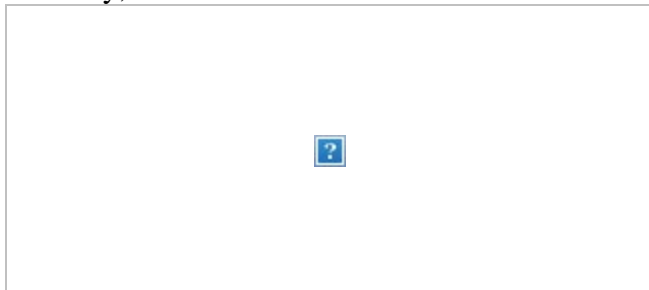
Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus it is important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing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

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

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

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

Sincerely,



Patrice M. Ashfield

Field Office Supervisor

cc: Nathan Reardon, ODNR-DOW
Kate Parsons, ODNR-DOW

Appendix C REPRESENTATIVE PHOTOGRAPHS

C.1 WETLAND AND WATERBODY PHOTOGRAPHS

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 1. View of Wetland 1. Photograph taken facing north.



Photograph Location 1. View of Wetland 1. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 1. View of Wetland 1. Photograph taken facing south.



Photograph Location 1. View of Wetland 1. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 1. View of soil profile at wetland determination sample point SP03 within Wetland 1.



Photograph Location 2. View of upland (new field habitat) at wetland determination sample point SP04. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 2. View of upland (new field habitat) at wetland determination sample point SP04. Photograph taken facing east.



Photograph Location 3. View of Wetland 2. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 3. View of Wetland 2. Photograph taken facing east.



Photograph Location 3. View of Wetland 2. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 3. View of Wetland 2. Photograph taken facing west.



Photograph Location 3. View of soil profile at wetland determination sample point SP05 within Wetland 2.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 4. View of upland (pasture habitat) at wetland determination sample point SP06. Photograph taken facing north.



Photograph Location 4. View of upland (pasture habitat) at wetland determination sample point SP06. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 5. View of Stream 2. Photograph taken facing upstream/west.



Photograph Location 5. View of Stream 2. Photograph taken facing downstream/east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 5. View of substrates of Stream 2.



Photograph Location 6. View of Stream 3. Photograph taken facing upstream/north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 6. View of Stream 3. Photograph taken facing downstream/south.



Photograph Location 6. View of substrates of Stream 3.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 7. View of Wetland 3. Photograph taken facing north.



Photograph Location 7. View of Wetland 3. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 7. View of Wetland 3. Photograph taken facing south.



Photograph Location 7. View of Wetland 3. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 7. View of soil profile at wetland determination sample point SP07 within Wetland 3.



Photograph Location 8. View of upland (pasture habitat) at wetland determination sample point SP08. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 8. View of upland (pasture habitat) at wetland determination sample point SP08. Photograph taken facing west.



Photograph Location 9. View of Stream 4. Photograph taken facing upstream/northeast.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 9. View of Stream 4. Photograph taken facing downstream/southwest.



Photograph Location 9. View of substrates of Stream 4.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 10. View of Wetland 4. Photograph taken facing north.



Photograph Location 10. View of Wetland 4. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 10. View of Wetland 4. Photograph taken facing south.



Photograph Location 10. View of Wetland 4. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 10. View of soil profile at wetland determination sample point SP09 within Wetland 4.



Photograph Location 11. View of upland (new field habitat) at wetland determination sample point SP10. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 11. View of upland (new field habitat) at wetland determination sample point SP10. Photograph taken facing west.



Photograph Location 12. View of Wetland 5. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 12. View of Wetland 5. Photograph taken facing east.



Photograph Location 12. View of Wetland 5. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 12. View of Wetland 5. Photograph taken facing west.



Photograph Location 12. View of soil profile at wetland determination sample point SP11 within Wetland 5.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 13. View of upland (new field habitat) at wetland determination sample point SP12. Photograph taken facing north.



Photograph Location 13. View of upland (new field habitat) at wetland determination sample point SP12. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 14. View of Stream 5. Photograph taken facing upstream/northeast.



Photograph Location 14. View of Stream 5. Photograph taken facing downstream/southwest.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 14. View of substrates of Stream 5.



Photograph Location 15. View of Stream 6. Photograph taken facing upstream/east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 15. View of Stream 6. Photograph taken facing downstream/southwest.



Photograph Location 15. View of substrates of Stream 6.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 16. View of Wetland 6. Photograph taken facing north.



Photograph Location 16. View of Wetland 6. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 16. View of Wetland 6. Photograph taken facing south.



Photograph Location 16. View of Wetland 6. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 16. View of soil profile at wetland determination sample point SP13 within Wetland 6.



Photograph Location 17. View of upland (old field habitat) wetland determination sample point SP14. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 17. View of upland (old field habitat) wetland determination sample point SP14. Photograph taken facing east.



Photograph Location 18. View of Wetland 7. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 18. View of Wetland 7. Photograph taken facing east.



Photograph Location 18. View of Wetland 7. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 18. View of Wetland 7. Photograph taken facing west.



Photograph Location 18. View of soil profile at wetland determination sample point SP15 within Wetland 7.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 19. View of upland (old field habitat) wetland determination sample point SP16. Photograph taken facing north.



Photograph Location 19. View of upland (old field habitat) wetland determination sample point SP16. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 20. View of Stream 7. Photograph taken facing upstream/west.



Photograph Location 20. View of Stream 7. Photograph taken facing downstream/east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 20. View of substrates of Stream 7.



Photograph Location 21. View of Wetland 11. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 21. View of Wetland 11. Photograph taken facing east.



Photograph Location 21. View of Wetland 11. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 21. View of Wetland 11. Photograph taken facing west.



Photograph Location 21. View of soil profile at wetland determination sample point SP24 within Wetland 11.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 22. View of upland (old field habitat) at wetland determination sample point SP25. Photograph taken facing north.



Photograph Location 22. View of upland (old field habitat) at wetland determination sample point SP25. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 23. View of Wetland 12. Photograph taken facing north.



Photograph Location 23. View of Wetland 12. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 23. View of Wetland 12. Photograph taken facing south.



Photograph Location 23. View of Wetland 12. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 23. View of soil profile at wetland determination sample point SP26 within Wetland 12.



Photograph Location 24. View of upland (old field habitat) at wetland determination sample point SP 27. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 24. View of upland (old field habitat) at wetland determination sample point SP27. Photograph taken facing west.



Photograph Location 25. View of palustrine scrub-shrub (PSS) portion of Wetland 10. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 25. View of PSS portion of Wetland 10. Photograph taken facing east.



Photograph Location 25. View of PSS portion of Wetland 10. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 25. View of PSS portion of Wetland 10. Photograph taken facing west.



Photograph Location 25. View of soil profile at PSS wetland determination sample point SP21 within Wetland 10.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 26. View of palustrine emergent (PEM) portion of Wetland 10. Photograph taken facing north.



Photograph Location 26. View of PEM portion of Wetland 10. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 26. View of PEM portion of Wetland 10. Photograph taken facing south.



Photograph Location 26. View of PEM portion of Wetland 10. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 26. View of soil profile at PEM wetland determination sample point SP22 within Wetland 10.



Photograph Location 27. View of upland (old field habitat) at wetland determination sample point SP23. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 27. View of upland (old field habitat) at wetland determination sample point SP23. Photograph taken facing south.



Photograph Location 28. View of Wetland 9. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 28. View of Wetland 9. Photograph taken facing east.



Photograph Location 28. View of Wetland 9. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 28. View of Wetland 9. Photograph taken facing west.



Photograph Location 28. View of soil profile at wetland determination sample point SP19 within Wetland 09.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 29. View of upland (agricultural field habitat) at wetland determination sample point SP20. Photograph taken facing east.



Photograph Location 29. View of upland (agricultural field habitat) at wetland determination sample point SP20. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 30. View of Stream 9. Photograph taken facing upstream/south.



Photograph Location 30. View of Stream 9. Photograph taken facing downstream/north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 30. View of substrates of Stream 9.



Photograph Location 31. View of Stream 8. Photograph taken facing upstream/northeast.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 31. View of Stream 8. Photograph taken facing downstream/west.



Photograph Location 31. View of substrates of Stream 8.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 32. View of Wetland 8. Photograph taken facing north.



Photograph Location 32. View of Wetland 8. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 32. View of Wetland 8. Photograph taken facing south.



Photograph Location 32. View of Wetland 8. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 32. View of soil profile at wetland determination sample point SP17 within Wetland 8.



Photograph Location 33. View of upland (pasture habitat) at wetland determination sample point SP18. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 33. View of upland (pasture habitat) at wetland determination sample point SP 18. Photograph taken facing south.



Photograph Location 34. View of Wetland 13. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 34. View of Wetland 13. Photograph taken facing east.



Photograph Location 34. View of Wetland 13. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 34. View of Wetland 13. Photograph taken facing west.



Photograph Location 34. View of soil profile at wetland determination sample point SP01 within Wetland 13.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 35. View of upland (agricultural field habitat) at wetland determination sample point SP02. Photograph taken facing north.



Photograph Location 35. View of upland (agricultural field habitat) at wetland determination sample point SP02. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 36. View of Stream 1. Photograph taken facing upstream/west.



Photograph Location 36. View of Stream 1. Photograph taken facing downstream/east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 36. View of substrates of Stream 1.



Photograph Location 37. Representative view of an upland drainage feature. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 38. Representative view of an upland drainage feature. Photograph taken facing east.

C.2 HABITAT PHOTOGRAPHS

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 1. Representative view of new field habitat. Photograph taken facing north.



Photograph Location 2. Representative view of pasture habitat. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 2. Representative view of pasture habitat. Photograph taken facing south.



Photograph Location 3. Representative view of early successional deciduous forest habitat. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 3. Representative view of old field habitat. Photograph taken facing south.



Photograph Location 4. Representative view of mixed early successional/second growth deciduous forest habitat. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 5. Representative view of existing access road. Photograph taken facing west.



Photograph Location 6. Representative view of residential lawn habitat. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 6. Representative view of early successional deciduous forest habitat.
Photograph taken facing west.



Photograph Location 7. Representative view of agricultural field habitat. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project
Stark County, Ohio



Photograph Location 8. Representative view of industrial land (existing Torrey Station).
Photograph taken facing north.

Appendix D DATA FORMS

D. 1 WETLAND DETERMINATION DATA FORMS

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/04/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Sebring silt loam, 0-2% slopes		NW1/WW1 Classification: N/A	
Landform: Depression		Local Relief: Concave	
Slope (%): 0-2	Latitude: 40.752200	Longitude: -81.414114	Datum: NAD83
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input type="checkbox"/> No			Wetland ID: Wetland 1
Are Vegetation <input checked="" type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Sample Point: SP01	Community ID: PEM
Section: --		Range: --	Dir: --

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0-2 (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 4 (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Sebring silt loam, 0-2% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pure Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	16	1	10YR	5/2	95	10YR	5/8	5	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<p>NRCS Hydric Soil Field Indicators (check here if indicators are not present) <input type="checkbox"/></p> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
---	--

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A	Depth: N/A	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	-------------------	---

Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 1** Sample Point: **SP01**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Juncus effusus</i>	10	N	OBL
2.	<i>Phalaris arundinacea</i>	30	Y	FACW
3.	<i>Poa palustris</i>	60	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	2 (A)
Total Number of Dominant Species Across All Strata:	2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100% (A/B)
Prevalence Index Worksheet	
Total % Cover of:	Multiply by:
OBL spp. 10	x 1 = 10
FACW spp. 90	x 2 = 180
FAC spp. 0	x 3 = 0
FACU spp. 0	x 4 = 0
UPL spp. 0	x 5 = 0
Total 100 (A)	190 (B)
Prevalence Index = B/A = 1.900	
Hydrophytic Vegetation Indicators:	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Dominance Test is > 50%
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Vegetation Strata:	
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.	
Woody Vines - All woody vines greater than 3.28 ft. in height.	
Hydrophytic Vegetation Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/04/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Sebring silt loam, 0-2% slopes	NW/WWI Classification: N/A		County: Stark
Landform: Plain	Local Relief: Linear	State: Ohio	Wetland ID: Wetland 1
Slope (%): 0-2	Latitude: 40.752200	Longitude: -81.414114	Sample Point: SP02
			Community ID: UPL
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input type="checkbox"/> No			Section: --
Are Vegetation <input checked="" type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Township: --	
		Range: -- Dir: --	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Sebring silt loam, 0-2% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pure Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	16	1	10YR	4/3	90	--	--	--	--	--	silt loam
--	--	1	10YR	6/3	10	--	--	--	--	--	silt loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<p>NRCS Hydric Soil Field Indicators (check here if indicators are not present) <input checked="" type="checkbox"/></p> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: N/A	Depth: N/A	Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 1** Sample Point: **SP02**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
		Total Cover =	0	
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
		Total Cover =	0	
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Plantago lanceolata</i>	15	Y	FACU
2.	<i>Taraxacum officinale</i>	10	N	FACU
3.	<i>Schedonorus arundinaceus</i>	50	Y	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
		Total Cover =	75	
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
		Total Cover =	0	
Remarks:				

<p>Dominance Test Worksheet</p> <p>Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>2</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)</p>	<p>Prevalence Index Worksheet</p> <p>Total % Cover of:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td>OBL spp.</td> <td style="text-align: center;"><u>0</u></td> <td>x 1 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACW spp.</td> <td style="text-align: center;"><u>0</u></td> <td>x 2 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FAC spp.</td> <td style="text-align: center;"><u>0</u></td> <td>x 3 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACU spp.</td> <td style="text-align: center;"><u>75</u></td> <td>x 4 =</td> <td style="text-align: center;"><u>300</u></td> </tr> <tr> <td>UPL spp.</td> <td style="text-align: center;"><u>0</u></td> <td>x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> </table> <p>Total <u>75</u> (A) <u>300</u> (B)</p> <p>Prevalence Index = B/A = <u>4.000</u></p>	OBL spp.	<u>0</u>	x 1 =	<u>0</u>	FACW spp.	<u>0</u>	x 2 =	<u>0</u>	FAC spp.	<u>0</u>	x 3 =	<u>0</u>	FACU spp.	<u>75</u>	x 4 =	<u>300</u>	UPL spp.	<u>0</u>	x 5 =	<u>0</u>
OBL spp.	<u>0</u>	x 1 =	<u>0</u>																		
FACW spp.	<u>0</u>	x 2 =	<u>0</u>																		
FAC spp.	<u>0</u>	x 3 =	<u>0</u>																		
FACU spp.	<u>75</u>	x 4 =	<u>300</u>																		
UPL spp.	<u>0</u>	x 5 =	<u>0</u>																		
<p>Hydrophytic Vegetation Indicators:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> <td>Rapid Test for Hydrophytic Vegetation</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> <td>Dominance Test is > 50%</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> <td>Prevalence Index is ≤ 3.0 *</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> <td>Morphological Adaptations (Explain) *</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> <td>Problem Hydrophytic Vegetation (Explain) *</td> </tr> </table> <p>* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p>		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Dominance Test is > 50%	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Prevalence Index is ≤ 3.0 *	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *					
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation																			
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Dominance Test is > 50%																			
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Prevalence Index is ≤ 3.0 *																			
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *																			
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *																			
<p>Definitions of Vegetation Strata:</p> <p>Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.</p> <p>Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.</p> <p>Woody Vines - All woody vines greater than 3.28 ft. in height.</p>																					
<p>Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>																					

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Latham silt loam, 6-12% slopes, moderately eroded		NWI/WWI Classification: N/A	County: Stark
Landform: Side slope		Local Relief: Linear	State: Ohio
Slope (%): 2-4		Latitude: 40.71677	Longitude: -81.409369
		Datum: NAD83	Wetland ID: Wetland 2
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Section:	
Are Vegetation <input type="checkbox"/> , Soil <input checked="" type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Township:	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: Dir: --	
Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydic Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 1 (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 8 (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Latham silt loam, 6-12% slopes, moderately eroded** Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%		Color (Moist)	%	Type		Location	
0	16	1	10YR	5/1	60	10YR	5/8	10	C	M	clay loam
--	--	1	10YR	2/2	15	--	--	--	--	--	clay loam
--	--	1	10YR	6/6	15	--	--	--	--	--	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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

<input type="checkbox"/> 1- Histic Epipedon <input type="checkbox"/> 2- Histic Epipedon <input type="checkbox"/> 3- Black Histic <input type="checkbox"/> 4- Hydrogen Sulfide <input type="checkbox"/> 5- Stratified Layers <input type="checkbox"/> 10 - 2 cm Muck (LRR N) <input type="checkbox"/> 11 - Depleted Below Dark Surface <input type="checkbox"/> 12 - Thick Dark Surface <input type="checkbox"/> 1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) <input type="checkbox"/> 4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface <input type="checkbox"/> S8 - Polyvalue Below Dark Surface (MLRA 147, 148) <input type="checkbox"/> S9 - Thin Dark Surface (MLRA 147, 148) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR N, MLRA 122, 136) <input type="checkbox"/> F13 - Umbric Surface (MLRA 122, 136) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> F21 - Red Parent Material (MLRA 127, 147)	<input type="checkbox"/> A10 - 2cm Muck (MLRA 147) <input type="checkbox"/> A16 - Coast Prairie Redox (MLRA 147, 148) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if Observed) Type: Depth: **Hydic Soil Present?** Yes No

Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 2** Sample Point **SP03**

VEGETATION (Species identified in all uppercase are non-native species.)																													
Tree Stratum (Plot size: 30 ft radius)																													
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>																									
1.	--	--	--	--																									
2.	--	--	--	--																									
3.	--	--	--	--																									
4.	--	--	--	--																									
5.	--	--	--	--																									
6.	--	--	--	--																									
7.	--	--	--	--																									
8.	--	--	--	--																									
9.	--	--	--	--																									
10.	--	--	--	--																									
Total Cover =		0																											
Sapling/Shrub Stratum (Plot size: 15 ft radius)																													
1.	--	--	--	--																									
2.	--	--	--	--																									
3.	--	--	--	--																									
4.	--	--	--	--																									
5.	--	--	--	--																									
6.	--	--	--	--																									
7.	--	--	--	--																									
8.	--	--	--	--																									
9.	--	--	--	--																									
10.	--	--	--	--																									
Total Cover =		0																											
Herb Stratum (Plot size: 5 ft radius)																													
1.	<i>Juncus effusus</i>	30	Y	FACW																									
2.	<i>Dichanthelium clandestinum</i>	20	Y	FAC																									
3.	<i>Carex frankii</i>	10	N	OBL																									
4.	--	--	--	--																									
5.	--	--	--	--																									
6.	--	--	--	--																									
7.	--	--	--	--																									
8.	--	--	--	--																									
9.	--	--	--	--																									
10.	--	--	--	--																									
11.	--	--	--	--																									
12.	--	--	--	--																									
13.	--	--	--	--																									
14.	--	--	--	--																									
15.	--	--	--	--																									
Total Cover =		60																											
Woody Vine Stratum (Plot size: 30 ft radius)																													
1.	--	--	--	--																									
2.	--	--	--	--																									
3.	--	--	--	--																									
4.	--	--	--	--																									
5.	--	--	--	--																									
Total Cover =		0																											
Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																													
Prevalence Index Worksheet Total % Cover of: <table style="margin-left: 20px; border-collapse: collapse;"> <tr> <td style="border-bottom: 1px solid black;">OBL spp.</td> <td style="border-bottom: 1px solid black; width: 50px; text-align: center;">10</td> <td style="border-bottom: 1px solid black; width: 20px; text-align: center;">x</td> <td style="border-bottom: 1px solid black; width: 20px; text-align: center;">1 =</td> <td style="border-bottom: 1px solid black; width: 50px; text-align: center;">10</td> </tr> <tr> <td style="border-bottom: 1px solid black;">FACW spp.</td> <td style="border-bottom: 1px solid black; text-align: center;">30</td> <td style="border-bottom: 1px solid black; text-align: center;">x</td> <td style="border-bottom: 1px solid black; text-align: center;">2 =</td> <td style="border-bottom: 1px solid black; text-align: center;">60</td> </tr> <tr> <td style="border-bottom: 1px solid black;">FAC spp.</td> <td style="border-bottom: 1px solid black; text-align: center;">20</td> <td style="border-bottom: 1px solid black; text-align: center;">x</td> <td style="border-bottom: 1px solid black; text-align: center;">3 =</td> <td style="border-bottom: 1px solid black; text-align: center;">60</td> </tr> <tr> <td style="border-bottom: 1px solid black;">FACU spp.</td> <td style="border-bottom: 1px solid black; text-align: center;">0</td> <td style="border-bottom: 1px solid black; text-align: center;">x</td> <td style="border-bottom: 1px solid black; text-align: center;">4 =</td> <td style="border-bottom: 1px solid black; text-align: center;">0</td> </tr> <tr> <td style="border-bottom: 1px solid black;">UPL spp.</td> <td style="border-bottom: 1px solid black; text-align: center;">0</td> <td style="border-bottom: 1px solid black; text-align: center;">x</td> <td style="border-bottom: 1px solid black; text-align: center;">5 =</td> <td style="border-bottom: 1px solid black; text-align: center;">0</td> </tr> </table> Total <u>60</u> (A) <u>130</u> (B) Prevalence Index = B/A = <u>2.167</u>					OBL spp.	10	x	1 =	10	FACW spp.	30	x	2 =	60	FAC spp.	20	x	3 =	60	FACU spp.	0	x	4 =	0	UPL spp.	0	x	5 =	0
OBL spp.	10	x	1 =	10																									
FACW spp.	30	x	2 =	60																									
FAC spp.	20	x	3 =	60																									
FACU spp.	0	x	4 =	0																									
UPL spp.	0	x	5 =	0																									
Hydrophytic Vegetation Indicators: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Dominance Test is > 50% Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Prevalence Index is ≤ 3.0 * Yes <input type="checkbox"/> No <input type="checkbox"/> Morphological Adaptations (Explain) * Yes <input type="checkbox"/> No <input type="checkbox"/> Problem Hydrophytic Vegetation (Explain) * * Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																													
Definitions of Vegetation Strata: <p style="margin-left: 40px;">Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.</p> <p style="margin-left: 40px;">Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.</p> <p style="margin-left: 40px;">Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.</p> <p style="margin-left: 40px;">Woody Vines - All woody vines greater than 3.28 ft. in height.</p>																													
Hydrophytic Vegetation Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																													
Remarks:																													

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Kate Bomar	County: Stark
Investigator #2: Matt Denzler	Investigator #2: Matt Denzler	State: Ohio
Soil Unit: Latham silt loam, 6-12% slopes, moderately eroded	NWI/WWI Classification: N/A	Wetland ID: Wetland 2
Landform: Side slope	Local Relief: Linear	Sample Point: SP04
Slope (%): 3-5	Latitude: 40.71700	Longitude: -81.15409491
	Datum: NAD83	Community ID: UPL
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Section:
Are Vegetation <input type="checkbox"/> , Soil <input checked="" type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Township:
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: Dir: --

SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydic Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

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

Remarks:

SOILS

Map Unit Name: **Latham silt loam, 6-12% slopes, moderately eroded** Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Mottles				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	8	1	10YR	4/3	100	--	--	--	--	--	clay loam
8	12	2	10YR	6/6	100	--	--	--	--	--	clay loam
12	16	3	10YR	7/6	100	--	--	--	--	--	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<p>NRCS Hydric Soil Field Indicators (check here if indicators are not present): <input checked="" type="checkbox"/></p> <input type="checkbox"/> 1- Histosol <input type="checkbox"/> 2 - Histic Epipedon <input type="checkbox"/> 3 - Black Histic <input type="checkbox"/> 4 - Hydrogen Sulfide <input type="checkbox"/> 5 - Stratified Layers <input type="checkbox"/> 10 - 2 cm Muck (LRR N) <input type="checkbox"/> 11 - Depleted Below Dark Surface <input type="checkbox"/> 12 - Thick Dark Surface <input type="checkbox"/> 1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) <input type="checkbox"/> 4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface <input type="checkbox"/> S8 - Polyvalue Below Dark Surface (MLRA 147, 148) <input type="checkbox"/> S9 - Thin Dark Surface (MLRA 147, 148) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<p>Indicators for Problematic Soils ¹</p> <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR N, MLRA 147) <input type="checkbox"/> F13 - Umbric Surface (MLRA 122, 136) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> F21 - Red Parent Material (MLRA 127, 147) <input type="checkbox"/> A10 - 2cm Muck (MLRA 147) <input type="checkbox"/> A16 - Coast Prairie Redox (MLRA 147, 148) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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Restrictive Layer (if Observed) Type: Depth:	<p>Hydic Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
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Remarks:

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 2** Sample Point **SP04**

VEGETATION (Species identified in all uppercase are non-native species.)																						
Tree Stratum (Plot size: 30 ft radius)																						
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>																		
1.	--	--	--	--																		
2.	--	--	--	--																		
3.	--	--	--	--																		
4.	--	--	--	--																		
5.	--	--	--	--																		
6.	--	--	--	--																		
7.	--	--	--	--																		
8.	--	--	--	--																		
9.	--	--	--	--																		
10.	--	--	--	--																		
Total Cover =		0																				
Sapling/Shrub Stratum (Plot size: 15 ft radius)																						
1.	--	--	--	--																		
2.	--	--	--	--																		
3.	--	--	--	--																		
4.	--	--	--	--																		
5.	--	--	--	--																		
6.	--	--	--	--																		
7.	--	--	--	--																		
8.	--	--	--	--																		
9.	--	--	--	--																		
10.	--	--	--	--																		
Total Cover =		0																				
Herb Stratum (Plot size: 5 ft radius)																						
1.	<i>Andropogon virginicus</i>	15	Y	FACU																		
2.	<i>Dichanthelium clandestinum</i>	25	Y	FAC																		
3.	<i>Schedonorus arundinaceus</i>	60	Y	FACU																		
4.	--	--	--	--																		
5.	--	--	--	--																		
6.	--	--	--	--																		
7.	--	--	--	--																		
8.	--	--	--	--																		
9.	--	--	--	--																		
10.	--	--	--	--																		
11.	--	--	--	--																		
12.	--	--	--	--																		
13.	--	--	--	--																		
14.	--	--	--	--																		
15.	--	--	--	--																		
Total Cover =		100																				
Woody Vine Stratum (Plot size: 30 ft radius)																						
1.	--	--	--	--																		
2.	--	--	--	--																		
3.	--	--	--	--																		
4.	--	--	--	--																		
5.	--	--	--	--																		
Total Cover =		0																				
Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																						
Prevalence Index Worksheet Total % Cover of: <table style="float: right; border-collapse: collapse;"> <tr> <td style="text-align: right;"><u>0</u></td> <td style="text-align: right;">x 1 =</td> <td style="text-align: right;"><u>0</u></td> </tr> <tr> <td style="text-align: right;"><u>0</u></td> <td style="text-align: right;">x 2 =</td> <td style="text-align: right;"><u>0</u></td> </tr> <tr> <td style="text-align: right;"><u>25</u></td> <td style="text-align: right;">x 3 =</td> <td style="text-align: right;"><u>75</u></td> </tr> <tr> <td style="text-align: right;"><u>75</u></td> <td style="text-align: right;">x 4 =</td> <td style="text-align: right;"><u>300</u></td> </tr> <tr> <td style="text-align: right;"><u>0</u></td> <td style="text-align: right;">x 5 =</td> <td style="text-align: right;"><u>0</u></td> </tr> <tr> <td colspan="2" style="text-align: right;">Total <u>100</u> (A)</td> <td style="text-align: right;"><u>375</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.750</u>					<u>0</u>	x 1 =	<u>0</u>	<u>0</u>	x 2 =	<u>0</u>	<u>25</u>	x 3 =	<u>75</u>	<u>75</u>	x 4 =	<u>300</u>	<u>0</u>	x 5 =	<u>0</u>	Total <u>100</u> (A)		<u>375</u> (B)
<u>0</u>	x 1 =	<u>0</u>																				
<u>0</u>	x 2 =	<u>0</u>																				
<u>25</u>	x 3 =	<u>75</u>																				
<u>75</u>	x 4 =	<u>300</u>																				
<u>0</u>	x 5 =	<u>0</u>																				
Total <u>100</u> (A)		<u>375</u> (B)																				
Hydrophytic Vegetation Indicators: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Dominance Test is > 50% Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 * Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Morphological Adaptations (Explain) * Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Problem Hydrophytic Vegetation (Explain) * * Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																						
Definitions of Vegetation Strata: <p style="margin-left: 40px;">Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.</p> <p style="margin-left: 40px;">Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.</p> <p style="margin-left: 40px;">Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.</p> <p style="margin-left: 40px;">Woody Vines - All woody vines greater than 3.28 ft. in height.</p>																						
Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																						
Remarks:																						

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Kate Bomar	County: Stark
Investigator #2: Matt Denzler	Investigator #2: Matt Denzler	State: Ohio
Soil Unit: Sebring silt loam, 0-2% slopes	NWI/WWI Classification: N/A	Wetland ID: Wetland 3
Landform: Side slope	Local Relief: Concave	Sample Point: SP05
Slope (%): 2-4	Latitude: 40.71841	Longitude: -81.410028
	Datum: NAD83	Community ID: PEM
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Section:
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Township:
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: Dir: --

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydic Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: <1 (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 9 (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Sebring silt loam, 0-2% slopes** Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	4	1	10YR	4/2	90	10YR	5/8	10	C	M	clay loam
4	6	2	2.5Y	4/1	90	10YR	5/8	10	C	M	clay loam
6	16	3	2.5Y	4/2	85	10YR	5/8	15	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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

<input type="checkbox"/> 1- Histic Epipedon <input type="checkbox"/> 2- Histic Epipedon <input type="checkbox"/> 3- Black Histic <input type="checkbox"/> 4- Hydrogen Sulfide <input type="checkbox"/> 5- Stratified Layers <input type="checkbox"/> 10 - 2 cm Muck (LRR N) <input type="checkbox"/> 11 - Depleted Below Dark Surface <input type="checkbox"/> 12 - Thick Dark Surface <input type="checkbox"/> 1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) <input type="checkbox"/> 4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface <input type="checkbox"/> S8 - Polyvalue Below Dark Surface (MLRA 147, 148) <input type="checkbox"/> S9 - Thin Dark Surface (MLRA 147, 148) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR N, MLRA 122, 136) <input type="checkbox"/> F13 - Umbric Surface (MLRA 122, 136) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> F21 - Red Parent Material (MLRA 127, 147)	<input type="checkbox"/> A10 - 2cm Muck (MLRA 147) <input type="checkbox"/> A16 - Coast Prairie Redox (MLRA 147, 148) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if Observed)

Type:	Depth:	Hydric Soil Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project Wetland ID: Wetland 3 Sample Point SP05

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 30 ft radius)				
1.	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 15 ft radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 5 ft radius)				
1.	<i>Juncus effusus</i>	30	Y	FACW
2.	<i>Carex frankii</i>	10	N	OBL
3.	<i>Scirpus cyperinus</i>	15	N	FACW
4.	<i>Solidago gigantea</i>	20	Y	FACW
5.	<i>Typha latifolia</i>	10	N	OBL
6.	<i>Dichanthelium clandestinum</i>	15	N	FAC
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 30 ft radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	<u>2</u> (A)
Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100.0%</u> (A/B)

Prevalence Index Worksheet	
Total % Cover of:	Multiply by:
OBL spp. <u>20</u>	x 1 = <u>20</u>
FACW spp. <u>65</u>	x 2 = <u>130</u>
FAC spp. <u>15</u>	x 3 = <u>45</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>100</u> (A)	<u>195</u> (B)
Prevalence Index = B/A = <u>1.950</u>	

Hydrophytic Vegetation Indicators:	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Rapid Test for Hydrophytic Vegetation
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Dominance Test is > 50%
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Prevalence Index is ≤ 3.0 *
Yes <input type="checkbox"/> No <input type="checkbox"/>	Morphological Adaptations (Explain) *
Yes <input type="checkbox"/> No <input type="checkbox"/>	Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	

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

Hydrophytic Vegetation Present	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Kate Bomar	County: Stark
Investigator #2: Matt Denzler	Investigator #2: Matt Denzler	State: Ohio
Soil Unit: Sebring silt loam, 0-2% slopes	NWI/WWI Classification: N/A	Wetland ID: Wetland 3
Landform: Plain	Local Relief: Linear	Sample Point: SP06
Slope (%): 0	Latitude: 40.71855	Longitude: -81.410111
	Datum: NAD83	Community ID: UPL
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Section:
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Township:
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: Dir: --

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydic Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Sebring silt loam, 0-2% slopes** Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	16	1	10YR	4/3	100	--	--	--	--	--	silt loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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

<input type="checkbox"/> 1- Histic Epipedon <input type="checkbox"/> 2- Histic Epipedon <input type="checkbox"/> 3- Black Histic <input type="checkbox"/> 4- Hydrogen Sulfide <input type="checkbox"/> 5- Stratified Layers <input type="checkbox"/> 10 - 2 cm Muck (LRR N) <input type="checkbox"/> 11 - Depleted Below Dark Surface <input type="checkbox"/> 12 - Thick Dark Surface <input type="checkbox"/> 1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) <input type="checkbox"/> 4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface <input type="checkbox"/> S8 - Polyvalue Below Dark Surface (MLRA 147, 148) <input type="checkbox"/> S9 - Thin Dark Surface (MLRA 147, 148) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR N, MLRA 122, 136) <input type="checkbox"/> F13 - Umbric Surface (MLRA 122, 136) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 127, 147) <input type="checkbox"/> F21 - Red Parent Material (MLRA 127, 147)	<input type="checkbox"/> A10 - 2cm Muck (MLRA 147) <input type="checkbox"/> A16 - Coast Prairie Redox (MLRA 147, 148) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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Restrictive Layer (If Observed) Type: Depth:

	Hydic Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
--	--

Remarks:

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 3** Sample Point **SP06**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 30 ft radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 15 ft radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 5 ft radius)				
1.	<i>Dichanthelium clandestinum</i>	15	N	FAC
2.	<i>Andropogon virginicus</i>	15	N	FACU
3.	<i>Schedonorus arundinaceus</i>	70	Y	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 30 ft radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Dominance Test Worksheet				
Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)				
Total Number of Dominant Species Across All Strata: <u>1</u> (B)				
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)				
Prevalence Index Worksheet				
Total % Cover of:				
OBL spp.	<u>0</u>	x 1 =	<u>0</u>	
FACW spp.	<u>0</u>	x 2 =	<u>0</u>	
FAC spp.	<u>15</u>	x 3 =	<u>45</u>	
FACU spp.	<u>85</u>	x 4 =	<u>340</u>	
UPL spp.	<u>0</u>	x 5 =	<u>0</u>	
Total		<u>100</u> (A)	<u>385</u> (B)	
Prevalence Index = B/A = <u>3.850</u>				
Hydrophytic Vegetation Indicators:				
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Rapid Test for Hydrophytic Vegetation		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Dominance Test is > 50%		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Prevalence Index is ≤ 3.0 *		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Morphological Adaptations (Explain) *		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Problem Hydrophytic Vegetation (Explain) *		
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata:				
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.				
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.				
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.				
Woody Vines - All woody vines greater than 3.28 ft. in height.				
Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Remarks:				

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Sebring silt loam, 0-2% slopes		NWI/WWI Classification: N/A	County: Stark
Landform: Depression		Local Relief: Concave	State: Ohio
Slope (%): 0		Latitude: 40.71949	Longitude: -81.410718
		Datum: NAD83	Wetland ID: Wetland 4
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Sample Point: SP07	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Community ID: PEM	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Section:	
Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township:	
		Range: Dir: --	

SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydic Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks:	

HYDROLOGY	
Wetland Hydrology Indicators (Check here if indicators are not present): <input type="checkbox"/>	
<u>Primary:</u>	<u>Secondary:</u>
<input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test

Field Observations:	
Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0-2 (in.)
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 5 (in.)
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

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

Remarks:

SOILS

Map Unit Name: **Sebring silt loam, 0-2% slopes** Series Drainage Class:

Taxonomy (Subgroup):

Profile Description <small>(Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)</small>											
Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	16	1	10YR	5/2	94	10YR	5/8	6	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present): <input type="checkbox"/>		Indicators for Problematic Soils ¹	
<input type="checkbox"/> 1- Histosol <input type="checkbox"/> 2 - Histic Epipedon <input type="checkbox"/> 3 - Black Histic <input type="checkbox"/> 4 - Hydrogen Sulfide <input type="checkbox"/> 5 - Stratified Layers <input type="checkbox"/> 10 - 2 cm Muck (LRR N) <input type="checkbox"/> 11 - Depleted Below Dark Surface <input type="checkbox"/> 12 - Thick Dark Surface <input type="checkbox"/> 1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) <input type="checkbox"/> 4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface <input type="checkbox"/> S8 - Polyvalue Below Dark Surface (MLRA 147, 148) <input type="checkbox"/> S9 - Thin Dark Surface (MLRA 147, 148) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR N, N) <input type="checkbox"/> F13 - Umbric Surface (MLRA 122, 136) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA) <input type="checkbox"/> F21 - Red Parent Material (MLRA 127, 147)	<input type="checkbox"/> A10 - 2cm Muck (MLRA 147) <input type="checkbox"/> A16 - Coast Prairie Redox (MLRA 147, 148) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)

Restrictive Layer (if Observed)	Type:	Depth:	Hydic Soil Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
Remarks:			

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project Wetland ID: Wetland 4 Sample Point SP07

VEGETATION (Species identified in all uppercase are non-native species.)																										
Tree Stratum (Plot size: 30 ft radius)					Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)																					
1.	--																									
2.	--																									
3.	--																									
4.	--																									
5.	--																									
6.	--																									
7.	--																									
8.	--																									
9.	--																									
10.	--																									
Total Cover = <u>0</u>					Prevalence Index Worksheet Total % Cover of: <table style="margin-left: 20px;"> <tr> <td>OBL spp.</td> <td><u>10</u></td> <td>x 1 =</td> <td><u>10</u></td> </tr> <tr> <td>FACW spp.</td> <td><u>50</u></td> <td>x 2 =</td> <td><u>100</u></td> </tr> <tr> <td>FAC spp.</td> <td><u>25</u></td> <td>x 3 =</td> <td><u>75</u></td> </tr> <tr> <td>FACU spp.</td> <td><u>0</u></td> <td>x 4 =</td> <td><u>0</u></td> </tr> <tr> <td>UPL spp.</td> <td><u>0</u></td> <td>x 5 =</td> <td><u>0</u></td> </tr> </table> Total <u>85</u> (A) <u>185</u> (B) Prevalence Index = B/A = <u>2.176</u>		OBL spp.	<u>10</u>	x 1 =	<u>10</u>	FACW spp.	<u>50</u>	x 2 =	<u>100</u>	FAC spp.	<u>25</u>	x 3 =	<u>75</u>	FACU spp.	<u>0</u>	x 4 =	<u>0</u>	UPL spp.	<u>0</u>	x 5 =	<u>0</u>
OBL spp.	<u>10</u>	x 1 =	<u>10</u>																							
FACW spp.	<u>50</u>	x 2 =	<u>100</u>																							
FAC spp.	<u>25</u>	x 3 =	<u>75</u>																							
FACU spp.	<u>0</u>	x 4 =	<u>0</u>																							
UPL spp.	<u>0</u>	x 5 =	<u>0</u>																							
Sapling/Shrub Stratum (Plot size: 15 ft radius)																										
1.	--																									
2.	--																									
3.	--																									
4.	--																									
5.	--																									
6.	--																									
7.	--																									
8.	--																									
9.	--																									
10.	--																									
Total Cover = <u>0</u>																										
Herb Stratum (Plot size: 5 ft radius)					Hydrophytic Vegetation Indicators: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Dominance Test is > 50% Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Prevalence Index is ≤ 3.0 * Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Morphological Adaptations (Explain) * Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Problem Hydrophytic Vegetation (Explain) * * Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																					
1.	<i>Symplocarpus foetidus</i>	<u>10</u>	<u>N</u>	<u>OBL</u>																						
2.	<i>Dichanthelium clandestinum</i>	<u>15</u>	<u>Y</u>	<u>FAC</u>																						
3.	<i>Solidago gigantea</i>	<u>15</u>	<u>Y</u>	<u>FACW</u>																						
4.	<i>Onoclea sensibilis</i>	<u>15</u>	<u>Y</u>	<u>FACW</u>																						
5.	<i>Rumex crispus</i>	<u>10</u>	<u>N</u>	<u>FAC</u>																						
6.	<i>Scirpus cyperinus</i>	<u>20</u>	<u>Y</u>	<u>FACW</u>																						
7.	--	--	--	--																						
8.	--	--	--	--																						
9.	--	--	--	--																						
10.	--	--	--	--																						
11.	--	--	--	--																						
12.	--	--	--	--																						
13.	--	--	--	--																						
14.	--	--	--	--																						
15.	--	--	--	--																						
Total Cover = <u>85</u>																										
Woody Vine Stratum (Plot size: 30 ft radius)					Definitions of Vegetation Strata: Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall. Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall. Woody Vines - All woody vines greater than 3.28 ft. in height.																					
1.	--																									
2.	--																									
3.	--																									
4.	--																									
5.	--																									
Total Cover = <u>0</u>					Hydrophytic Vegetation Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																					
Remarks:																										

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Sebring silt loam, 0-2% slopes		NWI/WWI Classification: N/A	County: Stark
Landform: Side slope		Local Relief: Linear	State: Ohio
Slope (%): 3-5		Latitude: 40.71963	Longitude: -81.410711
		Datum: NAD83	Wetland ID: Wetland 4
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Sample Point: SP08	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Community ID: UPL	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Section:	
Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township:	
		Range: Dir: --	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydic Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Sebring silt loam, 0-2% slopes** Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	5	1	2.5Y	4/3	100	--	--	--	--	clay loam	
5	16	2	2.5Y	6/3	95	10YR	5/8	5	C	PL	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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

<input type="checkbox"/> 1- Histic Epipedon <input type="checkbox"/> 2- Histic Epipedon <input type="checkbox"/> 3- Black Histic <input type="checkbox"/> 4- Hydrogen Sulfide <input type="checkbox"/> 5- Stratified Layers <input type="checkbox"/> 10 - 2 cm Muck (LRR N) <input type="checkbox"/> 11 - Depleted Below Dark Surface <input type="checkbox"/> 12 - Thick Dark Surface <input type="checkbox"/> 1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) <input type="checkbox"/> 4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface <input type="checkbox"/> S8 - Polyvalue Below Dark Surface (MLRA 147, 148) <input type="checkbox"/> S9 - Thin Dark Surface (MLRA 147, 148) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR N, MLRA 122, 136) <input type="checkbox"/> F13 - Umbric Surface (MLRA 122, 136) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> F21 - Red Parent Material (MLRA 127, 147)	<input type="checkbox"/> A10 - 2cm Muck (MLRA 147) <input type="checkbox"/> A16 - Coast Prairie Redox (MLRA 147, 148) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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Restrictive Layer (If Observed) Type: Depth: **Hydic Soil Present?** Yes No

Remarks:

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 4** Sample Point **SP08**

VEGETATION (Species identified in all uppercase are non-native species.)																								
Tree Stratum (Plot size: 30 ft radius)																								
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>																				
1.	--	--	--	--																				
2.	--	--	--	--																				
3.	--	--	--	--																				
4.	--	--	--	--																				
5.	--	--	--	--																				
6.	--	--	--	--																				
7.	--	--	--	--																				
8.	--	--	--	--																				
9.	--	--	--	--																				
10.	--	--	--	--																				
Total Cover =		0																						
Sapling/Shrub Stratum (Plot size: 15 ft radius)																								
1.	--	--	--	--																				
2.	--	--	--	--																				
3.	--	--	--	--																				
4.	--	--	--	--																				
5.	--	--	--	--																				
6.	--	--	--	--																				
7.	--	--	--	--																				
8.	--	--	--	--																				
9.	--	--	--	--																				
10.	--	--	--	--																				
Total Cover =		0																						
Herb Stratum (Plot size: 5 ft radius)																								
1.	<i>Solidago canadensis</i>	30	Y	FACU																				
2.	<i>Schedonorus arundinaceus</i>	25	Y	FACU																				
3.	<i>Potentilla simplex</i>	5	N	FACU																				
4.	<i>Achillea millefolium</i>	10	N	FACU																				
5.	--	--	--	--																				
6.	--	--	--	--																				
7.	--	--	--	--																				
8.	--	--	--	--																				
9.	--	--	--	--																				
10.	--	--	--	--																				
11.	--	--	--	--																				
12.	--	--	--	--																				
13.	--	--	--	--																				
14.	--	--	--	--																				
15.	--	--	--	--																				
Total Cover =		70																						
Woody Vine Stratum (Plot size: 30 ft radius)																								
1.	--	--	--	--																				
2.	--	--	--	--																				
3.	--	--	--	--																				
4.	--	--	--	--																				
5.	--	--	--	--																				
Total Cover =		0																						
<p>Dominance Test Worksheet</p> <p>Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>2</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)</p>																								
<p>Prevalence Index Worksheet</p> <p>Total % Cover of:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td>OBL spp.</td><td><u>0</u></td> <td>x 1 =</td><td><u>0</u></td> </tr> <tr> <td>FACW spp.</td><td><u>0</u></td> <td>x 2 =</td><td><u>0</u></td> </tr> <tr> <td>FAC spp.</td><td><u>0</u></td> <td>x 3 =</td><td><u>0</u></td> </tr> <tr> <td>FACU spp.</td><td><u>70</u></td> <td>x 4 =</td><td><u>280</u></td> </tr> <tr> <td>UPL spp.</td><td><u>0</u></td> <td>x 5 =</td><td><u>0</u></td> </tr> </table> <p>Total <u>70</u> (A) <u>280</u> (B)</p> <p>Prevalence Index = B/A = <u>4.000</u></p>					OBL spp.	<u>0</u>	x 1 =	<u>0</u>	FACW spp.	<u>0</u>	x 2 =	<u>0</u>	FAC spp.	<u>0</u>	x 3 =	<u>0</u>	FACU spp.	<u>70</u>	x 4 =	<u>280</u>	UPL spp.	<u>0</u>	x 5 =	<u>0</u>
OBL spp.	<u>0</u>	x 1 =	<u>0</u>																					
FACW spp.	<u>0</u>	x 2 =	<u>0</u>																					
FAC spp.	<u>0</u>	x 3 =	<u>0</u>																					
FACU spp.	<u>70</u>	x 4 =	<u>280</u>																					
UPL spp.	<u>0</u>	x 5 =	<u>0</u>																					
<p>Hydrophytic Vegetation Indicators:</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Dominance Test is > 50%</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Prevalence Index is ≤ 3.0 *</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Morphological Adaptations (Explain) *</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Problem Hydrophytic Vegetation (Explain) *</p> <p>* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p>																								
<p>Definitions of Vegetation Strata:</p> <p>Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.</p> <p>Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.</p> <p>Woody Vines - All woody vines greater than 3.28 ft. in height.</p>																								
<p>Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>																								
Remarks:																								

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Latham silt loam, 8-15% slopes		NWI/WWI Classification: N/A	County: Stark
Landform: Side slope		Local Relief: Concave	State: Ohio
Slope (%): 2-4		Latitude: 40.72232	Longitude: -81.412077
		Datum: NAD83	Wetland ID: Wetland 5
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Section:	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Township:	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: Dir: --	
Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydic Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 1-2" (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 6" (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Latham silt loam, 8-15% slopes** Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%		Color (Moist)	%	Type		Location	
0	16	1	10YR	5/2	85	10YR	5/8	15	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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

<input type="checkbox"/> 1- Histic Epipedon <input type="checkbox"/> 2- Histic Epipedon <input type="checkbox"/> 3- Black Histic <input type="checkbox"/> 4- Hydrogen Sulfide <input type="checkbox"/> 5- Stratified Layers <input type="checkbox"/> 10 - 2 cm Muck (LRR N) <input type="checkbox"/> 11 - Depleted Below Dark Surface <input type="checkbox"/> 12 - Thick Dark Surface <input type="checkbox"/> 1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) <input type="checkbox"/> 4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface <input type="checkbox"/> S8 - Polyvalue Below Dark Surface (MLRA 147, 148) <input type="checkbox"/> S9 - Thin Dark Surface (MLRA 147, 148) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR N, N) <input type="checkbox"/> F13 - Umbric Surface (MLRA 122, 136) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA) <input type="checkbox"/> F21 - Red Parent Material (MLRA 127, 147)	<input type="checkbox"/> A10 - 2cm Muck (MLRA 147) <input type="checkbox"/> A16 - Coast Prairie Redox (MLRA 147, 148) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if Observed)

Type:	Depth:	Hydric Soil Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
Remarks:		

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 5** Sample Point **SP09**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 30 ft radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 15 ft radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 5 ft radius)				
1.	<i>Juncus effusus</i>	35	Y	FACW
2.	<i>Scirpus cyperinus</i>	35	Y	FACW
3.	<i>Solidago gigantea</i>	30	Y	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 30 ft radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
OBL spp.	<u>0</u>	x 1 =	<u>0</u>	
FACW spp.	<u>100</u>	x 2 =	<u>200</u>	
FAC spp.	<u>0</u>	x 3 =	<u>0</u>	
FACU spp.	<u>0</u>	x 4 =	<u>0</u>	
UPL spp.	<u>0</u>	x 5 =	<u>0</u>	

Remarks:

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Muskingum silt loam, 12-18% slopes		NWI/WWI Classification: N/A	County: Stark
Landform: Side slope		Local Relief: Linear	State: Ohio
Slope (%): 2-4		Latitude: 40.72233	Longitude: -81.412152
		Datum: NAD83	Wetland ID: Wetland 5
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Section:	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Township:	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: Dir: --	
Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydic Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Muskingum silt loam, 12-18% slopes** Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles				Texture (e.g. clay, sand, loam)
			Color (Moist)	%		Color (Moist)	%	Type	Location	
0	16	1	10YR	4/4	70	--	--	--	--	clay loam
--	--	1	10YR	5/6	30	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
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NRCS Hydic Soil Field Indicators (check here if indicators are not present):

<input type="checkbox"/> 1- Histic Epipedon <input type="checkbox"/> 2- Histic Epipedon <input type="checkbox"/> 3- Black Histic <input type="checkbox"/> 4- Hydrogen Sulfide <input type="checkbox"/> 5- Stratified Layers <input type="checkbox"/> 10 - 2 cm Muck (LRR N) <input type="checkbox"/> 11 - Depleted Below Dark Surface <input type="checkbox"/> 12 - Thick Dark Surface <input type="checkbox"/> 1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) <input type="checkbox"/> 4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface <input type="checkbox"/> S8 - Polyvalue Below Dark Surface (MLRA 147, 148) <input type="checkbox"/> S9 - Thin Dark Surface (MLRA 147, 148) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR N, N) <input type="checkbox"/> F13 - Umbric Surface (MLRA 122, 136) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA) <input type="checkbox"/> F21 - Red Parent Material (MLRA 127, 147)	<input type="checkbox"/> A10 - 2cm Muck (MLRA 147) <input type="checkbox"/> A16 - Coast Prairie Redox (MLRA 147, 148) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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Restrictive Layer (if Observed)

Type:	Depth:	Hydic Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Remarks:

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 5** Sample Point **SP10**

VEGETATION (Species identified in all uppercase are non-native species.)					
Tree Stratum (Plot size: 30 ft radius)					
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>	
1.	--	--	--	--	
2.	--	--	--	--	
3.	--	--	--	--	
4.	--	--	--	--	
5.	--	--	--	--	
6.	--	--	--	--	
7.	--	--	--	--	
8.	--	--	--	--	
9.	--	--	--	--	
10.	--	--	--	--	
Total Cover =		0			
Sapling/Shrub Stratum (Plot size: 15 ft radius)					
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>	
1.	<i>Rosa multiflora</i>	5	Y	FACU	
2.	--	--	--	--	
3.	--	--	--	--	
4.	--	--	--	--	
5.	--	--	--	--	
6.	--	--	--	--	
7.	--	--	--	--	
8.	--	--	--	--	
9.	--	--	--	--	
10.	--	--	--	--	
Total Cover =		5			
Herb Stratum (Plot size: 5 ft radius)					
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>	
1.	<i>Schedonorus arundinaceus</i>	80	Y	FACU	
2.	<i>Juncus effusus</i>	10	N	FACW	
3.	--	--	--	--	
4.	--	--	--	--	
5.	--	--	--	--	
6.	--	--	--	--	
7.	--	--	--	--	
8.	--	--	--	--	
9.	--	--	--	--	
10.	--	--	--	--	
11.	--	--	--	--	
12.	--	--	--	--	
13.	--	--	--	--	
14.	--	--	--	--	
15.	--	--	--	--	
Total Cover =		90			
Woody Vine Stratum (Plot size: 30 ft radius)					
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>	
1.	--	--	--	--	
2.	--	--	--	--	
3.	--	--	--	--	
4.	--	--	--	--	
5.	--	--	--	--	
Total Cover =		0			
Dominance Test Worksheet					
Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)					
Total Number of Dominant Species Across All Strata: <u>2</u> (B)					
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)					
Prevalence Index Worksheet					
Total % Cover of:					
OBL spp.	<u>0</u>	x	<u>1</u>	=	<u>0</u>
FACW spp.	<u>10</u>	x	<u>2</u>	=	<u>20</u>
FAC spp.	<u>0</u>	x	<u>3</u>	=	<u>0</u>
FACU spp.	<u>85</u>	x	<u>4</u>	=	<u>340</u>
UPL spp.	<u>0</u>	x	<u>5</u>	=	<u>0</u>
Total		<u>95</u>	(A)	<u>360</u>	(B)
Prevalence Index = B/A = <u>3.789</u>					
Hydrophytic Vegetation Indicators:					
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Rapid Test for Hydrophytic Vegetation			
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Dominance Test is > 50%			
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Prevalence Index is ≤ 3.0 *			
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Morphological Adaptations (Explain) *			
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Problem Hydrophytic Vegetation (Explain) *			
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.					
Definitions of Vegetation Strata:					
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.					
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.					
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.					
Woody Vines - All woody vines greater than 3.28 ft. in height.					
Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Remarks:					

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Kate Bomar	County: Stark
Investigator #2: Matt Denzler	Investigator #2: Matt Denzler	State: Ohio
Soil Unit: Latham silt loam, 12-18% slopes, moderately eroded	NWI/WWI Classification: N/A	Wetland ID: Wetland 6
Landform: Terrace	Local Relief: Linear	Sample Point: SP11
Slope (%): 0-1	Latitude: 40.72436	Longitude: -81.413202
	Datum: NAD83	Community ID: PEM
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Section:
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Township:
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: Dir: --

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydic Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0-2 (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 10 (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Latham silt loam, 12-18% slopes, moderately eroded** Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles			Texture (e.g. clay, sand, loam)		
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	12	1	10YR	5/2	90	10YR	5/6	10	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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

<input type="checkbox"/> 1- Histic Epipedon <input type="checkbox"/> 2- Black Histic <input type="checkbox"/> 3- Black Histic <input type="checkbox"/> 4- Hydrogen Sulfide <input type="checkbox"/> 5- Stratified Layers <input type="checkbox"/> 10 - 2 cm Muck (LRR N) <input type="checkbox"/> 11 - Depleted Below Dark Surface <input type="checkbox"/> 12 - Thick Dark Surface <input type="checkbox"/> 1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) <input type="checkbox"/> 4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface <input type="checkbox"/> S8 - Polyvalue Below Dark Surface (MLRA 147, 148) <input type="checkbox"/> S9 - Thin Dark Surface (MLRA 147, 148) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR N, MLRA 122, 136) <input type="checkbox"/> F13 - Umbric Surface (MLRA 122, 136) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> F21 - Red Parent Material (MLRA 127, 147)	<input type="checkbox"/> A10 - 2cm Muck (MLRA 147) <input type="checkbox"/> A16 - Coast Prairie Redox (MLRA 147, 148) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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Restrictive Layer (if Observed)

Type:	Depth:	Hydric Soil Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks:

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 6** Sample Point **SP11**

VEGETATION (Species identified in all uppercase are non-native species.)																								
Tree Stratum (Plot size: 30 ft radius)																								
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>																				
1.	--	--	--	--																				
2.	--	--	--	--																				
3.	--	--	--	--																				
4.	--	--	--	--																				
5.	--	--	--	--																				
6.	--	--	--	--																				
7.	--	--	--	--																				
8.	--	--	--	--																				
9.	--	--	--	--																				
10.	--	--	--	--																				
Total Cover =		0																						
Sapling/Shrub Stratum (Plot size: 15 ft radius)																								
1.	--	--	--	--																				
2.	--	--	--	--																				
3.	--	--	--	--																				
4.	--	--	--	--																				
5.	--	--	--	--																				
6.	--	--	--	--																				
7.	--	--	--	--																				
8.	--	--	--	--																				
9.	--	--	--	--																				
10.	--	--	--	--																				
Total Cover =		0																						
Herb Stratum (Plot size: 5 ft radius)																								
1.	<i>Juncus effusus</i>	60	Y	FACW																				
2.	<i>Onoclea sensibilis</i>	10	N	FACW																				
3.	<i>Scirpus cyperinus</i>	30	--	FACW																				
4.	--	--	--	--																				
5.	--	--	--	--																				
6.	--	--	--	--																				
7.	--	--	--	--																				
8.	--	--	--	--																				
9.	--	--	--	--																				
10.	--	--	--	--																				
11.	--	--	--	--																				
12.	--	--	--	--																				
13.	--	--	--	--																				
14.	--	--	--	--																				
15.	--	--	--	--																				
Total Cover =		100																						
Woody Vine Stratum (Plot size: 30 ft radius)																								
1.	--	--	--	--																				
2.	--	--	--	--																				
3.	--	--	--	--																				
4.	--	--	--	--																				
5.	--	--	--	--																				
Total Cover =		0																						
<p>Dominance Test Worksheet</p> <p>Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>1</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)</p>																								
<p>Prevalence Index Worksheet</p> <p>Total % Cover of:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td>OBL spp.</td><td align="center"><u>0</u></td> <td>x 1 =</td><td align="center"><u>0</u></td> </tr> <tr> <td>FACW spp.</td><td align="center"><u>100</u></td> <td>x 2 =</td><td align="center"><u>200</u></td> </tr> <tr> <td>FAC spp.</td><td align="center"><u>0</u></td> <td>x 3 =</td><td align="center"><u>0</u></td> </tr> <tr> <td>FACU spp.</td><td align="center"><u>0</u></td> <td>x 4 =</td><td align="center"><u>0</u></td> </tr> <tr> <td>UPL spp.</td><td align="center"><u>0</u></td> <td>x 5 =</td><td align="center"><u>0</u></td> </tr> </table> <p>Total <u>100</u> (A) <u>200</u> (B)</p> <p>Prevalence Index = B/A = <u>2.000</u></p>					OBL spp.	<u>0</u>	x 1 =	<u>0</u>	FACW spp.	<u>100</u>	x 2 =	<u>200</u>	FAC spp.	<u>0</u>	x 3 =	<u>0</u>	FACU spp.	<u>0</u>	x 4 =	<u>0</u>	UPL spp.	<u>0</u>	x 5 =	<u>0</u>
OBL spp.	<u>0</u>	x 1 =	<u>0</u>																					
FACW spp.	<u>100</u>	x 2 =	<u>200</u>																					
FAC spp.	<u>0</u>	x 3 =	<u>0</u>																					
FACU spp.	<u>0</u>	x 4 =	<u>0</u>																					
UPL spp.	<u>0</u>	x 5 =	<u>0</u>																					
<p>Hydrophytic Vegetation Indicators:</p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation</p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Dominance Test is > 50%</p> <p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Prevalence Index is ≤ 3.0 *</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Morphological Adaptations (Explain) *</p> <p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Problem Hydrophytic Vegetation (Explain) *</p> <p>* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p>																								
<p>Definitions of Vegetation Strata:</p> <p>Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.</p> <p>Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.</p> <p>Woody Vines - All woody vines greater than 3.28 ft. in height.</p>																								
<p>Hydrophytic Vegetation Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>																								
Remarks:																								

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Latham silt loam, 12-18% slopes, moderately eroded		NW1/WW1 Classification: N/A	
Landform: Side slope	Local Relief: Linear	Wetland ID: Wetland 6	Sample Point: SP12
Slope (%): 2-4	Latitude: 40.72443	Longitude: -81.413245	Datum: NAD83
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Section:
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Township:	
Range:			Dir: --

SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydic Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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<p>Field Observations:</p> <p>Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.)</p> <p>Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.)</p> <p>Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.)</p>	<p>Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
--	--

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

Remarks:

SOILS

Map Unit Name: **Latham silt loam, 12-18% slopes, moderately eroded** Series Drainage Class:

Taxonomy (Subgroup):

Profile Description <small>(Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)</small>											
Top Depth	Bottom Depth	Horizon	Matrix			Mottles				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	10	1	10YR	4/3	70	--	--	--	--	--	silt loam
--	--	1	10YR	5/6	30	--	--	--	--	--	silt loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydic Soil Field Indicators (check here if indicators are not present): <input checked="" type="checkbox"/>		Indicators for Problematic Soils ¹	
<input type="checkbox"/> 1- Histosol <input type="checkbox"/> 2 - Histic Epipedon <input type="checkbox"/> 3 - Black Histic <input type="checkbox"/> 4 - Hydrogen Sulfide <input type="checkbox"/> 5 - Stratified Layers <input type="checkbox"/> 10 - 2 cm Muck (LRR N) <input type="checkbox"/> 11 - Depleted Below Dark Surface <input type="checkbox"/> 12 - Thick Dark Surface <input type="checkbox"/> 1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) <input type="checkbox"/> 4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface <input type="checkbox"/> S8 - Polyvalue Below Dark Surface (MLRA 147, 148) <input type="checkbox"/> S9 - Thin Dark Surface (MLRA 147, 148) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR N, N) <input type="checkbox"/> F13 - Umbric Surface (MLRA 122, 136) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA) <input type="checkbox"/> F21 - Red Parent Material (MLRA 127, 147)	<input type="checkbox"/> A10 - 2cm Muck (MLRA 147) <input type="checkbox"/> A16 - Coast Prairie Redox (MLRA 147, 148) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<p>Restrictive Layer (if Observed) Type: Rock Depth: 10"</p>	<p>Hydic Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
---	---

Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 6** Sample Point **SP12**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 30 ft radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 15 ft radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 5 ft radius)				
1.	<i>Solidago canadensis</i>	20	Y	FACU
2.	<i>Schedonorus arundinaceus</i>	70	Y	FACU
3.	<i>Daucus carota</i>	10	N	UPL
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 30 ft radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Dominance Test Worksheet				
Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)				
Total Number of Dominant Species Across All Strata: <u>2</u> (B)				
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)				
Prevalence Index Worksheet				
Total % Cover of:				
OBL spp.	<u>0</u>	x 1 =	<u>0</u>	
FACW spp.	<u>0</u>	x 2 =	<u>0</u>	
FAC spp.	<u>0</u>	x 3 =	<u>0</u>	
FACU spp.	<u>90</u>	x 4 =	<u>360</u>	
UPL spp.	<u>10</u>	x 5 =	<u>50</u>	
Total		<u>100</u> (A)	<u>410</u> (B)	
Prevalence Index = B/A = <u>4.100</u>				
Hydrophytic Vegetation Indicators:				
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Rapid Test for Hydrophytic Vegetation		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Dominance Test is > 50%		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Prevalence Index is ≤ 3.0 *		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Morphological Adaptations (Explain) *		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Problem Hydrophytic Vegetation (Explain) *		
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata:				
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.				
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.				
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.				
Woody Vines - All woody vines greater than 3.28 ft. in height.				
Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Remarks:				

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Latham silt loam, 12-18% slopes, moderately eroded		NWI/WWI Classification: N/A	County: Stark
Landform: Side slope		Local Relief: Concave	State: Ohio
Slope (%): 2-4		Latitude: 40.72579	Longitude: -81.414062
		Datum: NAD83	Wetland ID: Wetland 7
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Section:	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Township:	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: Dir: --	
Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydic Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 1-2" (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 2" (in.)	
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: surface (in.)	

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

Remarks:

SOILS

Map Unit Name: **Latham silt loam, 12-18% slopes, moderately eroded**

Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	2	1	10Y	3/1	100	--	--	--	--	--	mucky loam
2	14	2	10Y	4/1	100	--	--	--	--	--	mucky loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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

<input type="checkbox"/> 1- Histic Epipedon <input type="checkbox"/> 2- Histic Epipedon <input type="checkbox"/> 3- Black Histic <input checked="" type="checkbox"/> 4- Hydrogen Sulfide <input type="checkbox"/> 5- Stratified Layers <input type="checkbox"/> 10 - 2 cm Muck (LRR N) <input type="checkbox"/> 11 - Depleted Below Dark Surface <input type="checkbox"/> 12 - Thick Dark Surface <input type="checkbox"/> 1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) <input type="checkbox"/> 4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface <input type="checkbox"/> S8 - Polyvalue Below Dark Surface (MLRA 147, 148) <input type="checkbox"/> S9 - Thin Dark Surface (MLRA 147, 148) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR N, N) <input type="checkbox"/> F13 - Umbric Surface (MLRA 122, 136) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA) <input type="checkbox"/> F21 - Red Parent Material (MLRA 127, 147)	<input type="checkbox"/> A10 - 2cm Muck (MLRA 147) <input type="checkbox"/> A16 - Coast Prairie Redox (MLRA 147, 148) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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Restrictive Layer (if Observed)

Type:	Depth:	Hydic Soil Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks:

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 7** Sample Point **SP13**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 30 ft radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 15 ft radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 5 ft radius)				
1.	<i>Scirpus cyperinus</i>	60	Y	FACW
2.	<i>Juncus effusus</i>	15	N	FACW
3.	<i>Carex frankii</i>	15	N	OBL
4.	<i>Onoclea sensibilis</i>	10	N	FACW
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 30 ft radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Dominance Test Worksheet				
Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)				
Total Number of Dominant Species Across All Strata: <u>1</u> (B)				
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)				
Prevalence Index Worksheet				
Total % Cover of:				
OBL spp.	<u>15</u>	x 1 =	<u>15</u>	
FACW spp.	<u>85</u>	x 2 =	<u>170</u>	
FAC spp.	<u>0</u>	x 3 =	<u>0</u>	
FACU spp.	<u>0</u>	x 4 =	<u>0</u>	
UPL spp.	<u>0</u>	x 5 =	<u>0</u>	
Total		<u>100</u> (A)	<u>185</u> (B)	
Prevalence Index = B/A = <u>1.850</u>				
Hydrophytic Vegetation Indicators:				
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Rapid Test for Hydrophytic Vegetation		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Dominance Test is > 50%		
Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Prevalence Index is ≤ 3.0 *		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Morphological Adaptations (Explain) *		
Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Problem Hydrophytic Vegetation (Explain) *		
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata:				
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.				
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.				
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.				
Woody Vines - All woody vines greater than 3.28 ft. in height.				
Hydrophytic Vegetation Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Remarks:				

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Latham silt loam, 12-18% slopes, moderately eroded		NWI/WWI Classification: N/A	
Landform: Side slope	Local Relief: Linear	Wetland ID: Wetland 7	Sample Point: SP14
Slope (%): 2-4	Latitude: 40.72601	Longitude: -81.414091	Datum: NAD83
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			Section:
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Township:	
Range:			Dir: --

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydic Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B14 - True Aquatic Plants <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Latham silt loam, 12-18% slopes, moderately eroded** Series Drainage Class:

Taxonomy (Subgroup):

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Mottles				Texture (e.g. clay, sand, loam)
			Color (Moist)	%		Color (Moist)	%	Type	Location	
0	12	1	7.5YR	6/2	70	--	--	--	--	clay loam
--	--	1	10YR	5/8	10	--	--	--	--	clay loam
--	--	1	10YR	4/2	20	--	--	--	--	clay loam
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

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

<input type="checkbox"/> 1- Histic Epipedon <input type="checkbox"/> 2- Histic Epipedon <input type="checkbox"/> 3- Black Histic <input type="checkbox"/> 4- Hydrogen Sulfide <input type="checkbox"/> 5- Stratified Layers <input type="checkbox"/> 10 - 2 cm Muck (LRR N) <input type="checkbox"/> 11 - Depleted Below Dark Surface <input type="checkbox"/> 12 - Thick Dark Surface <input type="checkbox"/> 1 - Sandy Muck Mineral (LRR N, MLRA 147, 148) <input type="checkbox"/> 4 - Sandy Gleyed Matrix	<input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface <input type="checkbox"/> S8 - Polyvalue Below Dark Surface (MLRA 147, 148) <input type="checkbox"/> S9 - Thin Dark Surface (MLRA 147, 148) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR N, N) <input type="checkbox"/> F13 - Umbric Surface (MLRA 122, 136) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA) <input type="checkbox"/> F21 - Red Parent Material (MLRA 127, 147)	<input type="checkbox"/> A10 - 2cm Muck (MLRA 147) <input type="checkbox"/> A16 - Coast Prairie Redox (MLRA 147, 148) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 136, 147) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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Restrictive Layer (if Observed)

Type:	Depth:	Hydic Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Remarks:

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 7** Sample Point **SP14**

VEGETATION (Species identified in all uppercase are non-native species.)

Tree Stratum (Plot size: 30 ft radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		

Sapling/Shrub Stratum (Plot size: 15 ft radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		

Herb Stratum (Plot size: 5 ft radius)				
1.	<i>Schedonorus arundinaceus</i>	80	Y	FACU
2.	<i>Elymus virginicus</i>	10	N	FACW
3.	<i>Juncus effusus</i>	10	N	FACW
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		

Woody Vine Stratum (Plot size: 30 ft radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		

Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index Worksheet

<u>Total % Cover of:</u>		<u>Multiply by:</u>	
OBL spp.	<u>0</u>	x 1 =	<u>0</u>
FACW spp.	<u>20</u>	x 2 =	<u>40</u>
FAC spp.	<u>0</u>	x 3 =	<u>0</u>
FACU spp.	<u>80</u>	x 4 =	<u>320</u>
UPL spp.	<u>0</u>	x 5 =	<u>0</u>
Total <u>100</u> (A)		<u>360</u> (B)	
Prevalence Index = B/A = <u>3.600</u>			

Hydrophytic Vegetation Indicators:

Yes No Rapid Test for Hydrophytic Vegetation

Yes No Dominance Test is > 50%

Yes No Prevalence Index is ≤ 3.0 *

Yes No Morphological Adaptations (Explain) *

Yes No Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

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

Hydrophytic Vegetation Present Yes No

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Kate Bomar	County: Stark
Investigator #2: Matt Denzler	Soil Unit: Latham silt loam, 8-15% slopes	State: Ohio
Local Relief: Concave	NWI/WWI Classification: N/A	Wetland ID: Wetland 8
Landform: Depression	Latitude: 40.731902	Sample Point: SP15
Slope (%): 0-1	Longitude: -81.415352	Community ID: PEM
	Datum: NAD83	Section: --
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input type="checkbox"/> No		Township: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: -- Dir: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)
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Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0-1 (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 4 (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Latham silt loam, 8-15% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	14	1	10YR	5/1	80	10YR	5/8	5	C	M	clay loam
--	--	1	10YR	3/1	15	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<p>NRCS Hydric Soil Field Indicators (check here if indicators are not present) <input type="checkbox"/></p> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: **Rock** Depth: **14"**

Hydric Soil Present? Yes No

Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 8** Sample Point: **SP15**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
		Total Cover =	0	
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
		Total Cover =	0	
Herb Stratum (Plot size: 2 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	<i>Apocynum cannabinum</i>	10	N	FAC
2.	<i>Juncus effusus</i>	20	Y	OBL
3.	<i>Onoclea sensibilis</i>	10	N	FACW
4.	<i>Typha angustifolia</i>	5	N	OBL
5.	<i>Schedonorus arundinaceus</i>	55	Y	FACU
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
		Total Cover =	100	
Woody Vine Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
		Total Cover =	0	
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	1 (A)
Total Number of Dominant Species Across All Strata:	2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50% (A/B)

Prevalence Index Worksheet	
Total % Cover of:	Multiply by:
OBL spp. <u>25</u>	x 1 = <u>25</u>
FACW spp. <u>10</u>	x 2 = <u>20</u>
FAC spp. <u>10</u>	x 3 = <u>30</u>
FACU spp. <u>55</u>	x 4 = <u>220</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>100</u> (A)	<u>295</u> (B)
Prevalence Index = B/A = <u>2.950</u>	

Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Dominance Test is > 50%
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	

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

Hydrophytic Vegetation Present	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/05/22
Applicant: AEP Ohio Transmission Company, Inc.			County: Stark
Investigator #1: Kate Bomar	Investigator #2: Matt Denzler		State: Ohio
Soil Unit: Latham silt loam, 8-15% slopes	NW/WWI Classification: N/A		Wetland ID: Wetland 8
Landform: Side slope	Local Relief: Linear		Sample Point: SP16
Slope (%): 1-2	Latitude: 40.731963	Longitude: -81.415344	Community ID: UPL
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input type="checkbox"/> No			Section: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Township: --	
		Range: -- Dir: --	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Latham silt loam, 8-15% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)
			Color (Moist)	%		Color (Moist)	%	Type	Location	
0	4	1	10YR	4/2	100	--	--	--	--	clay loam
4	7	2	10YR	4/2	50	--	--	--	--	clay loam
--	--	2	10YR	6/6	40	--	--	--	--	clay loam
--	--	2	10YR	8/1	10	--	--	--	--	clay loam
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

<p>NRCS Hydric Soil Field Indicators (check here if indicators are not present) <input checked="" type="checkbox"/></p> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks) <p><small>¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</small></p>
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Restrictive Layer (If Observed) Type: _____ Depth: _____	Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 8** Sample Point: **SP16**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Schedonorus arundinaceus</i>	95	Y	FACU
2.	<i>Apocynum cannabinum</i>	5	N	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	0 (A)
Total Number of Dominant Species Across All Strata:	1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0% (A/B)
Prevalence Index Worksheet	
Total % Cover of:	Multiply by:
OBL spp. 0	x 1 = 0
FACW spp. 0	x 2 = 0
FAC spp. 5	x 3 = 15
FACU spp. 95	x 4 = 380
UPL spp. 0	x 5 = 0
Total 100 (A)	395 (B)
Prevalence Index = B/A = 3.950	
Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Dominance Test is > 50%
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Vegetation Strata:	
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.	
Woody Vines - All woody vines greater than 3.28 ft. in height.	
Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 04/06/22
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Kate Bomar	County: Stark
Investigator #2: Matt Denzler	Soil Unit: Sebring silt loam, 0-2% slopes	State: Ohio
Local Relief: Linear	NWI/WWI Classification: N/A	Wetland ID: Wetland 9
Landform: Plain	Latitude: 40.749044	Sample Point: SP17
Slope (%): 0	Longitude: -81.414233	Community ID: PEM
Datum: NAD83		Section: --
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input type="checkbox"/> No		Township: --
Are Vegetation <input checked="" type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: -- Dir: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)
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Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 1-2" (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: surface (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Sebring silt loam, 0-2% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pure Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	2	1	10YR	4/1	100	--	--	--	--	--	clay loam
2	14	2	10YR	5/1	95	7.5YR	5/6	5	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<p>NRCS Hydric Soil Field Indicators (check here if indicators are not present) <input type="checkbox"/></p> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: _____	Depth: _____	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 9** Sample Point: **SP17**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Ranunculus sceleratus</i>	20	Y	OBL
2.	<i>Poa palustris</i>	50	Y	FACW
3.	<i>Juncus effusus</i>	20	Y	OBL
4.	<i>Lysimachia nummularia</i>	10	N	FACW
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Additional Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index Worksheet

<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL spp. <u>40</u>	x 1 = <u>40</u>
FACW spp. <u>60</u>	x 2 = <u>120</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>100</u> (A)	<u>160</u> (B)
Prevalence Index = B/A = <u>1.600</u>	

Hydrophytic Vegetation Indicators:

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Dominance Test is > 50%
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

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

Hydrophytic Vegetation Present Yes No

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 04/06/22
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Kate Bomar	County: Stark
Investigator #2: Matt Denzler	Soil Unit: Sebring silt loam, 0-2% slopes	State: Ohio
Local Relief: Linear	NWI/WWI Classification: N/A	Wetland ID: Wetland 9
Landform: Plain	Latitude: 40.748686	Sample Point: SP18
Slope (%): 0	Longitude: -81.414185	Community ID: UPL
Datum: NAD83		Section: --
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input type="checkbox"/> No		Township: --
Are Vegetation <input checked="" type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: -- Dir: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Sebring silt loam, 0-2% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pure Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	14	1	10YR	5/1	92	5YR	4/6	8	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions
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Indicators for Problematic Soils¹

<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)	
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: _____	Depth: _____	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 9** Sample Point: **SP18**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	<i>Rosa multiflora</i>	5	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		5		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Setaria faberi</i>	10	Y	FACU
2.	<i>Trifolium repens</i>	5	N	FACU
3.	<i>Rumex crispus</i>	10	Y	FAC
4.	<i>Ranunculus bulbosus</i>	10	Y	FACW
5.	<i>Plantago major</i>	10	Y	FACU
6.	<i>Poa pratensis</i>	40	Y	FACU
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		85		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Additional Remarks:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index Worksheet

<u>Total % Cover of:</u>		<u>Multiply by:</u>	
OBL spp.	<u>0</u>	x 1 =	<u>0</u>
FACW spp.	<u>10</u>	x 2 =	<u>20</u>
FAC spp.	<u>10</u>	x 3 =	<u>30</u>
FACU spp.	<u>70</u>	x 4 =	<u>280</u>
UPL spp.	<u>0</u>	x 5 =	<u>0</u>
Total		<u>90</u> (A)	<u>330</u> (B)
Prevalence Index = B/A =		<u>3.667</u>	

Hydrophytic Vegetation Indicators:

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Dominance Test is > 50%
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

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

Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.

Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.

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

Hydrophytic Vegetation Present Yes No

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 04/06/22
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Kate Bomar	County: Stark
Investigator #2: Matt Denzler	Soil Unit: Sebring silt loam, 0-2% slopes	State: Ohio
Local Relief: Concave	NWI/WWI Classification: N/A	Wetland ID: Wetland 10
Landform: Depression	Latitude: 40.746623	Sample Point: SP19
Slope (%): 0	Longitude: -81.414392	Community ID: PEM
	Datum: NAD83	Section: --
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input type="checkbox"/> No		Township: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: -- Dir: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 1-2" (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Sebring silt loam, 0-2% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pure Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	16	1	10YR	5/2	90	10YR	5/8	10	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
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--	--	--	--	--	--	--	--	--	--	--	--

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

<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions
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Indicators for Problematic Soils¹

<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
--	--

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: _____	Depth: _____	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 10** Sample Point: **SP19**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Phalaris arundinacea</i>	90	Y	FACW
2.	<i>Lythrum salicaria</i>	10	N	OBL
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

<p>Dominance Test Worksheet</p> <p>Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)</p> <p>Total Number of Dominant Species Across All Strata: <u>1</u> (B)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)</p>	<p>Prevalence Index Worksheet</p> <p>Total % Cover of:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td>OBL spp.</td> <td style="text-align: center;"><u>10</u></td> <td>x 1 =</td> <td style="text-align: center;"><u>10</u></td> </tr> <tr> <td>FACW spp.</td> <td style="text-align: center;"><u>90</u></td> <td>x 2 =</td> <td style="text-align: center;"><u>180</u></td> </tr> <tr> <td>FAC spp.</td> <td style="text-align: center;"><u>0</u></td> <td>x 3 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>FACU spp.</td> <td style="text-align: center;"><u>0</u></td> <td>x 4 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td>UPL spp.</td> <td style="text-align: center;"><u>0</u></td> <td>x 5 =</td> <td style="text-align: center;"><u>0</u></td> </tr> <tr> <td colspan="2">Total</td> <td></td> <td style="text-align: center;"><u>100</u> (A)</td> </tr> <tr> <td colspan="2"></td> <td></td> <td style="text-align: center;"><u>190</u> (B)</td> </tr> <tr> <td colspan="2">Prevalence Index = B/A =</td> <td></td> <td style="text-align: center;"><u>1.900</u></td> </tr> </table>	OBL spp.	<u>10</u>	x 1 =	<u>10</u>	FACW spp.	<u>90</u>	x 2 =	<u>180</u>	FAC spp.	<u>0</u>	x 3 =	<u>0</u>	FACU spp.	<u>0</u>	x 4 =	<u>0</u>	UPL spp.	<u>0</u>	x 5 =	<u>0</u>	Total			<u>100</u> (A)				<u>190</u> (B)	Prevalence Index = B/A =			<u>1.900</u>																															
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Total			<u>100</u> (A)																																																													
			<u>190</u> (B)																																																													
Prevalence Index = B/A =			<u>1.900</u>																																																													
<p>Hydrophytic Vegetation Indicators:</p> <table style="width:100%; border-collapse: collapse;"> <tr> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> <td>Rapid Test for Hydrophytic Vegetation</td> </tr> <tr> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> <td>Dominance Test is > 50%</td> </tr> <tr> <td><input checked="" type="checkbox"/> Yes</td> <td><input type="checkbox"/> No</td> <td>Prevalence Index is ≤ 3.0 *</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> <td>Morphological Adaptations (Explain) *</td> </tr> <tr> <td><input type="checkbox"/> Yes</td> <td><input checked="" type="checkbox"/> No</td> <td>Problem Hydrophytic Vegetation (Explain) *</td> </tr> </table> <p>* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</p>																																																		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Dominance Test is > 50%	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Prevalence Index is ≤ 3.0 *	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation																																																														
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<p>Definitions of Vegetation Strata:</p> <p>Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.</p> <p>Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.</p> <p>Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.</p> <p>Woody Vines - All woody vines greater than 3.28 ft. in height.</p>																																																																
<p>Hydrophytic Vegetation Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>																																																																

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 04/06/22
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Fitchville silt loam, 0-2% slopes	NWI/WWI Classification: N/A	County: Stark
Landform: Depression	Local Relief: Linear	State: Ohio
Slope (%): 0	Latitude: 40.746278	Longitude: -81.414397
Datum: NAD83		Wetland ID: Wetland 10
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input type="checkbox"/> No		Sample Point: SP20
Are Vegetation <input checked="" type="checkbox"/> , Soil <input checked="" type="checkbox"/> , or Hydrology <input checked="" type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: UPL
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Section: --
		Township: --
		Range: -- Dir: --

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Fitchville silt loam, 0-2% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	12	1	10YR	5/3	90	10YR	5/8	10	C	M	clay loam
12	14	2	10YR	5/2	85	10YR	5/8	15	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<p>NRCS Hydric Soil Field Indicators (check here if indicators are not present) <input checked="" type="checkbox"/></p> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type:	Depth:	Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 10** Sample Point: **SP20**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Zea mays</i>	60	Y	UPL
2.	<i>Setaria faberi</i>	10	N	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		70		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	0 (A)
Total Number of Dominant Species Across All Strata:	1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0% (A/B)
Prevalence Index Worksheet	
Total % Cover of:	Multiply by:
OBL spp. 0	x 1 = 0
FACW spp. 0	x 2 = 0
FAC spp. 0	x 3 = 0
FACU spp. 10	x 4 = 40
UPL spp. 60	x 5 = 300
Total 70 (A)	340 (B)
Prevalence Index = B/A = 4.857	
Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Dominance Test is > 50%
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Vegetation Strata:	
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.	
Woody Vines - All woody vines greater than 3.28 ft. in height.	
Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/06/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Luray silt loam, 0-2% slopes	NW1/WWI Classification: N/A		County: Stark
Landform: Depression	Local Relief: Concave	State: Ohio	Wetland ID: Wetland 11
Slope (%): 0	Latitude: 40.743008	Longitude: -81.414691	Sample Point: SP21
Datum: NAD83			Community ID: PSS
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input type="checkbox"/> No			Section: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Township: --	
Remarks:		Range: -- Dir: --	

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C5 - Crayfish Burrows <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> C8 - Saturation Visible on Aerial Imagery <input type="checkbox"/> C9 - Stunted or Stressed Plants <input type="checkbox"/> C10 - Geomorphic Position <input type="checkbox"/> C11 - Shallow Aquitard <input type="checkbox"/> C12 - Microtopographic Relief <input type="checkbox"/> C13 - FAC-Neutral Test
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<p>Field Observations:</p> Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: 2 (in.) Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: 5 (in.) Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.)	<p>Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: **N/A**

Remarks:

SOILS

Map Unit Name: **Luray silt loam, 0-2% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	16	1	10YR	4/1	95	7.5YR	4/6	5	C	M	clay loam
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<p>NRCS Hydric Soil Field Indicators (check here if indicators are not present) <input type="checkbox"/></p> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)		<p><input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions</p>		<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)	
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: _____	Depth: _____	Hydric Soil Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 11** Sample Point: **SP21**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	<i>Quercus palustris</i>	5	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		5		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	<i>Cornus amomum</i>	30	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		30		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Solidago gigantea</i>	40	Y	FACW
2.	<i>Panicum virgatum</i>	15	Y	FAC
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		55		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Dominance Test Worksheet				
Number of Dominant Species that are OBL, FACW, or FAC: <u>4</u> (A)				
Total Number of Dominant Species Across All Strata: <u>4</u> (B)				
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)				
Prevalence Index Worksheet				
Total % Cover of:				
OBL spp.	<u>0</u>	x 1 =	<u>0</u>	
FACW spp.	<u>75</u>	x 2 =	<u>150</u>	
FAC spp.	<u>15</u>	x 3 =	<u>45</u>	
FACU spp.	<u>0</u>	x 4 =	<u>0</u>	
UPL spp.	<u>0</u>	x 5 =	<u>0</u>	
Total		<u>90</u> (A)	<u>195</u> (B)	
Prevalence Index = B/A =				<u>2.167</u>
Hydrophytic Vegetation Indicators:				
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation		
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Dominance Test is > 50%		
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Prevalence Index is ≤ 3.0 *		
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *		
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *		
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Definitions of Vegetation Strata:				
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.				
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.				
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.				
Woody Vines - All woody vines greater than 3.28 ft. in height.				
Hydrophytic Vegetation Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
Remarks:				

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/06/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Luray silt loam, 0-2% slopes		NW1/WW1 Classification: N/A	
Landform: Depression		Local Relief: Concave	
Slope (%): 0	Latitude: 40.742811	Longitude: -81.414646	Datum: NAD83
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			<input type="checkbox"/> Yes <input type="checkbox"/> No
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Section: --		Township: --	
Community ID: PEM		Range: -- Dir: --	

SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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<p>Field Observations:</p> Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: 1 (in.) Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Depth: 10 (in.) Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.)	<p>Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks:

SOILS

Map Unit Name: **Luray silt loam, 0-2% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pure Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	12	1	2.5Y	5/1	85	7.5YR	5/8	15	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
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NRCS Hydric Soil Field Indicators (check here if indicators are not present) <input type="checkbox"/>		Indicators for Problematic Soils¹	
<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)	

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: Rock	Depth: 12"	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 11** Sample Point: **SP22**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<i>Species Name</i>	% Cover	Dominant	Ind. Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
		Total Cover =	0	
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
	<i>Species Name</i>	% Cover	Dominant	Ind. Status
1.	<i>Salix discolor</i>	3	Y	FACW
2.	<i>Rosa palustris</i>	3	Y	OBL
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
		Total Cover =	6	
Herb Stratum (Plot size: 2 meter radius)				
	<i>Species Name</i>	% Cover	Dominant	Ind. Status
1.	<i>Phalaris arundinacea</i>	80	Y	FACW
2.	<i>Onoclea sensibilis</i>	10	N	FACW
3.	<i>Juncus effusus</i>	10	N	OBL
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
		Total Cover =	100	
Woody Vine Stratum (Plot size: 10 meter radius)				
	<i>Species Name</i>	% Cover	Dominant	Ind. Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
		Total Cover =	0	
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	3 (A)
Total Number of Dominant Species Across All Strata:	3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100% (A/B)

Prevalence Index Worksheet	
Total % Cover of:	
OBL spp.	13 x 1 = 13
FACW spp.	93 x 2 = 186
FAC spp.	0 x 3 = 0
FACU spp.	0 x 4 = 0
UPL spp.	0 x 5 = 0
Total	106 (A) 199 (B)
Prevalence Index = B/A = 1.877	

Hydrophytic Vegetation Indicators:	
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No Rapid Test for Hydrophytic Vegetation
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No Dominance Test is > 50%
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	

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

Hydrophytic Vegetation Present	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/06/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Fitchville silt loam, 0-2% slopes		NW1/WW1 Classification: N/A	
Landform: Plain	Local Relief: Linear		Wetland ID: Wetland 11
Slope (%): 0	Latitude: 40.742134	Longitude: -81.414619	Datum: NAD83
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			<input type="checkbox"/> Yes <input type="checkbox"/> No
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Section: --		Township: --	
Range: --		Dir: --	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Fitchville silt loam, 0-2% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)
			Color (Moist)	%		Color (Moist)	%	Type	Location	
0	8	1	10YR	5/2	100	--	--	--	--	clay loam
8	12	2	10YR	6/6	100	--	--	--	--	clay loam
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

<p>NRCS Hydric Soil Field Indicators (check here if indicators are not present) <input checked="" type="checkbox"/></p> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: _____	Depth: _____	Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 11** Sample Point: **SP23**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	<i>Symphotrichum ericoides</i>	10	N	FACU
2.	<i>Schedonorus arundinaceus</i>	90	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	0 (A)
Total Number of Dominant Species Across All Strata:	1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0% (A/B)
Prevalence Index Worksheet	
Total % Cover of:	Multiply by:
OBL spp. 0	x 1 = 0
FACW spp. 0	x 2 = 0
FAC spp. 0	x 3 = 0
FACU spp. 100	x 4 = 400
UPL spp. 0	x 5 = 0
Total 100 (A)	400 (B)
Prevalence Index = B/A = 4.000	
Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Dominance Test is > 50%
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Vegetation Strata:	
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.	
Woody Vines - All woody vines greater than 3.28 ft. in height.	
Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 04/06/22
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Kate Bomar	County: Stark
Investigator #2: Matt Denzler	Soil Unit: Canfield silt loam, 2-6% slopes	State: Ohio
Local Relief: Linear	NWI/WWI Classification: N/A	Wetland ID: Wetland 12
Landform: Side slope	Latitude: 40.740177	Sample Point: SP24
Slope (%): 3-5	Longitude: -81.414858	Community ID: PEM
Datum: NAD83	Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input type="checkbox"/> No	Section: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Township: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: -- Dir: --

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)
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Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 1 (in.)	Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 12 (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Canfield silt loam, 2-6% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pure Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	14	1	10YR	4/1	92	5YR	4/6	8	C	M	silty clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

<p>NRCS Hydric Soil Field Indicators (check here if indicators are not present) <input type="checkbox"/></p> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: _____ Depth: _____	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 12** Sample Point: **SP24**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Juncus effusus</i>	70	Y	OBL
2.	<i>Phalaris arundinacea</i>	30	Y	FACW
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	2 (A)
Total Number of Dominant Species Across All Strata:	2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100% (A/B)
Prevalence Index Worksheet	
<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL spp. 70	x 1 = 70
FACW spp. 30	x 2 = 60
FAC spp. 0	x 3 = 0
FACU spp. 0	x 4 = 0
UPL spp. 0	x 5 = 0
Total 100 (A)	130 (B)
Prevalence Index = B/A = 1.300	
Hydrophytic Vegetation Indicators:	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Dominance Test is > 50%
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Vegetation Strata:	
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.	
Woody Vines - All woody vines greater than 3.28 ft. in height.	
Hydrophytic Vegetation Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/06/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Canfield silt loam, 2-6% slopes		NW1/WW1 Classification: N/A	
Landform: Side slope	Local Relief: Linear	Wetland ID: Wetland 12	Sample Point: SP25
Slope (%): 3-5	Latitude: 40.740059	Longitude: -81.414831	Datum: NAD83
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Section: --		Township: --	
Range: --		Dir: --	

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Canfield silt loam, 2-6% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)
			Color (Moist)	%		Color (Moist)	%	Type	Location	
0	10	1	10YR	4/3	100	--	--	--	--	clay loam
10	16	2	10YR	5/6	60	--	--	--	--	clay loam
10	16	2	10YR	4/3	40	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

<p>NRCS Hydric Soil Field Indicators (check here if indicators are not present) <input checked="" type="checkbox"/></p> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: _____	Depth: _____	Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 12** Sample Point: **SP25**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind.Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Juncus effusus</i>	10	N	OBL
2.	<i>Schedonorus arundinaceus</i>	90	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	0 (A)
Total Number of Dominant Species Across All Strata:	1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0% (A/B)
Prevalence Index Worksheet	
<u>Total % Cover of:</u>	<u>Multiply by:</u>
OBL spp. <u>10</u>	x 1 = <u>10</u>
FACW spp. <u>0</u>	x 2 = <u>0</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>90</u>	x 4 = <u>360</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>100</u> (A)	<u>370</u> (B)
Prevalence Index = B/A = <u>3.700</u>	
Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Dominance Test is > 50%
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Vegetation Strata:	
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.	
Woody Vines - All woody vines greater than 3.28 ft. in height.	
Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 04/06/22
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Canfield silt loam, 2-6% slopes	NWI/WWI Classification: N/A	County: Stark
Landform: Side slope	Local Relief: Concave	State: Ohio
Slope (%): 1-2	Latitude: 40.741101	Longitude: -81.414841
Datum: NAD83		Wetland ID: Wetland 13
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input type="checkbox"/> No		Sample Point: SP26
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: PEM
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Section: --
		Township: --
		Range: -- Dir: --

SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<u>Primary:</u>		<u>Secondary:</u>
<input type="checkbox"/> A1 - Surface Water	<input type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B6 - Surface Soil Cracks
<input checked="" type="checkbox"/> A2 - High Water Table	<input type="checkbox"/> B13 - Aquatic Fauna	<input type="checkbox"/> B10 - Drainage Patterns
<input type="checkbox"/> A3 - Saturation	<input type="checkbox"/> B15 - Marl Deposits	<input type="checkbox"/> B16 - Moss Trim Lines
<input type="checkbox"/> B1 - Water Marks	<input type="checkbox"/> C1 - Hydrogen Sulfide Odor	<input type="checkbox"/> C2 - Dry-Season Water Table
<input type="checkbox"/> B2 - Sediment Deposits	<input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> C8 - Crayfish Burrows
<input type="checkbox"/> B3 - Drift Deposits	<input type="checkbox"/> C4 - Presence of Reduced Iron	<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery
<input type="checkbox"/> B4 - Algal Mat or Crust	<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils	<input type="checkbox"/> D1 - Stunted or Stressed Plants
<input type="checkbox"/> B5 - Iron Deposits	<input type="checkbox"/> C7 - Thin Muck Surface	<input type="checkbox"/> D2 - Geomorphic Position
<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> D3 - Shallow Aquitard
<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface		<input type="checkbox"/> D4 - Microtopographic Relief
		<input type="checkbox"/> D5 - FAC-Neutral Test

Field Observations:	
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 8 (in.)
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

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

Remarks:

SOILS

Map Unit Name: **Canfield silt loam, 2-6% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pure Lining, M=Matrix)											
Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	10	1	10YR	4/1	96	7.5YR	4/6	4	C	M	silty clay loam
4	10	2	10YR	4/1	98	7.5YR	4/6	2	C	M	clay loam
10	14	3	10YR	6/3	80	10YR	5/8	20	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present) <input type="checkbox"/>	Indicators for Problematic Soils¹
<input type="checkbox"/> A1 - Histosol	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)
<input type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)
<input type="checkbox"/> A3 - Black Histic	<input type="checkbox"/> S11 - High Chroma Sands
<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)
<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> F2 - Loamy Gleyed Matrix
<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input checked="" type="checkbox"/> F3 - Depleted Matrix
<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> F6 - Redox Dark Surface
<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> F7 - Depleted Dark Surface
<input type="checkbox"/> S4 - Sandy Gleyed Matrix	<input type="checkbox"/> F8 - Redox Depressions
<input type="checkbox"/> S5 - Sandy Redox	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)
<input type="checkbox"/> S6 - Stripped Matrix	<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)
<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)
	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)
	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)
	<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)
	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)
	<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)
	<input type="checkbox"/> F21 - Red Parent Material
	<input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B)
	<input type="checkbox"/> TF12 - Very Shallow Dark Surface
	<input type="checkbox"/> Other (Explain in Remarks)

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	
Type:	Depth:
Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 13** Sample Point: **SP26**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Scirpus cyperinus</i>	15	N	OBL
2.	<i>Phalaris arundinacea</i>	60	Y	FACW
3.	<i>Juncus effusus</i>	10	N	OBL
4.	<i>Hemerocallis fulva</i>	15	N	UPL
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	1 (A)
Total Number of Dominant Species Across All Strata:	1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100% (A/B)

Prevalence Index Worksheet	
Total % Cover of:	Multiply by:
OBL spp. <u>25</u>	x 1 = <u>25</u>
FACW spp. <u>60</u>	x 2 = <u>120</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>15</u>	x 5 = <u>75</u>
Total <u>100</u> (A)	<u>220</u> (B)
Prevalence Index = B/A = <u>2.200</u>	

Hydrophytic Vegetation Indicators:	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Dominance Test is > 50%
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	

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

Hydrophytic Vegetation Present	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 04/06/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	Investigator #2: Matt Denzler
Soil Unit: Canfield silt loam, 2-6% slopes		NWI/WWI Classification: N/A	County: Stark
Landform: Side slope		Local Relief: Linear	State: Ohio
Slope (%): 2-4		Latitude: 40.740975	Longitude: -81.414689
Datum: NAD83		Wetland ID: Wetland 13	Sample Point: SP27
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: UPL	Section: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Township: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Range: --	Dir: --

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present)

<p><u>Primary:</u></p> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)	<p><u>Secondary:</u></p> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Canfield silt loam, 2-6% slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)
			Color (Moist)	%		Color (Moist)	%	Type	Location	
0	8	1	10YR	4/2	80	--	--	--	--	clay loam
0	8	1	10YR	6/4	20	--	--	--	--	clay loam
8	12	2	10YR	5/4	90	--	--	--	--	clay loam
8	12	2	10YR	6/6	10	--	--	--	--	clay loam
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

<p>NRCS Hydric Soil Field Indicators (check here if indicators are not present) <input checked="" type="checkbox"/></p> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions	<p>Indicators for Problematic Soils¹</p> <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
--	---

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: _____	Depth: _____	Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
---	--------------	---

Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 13** Sample Point: **SP27**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<i>Species Name</i>	% Cover	Dominant	Ind. Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
		Total Cover =	0	
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
	<i>Species Name</i>	% Cover	Dominant	Ind. Status
1.	<i>Rosa multiflora</i>	10	Y	FACU
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
		Total Cover =	10	
Herb Stratum (Plot size: 2 meter radius)				
	<i>Species Name</i>	% Cover	Dominant	Ind. Status
1.	<i>Symphotrichum ericoides</i>	15	N	FACU
2.	<i>Poa pratensis</i>	75	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
		Total Cover =	90	
Woody Vine Stratum (Plot size: 10 meter radius)				
	<i>Species Name</i>	% Cover	Dominant	Ind. Status
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
		Total Cover =	0	
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	0 (A)
Total Number of Dominant Species Across All Strata:	2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0% (A/B)

Prevalence Index Worksheet	
Total % Cover of:	
OBL spp.	0 x 1 = 0
FACW spp.	0 x 2 = 0
FAC spp.	0 x 3 = 0
FACU spp.	100 x 4 = 400
UPL spp.	0 x 5 = 0
Total	100 (A) 400 (B)
Prevalence Index = B/A = 4.000	

Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No Rapid Test for Hydrophytic Vegetation
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No Dominance Test is > 50%
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	

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

Hydrophytic Vegetation Present	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Additional Remarks:

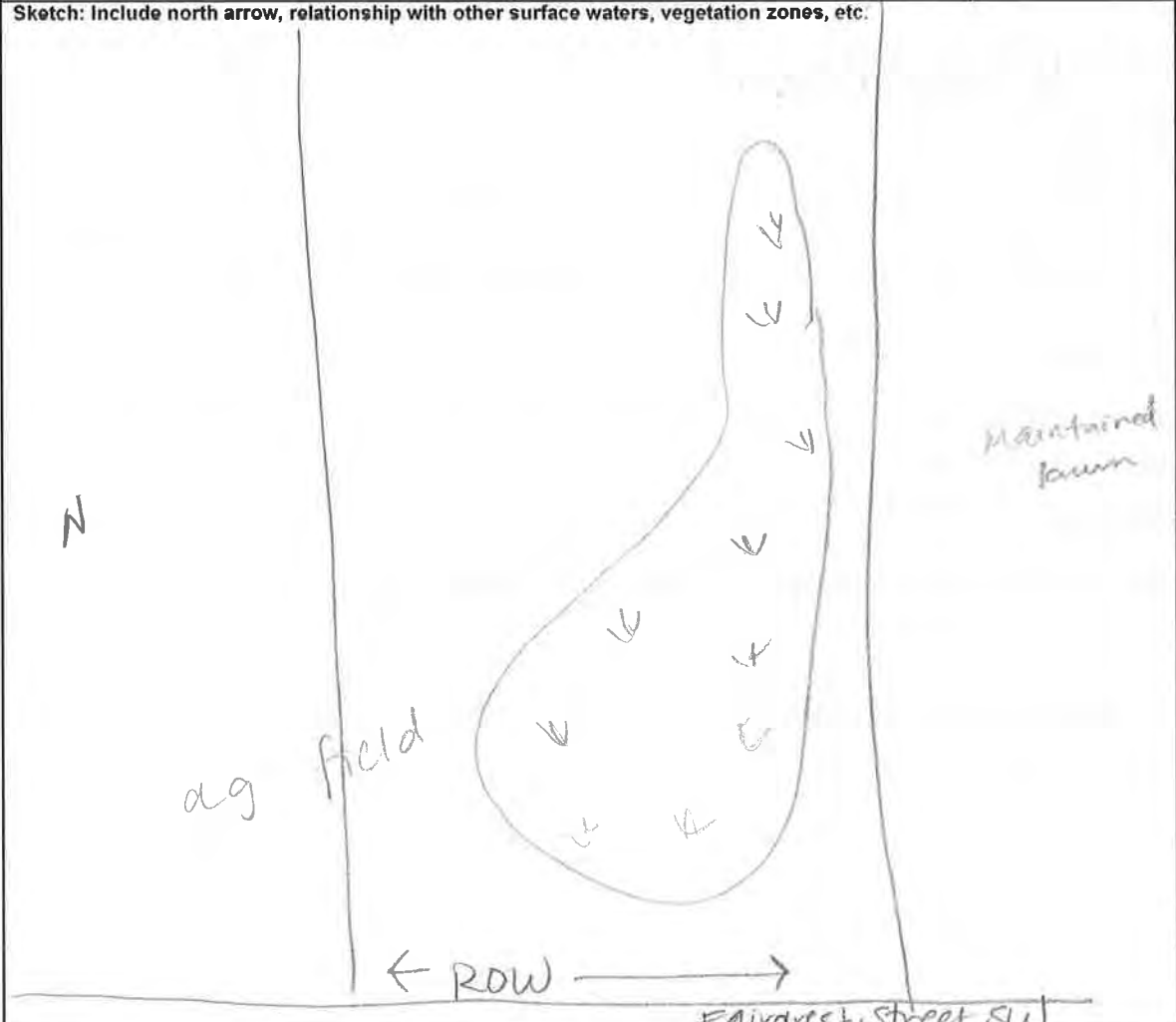
D.2 ORAM DATA FORMS

Background Information

Name:	Kate Bomar
Date:	4/4/2022
Affiliation:	Stantec Consulting Services, Inc.
Address:	11687 Lebanon Rd. Cincinnati, OH 45241
Phone Number:	513-842-8207
e-mail address:	Kate.bomar@stantec.com
Name of Wetland:	Wetland 1
Vegetation Community(ies):	PEM
HGM Class(es):	depressional
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	40.752200N, -81.414114W
USGS Quad Name	Canton West
County	Stark County
Township	TION R8W
Section and Subsection	S19
Hydrologic Unit Code	050400010505
Site Visit	4/4/2022
National Wetland Inventory Map	N/A
Ohio Wetland Inventory Map	N/A
Soil Survey	slbmg silt loam, 0-2% slopes
Delineation report map	See Ecological Resources Inventory Report

Name of Wetland: Wetland 1

Wetland Size (acres, hectares): 0.07 acres



Comments, Narrative Discussion, Justification of Category Changes:

Final score : 11 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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✓
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

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

Wetland 1

Table 1. Characteristic plant species.

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

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

R/BMDW100

Site: Wetland 1 Rater(s): R/B/MD Date: _____

0 0
max 6 pts. subtotal

Metric 1. Wetland Area (size).

- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

0.07

1 1
max 14 pts. subtotal

Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

7 8
max 30 pts. subtotal

Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)

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

4 12
max 20 pts. subtotal

Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)

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

12
subtotal this page

KRM/DW/100

Site: Wetland | Rater(s): K. Bomar / M. Denzler | Date: 4/4/2022

12
subtotal first page

0 | 12
max 10 pts. | subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-1 | 11
max 20 pts. | subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale.

- Aquatic bed
Emergent
Shrub
Forest
Mudflats
Open water
Other

6b. horizontal (plan view) Interspersion. Select only one.

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

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

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

6d. Microtopography. Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

Table with 2 columns: Score (0-3) and Description of vegetation cover quality.

Narrative Description of Vegetation Quality

Table with 2 columns: Quality level (low, mod, high) and Narrative description.

Mudflat and Open Water Class Quality

Table with 2 columns: Score (0-3) and Description of mudflat/open water class quality.

Microtopography Cover Scale

Table with 2 columns: Score (0-3) and Description of microtopography cover quality.

11

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

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

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one	Category 1	Category 2	Category 3
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End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name:	Kate Bomar		
Date:	4/5/2022		
Affiliation:	Stantec Consulting Services, Inc.		
Address:	11687 Lebanon Rd. Cincinnati, OH 45241		
Phone Number:	513-842-8207		
e-mail address:	Kate.bomar@stantec.com		
Name of Wetland:	Wetland 2		
Vegetation Community(ies):	PEM		
HGM Class(es):	Slope		
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	40.716768°N, -81.409376°W		
USGS Quad Name	Bolivar		
County	Stark County		
Township	T9N R8W		
Section and Subsection	S5		
Hydrologic Unit Code	050400010607		
Site Visit	4/5/2022		
National Wetland Inventory Map	N/A		
Ohio Wetland Inventory Map	N/A		
Soil Survey	Latham silt loam, 6-12% slopes, moderately eroded		
Delineation report/map	See Ecological Resources Inventory Report		

Name of Wetland: Wetland 2

Wetland Size (acres, hectares): 0.08 acres *within Row*

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification 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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✓
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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

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

Wetland 2

Table 1. Characteristic plant species.

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

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

Site: <u>Wetland 2</u>	Rater(s): <u>K. Bomar / M. Denzler</u>	Date: <u>4/5/2022</u>
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1	1
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

0.08 acres (extends outside project area)

6	7
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

12	19
max 30 pts.	subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

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

7	26
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

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

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

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

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

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

26
subtotal this page

KBMDW101

Site: <u>Wetland 2</u>	Rater(s): <u>K. Bomar / M. Denzler</u>	Date: <u>4/5/2022</u>
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26

subtotal first page

0	26
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max 10 pts

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated

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

3	26
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max 20 pts

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography

Score all present using 0 to 3 scale

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

29

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1. Critical Habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 1.
	Question 6. Bogs	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 7. Fens	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted with native plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3
Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.	
Question 10. Oak Openings	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input type="radio"/> NO <input checked="" type="radio"/>	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	6	
	Metric 3. Hydrology	12	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersions, microtopography	3	
	TOTAL SCORE	29	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one Category 1 Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name:	Kate Bomar
Date:	4/5/2022
Affiliation:	Stantec Consulting Services, Inc.
Address:	11687 Lebanon Rd. Cincinnati, OH 45241
Phone Number:	513-842-8207
e-mail address:	Kate.bomar@stantec.com
Name of Wetland:	Wetland 3
Vegetation Community(ies):	PEM
HGM Class(es):	depressional, riverine
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	<p>Torrey Station</p> <p>Faircrest street</p> <p>Prairie college street</p> <p>← Project ROW</p> <p>I-77</p> <p>Fahl Street</p> <p>Wetland 3 ~0.37 miles</p> <p>Brinker Street</p> <p>N ↑</p>
Lat/Long or UTM Coordinate	40.710413°N, -81.410031°W
USGS Quad Name	Bolivar
County	Stark County
Township	T9N R8W
Section and Subsection	S5
Hydrologic Unit Code	050400010607
Site Visit	4/5/2022
National Wetland Inventory Map	N/A
Ohio Wetland Inventory Map	N/A
Soil Survey	Sebring silt loam, 0-2% slopes
Delineation report/map	See Ecological Resources Inventory Report

Name of Wetland: Wetland 3

Wetland Size (acres, hectares): 0.15 acres within ROW

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Final score : 33 Category: 2

Scoring Boundary Worksheet

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

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

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	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

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

Wetland 3

Table 1. Characteristic plant species.

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

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

Site: Wetland 3 **Rater(s):** K. Bomar, M. Danzler **Date:** 4/5/22

1	1
max 6 pts	subtotal

Metric 1. Wetland Area (size).

- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

0.15 acres

9	10
max 14 pts	subtotal

Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

12	22
max 30 pts	subtotal

Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- | | |
|---|---|
| Check all disturbances observed | |
| <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) |
| <input type="checkbox"/> tile | <input checked="" type="checkbox"/> filling/grading |
| <input type="checkbox"/> dike | <input type="checkbox"/> road bed/RR track |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> other |

9	31
max 20 pts	subtotal

Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- | | |
|---|---|
| Check all disturbances observed | |
| <input type="checkbox"/> mowing | <input type="checkbox"/> shrub/sapling removal |
| <input checked="" type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal |
| <input type="checkbox"/> clearcutting | <input type="checkbox"/> sedimentation |
| <input type="checkbox"/> selective cutting | <input type="checkbox"/> dredging |
| <input type="checkbox"/> woody debris removal | <input type="checkbox"/> farming |
| <input type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |

31
subtotal this page

Site: Wetland 3 **Rater(s):** K. Bomar, M. Denzler **Date:** 4/5/2022

31

subtotal first page

0	31
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

2	33
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities
Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion.
Select only one.

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

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

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

6d. Microtopography.
Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

33

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 1.
	Question 6. Bogs	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 7. Fens	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted with native plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3
Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.	
Question 10. Oak Openings	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input type="radio"/> NO <input checked="" type="radio"/>	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	9	
	Metric 3. Hydrology	12	
	Metric 4. Habitat	9	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersed, microtopography	2	
	TOTAL SCORE	33	Category based on score breakpoints <i>1 or 2 gray zone</i>

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one	Category 1	Category 2	Category 3
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End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name:	Kate Bomar
Date:	4/5/2022
Affiliation:	Stantec Consulting Services, Inc.
Address:	11687 Lebanon Rd. Cincinnati, OH 45241
Phone Number:	513-842-8207
e-mail address:	Kate.bomar@stantec.com
Name of Wetland:	Wetland 4
Vegetation Community(ies):	PEM
HGM Class(es):	Riverine/slope
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	40.719491°N, -81.410738°W
USGS Quad Name	Bolivar
County	Stark County
Township	T0N R0W
Section and Subsection	55
Hydrologic Unit Code	050400010607
Site Visit	4/5/2022
National Wetland Inventory Map	N/A
Ohio Wetland Inventory Map	N/A
Soil Survey	Sebring silt loam, 0-2% slopes
Delineation report/map	See Ecological Resources Inventory Report

Name of Wetland: Wetland 4

Wetland Size (acres, hectares): 0.13 acres within ROW

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Final score : 34 Category: 2

1 or 2 gray zone.

Scoring Boundary Worksheet

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

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✓
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

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

Table 1. Characteristic plant species.

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

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

KBMD W103

Site: Wetland 4	Rater(s): H. Boman / M. Denzler	Date: 4/5/2022
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Metric 1. Wetland Area (size).

1	1
max 6 pts.	subtotal

Select one size class and assign score.

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

0.13

Metric 2. Upland buffers and surrounding land use.

5	6
max 14 pts.	subtotal

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

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

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

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

Metric 3. Hydrology.

15	21
max 30 pts.	subtotal

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

<ul style="list-style-type: none"> <input type="checkbox"/> None or none apparent (12) <input type="checkbox"/> Recovered (7) <input checked="" type="checkbox"/> Recovering (3) <input type="checkbox"/> Recent or no recovery (1) 	<p>Check all disturbances observed</p> <ul style="list-style-type: none"> <input type="checkbox"/> ditch <input type="checkbox"/> tile <input type="checkbox"/> dike <input type="checkbox"/> weir <input type="checkbox"/> stormwater input
<ul style="list-style-type: none"> <input type="checkbox"/> point source (nonstormwater) <input checked="" type="checkbox"/> filling/grading <input type="checkbox"/> road bed/RR track <input type="checkbox"/> dredging <input type="checkbox"/> other 	

Metric 4. Habitat Alteration and Development.

9	30
max 20 pts.	subtotal

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

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

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

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

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

<ul style="list-style-type: none"> <input type="checkbox"/> None or none apparent (9) <input type="checkbox"/> Recovered (6) <input checked="" type="checkbox"/> Recovering (3) <input type="checkbox"/> Recent or no recovery (1) 	<p>Check all disturbances observed</p> <table style="width:100%;"> <tr> <td style="width:50%; vertical-align: top;"> <ul style="list-style-type: none"> <input type="checkbox"/> mowing <input checked="" type="checkbox"/> grazing <input checked="" type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants </td> <td style="width:50%; vertical-align: top;"> <ul style="list-style-type: none"> <input type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input type="checkbox"/> farming <input type="checkbox"/> nutrient enrichment </td> </tr> </table>	<ul style="list-style-type: none"> <input type="checkbox"/> mowing <input checked="" type="checkbox"/> grazing <input checked="" type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants 	<ul style="list-style-type: none"> <input type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input type="checkbox"/> farming <input type="checkbox"/> nutrient enrichment
<ul style="list-style-type: none"> <input type="checkbox"/> mowing <input checked="" type="checkbox"/> grazing <input checked="" type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants 	<ul style="list-style-type: none"> <input type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input type="checkbox"/> farming <input type="checkbox"/> nutrient enrichment 		

30
subtotal this page

Site: Wetland 7 **Rater(s):** K. Boman / m. Denzler **Date:** 4/5/2022

30

subtotal first page

0	30
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

4	34
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d Microtopography

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

34

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1. Critical Habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input checked="" type="radio"/> NO	If yes, Category 1.
	Question 6. Bogs	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 7. Fens	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted with native plants	YES <input checked="" type="radio"/> NO	If yes, Category 3
Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Question 10. Oak Openings	YES <input checked="" type="radio"/> NO	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	15	
	Metric 4. Habitat	9	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersions, microtopography	4	
	TOTAL SCORE	34	Category based on score breakpoints 1 or 2 gray zone

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one	Category 1	Category 2	Category 3
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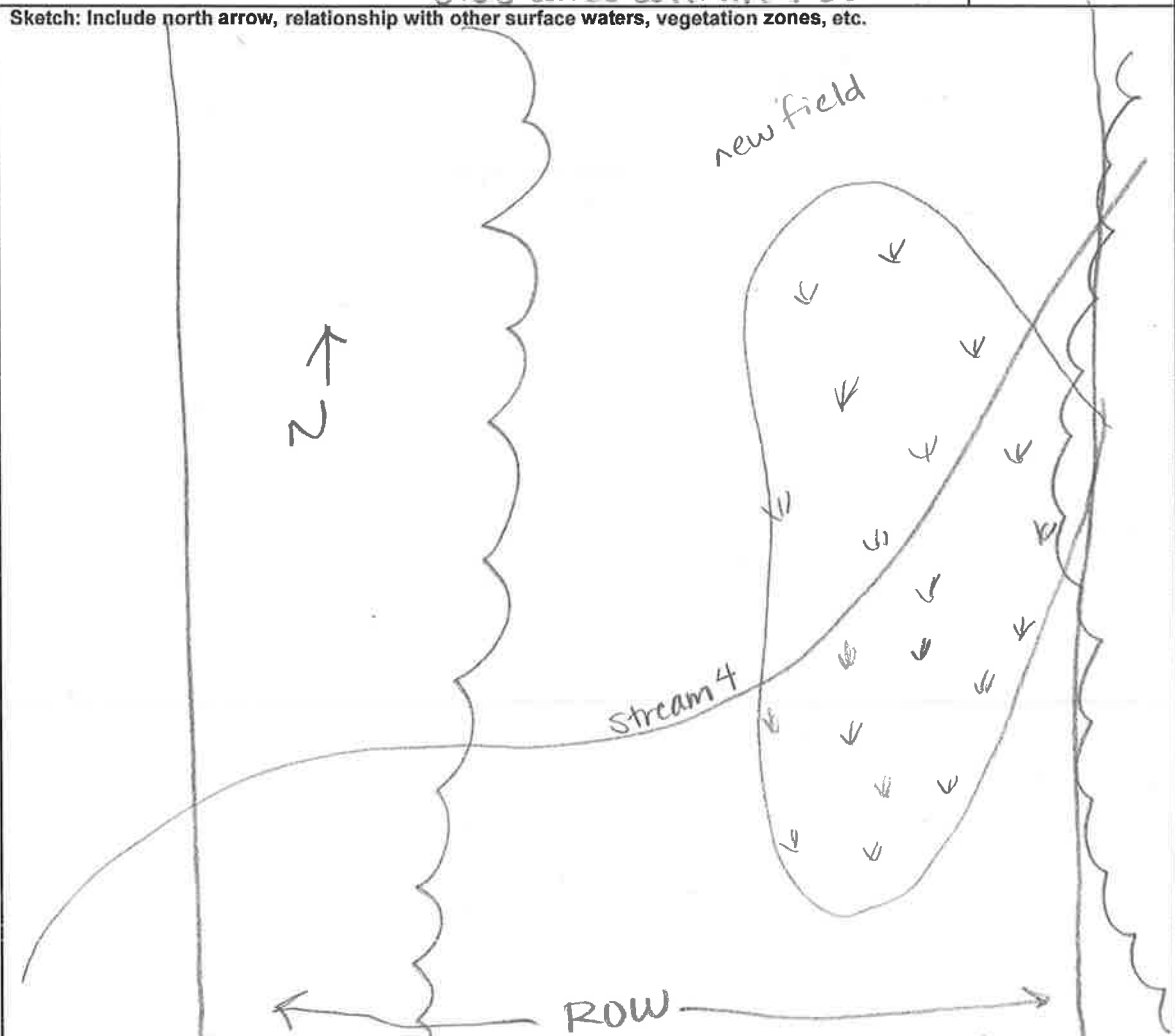
End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name:	Kate Bomar
Date:	4/5/2022
Affiliation:	Stantec Consulting Services, Inc.
Address:	11687 Lebanon Rd. Cincinnati, OH 45241
Phone Number:	513-842-8207
e-mail address:	Kate.bomar@stantec.com
Name of Wetland:	Wetland 5
Vegetation Community(ies):	PEM
HGM Class(es):	Riverine / Depressional
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	40.722316° N, -81.412068° W
USGS Quad Name	Bolivar
County	Stark County
Township	T10N R8W
Section and Subsection	SS
Hydrologic Unit Code	05040001010107
Site Visit	4/5/2022
National Wetland Inventory Map	
Ohio Wetland Inventory Map	N/A
Soil Survey	Latham silt loam, 8-15% slopes
Delineation report/map	See Ecological Resources Inventory Report

Name of Wetland: Wetland 5

Wetland Size (acres, hectares): 0.05 acres within ROW



Comments, Narrative Discussion, Justification of Category Changes:

Final score : 28 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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✓
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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

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

Table 1. Characteristic plant species.

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

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

KBRADW104

Site: <u>Wetland 5</u>	Rater(s): <u>K. Boniav</u> <u>Al. Demeler</u>	Date: <u>1/5/2012</u>
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<u>0</u>	<u>0</u>
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

0.05 acres

<u>6</u>	<u>6</u>
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

<u>12</u>	<u>18</u>
max 30 pts.	subtotal

Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)

- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- None or none apparent (12)
 - Recovered (7)
 - Recovering (3)
 - Recent or no recovery (1)

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

<u>7</u>	<u>25</u>
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)

- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)

- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)

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

<u>25</u>
subtotal this page

KBMD W104

Site: Wetland 5 **Rater(s):** Kate Bomar Matt Denzler **Date:** 4/5/2022

25

subtotal first page

0	25
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

3	28
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion.
Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

28

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input checked="" type="radio"/> NO	If yes, Category 1.
	Question 6. Bogs	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 7. Fens	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted with native plants	YES <input checked="" type="radio"/> NO	If yes, Category 3
Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Question 10. Oak Openings	YES <input checked="" type="radio"/> NO	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	0	
	Metric 3. Hydrology	12	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	3	
	TOTAL SCORE	28	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one Category 1 Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

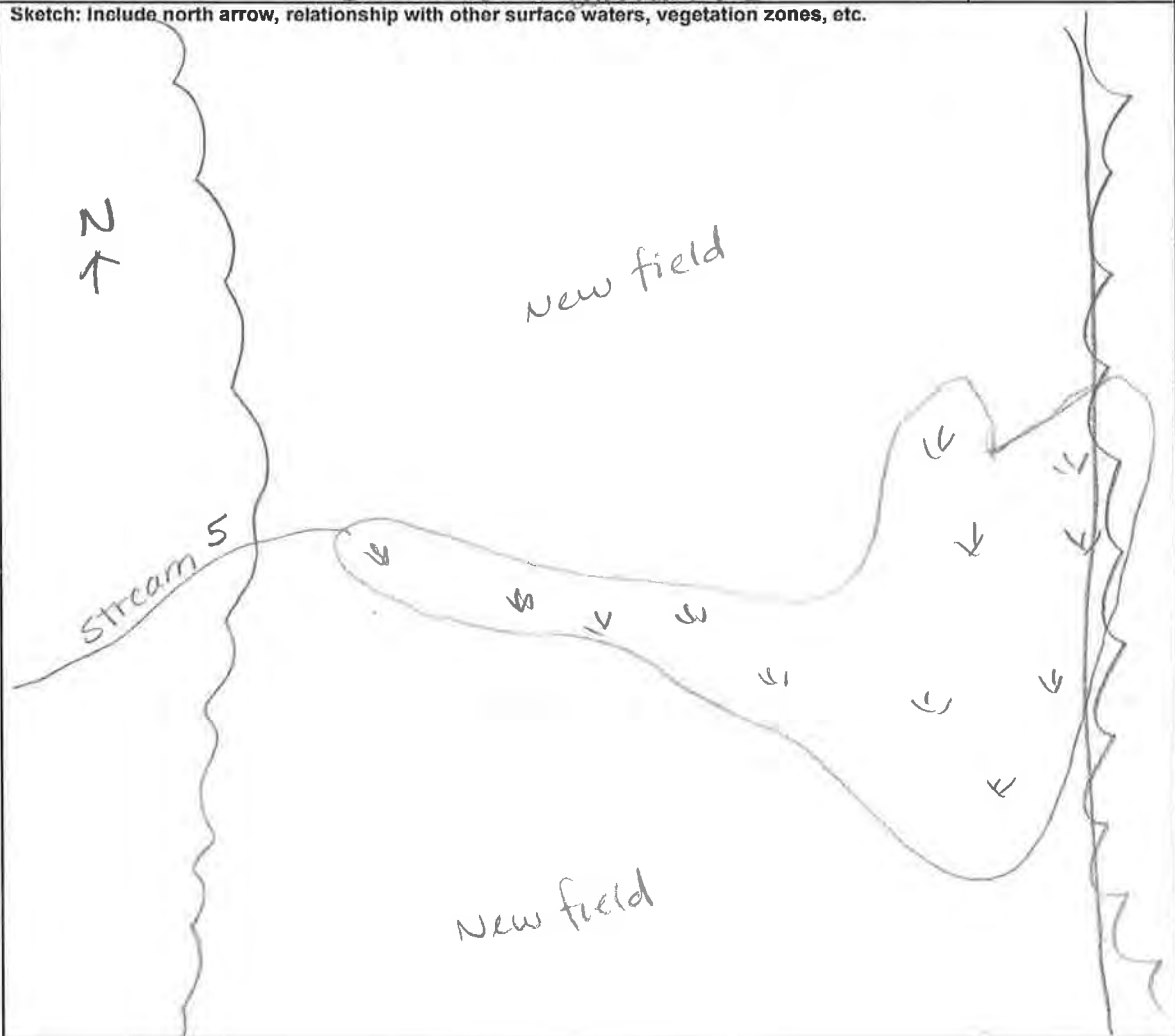
KBMDW105

Background Information

Name:	Kate Bomar
Date:	4/5/2022
Affiliation:	Stantec Consulting Services, Inc.
Address:	11687 Lebanon Rd. Cincinnati, OH 45241
Phone Number:	513-842-8207
e-mail address:	kate.bomar@stantec.com
Name of Wetland:	Wetland 1e
Vegetation Community(ies):	PEM
HGM Class(es):	depressional
Location of Wetland: Include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	40.724364°N, -81.413202°W
USGS Quad Name	Bolivar
County	Stark County
Township	T10N R8W
Section and Subsection	55
Hydrologic Unit Code	050400010607
Site Visit	4/5/2022
National Wetland Inventory Map	N/A
Ohio Wetland Inventory Map	N/A
Soil Survey	Latham silt loam, 12-18% slopes, mod. eroded
Delineation report/map	See Ecological Resources Inventory Report

Name of Wetland: Wetland 6

Wetland Size (acres, hectares): 0.03 acres within ROW



Comments, Narrative Discussion, Justification of Category Changes:

Final score : 28 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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✓
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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

Wetland 6

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

Wetland 6

Table 1. Characteristic plant species.

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

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

Site: Wetland 6 Rater(s): K. Bonar / M. Denzler Date: 4/5/2022

0	0
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

0.03 acres

7	7
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

12	19
max 30 pts.	subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply

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

4

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

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

1

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

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

3

3b. Connectivity. Score all that apply.

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

1

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

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

3

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

6	25
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

2

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

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

1

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

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

3

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

25
subtotal this page

*BND105

Site: Wetland 6 Rater(s): K. Borman / M. Denzler Date: 4/5/2011

25
subtotal first page

0 25
max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated

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

3 28
max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities. Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion. Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

28

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input checked="" type="radio"/> NO	If yes, Category 1.
	Question 6. Bogs	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 7. Fens	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted with native plants	YES <input checked="" type="radio"/> NO	If yes, Category 3
Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Question 10. Oak Openings	YES <input checked="" type="radio"/> NO	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	7	
	Metric 3. Hydrology	12	
	Metric 4. Habitat	6	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	3	
	TOTAL SCORE	28	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one Category 1 Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

KBMDW100

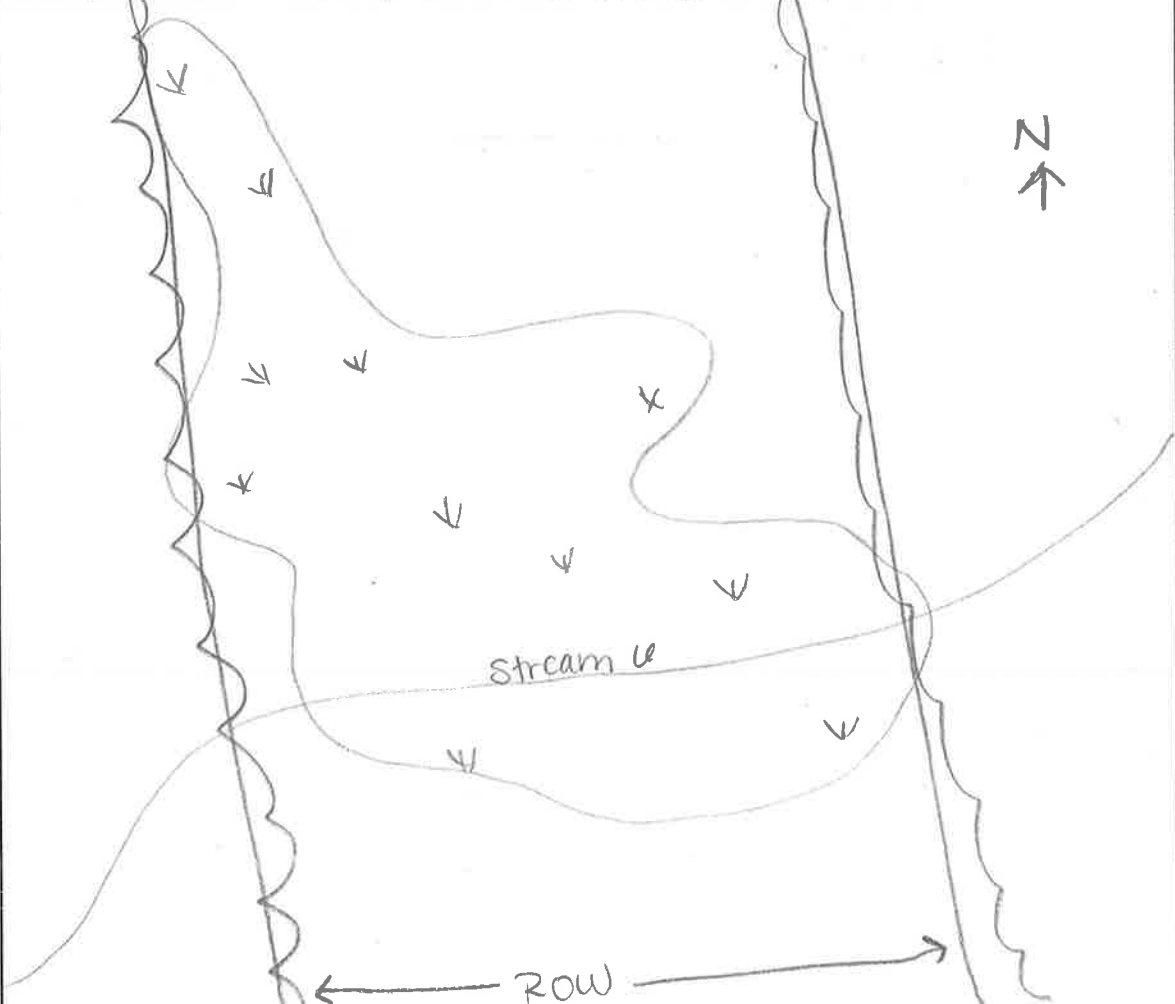
Background Information

Name:	Kate Bomar
Date:	4/5/2022
Affiliation:	Stantec Consulting Services, Inc.
Address:	11687 Lebanon Rd. Cincinnati, OH 45241
Phone Number:	513-842-8207
e-mail address:	Kate.bomar@stantec.com
Name of Wetland:	Wetland 7
Vegetation Community(ies):	PEM
HGM Class(es):	depressional/riverine
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	40.725792°N, -81.414042°W
USGS Quad Name	Polivar
County	Stark County
Township	TION RBW
Section and Subsection	55
Hydrologic Unit Code	050400010607
Site Visit	4/5/2022
National Wetland Inventory Map	N/A
Ohio Wetland Inventory Map	N/A
Soil Survey	Latham silt loam, 12-18% slopes, mod. eroded
Delineation report/map	See Ecological Resources Inventory Report

Name of Wetland: Wetland 7

Wetland Size (acres, hectares): 0.21 acres within ROW

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Final score : 28 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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✓
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

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

Wetland 7

Table 1. Characteristic plant species.

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

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

Site: <u>Wetland 7</u>	Rater(s): <u>K. Bomar / m. Denzler</u>	Date: <u>4/5/2022</u>
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1	1
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

0.26 acres

6	7
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

10	17
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

4

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

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

1

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

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

1

3b. Connectivity. Score all that apply.

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

1

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

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

3

Check all disturbances observed

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

7	24
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

2

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

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

2

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

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

3

Check all disturbances observed

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

24
subtotal this page

Site: Wetland 7 **Rater(s):** K. Boman / M. Denzler **Date:**

24

subtotal first page

0	24
max 10 pts	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

4	28
max 20 pts	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion.

Select only one

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

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

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

6d. Microtopography

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

28

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 1.
	Question 6. Bogs	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 7. Fens	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted with native plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3
Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.	
Question 10. Oak Openings	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input type="radio"/> NO <input checked="" type="radio"/>	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	6	
	Metric 3. Hydrology	10	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersed, microtopography	4	
	TOTAL SCORE	28	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one Category 1 Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

KBMDW107

Name:	Kate Bomar		
Date:	4/5/2022		
Affiliation:	Stantec Consulting Services, Inc.		
Address:	11687 Lebanon Rd. Cincinnati, OH 45241		
Phone Number:	513-842-8207		
e-mail address:	Kate.bomar@stantec.com		
Name of Wetland:	Wetland 8		
Vegetation Community(ies):	PEM		
HGM Class(es):	depressional		
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	40.731902°N, -81.415352°W		
USGS Quad Name	Bolivar		
County	Stark County		
Township	TION R9W		
Section and Subsection	55		
Hydrologic Unit Code	050400010607		
Site Visit	4/5/2022		
National Wetland Inventory Map	N/A		
Ohio Wetland Inventory Map	N/A		
Soil Survey	Latham silt loam, 9-15% slopes		
Delineation report/map	See Ecological Resources Inventory Report		

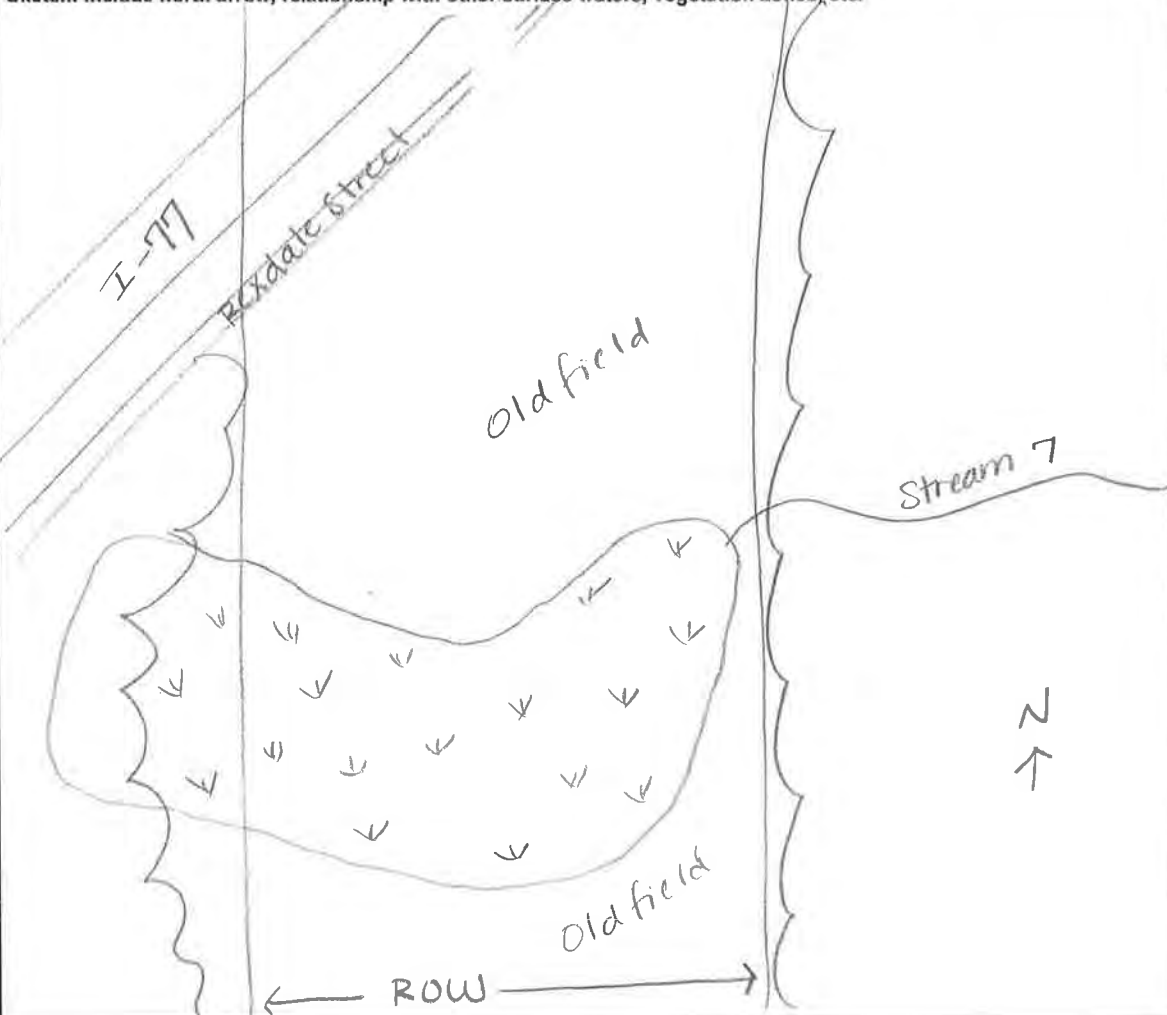
Name of Wetland:

Wetland 8

Wetland Size (acres, hectares):

0.07 acres within ROW

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Final score :

23

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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✓
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

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

Wetland 3

Table 1. Characteristic plant species.

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

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

Site: <u>Wetland 8</u>	Rater(s): <u>K. Boman / M. Denzler</u>	Date: <u>4/5/2022</u>
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0	0
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

0.07 acres

4	4
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

9	13
max 30 pts	subtotal

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

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

7	20
max 20 pts	subtotal

Metric 4. Habitat Alteration and Development.

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

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

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

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

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

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

Check all disturbances observed

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

20
subtotal this page

Site: Wetland 8 **Rater(s):** K. Bonna / M. Denzler **Date:** 4/5/2022

20

subtotal first page

0	20
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated

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

3	23
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max 20 pts subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

23

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

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

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one	<input checked="" type="radio"/> Category 1	<input type="radio"/> Category 2	<input type="radio"/> Category 3
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End of Ohio Rapid Assessment Method for Wetlands.

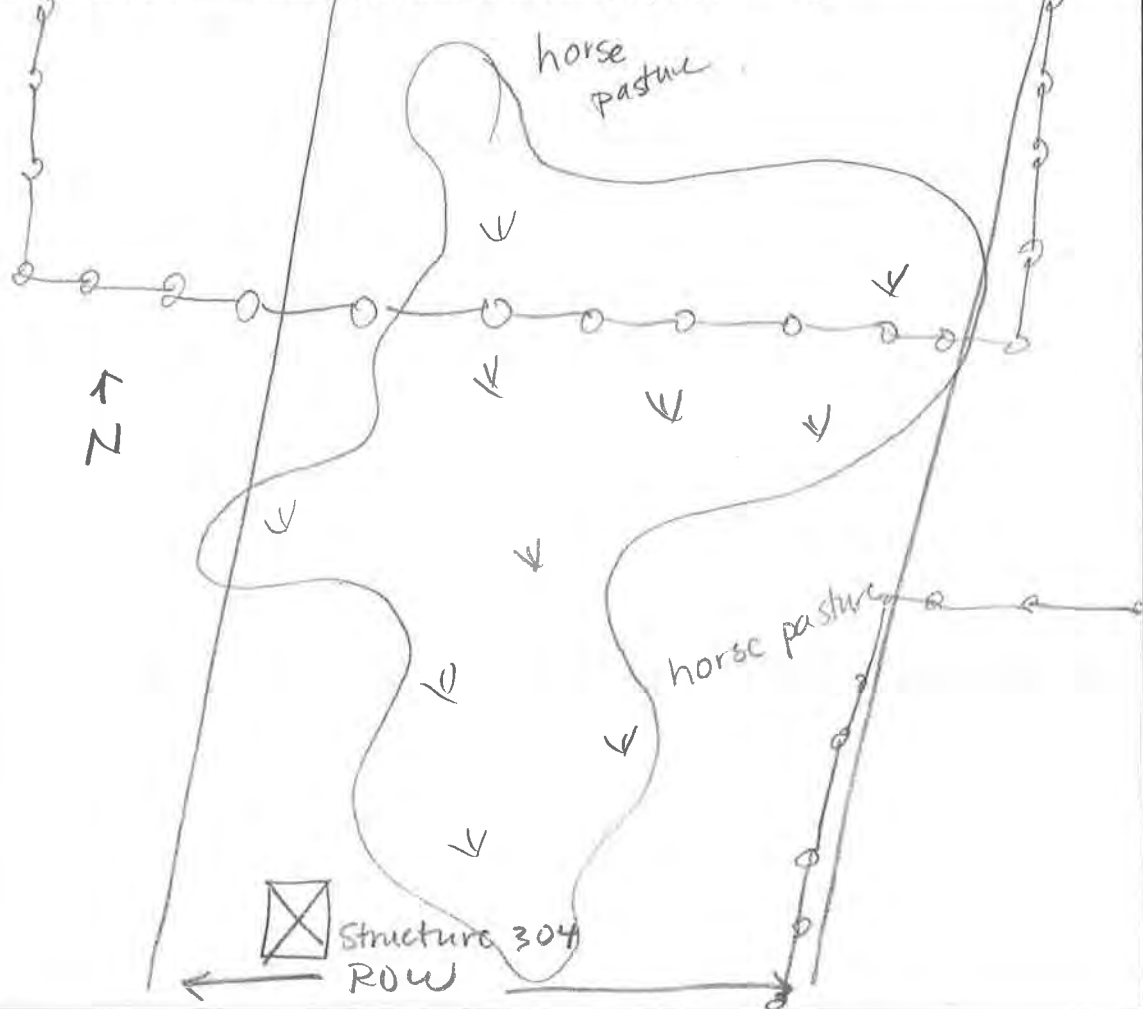
Background Information

Name:	Kate Bomar
Date:	4/6/2022
Affiliation:	Stantec Consulting Services, Inc.
Address:	11687 Lebanon Rd. Cincinnati, OH 45241
Phone Number:	513-842-8207
e-mail address:	Kate.bomar@stantec.com
Name of Wetland:	Wetland 9
Vegetation Community(ies):	PEM
HGM Class(es):	Depressional
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	40.749044°N, -81.414233°W
USGS Quad Name	Bolivar
County	Stark County
Township	T10N R3W
Section and Subsection	55
Hydrologic Unit Code	050400010505
Site Visit	4/6/2022
National Wetland Inventory Map	N/A
Ohio Wetland Inventory Map	N/A
Soil Survey	Sebring silt loam, 0-2% slopes
Delineation report/map	See Ecological Resources Inventory Report

Name of Wetland: Wetland 9

Wetland Size (acres, hectares): 0.98 acres within ROW

Sketch; Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Final score : 27 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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✓
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

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

Table 1. Characteristic plant species.

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

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

Site: Wetland 9 Rater(s): K. Bonner / M. Denzler Date: 4/10/2022

2	2
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

0.98 acres

3	5
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

13	18
max 30 pts.	subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

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

4	27
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

2

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

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

1

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

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

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

27
subtotal this page

Site: Wetland 9 Rater(s): K. Bomar | M. Danzler Date: 4/6/22

22

subtotal first page

0	22
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

5	27
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

27

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 1.
	Question 6. Bogs	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 7. Fens	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted with native plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3
Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.	
Question 10. Oak Openings	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input type="radio"/> NO <input checked="" type="radio"/>	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	3	
	Metric 3. Hydrology	13	
	Metric 4. Habitat	4	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersions, microtopography	5	
	TOTAL SCORE	27	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one Category 1 Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.

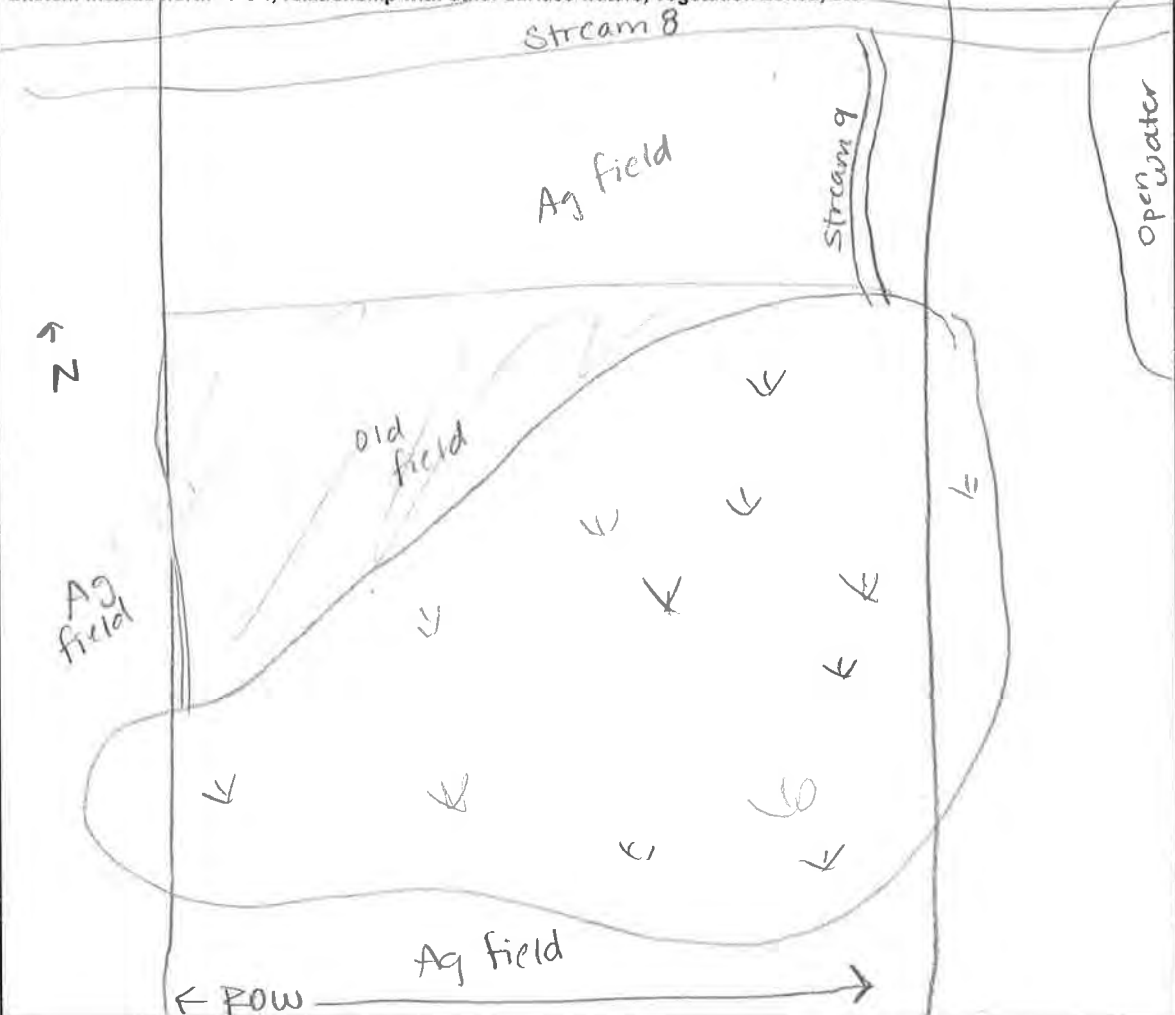
Background Information

Name:	Kate Bomar
Date:	4/16/2022
Affiliation:	Stantec Consulting Services, Inc.
Address:	11687 Lebanon Rd. Cincinnati, OH 45241
Phone Number:	513-842-8207
e-mail address:	Kate.bomar@stantec.com
Name of Wetland:	Wetland 10
Vegetation Community(ies):	PEM
HGM Class(es):	Depressional
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	40.746623°N, -81.414392°W
USGS Quad Name	Bolivar
County	Stark County
Township	T10N R8W
Section and Subsection	55
Hydrologic Unit Code	050400010SD5
Site Visit	4/16/2022
National Wetland Inventory Map	N/A
Ohio Wetland Inventory Map	N/A
Soil Survey	Sebring silt loam, 0-2% slopes
Delineation report/map	See Ecological Resources Inventory Report

Name of Wetland: Wetland 10

Wetland Size (acres, hectares): 0.27 acres within ROW

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Final score : 15 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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✓
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

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

Wetland 10

Table 1. Characteristic plant species.

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

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

Site: Wetland 10 Rater(s): K. Boman M. Denzler Date: 4/6/2022

1 1 max 6 pts subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

0.27 acres

2 3 max 14 pts subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

8 11 max 30 pts subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply

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

3b. Connectivity. Score all that apply

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

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

- [] >0.7 (27.6in) (3)
[X] 0.4 to 0.7m (15.7 to 27.6in) (2)
[X] <0.4m (<15.7in) (1)

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

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

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

- [] None or none apparent (12)
[X] Recovered (7)
[X] Recovering (3)
[X] Recent or no recovery (1)
Check all disturbances observed:
[X] ditch
[X] tile
[] dike
[] weir
[] stormwater input
[X] point source (nonstormwater)
[X] filling/grading
[] road bed/RR track
[] dredging
[] other

6 17 max 20 pts subtotal

Metric 4. Habitat Alteration and Development.

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

- [] None or none apparent (4)
[X] Recovered (3)
[X] Recovering (2)
[X] Recent or no recovery (1)

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

- [] Excellent (7)
[X] Very good (6)
[] Good (5)
[] Moderately good (4)
[] Fair (3)
[X] Poor to fair (2)
[X] Poor (1)

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

- [] None or none apparent (9)
[X] Recovered (6)
[X] Recovering (3)
[X] Recent or no recovery (1)
Check all disturbances observed:
[X] mowing
[X] grazing
[X] clearcutting
[X] selective cutting
[X] woody debris removal
[X] toxic pollutants
[] shrub/sapling removal
[] herbaceous/aquatic bed removal
[] sedimentation
[] dredging
[X] farming
[] nutrient enrichment

17 subtotal this page

Site: Wetland 10 Rater(s): K. Bomar / M. Denzler Date: 4/6/2022

17

subtotal first page

0	17
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max 10 pts

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated

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

-2	15
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max 20 pts

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography

Score all present using 0 to 3 scale

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

15

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1. Critical Habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input checked="" type="radio"/> NO	If yes, Category 1.
	Question 6. Bogs	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 7. Fens	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted with native plants	YES <input checked="" type="radio"/> NO	If yes, Category 3
Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Question 10. Oak Openings	YES <input checked="" type="radio"/> NO	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input checked="" type="radio"/> 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	8	
	Metric 4. Habitat	6	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersions, microtopography	-2	
	TOTAL SCORE	15	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one	Category 1	Category 2	Category 3
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End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name:	Kate Bomar
Date:	4/10/2022
Affiliation:	Stantec Consulting Services, Inc.
Address:	11687 Lebanon Rd. Cincinnati, OH 45241
Phone Number:	513-842-8207
e-mail address:	Kate.bomar@stantec.com
Name of Wetland:	Wetland 11
Vegetation Community(ies):	PEM1SS
HGM Class(es):	Depressional
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	40.7428110N, -81.414646W
USGS Quad Name	Bolivar
County	Stark County
Township	TION PAW
Section and Subsection	55
Hydrologic Unit Code	050400010505
Site Visit	4/10/2022
National Wetland Inventory Map	N/A
Ohio Wetland Inventory Map	N/A
Soil Survey	Luray silt loam, 0.2% slopes
Delineation report/map	See Ecological Resources Inventory Report

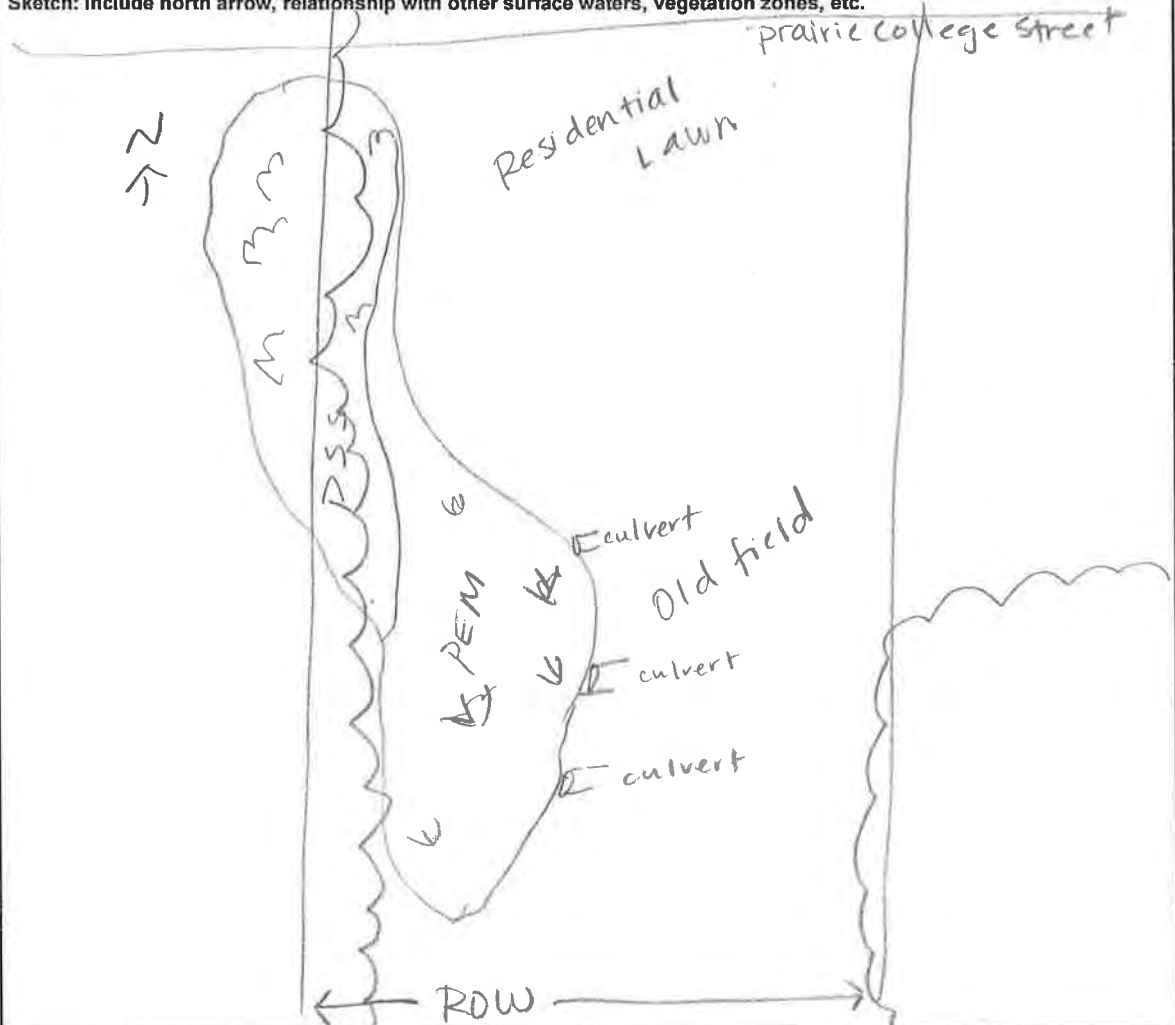
Name of Wetland:

Wetland 11

Wetland Size (acres, hectares):

0.02 acres within ROW

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Final score :

20

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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✓
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

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

Wetland 11

Table 1. Characteristic plant species.

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

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

W110

Site: <u>Wetland 11</u>	Rater(s): <u>K. Bomar / M. Denzler</u>	Date: <u>4/11/22</u>
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2	2
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

0.62 acres

5	7
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

9	16
max 30 pts.	subtotal

Metric 3. Hydrology.

3a. Sources of Water. Score all that apply

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

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

8	24
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

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

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

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

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

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

24
subtotal this page

Site: Wetland 11 Rater(s): K. Boman / M. Denzler Date: 4/6/22

24

subtotal first page

0	24
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated

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

2	26
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities
 Score all present using 0 to 3 scale.

- Aquatic bed
 - Emergent
 - Shrub
 - Forest
 - Mudflats
 - Open water
 - Other _____
- 2

6b. horizontal (plan view) Interspersion.
 Select only one.

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

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

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

6d. Microtopography

- Score all present using 0 to 3 scale.
- Vegetated hummocks/tussucks
 - Coarse woody debris >15cm (6in)
 - Standing dead >25cm (10in) dbh
 - Amphibian breeding pools
- 2

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

26

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1. Critical Habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input checked="" type="radio"/> NO	If yes, Category 1.
	Question 6. Bogs	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 7. Fens	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted with native plants	YES <input checked="" type="radio"/> NO	If yes, Category 3
Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Question 10. Oak Openings	YES <input checked="" type="radio"/> NO	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	2	
	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	9	
	Metric 4. Habitat	8	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersions, microtopography	2	
	TOTAL SCORE	26	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one	<u>Category 1</u>	Category 2	Category 3
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End of Ohio Rapid Assessment Method for Wetlands.

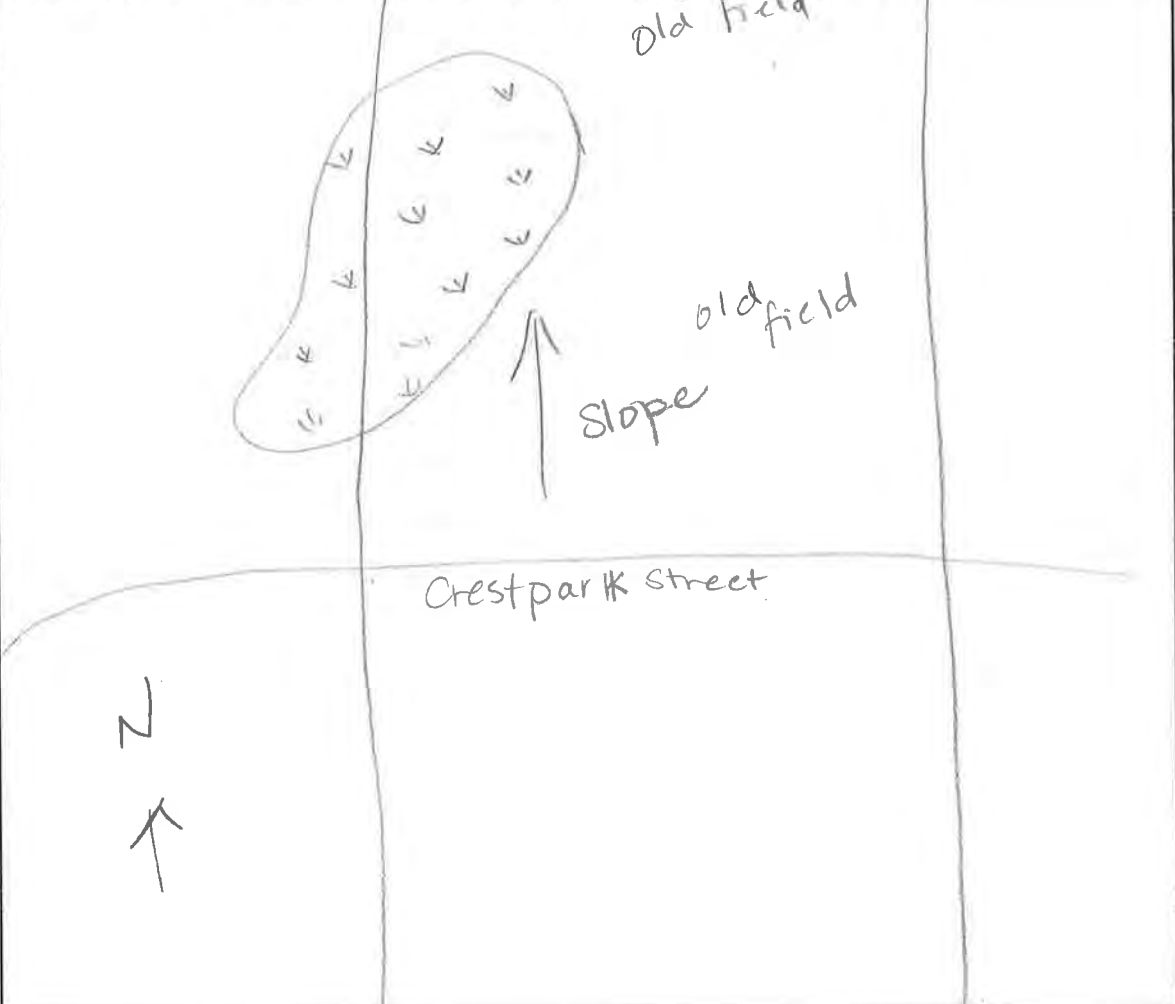
Background Information

Name:	Kate Bomar
Date:	4/6/2022
Affiliation:	Stantec Consulting Services, Inc.
Address:	11687 Lebanon Rd. Cincinnati, OH 45241
Phone Number:	513-842-8207
e-mail address:	Kate.bomar@stantec.com
Name of Wetland:	Wetland 12
Vegetation Communit(ies):	PEM
HGM Class(es):	Slope
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	40.740177°N, -81.414858°W
USGS Quad Name	Bolivar
County	Stark County
Township	T10N R9W
Section and Subsection	55
Hydrologic Unit Code	050400010505
Site Visit	4/6/2022
National Wetland Inventory Map	N/A
Ohio Wetland Inventory Map	N/A
Soil Survey	Canfield silt loam, 2-6% slopes
Delineation report/map	See Ecological Resources Inventory Report

Name of Wetland: Wetland 12

Wetland Size (acres, hectares): 0.09 acres within ROW

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Final score : 19 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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✓
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

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

Wetland 12

Table 1. Characteristic plant species.

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

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

KBMDWJ11

Site: Wetland 12 Rater(s): K. Bomar/M. Daveler Date: 4/11/2022

0	0
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

0.09

5	5
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

8	13
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

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

6	19
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

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

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

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

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

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

19
subtotal this page

Site: Wetland 12 Rater(s): K. Bomar | M. Denzler Date: 4/6/2022

19

subtotal first page

0	19
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max 10 pts.

subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

0	19
---	----

max 20 pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

19

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 1.
	Question 6. Bogs	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 7. Fens	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted with native plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3
Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.	
Question 10. Oak Openings	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	8	
	Metric 4. Habitat	6	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersions, microtopography	0	
	TOTAL SCORE	19	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one	Category 1	Category 2	Category 3
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End of Ohio Rapid Assessment Method for Wetlands.

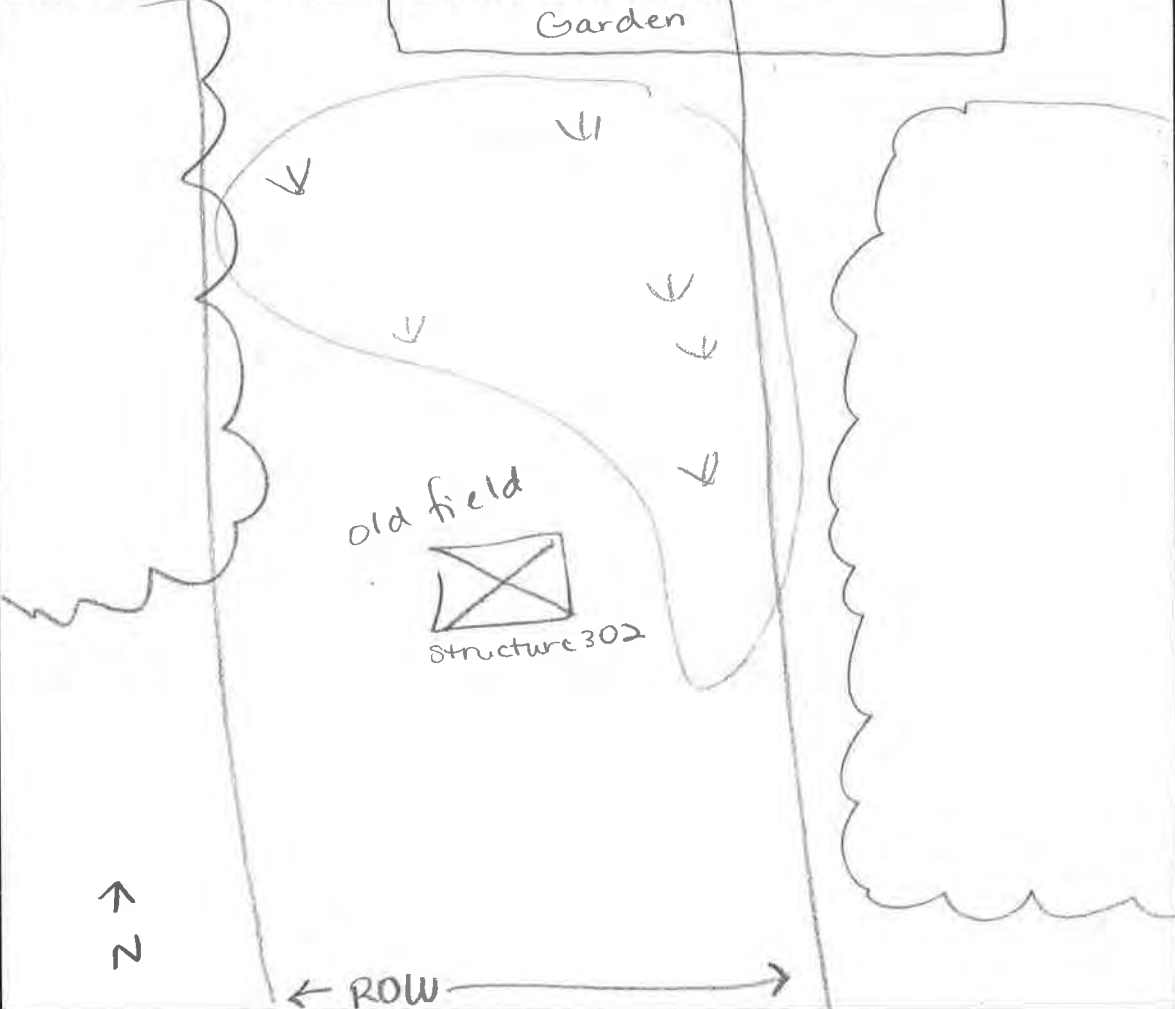
Background Information

Name:	Kate Bomar		
Date:	4/6/2022		
Affiliation:	Stantec Consulting Services, Inc.		
Address:	11687 Lebanon Rd. Cincinnati, OH 45241		
Phone Number:	513-842-8207		
e-mail address:	Kate.bomar@stantec.com		
Name of Wetland:	Wetland 13		
Vegetation Community(ies):	PEM		
HGM Class(es):	Depressional		
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	40.741101°N, -81.414824°W		
USGS Quad Name	Bolivar		
County	Stark County		
Township	T10N R0W		
Section and Subsection	55		
Hydrologic Unit Code	050400010505		
Site Visit	4/6/2022		
National Wetland Inventory Map	N/A		
Ohio Wetland Inventory Map	N/A		
Soil Survey	Canfield silt loam, 2-6% slopes		
Delineation report/map	See Ecological Resources Inventory Report		

Name of Wetland: Wetland 13

Wetland Size (acres, hectares): 0.12 acres within ROW

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Final score : 21 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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✓
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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

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

Table 1. Characteristic plant species.

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

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

Site: <u>Wetland 13</u>	Rater(s): <u>K. Borna / M. Denzler</u>	Date: <u>4/10/22</u>
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1	1
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

0.12 acres

5	6
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

8	14
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

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

7	21
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

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

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

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

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

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

21
subtotal this page

Site: Wetland 13 **Rater(s):** K. Boma / m. Denzler **Date:** 4/10/2022

21

subtotal first page

0	21
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

0	21
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion.
Select only one.

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

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

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

6d. Microtopography.
Score all present using 0 to 3 scale

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

21

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1. Critical Habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input checked="" type="radio"/> NO	If yes, Category 1.
	Question 6. Bogs	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 7. Fens	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted with native plants	YES <input checked="" type="radio"/> NO	If yes, Category 3
Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Question 10. Oak Openings	YES <input checked="" type="radio"/> NO	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	1	
	Metric 2. Buffers and surrounding land use	5	
	Metric 3. Hydrology	8	
	Metric 4. Habitat	7	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersions, microtopography	0	
	TOTAL SCORE	21	Category based on score breakpoints 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one	Category 1	Category 2	Category 3
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End of Ohio Rapid Assessment Method for Wetlands.

D.3 HHEI/QHEI DATA FORMS



Primary Headwater Habitat Field Evaluation Form

HHEI Score (sum of metrics 1+2+3) 47

SITE NAME/LOCATION South Central Torrey 138 KV Line Rebuild Project / Stark County, OH
 SITE NUMBER Stream 1 RIVER BASIN Muskingum RIVER CODE DRAINAGE AREA (mi²) 0.28
 LENGTH OF STREAM REACH (ft) 104 LAT 40.759539°N LONG -81.413717°W RIVER MILE
 DATE 4/4/22 SCORER KLB COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B				HHEI Metric Points Substrate Max = 40 <div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center; font-size: 24px;">7</div>
TYPE	PERCENT	TYPE	PERCENT	
<input type="checkbox"/> Bldr Slabs [16 pts]	_____	<input checked="" type="checkbox"/> SLT [3 pt]	100	
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	_____	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	_____	
<input type="checkbox"/> BEDROCK [16 pts]	_____	<input type="checkbox"/> FINE DETRITUS [3 pts]	_____	
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	_____	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	_____	
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	_____	<input type="checkbox"/> MUCK [0 pts]	_____	
<input type="checkbox"/> SAND (<2 mm) [6 pts]	_____	<input type="checkbox"/> ARTIFICIAL [3 pts]	_____	
Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock _____ (A) 0		(B) 1		A + B
SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 0				TOTAL NUMBER OF SUBSTRATE TYPES: 1
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):				Pool Depth Max = 30 <div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center; font-size: 24px;">15</div>
<input type="checkbox"/> > 30 centimeters [20 pts]	<input checked="" type="checkbox"/> 5 cm - 10 cm [15 pts]			
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5pts]			
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0pts]			
COMMENTS _____				MAXIMUM POOL DEPTH (centimeters): 0
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):				Bankfull Width Max=30 <div style="border: 1px solid black; width: 40px; height: 40px; margin: 0 auto; display: flex; align-items: center; justify-content: center; font-size: 24px;">20</div>
<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]			
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]			
<input checked="" type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]				
COMMENTS _____				AVERAGE BANKFULL WIDTH (meters) 3

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream*

RIPARIAN WIDTH		FLOODPLAIN QUALITY (Most Predominant per Bank)			
(Per Bank)		L R		L R	
<input type="checkbox"/> L <input type="checkbox"/> R	Wide >10m	<input type="checkbox"/> L <input type="checkbox"/> R	Mature Forest, Wetland	<input type="checkbox"/> L <input type="checkbox"/> R	Conservation Tillage
<input type="checkbox"/> L <input type="checkbox"/> R	Moderate 5-10m	<input type="checkbox"/> L <input type="checkbox"/> R	Immature Forest, Shrub or Old Field	<input type="checkbox"/> L <input type="checkbox"/> R	Urban or Industrial
<input checked="" type="checkbox"/> L <input checked="" type="checkbox"/> R	Narrow <5m	<input type="checkbox"/> L <input type="checkbox"/> R	Residential, Park, New Field	<input checked="" type="checkbox"/> L <input checked="" type="checkbox"/> R	Open Pasture, Row Crop
<input type="checkbox"/> L <input type="checkbox"/> R	None	<input type="checkbox"/> L <input type="checkbox"/> R	Fenced Pasture	<input type="checkbox"/> L <input type="checkbox"/> R	Mining or Construction

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

Stream Flowing Moist Channel, isolated pools, no flow (intermittent)
 Subsurface flow with isolated pools (interstitial) Dry channel, no water (ephemeral)

COMMENTS RU: Rem - Intermittent

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

None 1.0 2.0 3.0
 0.5 1.5 2.5 >3

STREAM GRADIENT ESTIMATE

Flat (0.5 %/100 ft) Flat to Moderate Moderate (2 %/100 ft) Moderate to Severe Severe (10 %/100 ft)

BF 3m
 CH/WH 7'

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

QHEI PERFORMED? Yes No QHEI Score _____ (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

WWH Name: Nimishillen Creek Distance from Evaluated Stream ~2.5 miles
 CWH Name: _____ Distance from Evaluated Stream _____
 EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: Canton West NRCS Soil Map Page: / NRCS Soil Map Stream Order: /

County: Stark Township/City: Canton

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 4/3/2022 Quantity: 0.07"

Photo-documentation Notes: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 95

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _____

Field Measures: Temp (°C) / Dissolved Oxygen (mg/l) / pH (S.U.) / Conductivity (umhos/cm) /

Is the sampling reach representative of the stream (Y/N) Y If not, explain: _____

Additional comments/description of pollution impacts: _____

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) N Species observed (if known): _____

Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): _____

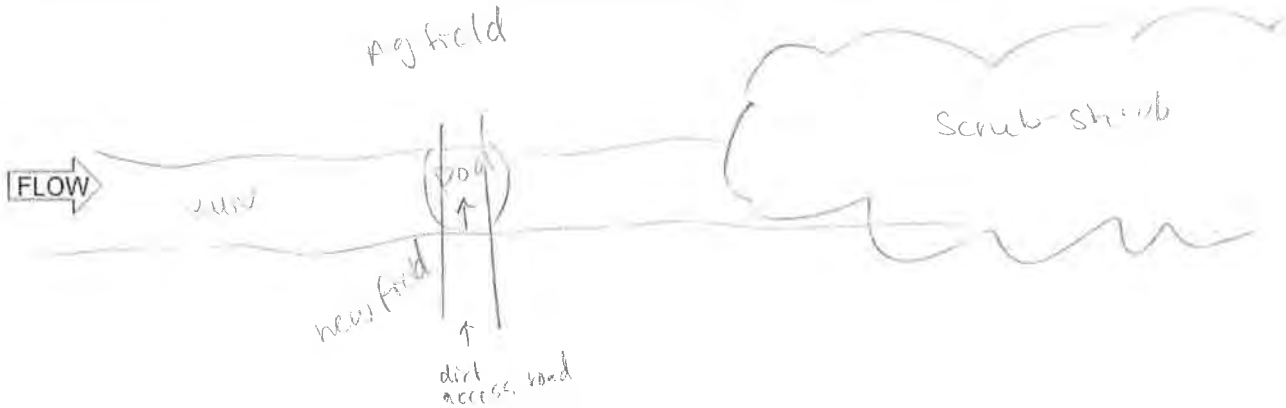
Salamanders Observed? (Y/N) N Species observed (if known): _____

Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): _____

Comments Regarding Biology: none observed

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

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





Primary Headwater Habitat Field Evaluation Form

HHEI Score (sum of metrics 1+2+3) 16

SITE NAME/LOCATION South Canton - Torrey 138 kv Line Rebuild Project
 SITE NUMBER Stream 2 RIVER BASIN Muskingum RIVER CODE DRAINAGE AREA (mi²) 0.48mi²
 LENGTH OF STREAM REACH (ft) 240 LAT 40.719197°N LONG -81.410541°W RIVER MILE
 DATE 4/5/2012 SCORER KLB COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

<p>1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">TYPE</th> <th style="width: 35%;">PERCENT</th> <th style="width: 15%;">TYPE</th> <th style="width: 35%;">PERCENT</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> BLDR SLABS [16 pts]</td> <td>_____</td> <td><input checked="" type="checkbox"/> SILT [3 pt]</td> <td><u>30</u></td> </tr> <tr> <td><input type="checkbox"/> BOULDER (>256 mm) [16 pts]</td> <td>_____</td> <td><input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> BEDROCK [16 pts]</td> <td>_____</td> <td><input type="checkbox"/> FINE DETRITUS [3 pts]</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> COBBLE (65-256 mm) [12 pts]</td> <td><u>10</u></td> <td><input type="checkbox"/> CLAY or HARDPAN [0 pt]</td> <td>_____</td> </tr> <tr> <td><input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts]</td> <td><u>40</u></td> <td><input type="checkbox"/> MUCK [0 pts]</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> SAND (<2 mm) [6 pts]</td> <td><u>20</u></td> <td><input type="checkbox"/> ARTIFICIAL [3 pts]</td> <td>_____</td> </tr> </tbody> </table> <p>Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock <u>10</u> (A) 12 (B) 4</p> <p>SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 4</p>	TYPE	PERCENT	TYPE	PERCENT	<input type="checkbox"/> BLDR SLABS [16 pts]	_____	<input checked="" type="checkbox"/> SILT [3 pt]	<u>30</u>	<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	_____	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	_____	<input type="checkbox"/> BEDROCK [16 pts]	_____	<input type="checkbox"/> FINE DETRITUS [3 pts]	_____	<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<u>10</u>	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	_____	<input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<u>40</u>	<input type="checkbox"/> MUCK [0 pts]	_____	<input type="checkbox"/> SAND (<2 mm) [6 pts]	<u>20</u>	<input type="checkbox"/> ARTIFICIAL [3 pts]	_____	<p>HHEI Metric Points</p> <p>Substrate Max = 40</p> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 40px; margin: 0 auto;">16</div> <p>A + B</p>
TYPE	PERCENT	TYPE	PERCENT																										
<input type="checkbox"/> BLDR SLABS [16 pts]	_____	<input checked="" type="checkbox"/> SILT [3 pt]	<u>30</u>																										
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	_____	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	_____																										
<input type="checkbox"/> BEDROCK [16 pts]	_____	<input type="checkbox"/> FINE DETRITUS [3 pts]	_____																										
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<u>10</u>	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	_____																										
<input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<u>40</u>	<input type="checkbox"/> MUCK [0 pts]	_____																										
<input type="checkbox"/> SAND (<2 mm) [6 pts]	<u>20</u>	<input type="checkbox"/> ARTIFICIAL [3 pts]	_____																										
<p>2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):</p> <table style="width: 100%;"> <tr> <td><input checked="" type="checkbox"/> > 30 centimeters [20 pts]</td> <td><input type="checkbox"/> 5 cm - 10 cm [15 pts]</td> </tr> <tr> <td><input type="checkbox"/> > 22.5 - 30 cm [30 pts]</td> <td><input type="checkbox"/> < 5 cm [5pts]</td> </tr> <tr> <td><input type="checkbox"/> > 10 - 22.5 cm [25 pts]</td> <td><input type="checkbox"/> NO WATER OR MOIST CHANNEL [0pts]</td> </tr> </table> <p>COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 30</p>	<input checked="" type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> 5 cm - 10 cm [15 pts]	<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5pts]	<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0pts]	<p>Pool Depth Max = 30</p> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 40px; margin: 0 auto;">30</div>																						
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<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0pts]																												
<p>3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check ONLY one box):</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> > 4.0 meters (> 13') [30 pts]</td> <td><input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]</td> </tr> <tr> <td><input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]</td> <td><input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]</td> </tr> <tr> <td><input checked="" type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]</td> <td></td> </tr> </table> <p>COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) 2.9</p>	<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]	<input checked="" type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]		<p>Bankfull Width Max=30</p> <div style="border: 1px solid black; padding: 5px; text-align: center; width: 40px; margin: 0 auto;">20</div>																						
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<input checked="" type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]																													

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream*

RIPARIAN WIDTH (Per Bank)		FLOODPLAIN QUALITY (Most Predominant per Bank)			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

DHWM 7'
BF = 9.5'

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (interstitial)	<input type="checkbox"/> Dry channel, no water (ephemeral)

COMMENTS intermittent

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input checked="" type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

<input type="checkbox"/> Flat (0.5 %/100 ft)	<input checked="" type="checkbox"/> Flat to Moderate	<input type="checkbox"/> Moderate (2 %/100 ft)	<input type="checkbox"/> Moderate to Severe	<input type="checkbox"/> Severe (10 %/100 ft)
--	--	--	---	---

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

QHEI PERFORMED? Yes No QHEI Score 43.5 (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

WWH Name: Bear Run Distance from Evaluated Stream ~0.6 mi
 CWH Name: _____ Distance from Evaluated Stream _____
 EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: Bolivar NRCS Soil Map Page: / NRCS Soil Map Stream Order: /
County: Stark County Township/City: Canton

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 4/5/22 Quantity: 0.1"

Photo-documentation Notes: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 75%

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _____

Field Measures: Temp (°C) / Dissolved Oxygen (mg/l) / pH (S.U.) / Conductivity (umhos/cm) /

Is the sampling reach representative of the stream (Y/N) Y If not, explain: _____

Additional comments/description of pollution impacts: _____

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) N Species observed (if known): _____

Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): _____

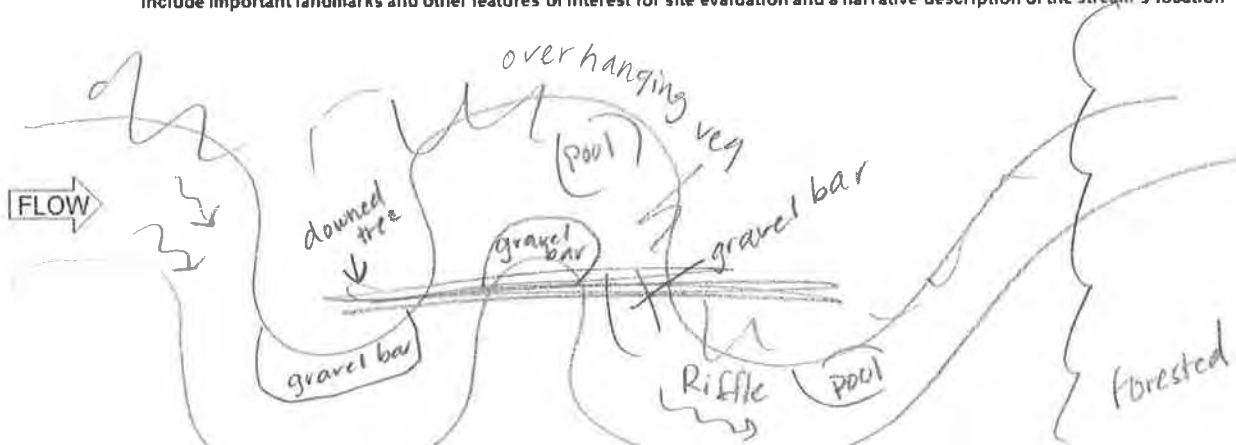
Salamanders Observed? (Y/N) N Species observed (if known): _____

Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): _____

Comments Regarding Biology: _____

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

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



KBWMS101

Stream & Location: Stream 7 South Canton-Torrey 138 KV Line RM: Date: 4/5/2012

Rebuild Project / Stark County Scorers Full Name & Affiliation: Kate Bomar / Staniec

River Code: STORET #: Lat./Long.: 40.719 107 -81.4105 41 Office verified location

1) SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present. Check ONE (Or 2 & average). BEST TYPES: BLDR/SLABS [10], BOULDER [9], COBBLE [8], GRAVEL [7], SAND [6], BEDROCK [5]. OTHER TYPES: HARDPAN [4], DETRITUS [3], MUCK [2], SILT [2], ARTIFICIAL [0]. ORIGIN: LIMESTONE [1], TILLS [1], WETLANDS [0], HARDPAN [0], SANDSTONE [0], RIP/RAP [0], LACUSTURINE [0], SHALE [-1], COAL FINES [-2]. QUALITY: HEAVY [-2], MODERATE [-1], NORMAL [0], FREE [1], EXTENSIVE [-2], MODERATE [-1], NORMAL [0], NONE [1]. Substrate Maximum 20

2) INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts. Check ONE (Or 2 & average). UNDERCUT BANKS [1], OVERHANGING VEGETATION [1], SHALLOWS (IN SLOW WATER) [1], ROOTMATS [1]. POOLS > 70cm [2], ROOTWADS [1], BOULDERS [1]. OXBOWS, BACKWATERS [1], AQUATIC MACROPHYTES [1], LOGS OR WOODY DEBRIS [1]. AMOUNT: EXTENSIVE >75% [1], MODERATE 25-75% [7], SPARSE 5-<25% [3], NEARLY ABSENT <5% [1]. Cover Maximum 20

3) CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average). SINUOSITY: HIGH [4], MODERATE [3], LOW [2], NONE [1]. DEVELOPMENT: EXCELLENT [7], GOOD [5], FAIR [3], POOR [1]. CHANNELIZATION: NONE [6], RECOVERED [4], RECOVERING [3], RECENT OR NO RECOVERY [1]. STABILITY: HIGH [3], MODERATE [2], LOW [1]. Channel Maximum 20

4) BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average). River right looking downstream. EROSION: NONE/LITTLE [3], MODERATE [2], HEAVY/SEVERE [1]. RIPARIAN WIDTH: WIDE > 50m [4], MODERATE 10-50m [3], NARROW 5-10m [2], VERY NARROW < 5m [1], NONE [0]. FLOOD PLAIN QUALITY: FOREST, SWAMP [3], SHRUB/OR OLD FIELD [2], RESIDENTIAL, PARK, NEW FIELD [1], FENCED PASTURE [1], OPEN PASTURE, ROWCROP [0]. CONSERVATION TILLAGE [1], URBAN OR INDUSTRIAL [0], MINING / CONSTRUCTION [0]. Riparian Maximum 10

5) POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH: > 1m [6], 0.7-<1m [4], 0.4-<0.7m [2], 0.2-<0.4m [1], < 0.2m [0]. CHANNEL WIDTH: POOL WIDTH > RIFFLE WIDTH [2], POOL WIDTH = RIFFLE WIDTH [1], POOL WIDTH < RIFFLE WIDTH [0]. CURRENT VELOCITY: TORRENTIAL [-1], VERY FAST [1], FAST [1], MODERATE [1], SLOW [1], INTERSTITIAL [-1], INTERMITTENT [-2], EDDIES [1]. Recreation Potential: Primary Contact, Secondary Contact. Pool / Current Maximum 12

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (Or 2 & average). RIFFLE DEPTH: BEST AREAS > 10cm [2], BEST AREAS 5-10cm [1], BEST AREAS < 5cm [metric=0]. RUN DEPTH: MAXIMUM > 50cm [2], MAXIMUM < 50cm [1]. RIFFLE / RUN SUBSTRATE: STABLE (e.g., Cobble, Boulder) [2], MOD. STABLE (e.g., Large Gravel) [1], UNSTABLE (e.g., Fine Gravel, Sand) [0]. RIFFLE / RUN EMBEDDEDNESS: NONE [2], LOW [1], MODERATE [0], EXTENSIVE [-1]. Riffle / Run Maximum 8

6) GRADIENT (170 ft/mi) DRAINAGE AREA (0.48 mi^2). VERY LOW - LOW [2-4], MODERATE [6-10], HIGH - VERY HIGH [10-6]. %POOL: 10, %GLIDE: 0, %RUN: 75, %RIFFLE: 15. Gradient Maximum 10

AJ SAMPLED REACH

Check ALL that apply

METHOD STAGE

- BOAT
 WADE
 L. LINE
 OTHER
- HIGH
 UP
 NORMAL
 LOW
 DRY

DISTANCE

- 0.5 Km
 0.2 Km
 0.15 Km
 0.12 Km
 OTHER

CLARITY

- 1st --sample pass-- 2nd
- < 20 cm
 20-40 cm
 40-70 cm
 > 70 cm/ CTB
 SECCHI DEPTH

CANOPY

- 1st pass _____ cm
 2nd pass _____ cm
- > 85%- OPEN
 55%-<85%
 30%-<55%
 10%-<30%
 <10%- CLOSED

CJ RECREATION

- AREA DEPTH
 POOL: >100ft² >3ft

BJ AESTHETICS

- NUISANCE ALGAE
 INVASIVE MACROPHYTES
 EXCESS TURBIDITY
 DISCOLORATION
 FOAM / SCUM
 OIL SHEEN
 TRASH / LITTER
 NUISANCE ODOR
 SLUDGE DEPOSITS
 CSOs/SSOs/OUTFALLS

DJ MAINTENANCE

- PUBLIC / PRIVATE / BOTH / NA
 ACTIVE / HISTORIC / BOTH / NA
 YOUNG-SUCCESSION-OLD
 SPRAY / SNAG / REMOVED
 MODIFIED / DIPPED OUT / NA
 LEVEED / ONE SIDED
 RELOCATED / CUTOFFS
 MOVING-BEDLOAD-STABLE
 ARMoured / SLUMPS
 ISLANDS / SCOURED
 IMPOUNDED / DESICCATED
 FLOOD CONTROL / DRAINAGE

Circle some & COMMENT

EJ ISSUES

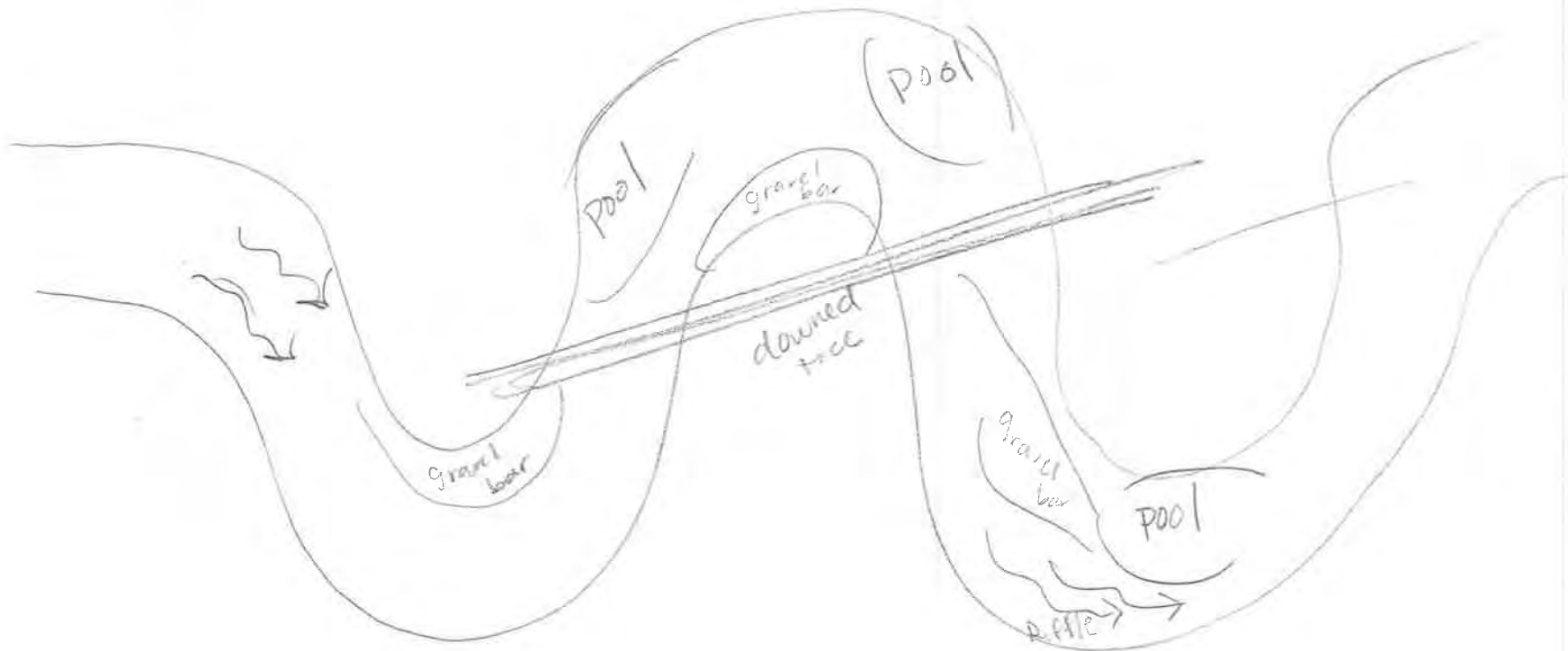
- WWTP / CSO / NPDES / INDUSTRY
 HARDENED / URBAN / DIRT&GRIME
 CONTAMINATED / LANDFILL
 BMPs-CONSTRUCTION-SEDIMENT
 LOGGING / IRRIGATION / COOLING
 BANK / EROSION / SURFACE
 FALSE BANK / MANURE / LAGOON
 WASH H₂O / TILE / H₂O TABLE
 ACID / MINE / QUARRY / FLOW
 NATURAL / WETLAND / STAGNANT
 PARK / GOLF / LAWN / HOME
 ATMOSPHERE / DATA PAUCITY

FJ MEASUREMENTS

- \bar{x} width
 \bar{x} depth
 max. depth
 \bar{x} bankfull width
 bankfull \bar{x} depth
 W/D ratio
 bankfull max. depth
 floodprone x² width
 entrench. ratio
 Legacy Tree:

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

Stream Drawing:



Ohio Primary Headwater Habitat Field Evaluation Form
Ohio Environmental Protection Agency
HHEI Score (sum of metrics 1+2+3) 24

SITE NAME/LOCATION South Canton - Torrey 138 KV Line Rebuild Project / Stark County
 SITE NUMBER Stream 3 RIVER BASIN Muskingum RIVER CODE DRAINAGE AREA (mi²) <1mi²
 LENGTH OF STREAM REACH (ft) 39 LAT 40° 19' 34" N LONG -81° 41' 09" W RIVER MILE
 DATE 4/5/2012 SCORER KLB COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

<p>1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">TYPE</th> <th style="width: 25%;">PERCENT</th> <th style="width: 15%;">TYPE</th> <th style="width: 25%;">PERCENT</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> Bldr Slabs [16 pts]</td> <td>_____</td> <td><input checked="" type="checkbox"/> SILT [3 pt]</td> <td style="text-align: center;">80</td> </tr> <tr> <td><input type="checkbox"/> BOULDER (>256 mm) [16 pts]</td> <td>_____</td> <td><input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> BEDROCK [16 pts]</td> <td>_____</td> <td><input type="checkbox"/> FINE DETRITUS [3 pts]</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> COBBLE (65-256 mm) [12 pts]</td> <td>_____</td> <td><input type="checkbox"/> CLAY or HARDPAN [0 pt]</td> <td>_____</td> </tr> <tr> <td><input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts]</td> <td style="text-align: center;">20</td> <td><input type="checkbox"/> MUCK [0 pts]</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> SAND (<2 mm) [6 pts]</td> <td>_____</td> <td><input type="checkbox"/> ARTIFICIAL [3 pts]</td> <td>_____</td> </tr> </tbody> </table> <p>Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock <u>0</u> (A) 12 (B) 2</p> <p>SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 2</p>	TYPE	PERCENT	TYPE	PERCENT	<input type="checkbox"/> Bldr Slabs [16 pts]	_____	<input checked="" type="checkbox"/> SILT [3 pt]	80	<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	_____	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	_____	<input type="checkbox"/> BEDROCK [16 pts]	_____	<input type="checkbox"/> FINE DETRITUS [3 pts]	_____	<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	_____	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	_____	<input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	20	<input type="checkbox"/> MUCK [0 pts]	_____	<input type="checkbox"/> SAND (<2 mm) [6 pts]	_____	<input type="checkbox"/> ARTIFICIAL [3 pts]	_____	<p>HHEI Metric Points</p> <p>Substrate Max = 40</p> <div style="border: 1px solid black; width: 40px; height: 40px; margin: 5px auto; text-align: center; line-height: 40px;">14</div> <p>A + B</p>
TYPE	PERCENT	TYPE	PERCENT																										
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This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream*

RIPARIAN WIDTH (Per Bank)		FLOODPLAIN QUALITY (Most Predominant per Bank)			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (interstitial)	<input type="checkbox"/> Dry channel, no water (ephemeral)

COMMENTS _____ *intermittent*

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input checked="" type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

<input type="checkbox"/> Flat (0.5 %/100 ft)	<input checked="" type="checkbox"/> Flat to Moderate	<input type="checkbox"/> Moderate (2 %/100 ft)	<input type="checkbox"/> Moderate to Severe	<input type="checkbox"/> Severe (10 %/100 ft)
--	--	--	---	---

0.75
W-11

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

QHEI PERFORMED? Yes No QHEI Score _____ (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

WWH Name: Bear Run Distance from Evaluated Stream ~0.7 mi
 CWH Name: _____ Distance from Evaluated Stream _____
 EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: Bolivar NRCS Soil Map Page: / NRCS Soil Map Stream Order: /
 County: Stark County Township/City: Canton

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 4/5/2022 Quantity: 0.1"
 Photo-documentation Notes: _____
 Elevated Turbidity? (Y/N): N Canopy (% open): _____
 Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _____
 Field Measures: Temp (°C) / Dissolved Oxygen (mg/l) / pH (S.U.) / Conductivity (umhos/cm) /
 Is the sampling reach representative of the stream (Y/N) Y If not, explain: entire length evaluated in project area
 Additional comments/description of pollution impacts: _____

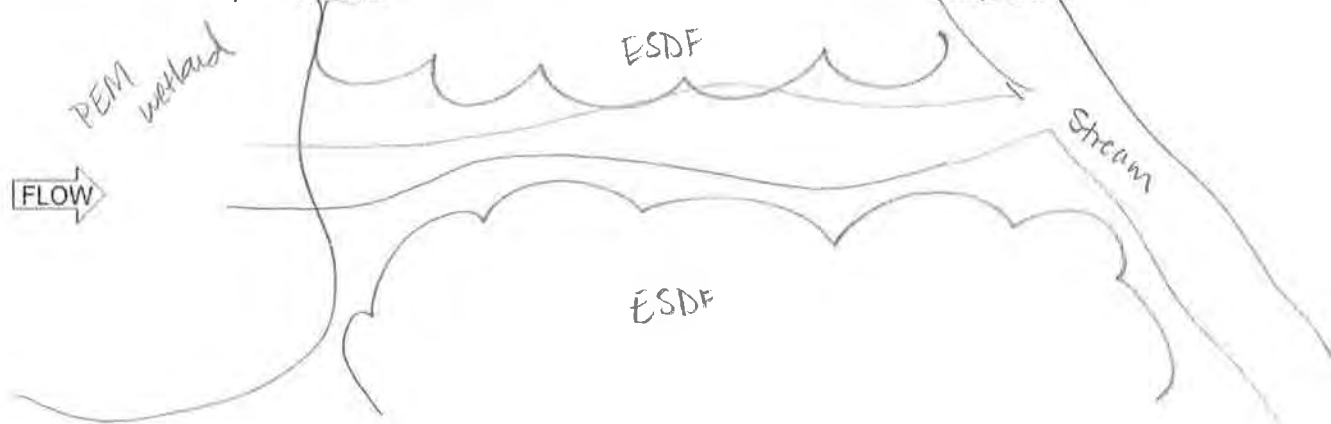
BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) N Species observed (if known): _____
 Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): _____
 Salamanders Observed? (Y/N) N Species observed (if known): _____
 Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): _____
 Comments Regarding Biology: _____

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

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



Ohio Primary Headwater Habitat Field Evaluation Form
Ohio Environmental Protection Agency
HHEI Score (sum of metrics 1+2+3) 24

SITE NAME/LOCATION South Canton-Torrey 138kV Line Rebuild Project
SITE NUMBER Stream 4 RIVER BASIN Muskingum RIVER CODE DRAINAGE AREA (mi²) < 1 mi²
LENGTH OF STREAM REACH (ft) 199 LAT 40.752216°N LONG -81.412119°W RIVER MILE
DATE 4/5/2012 SCORER KLB COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

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This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream*

RIPARIAN WIDTH (Per Bank)		FLOODPLAIN QUALITY (Most Predominant per Bank)			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (interstitial)	<input type="checkbox"/> Dry channel, no water (ephemeral)

COMMENTS _____ *intermittent*

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input checked="" type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 ft/100 ft) Flat to Moderate Moderate (2 ft/100 ft) Moderate to Severe Severe (10 ft/100 ft)

*0.14m
w = 0.75'*

Stream 4
KBMD3103

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

QHEI PERFORMED? Yes No QHEI Score _____ (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

WWH Name: Bear Run Distance from Evaluated Stream ~0.9 mi
 CWH Name: _____ Distance from Evaluated Stream _____
 EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: Bolivar NRCS Soil Map Page: NRCS Soil Map Stream Order:
County: SACK Township/City: Canton

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 4/5/2022 Quantity: 0.1"

Photo-documentation Notes: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 100

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _____

Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (umhos/cm)

Is the sampling reach representative of the stream (Y/N) Y If not, explain: _____

Additional comments/description of pollution impacts: _____

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) N Species observed (if known): _____

Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): _____

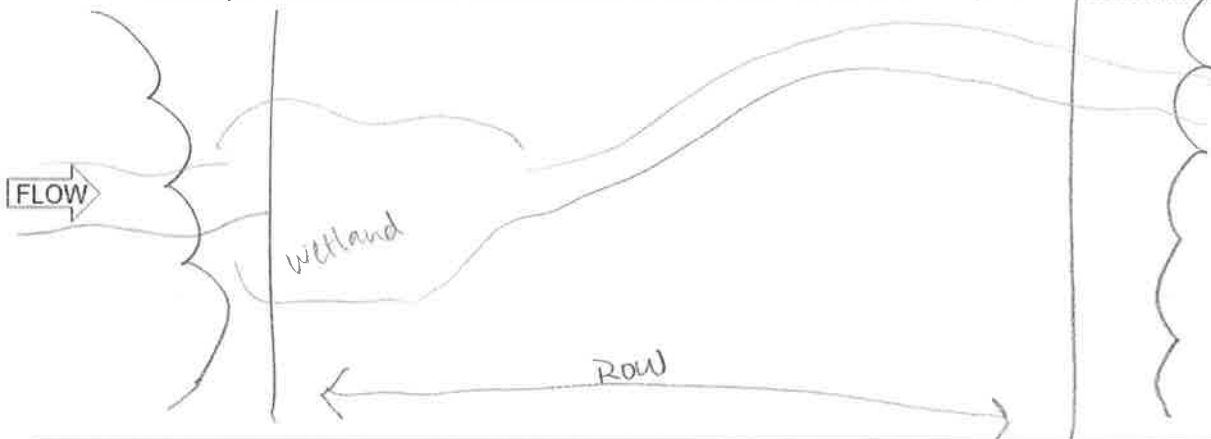
Salamanders Observed? (Y/N) N Species observed (if known): _____

Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): _____

Comments Regarding Biology: _____

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

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



Ohio Primary Headwater Habitat Field Evaluation Form
Ohio Environmental Protection Agency
HHEI Score (sum of metrics 1+2+3) **18**

SITE NAME/LOCATION South Canton-Torrey 138 kV Line Rebuild Project
SITE NUMBER Streams RIVER BASIN Mucklingum RIVER CODE DRAINAGE AREA (mi²) <1mi²
LENGTH OF STREAM REACH (ft) 15 LAT 40.724261°N LONG -81.413399°W RIVER MILE
DATE 4/5/2022 SCORER KLB COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B		HHEI Metric Points Substrate Max = 40 13 A + B																											
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COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) 1																													

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream*

OHUM
w = 1.5'

RIPARIAN WIDTH (Per Bank)		FLOODPLAIN QUALITY (Most Predominant per Bank)	
L	R	L	R
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (interstitial)	<input checked="" type="checkbox"/> Dry channel, no water (ephemeral)

COMMENTS _____ ephemeral

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input checked="" type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

<input type="checkbox"/> Flat (0.5 %/100 ft)	<input type="checkbox"/> Flat to Moderate	<input checked="" type="checkbox"/> Moderate (2 %/100 ft)	<input type="checkbox"/> Moderate to Severe	<input type="checkbox"/> Severe (10 %/100 ft)
--	---	---	---	---

Stream 5
3104

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

QHEI PERFORMED? Yes No QHEI Score _____ (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

WWH Name: Bear Run Distance from Evaluated Stream ~2 mi
 CWH Name: _____ Distance from Evaluated Stream _____
 EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: Bolivar NRCS Soil Map Page: 1 NRCS Soil Map Stream Order: 1
County: SARK County Township/City: Canton

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 7/5/22 Quantity: 0.1"
Photo-documentation Notes: _____
Elevated Turbidity? (Y/N): N Canopy (% open): 90
Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): 1
Field Measures: Temp (°C) ✓ Dissolved Oxygen (mg/l) ✓ pH (S.U.) ✓ Conductivity (umhos/cm) ✓
Is the sampling reach representative of the stream (Y/N) Y If not, explain: _____

Additional comments/description of pollution impacts: _____

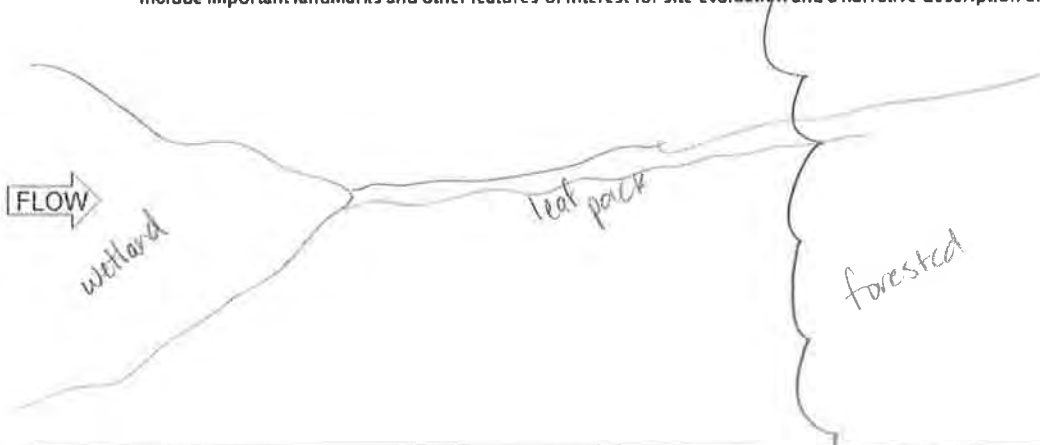
BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) N Species observed (if known): _____
Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): _____
Salamanders Observed? (Y/N) N Species observed (if known): _____
Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): _____
Comments Regarding Biology: _____

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

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



KBMDS105

Ohio Primary Headwater Habitat Field Evaluation Form
Ohio Environmental Protection Agency
HHEI Score (sum of metrics 1+2+3) V3

SITE NAME/LOCATION South Canton - Torrey 138 kV Line Rebuild Project
SITE NUMBER Stream V RIVER BASIN Muskingum RIVER CODE 1 DRAINAGE AREA (mi²) < 1 mi
LENGTH OF STREAM REACH (ft) 109 LAT 40.725547°N LONG -81.413928°W RIVER MILE 1
DATE 4/5/22 SCORER KLB COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

<p>1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">TYPE</th> <th style="width: 35%;">PERCENT</th> <th style="width: 15%;">TYPE</th> <th style="width: 35%;">PERCENT</th> </tr> </thead> <tbody> <tr> <td><input type="checkbox"/> BLDR SLABS [16 pts]</td> <td>_____</td> <td><input checked="" type="checkbox"/> SILT [3 pt]</td> <td><u>30</u></td> </tr> <tr> <td><input type="checkbox"/> BOULDER (>256 mm) [16 pts]</td> <td>_____</td> <td><input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]</td> <td><u>20</u></td> </tr> <tr> <td><input type="checkbox"/> BEDROCK [16 pts]</td> <td>_____</td> <td><input type="checkbox"/> FINE DETRITUS [3 pts]</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> COBBLE (85-256 mm) [12 pts]</td> <td>_____</td> <td><input type="checkbox"/> CLAY or HARDPAN [0 pt]</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]</td> <td><u>10</u></td> <td><input type="checkbox"/> MUCK [0 pts]</td> <td>_____</td> </tr> <tr> <td><input checked="" type="checkbox"/> SAND (<2 mm) [6 pts]</td> <td><u>50</u></td> <td><input type="checkbox"/> ARTIFICIAL [3 pts]</td> <td>_____</td> </tr> </tbody> </table> <p>Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock <u>0</u> (A) 9 (B) 4</p> <p>SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 9 TOTAL NUMBER OF SUBSTRATE TYPES: 4</p>	TYPE	PERCENT	TYPE	PERCENT	<input type="checkbox"/> BLDR SLABS [16 pts]	_____	<input checked="" type="checkbox"/> SILT [3 pt]	<u>30</u>	<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	_____	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	<u>20</u>	<input type="checkbox"/> BEDROCK [16 pts]	_____	<input type="checkbox"/> FINE DETRITUS [3 pts]	_____	<input type="checkbox"/> COBBLE (85-256 mm) [12 pts]	_____	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	_____	<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<u>10</u>	<input type="checkbox"/> MUCK [0 pts]	_____	<input checked="" type="checkbox"/> SAND (<2 mm) [6 pts]	<u>50</u>	<input type="checkbox"/> ARTIFICIAL [3 pts]	_____	<p>HHEI Metric Points</p> <p>Substrate Max = 40</p> <div style="border: 1px solid black; width: 40px; height: 40px; margin: 5px auto; display: flex; align-items: center; justify-content: center; font-size: 24px;">13</div> <p>A + B</p>
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This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream*

RIPARIAN WIDTH (Per Bank)		FLOODPLAIN QUALITY (Most Predominant per Bank)			
L	R	L	R	L	R
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (interstitial)	<input type="checkbox"/> Dry channel, no water (ephemeral)

COMMENTS _____ Intermittent

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input checked="" type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

<input type="checkbox"/> Flat (0.5 ft/100 ft)	<input type="checkbox"/> Flat to Moderate	<input checked="" type="checkbox"/> Moderate (2 ft/100 ft)	<input type="checkbox"/> Moderate to Severe	<input type="checkbox"/> Severe (10 ft/100 ft)
---	---	--	---	--

OH/DMW
WJE

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

QHEI PERFORMED? Yes No QHEI Score _____ (If Yes, Attach Completed QHEI form)

DOWNSIDE DESIGNATED USE(S)
 WWH Name: Bear Run Distance from Evaluated Stream 2.2 mi
 CWH Name: _____ Distance from Evaluated Stream _____
 EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: Bolivar NRCS Soil Map Page: 1 NRCS Soil Map Stream Order: 1
County: Stark Township/City: Canton

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 4/5/2011 Quantity: 0.1"
Photo-documentation Notes: _____
Elevated Turbidity? (Y/N): N Canopy (% open): 90
Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _____
Field Measures: Temp (°C) ✓ Dissolved Oxygen (mg/l) ✓ pH (S.U.) _____ Conductivity (umhos/cm) ✓
Is the sampling reach representative of the stream (Y/N) Y If not, explain: _____

Additional comments/description of pollution impacts: oil sheen, oil deposits

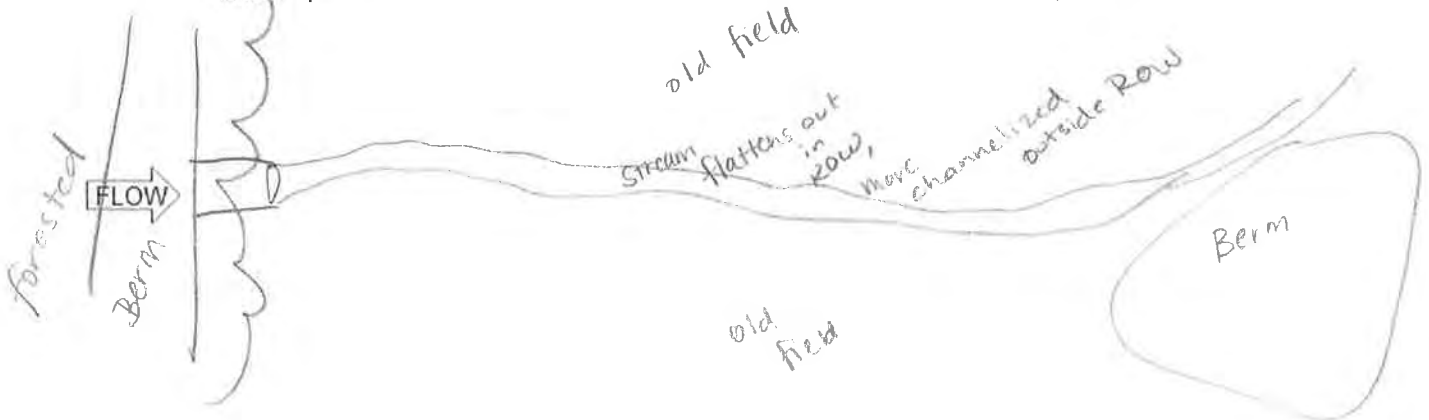
BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) N Species observed (if known): _____
Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): _____
Salamanders Observed? (Y/N) N Species observed (if known): _____
Aquatic Macroinvertebrates Observed? (Y/N) _____ Species observed (if known): water spider
Comments Regarding Biology: _____

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

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



KBMD106



Primary Headwater Habitat Field Evaluation Form

HHEI Score (sum of metrics 1+2+3)

27

SITE NAME/LOCATION South Canton - Torrey 138 KV Line Rebuild Project
 SITE NUMBER Stream 7 RIVER BASIN Muskingum RIVER CODE DRAINAGE AREA (mi²) <1 mi
 LENGTH OF STREAM REACH (ft) 38 LAT 40.731965°N LONG -81.415077°W RIVER MILE
 DATE 4/5/22 SCORER KLB COMMENTS

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B		HHEI Metric Points Substrate Max = 40 17 A + B																											
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This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream.

RIPARIAN WIDTH (Per Bank)

FLOODPLAIN QUALITY (Most Predominant per Bank)

L R
 Wide >10m
 Moderate 5-10m
 Narrow <5m
 None

L R
 Mature Forest, Wetland
 Immature Forest, Shrub or Old Field
 Residential, Park, New Field
 Fenced Pasture

L R
 Conservation Tillage
 Urban or Industrial
 Open Pasture, Row Crop
 Mining or Construction

COMMENTS

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

Stream Flowing Moist Channel, isolated pools, no flow (intermittent)
 Subsurface flow with isolated pools (interstitial) Dry channel, no water (ephemeral)

COMMENTS

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

None 1.0 2.0 3.0
 0.5 1.5 2.5 >3

STREAM GRADIENT ESTIMATE

Flat (0.5 %/100 ft) Flat to Moderate Moderate (2 %/100 ft) Moderate to Severe Severe (10 %/100 ft)

OHUM
W#

Stream 7
S106

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

QHEI PERFORMED? Yes No QHEI Score _____ (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

WWH Name: Bear Run Distance from Evaluated Stream N 3 mi
 CWH Name: _____ Distance from Evaluated Stream _____
 EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: Bolivar NRCS Soil Map Page: _____ NRCS Soil Map Stream Order: _____
County: Stark Township/City: Canton

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 4/5/2022 Quantity: 0.1"

Photo-documentation Notes: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 85

Were samples collected for water chemistry? (Y/N): Y Lab Sample # or ID (attach results): _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (umhos/cm) _____

Is the sampling reach representative of the stream (Y/N) Y If not, explain: _____

Additional comments/description of pollution impacts: _____

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) N Species observed (if known): _____

Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): _____

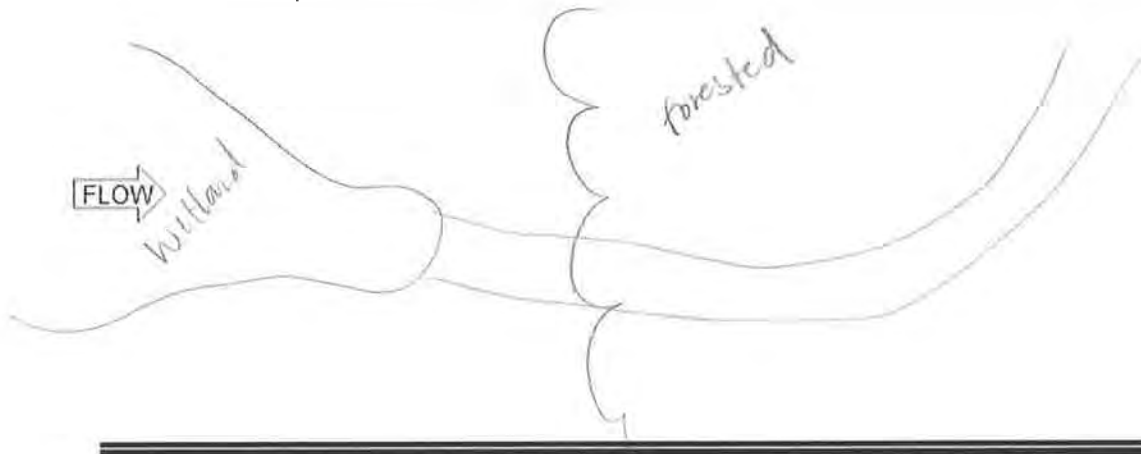
Salamanders Observed? (Y/N) N Species observed (if known): _____

Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): _____

Comments Regarding Biology: _____

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

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



Ohio Primary Headwater Habitat Field Evaluation Form
Ohio Environmental Protection Agency
HHEI Score (sum of metrics 1+2+3) 66

SITE NAME/LOCATION South Canton - Torrey 138K V Line Rebuild Project
SITE NUMBER Stream 8 RIVER BASIN Muskingum RIVER CODE - DRAINAGE AREA (mi²) 0.99 mi²
LENGTH OF STREAM REACH (ft) 141 LAT 40.747403°N LONG -81.414372°W RIVER MILE -
DATE 4/6/2022 SCORER KLB COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes. (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B

TYPE	PERCENT	TYPE	PERCENT
<input type="checkbox"/> BLDR SLABS [16 pts]	_____	<input checked="" type="checkbox"/> SILT [3 pt]	<u>30</u>
<input type="checkbox"/> BOULDER (>256 mm) [16 pts]	_____	<input type="checkbox"/> LEAF PACK/WOODY DEBRIS [3 pts]	_____
<input type="checkbox"/> BEDROCK [16 pts]	_____	<input type="checkbox"/> FINE DETRITUS [3 pts]	_____
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	<u>5</u>	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	_____
<input checked="" type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	<u>40</u>	<input type="checkbox"/> MUCK [0 pts]	_____
<input type="checkbox"/> SAND (<2 mm) [6 pts]	<u>25</u>	<input type="checkbox"/> ARTIFICIAL [3 pts]	_____

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 5 (A) 12 (B) 4

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 12 TOTAL NUMBER OF SUBSTRATE TYPES: 4

HHEI Metric Points
Substrate Max = 40
10
A + B

2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> 5 cm - 10 cm [15 pts]
<input type="checkbox"/> > 22.5 - 30 cm [25 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input checked="" type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0pts]

COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): 20

Pool Depth Max = 30
25

3. BANK FULL WIDTH (Measured as the average of 3 - 4 measurements) (Check ONLY one box):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input checked="" type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
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COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) 3

Bankfull Width Max=30
25

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY * NOTE: River Left (L) and Right (R) as looking downstream*

RIPARIAN WIDTH (Per Bank)

L	R	
<input type="checkbox"/>	<input type="checkbox"/>	Wide >10m
<input type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Narrow <5m
<input type="checkbox"/>	<input type="checkbox"/>	None

FLOODPLAIN QUALITY (Most Predominant per Bank)

L	R		L	R	
<input type="checkbox"/>	<input type="checkbox"/>	Mature Forest, Wetland	<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Immature Forest, Shrub or Old Field	<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	<input type="checkbox"/>	Residential, Park, New Field	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Open Pasture, Row Crop
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Fenced Pasture	<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (interstitial)	<input type="checkbox"/> Dry channel, no water (ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

<input type="checkbox"/> None	<input type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input checked="" type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

Flat (0.5 %/100 ft) Flat to Moderate Moderate (2 %/100 ft) Moderate to Severe Severe (10 %/100 ft)

OHWHM
8'
BF
10'

ADDITIONAL STREAM INFORMATION (This information must also be completed):

QHEI PERFORMED? Yes No QHEI Score 45.5 (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

WWH Name: Nimishillen Creek Distance from Evaluated Stream ~2.5mi
 CWH Name: _____ Distance from Evaluated Stream _____
 EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: Bolivar NRCS Soil Map Page: _____ NRCS Soil Map Stream Order: _____
County: Stark Township/City: Canton

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 4/5/2022 Quantity: 0.1"

Photo-documentation Notes: _____

Elevated Turbidity? (Y/N): N Canopy (% open): 90

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _____

Field Measures: Temp (°C) / Dissolved Oxygen (mg/l) / pH (S.U.) / Conductivity (umhos/cm) /

Is the sampling reach representative of the stream (Y/N) Y If not, explain: _____

Additional comments/description of pollution impacts: pipeline crossings

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) N Species observed (if known): _____

Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): _____

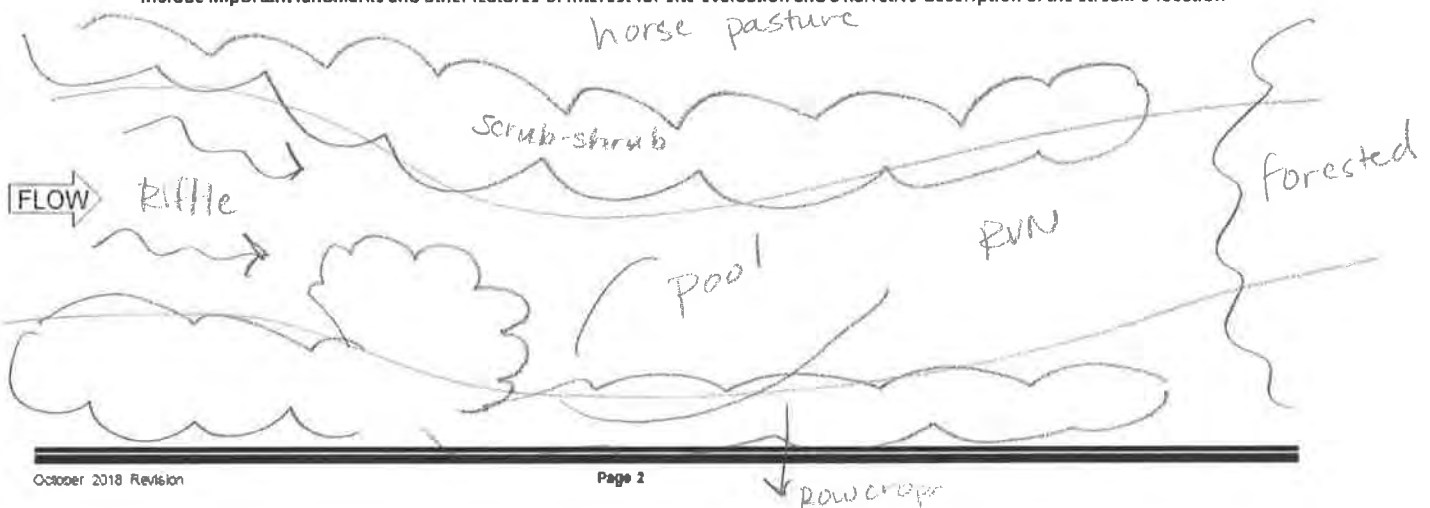
Salamanders Observed? (Y/N) N Species observed (if known): _____

Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): _____

Comments Regarding Biology: _____

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

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



Stream & Location: Stream 8 / South Canton - Torrey 138 kV Line RM: Date: 4/6/2022
Rebuild Project

River Code: STORET #: Lat./Long.: 40.74734 181.414400 Office verified location

1) SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present. Check ONE (Or 2 & average). BEST TYPES, OTHER TYPES, POOL RIFFLE, ORIGIN, QUALITY. Includes checkboxes for BLDR/SLABS, BOULDER, COBBLE, GRAVEL, SAND, BEDROCK, etc.

2) INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts... Check ONE (Or 2 & average). AMOUNT. Includes checkboxes for UNDERCUT BANKS, OVERHANGING VEGETATION, SHALLOWS, ROOTMATS, POOLS, OXBOWS, etc.

3) CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average). SINUOSITY, DEVELOPMENT, CHANNELIZATION, STABILITY. Includes checkboxes for HIGH, MODERATE, LOW, NONE in each category.

4) BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average). RIVER RIGHT LOOKING DOWNSTREAM. EROSION, RIPARIAN WIDTH, FLOOD PLAIN QUALITY. Includes checkboxes for NONE, MODERATE, HEAVY, etc.

5) POOL / GLIDE AND RIFFLE / RUN QUALITY MAXIMUM DEPTH, CHANNEL WIDTH, CURRENT VELOCITY. Check ONE (ONLY!), Check ONE (Or 2 & average), Check ALL that apply. Includes checkboxes for > 1m, 0.7-1m, etc.

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (Or 2 & average). NO RIFFLE [metric=0]. RIFFLE DEPTH, RUN DEPTH, RIFFLE / RUN SUBSTRATE, RIFFLE / RUN EMBEDDEDNESS. Includes checkboxes for BEST AREAS > 10cm, etc.

6) GRADIENT (ft/mi) DRAINAGE AREA (mi^2). VERY LOW - LOW, MODERATE, HIGH - VERY HIGH. % POOL, % GLIDE, % RUN, % RIFFLE. Includes checkboxes for VERY LOW, MODERATE, etc.

AJ SAMPLED REACH

Check ALL that apply

METHOD STAGE

- BOAT
 WADE
 L. LINE
 OTHER
- DISTANCE**
- 0.5 Km
 0.2 Km
 0.15 Km
 0.12 Km
 OTHER
- CLARITY**
- 1st --sample pass-- 2nd
 < 20 cm
 20-<40 cm
 40-70 cm
 > 70 cm/ CTB
 SECCHI DEPTH
- CANOPY**
- 1st pass _____ cm
 2nd pass _____ cm
- > 85%- OPEN
 55%-<85%
 30%-<55%
 10%-<30%
 <10%- CLOSED

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

Typical reach

pipeline crossing, electric transmission line crossing

BJ AESTHETICS

- NUISANCE ALGAE
 INVASIVE MACROPHYTES
 EXCESS TURBIDITY
 DISCOLORATION
 FOAM / SCUM
 OIL SHEEN
 TRASH / LITTER
 NUISANCE ODOR
 SLUDGE DEPOSITS
 CSOs/SSOs/OUTFALLS

DJ MAINTENANCE

- PUBLIC / PRIVATE / BOTH / NA
 ACTIVE / HISTORIC / BOTH / NA
 YOUNG-SUCCESSION-OLD
 SPRAY / SNAG / REMOVED
 MODIFIED / DIPPED OUT / NA
 LEVEED / ONE SIDED
 RELOCATED / CUTOFFS
 MOVING-BEDLOAD-STABLE
 ARMoured / SLUMPS
 ISLANDS / SCoured
 IMPOUNDED / DESICCATED
 FLOOD CONTROL / DRAINAGE

Circle some & COMMENT

EJ ISSUES

- WWTP / CSO / NPDES / INDUSTRY
 HARDENED / URBAN / DIRT&GRIME
 CONTAMINATED / LANDFILL
 BMPs-CONSTRUCTION-SEDIMENT
 LOGGING / IRRIGATION / COOLING
 BANK / EROSION / SURFACE
 FALSE BANK / MANURE / LAGOON
 WASH H₂O / TILE / H₂O TABLE
 ACID / MINE / QUARRY / FLOW
 NATURAL / WETLAND / STAGNANT
 PARK / GOLF / LAWN / HOME
 ATMOSPHERE / DATA PAUCITY

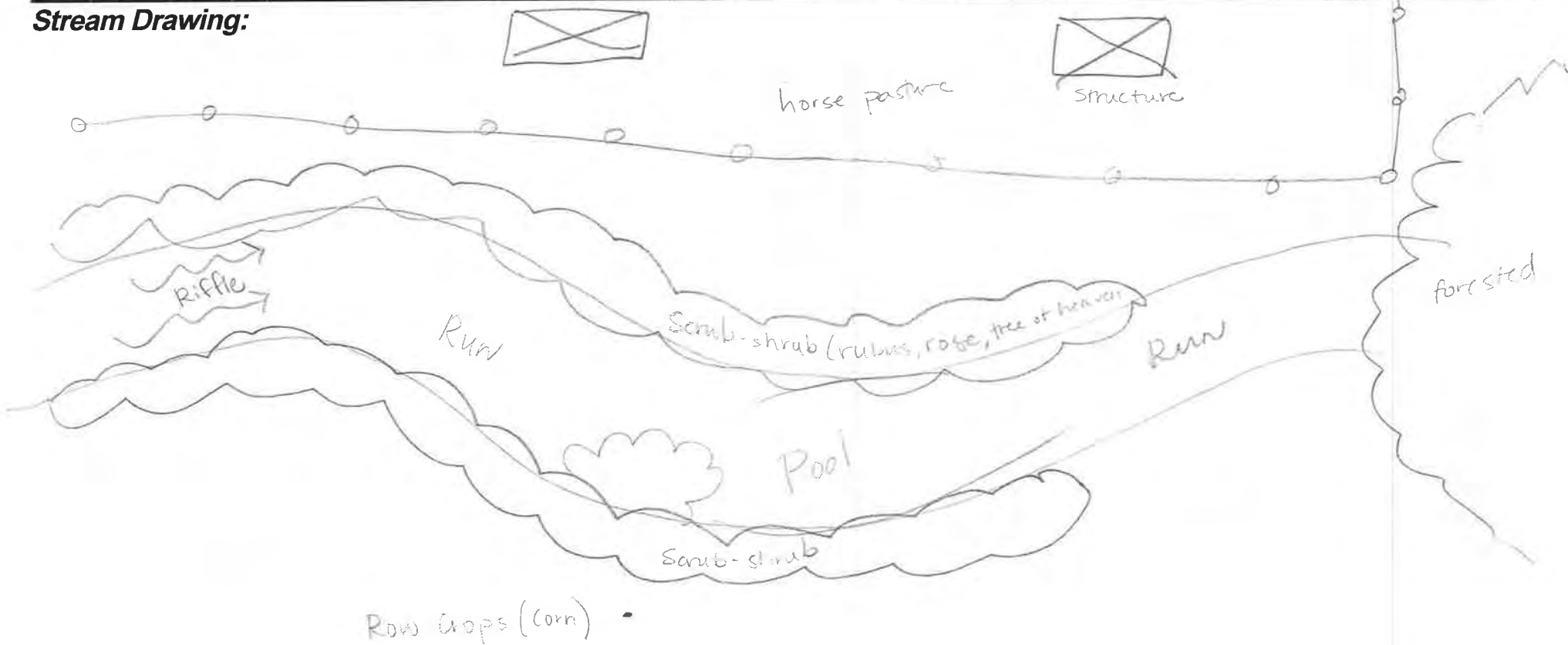
FJ MEASUREMENTS

- \bar{x} width
 \bar{x} depth
 max. depth
 \bar{x} bankfull width
 bankfull \bar{x} depth
 W/D ratio
 bankfull max. depth
 floodprone x^2 width
 entrench. ratio
 Legacy Tree:

CJ RECREATION

- AREA DEPTH
 POOL: >100ft² >3ft

Stream Drawing:



KBM 05109



Primary Headwater Habitat Field Evaluation Form

HHEI Score (sum of metrics 1+2+3)

29

SITE NAME/LOCATION South Canton - Torrey 138 KV Line Renewal Project
 SITE NUMBER Stream 9 RIVER BASIN Muskingum RIVER CODE 1 DRAINAGE AREA (mi²) <1mi
 LENGTH OF STREAM REACH (ft) 132 LAT 40.747286°N LONG 81.414227°W RIVER MILE 1
 DATE 4/10/22 SCORER KLB COMMENTS _____

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: NONE / NATURAL CHANNEL RECOVERED RECOVERING RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type present). Check ONLY two predominant substrate TYPE boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B				HHEI Metric Points Substrate Max = 40 9 A + B																											
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<input type="checkbox"/> BEDROCK [16 pts]	_____	<input type="checkbox"/> FINE DETRITUS [3 pts]	_____																												
<input type="checkbox"/> COBBLE (65-256 mm) [12 pts]	_____	<input type="checkbox"/> CLAY or HARDPAN [0 pt]	_____																												
<input type="checkbox"/> GRAVEL (2-64 mm) [9 pts]	5	<input type="checkbox"/> MUCK [0 pts]	_____																												
<input type="checkbox"/> SAND (<2 mm) [6 pts]	_____	<input type="checkbox"/> ARTIFICIAL [3 pts]	_____																												
2. Maximum Pool Depth (Measure the maximum pool depth within the 61 meter (200 feet) evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check ONLY one box):				Pool Depth Max = 30 5																											
<table border="0"> <tr><td><input type="checkbox"/> > 30 centimeters [20 pts]</td><td><input type="checkbox"/> 5 cm - 10 cm [15 pts]</td></tr> <tr><td><input type="checkbox"/> > 22.5 - 30 cm [30 pts]</td><td><input checked="" type="checkbox"/> < 5 cm [5 pts]</td></tr> <tr><td><input type="checkbox"/> > 10 - 22.5 cm [25 pts]</td><td><input type="checkbox"/> NO WATER OR MOIST CHANNEL [0pts]</td></tr> </table>					<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> 5 cm - 10 cm [15 pts]	<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input checked="" type="checkbox"/> < 5 cm [5 pts]	<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0pts]	COMMENTS _____ MAXIMUM POOL DEPTH (centimeters): <u>5</u>																				
<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> 5 cm - 10 cm [15 pts]																														
<input type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input checked="" type="checkbox"/> < 5 cm [5 pts]																														
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0pts]																														
3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) (Check ONLY one box):				Bankfull Width Max=30 15																											
<table border="0"> <tr><td><input type="checkbox"/> > 4.0 meters (> 13') [30 pts]</td><td><input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]</td></tr> <tr><td><input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]</td><td><input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]</td></tr> <tr><td><input type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]</td><td></td></tr> </table>					<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]	<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]	<input type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]		COMMENTS _____ AVERAGE BANKFULL WIDTH (meters) <u>1.5</u>																				
<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]																														
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]																														
<input type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 pts]																															

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ★ NOTE: River Left (L) and Right (R) as looking downstream

RIPARIAN WIDTH (Per Bank)

FLOODPLAIN QUALITY (Most Predominant per Bank)

L R
 Wide >10m
 Moderate 5-10m
 Narrow <5m
 None

L R
 Mature Forest, Wetland
 Immature Forest, Shrub or Old Field
 Residential, Park, New Field
 Fenced Pasture

L R
 Conservation Tillage
 Urban or Industrial
 Open Pasture, Row Crop
 Mining or Construction

COMMENTS _____

FLOW REGIME (At Time of Evaluation) (Check ONLY one box):

Stream Flowing Moist Channel, isolated pools, no flow (intermittent)
 Subsurface flow with isolated pools (interstitial) Dry channel, no water (ephemeral)

COMMENTS _____

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check ONLY one box):

None 1.0 2.0 3.0
 0.5 1.5 2.5 >3

STREAM GRADIENT ESTIMATE

Flat (0.5 %100 ft) Flat to Moderate Moderate (2 %100 ft) Moderate to Severe Severe (10 %100 ft)

24/10/22
w=1.57

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

QHEI PERFORMED? Yes No QHEI Score _____ (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

WWH Name: Nimishillen Creek Distance from Evaluated Stream ~2.5 mi
 CWH Name: _____ Distance from Evaluated Stream _____
 EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION.

USGS Quadrangle Name: Bolivar NRCS Soil Map Page: NRCS Soil Map Stream Order:
County: Stark Township/City: Canton

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 4/5/2022 Quantity: 0.1"
Photo-documentation Notes: _____
Elevated Turbidity? (Y/N): N Canopy (% open): 45
Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _____
Field Measures: Temp (°C) Dissolved Oxygen (mg/l) pH (S.U.) Conductivity (umhos/cm)
Is the sampling reach representative of the stream (Y/N) Y If not, explain: _____

Additional comments/description of pollution impacts: _____

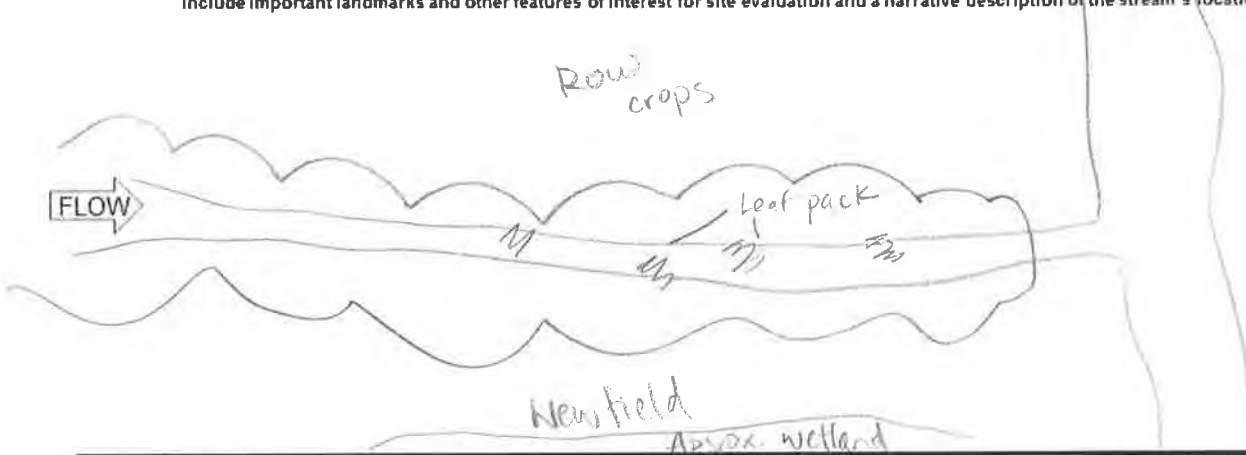
BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) N Species observed (if known): _____
Frogs or Tadpoles Observed? (Y/N) N Species observed (if known): _____
Salamanders Observed? (Y/N) N Species observed (if known): _____
Aquatic Macroinvertebrates Observed? (Y/N) N Species observed (if known): _____
Comments Regarding Biology: _____

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

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



Subject: South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio– Addendum Ecological Survey Memo

Date: March 16, 2023

To: Amy Toohey
AEP Ohio Transmission Company, Inc.
8600 Smiths Mill Road
New Albany, OH 43054

From: Dan Godec
10200 Alliance Road, Suite 300
Blue Ash, Ohio 45242

Stantec Consulting Services, Inc. (Stantec) performed surveys for wetlands and waterbodies, as well as a habitat assessment survey, for additional access roads and workspaces for the South Canton-Torrey 138 kV Line Rebuild Project in Stark County, Ohio (Figure 1) on December 21, 2022, and February 14, 2023. Stantec's wetland delineation was performed in accordance with the onsite inspection, routine determination methodology described in the 1987 Corps of Engineers Wetlands Delineation Manual and the U.S. Army Corps of Engineers (USACE) Regional Supplement to the Corps of Engineers Wetland Delineation Manuals: Eastern Mountain and Piedmont Version 2.0 and Northcentral and Northeast Region Version 2.0.

As result of the survey, four palustrine emergent (PEM) wetlands (Wetland 14, Wetland 15, Wetland 16, Wetland 17) were identified within the Project area. Wetland 14 was identified within the Project area east of Keiffer Avenue SW. Wetland determination sample point SP28 was assessed within Wetland 14. The wetland was dominated by hydrophytic vegetation including common rush (*Juncus effusus*) and barnyardgrass (*Echinochloa crus-galli*). Soil at SP28 met the requirements of Hydric Soil Field Indicator F3-Depleted Matrix. Hydrology within Wetland 14 was confirmed by the presence of oxidized rhizospheres on living roots. Wetland 14 scored 27 points on the Ohio Rapid Assessment Method for Wetlands (ORAM) data form and was classified as a Category 1 wetland. SP29 was assessed in the upland area adjacent to Wetland 14.

Wetland 15 was identified within Project area east of Sherman Church Ave SW. Wetland determination sample point SP30 was assessed within Wetland 15. The wetland was dominated by hydrophytic vegetation including creeping jenny (*Lysimachia nummularia*) and Nuttall's waterweed (*Elodea nuttallii*). Soil at SP30 met the requirements of Hydric Soil Field Indicator F3-Depleted Matrix. Hydrology within Wetland 15 was confirmed by the presence of surface water, saturation and a high water table. Wetland 15 scored 24.5 points on the ORAM data form and was classified as a Category 1 wetland. SP31 was assessed in the upland area adjacent to Wetland 15.

Wetland 16 was identified within Project area east of Sherman Church Ave SW. Wetland determination sample point SP32 was assessed within Wetland 16. The wetland was dominated by hydrophytic vegetation including reed canarygrass (*Phalaris arundinacea*). Soil at SP32 met the requirements of Hydric Soil Field Indicator F3-Depleted Matrix. Hydrology within Wetland 16 was confirmed by the presence of saturation and oxidized rhizospheres on living roots. Wetland 16 scored 12 points on the ORAM data form and was classified as a Category 1 wetland. SP33 was assessed in the upland area adjacent to Wetland 15.

Wetland 17 was identified within Project area east of Sherman Church Ave SW. Wetland determination sample point SP34 was assessed within Wetland 17. The wetland was dominated by hydrophytic vegetation including reed canarygrass. Soil at SP34 met the requirements of Hydric Soil Field Indicator F3-Depleted Matrix. Hydrology within Wetland 17 was confirmed by the presence of saturation. Wetland 17 scored 18.5 points on the ORAM data form and was classified as a Category 1 wetland. SP35 was assessed in the upland area adjacent to Wetland 17.

January 4, 2023

South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio

Page 2 of 4

Representative photographs of wetlands and the wetland determination sample points are attached. Photograph locations are shown on Figure 2. Completed wetland determination data forms and the completed ORAM data form are included as attachments to this memo. Additional information regarding the identified wetlands is provided in Table 1.

Table 1. Summary of Wetland Resources Found within the South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio

Wetland ID	Location		Isolated? ¹	Habitat Type ^{2,3}	Delineated Area within Project Area (acre)	ORAM ⁴		Nearest Proposed Structure Number	Existing Structure Number in Wetland	Proposed Structure Number in Wetland	Structure Installation Method	Proposed Impacts	
	Latitude	Longitude				Score	Category					Temporary Matting Area (acre)	Permanent Impact Area (acre)
Wetland 14	40.721503	-81.412514	No	PEM	0.01	27	1	299	N/A	N/A	N/A	0	0
Wetland 15	40.747187	-81.41509	No	PEM	0.003	24.5	1	304	N/A	N/A	N/A	0	0
Wetland 16	40.746918	-81.416467	No	PEM	0.001	12	1	304	N/A	N/A	N/A	0	0
Wetland 17	40.746716	-81.416728	No	PEM	0.004	18.5	1	304	N/A	N/A	N/A	0	0
Total:					0.018						Total:	0	0

¹ Pending USACE jurisdictional review
² Habitat type based on Cowardin et al. (1979).
³ PEM = Palustrine Emergent Wetland
⁴ ORAM Score and Category are based on the Ohio Rapid Assessment Method for Wetland v. 5.0 (Mack 2001).

Stantec also categorized the habitats and land cover types present within the Project area during the surveys completed on December 21, 2022 and February 14, 2023. The land cover types found within the additional Project area included new field, mixed early successional/second growth deciduous forest, old field, existing gravel road, residential lawn, agricultural field, pasture, and industrial land. Figure 3 shows the locations of habitats observed within the Project area during the habitat assessment surveys. Representative photographs of the vegetation communities/habitats and land cover types identified within the Project area are also attached.

New field habitat within the Project area was dominated by Canada goldenrod (*Solidago canadensis*), Kentucky bluegrass (*Poa pratensis*), tall fescue (*Schedonorus arundinaceus*), curly dock (*Rumex crispus*) and timothy (*Phleum pratense*).

Mixed early successional/second growth deciduous forest habitat within the Project area was dominated by multiflora rose (*Rosa multiflora*), Allegheny blackberry (*Rubus allegheniensis*), Morrow's honeysuckle (*Lonicera morrowii*), red maple (*Acer rubrum*), white oak (*Quercus alba*), and northern red oak (*Quercus rubra*).

Old field habitat within the Project area was dominated by Fuller's teasel (*Dipsacus fullonum*), Amur honeysuckle (*Lonicera maackii*), reed canarygrass, giant ironweed (*Vernonia gigantea*), Canada goldenrod, Japanese bristlegrass (*Setaria faberi*), Queen Anne's lace (*Daucus carota*), deertongue (*Dichanthelium clandestinum*), and hairy white oldfield aster (*Symphotrichum pilosum*).

Residential lawn habitat within the Project area was dominated by Kentucky bluegrass, common dandelion (*Taraxacum officinale*), and narrowleaf plantain (*Plantago lanceolata*).

Agricultural field habitat within the Project area was dominated by row crops including corn (*Zea mays*) and soybean (*Glycine max*).

Pasture habitat within the Project area is dominated by Kentucky bluegrass, English plantain, common plantain (*Plantago major*), red clover (*Trifolium pratense*), and curly dock.

Industrial land and existing gravel access roads consisted of highly disturbed areas and contained no identifiable vegetation.

In summary, Stantec identified four PEM wetlands during the wetland, waterbody, and habitat assessment surveys completed within the additional survey areas of the South Canton-Torrey 138 kV Line Rebuild Project on December 21, 2022 and February 14, 2023. During the field surveys, the following habitat/land cover types were found within the additional Project area; new field, mixed early successional/second growth deciduous forest, old field, existing gravel access road, residential lawn, agricultural field, pasture, and industrial land. Project maps, representative photographs, and completed data forms are attached.

Stantec Consulting Services, Inc.



Dan Godec

Phone: (513) 842-8203

Daniel.Godec@stantec.com

Attachments - Figure 1 – Addendum Project Location Map
Figure 2 – Addendum Wetland and Waterbody Delineation Map
Figure 3 – Addendum Habitat Assessment Map
Wetland and Waterbody Delineation Photographs
Wetland Determination Data Forms
ORAM Data Forms
Habitat Assessment Photographs



Figure No.

1

Title

Addendum Project Location Map

Client/Project
 AEP Ohio Transmission Company, Inc.
 South Canton-Torrey
 138 kV Line Rebuild Project

193708516

Project Location
 Stark County, Ohio

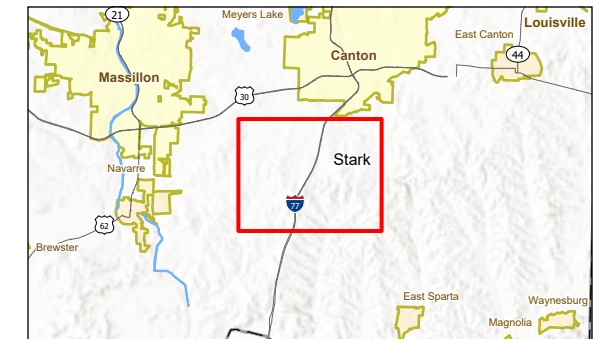
Prepared by RA on 2023-01-09
 TR by JDP on 2023-01-09
 IR by AJK on 2023-03-10



0 1,000 2,000 Feet
 (At original document size of 11x17)
 1:24,000

Legend

- AEP Substation
- Existing Structure to be Replaced
- ◇ Proposed Structure
- ◆ Proposed Distribution Structure
- Existing 138 kV Transmission Line to be Rebuilt
- - - Existing Distribution Line
- Proposed 138 kV Transmission Line
- ▭ Addendum Project Area
- ▭ Township Boundary
- ▭ Municipal Boundary



Notes
 1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
 3. Background: USGS 7.5' Topographic Quadrangles - Canton West, OH (1986) and Bolivar, OH (1978)



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 Reviset: 2023-03-13 By: roalvarez

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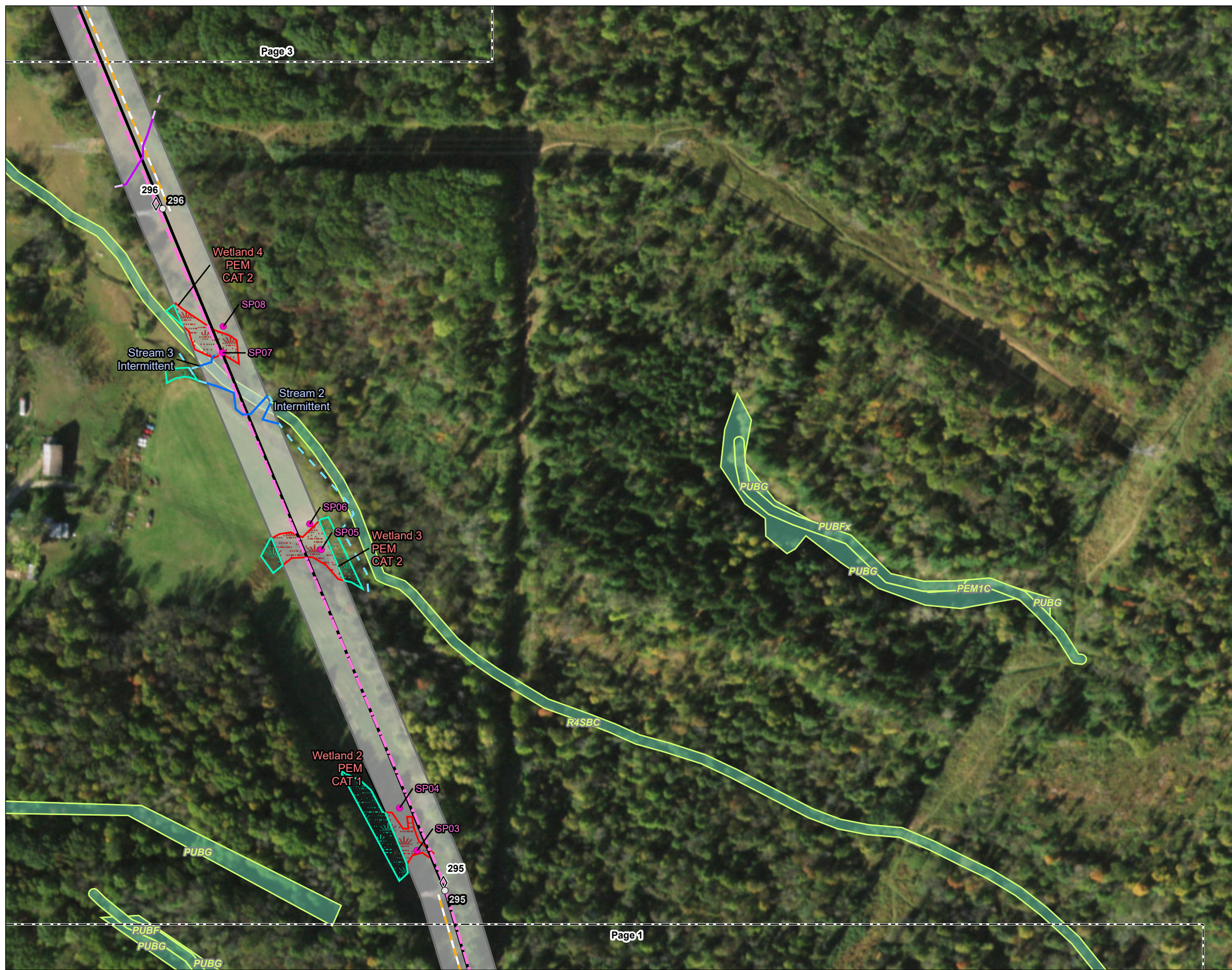
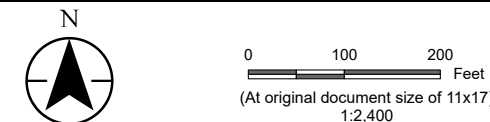
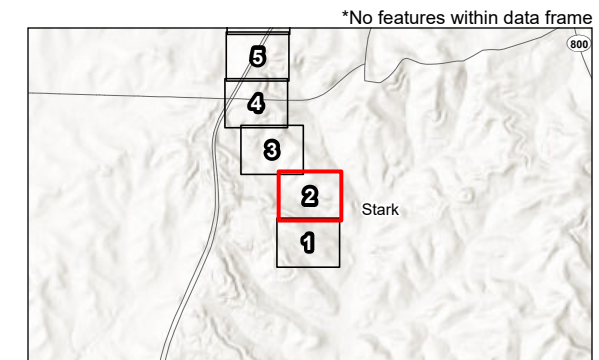


Figure No. **2**
 Title **Addendum Wetland and Waterbody Delineation Map**

Client/Project: AEP Ohio Transmission Company, Inc. 193708516
 South Canton-Torrey
 138 kV Line Rebuild Project
 Project Location: Stark County, Ohio
 Prepared by RA on 2023-01-09
 TR by JDP on 2023-01-09
 IR by AJK on 2023-03-13



- Legend**
- | | |
|---|--|
| ■ AEP Substation | ● Wetland Determination Sample Point |
| ○ Existing Structure to be Replaced | ○ Upland Drainage Feature |
| ◇ Proposed Structure | ○ Approximate Upland Drainage Feature |
| ◆ Proposed Distribution Structure | ○ Field Delineated Waterway |
| — Existing 138 kV Transmission Line to be Rebuilt | — Approximate Waterway |
| — Existing Distribution Line | ○ Field Delineated Emergent Wetland |
| — Proposed 138 kV Transmission Line | ○ Field Delineated Scrub-Shrub Wetland |
| — Proposed Access Road | ○ Approximate Wetland |
| □ Addendum Project Area | ○ National Wetlands Inventory Feature |
| ■ Project Area (Previously Surveyed) | ○ FEMA Flood Hazard Area* |
| ○ Photo Location | ○ 100-year Floodplain |
| △ Existing Culvert | ○ Floodway |



Notes
 1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



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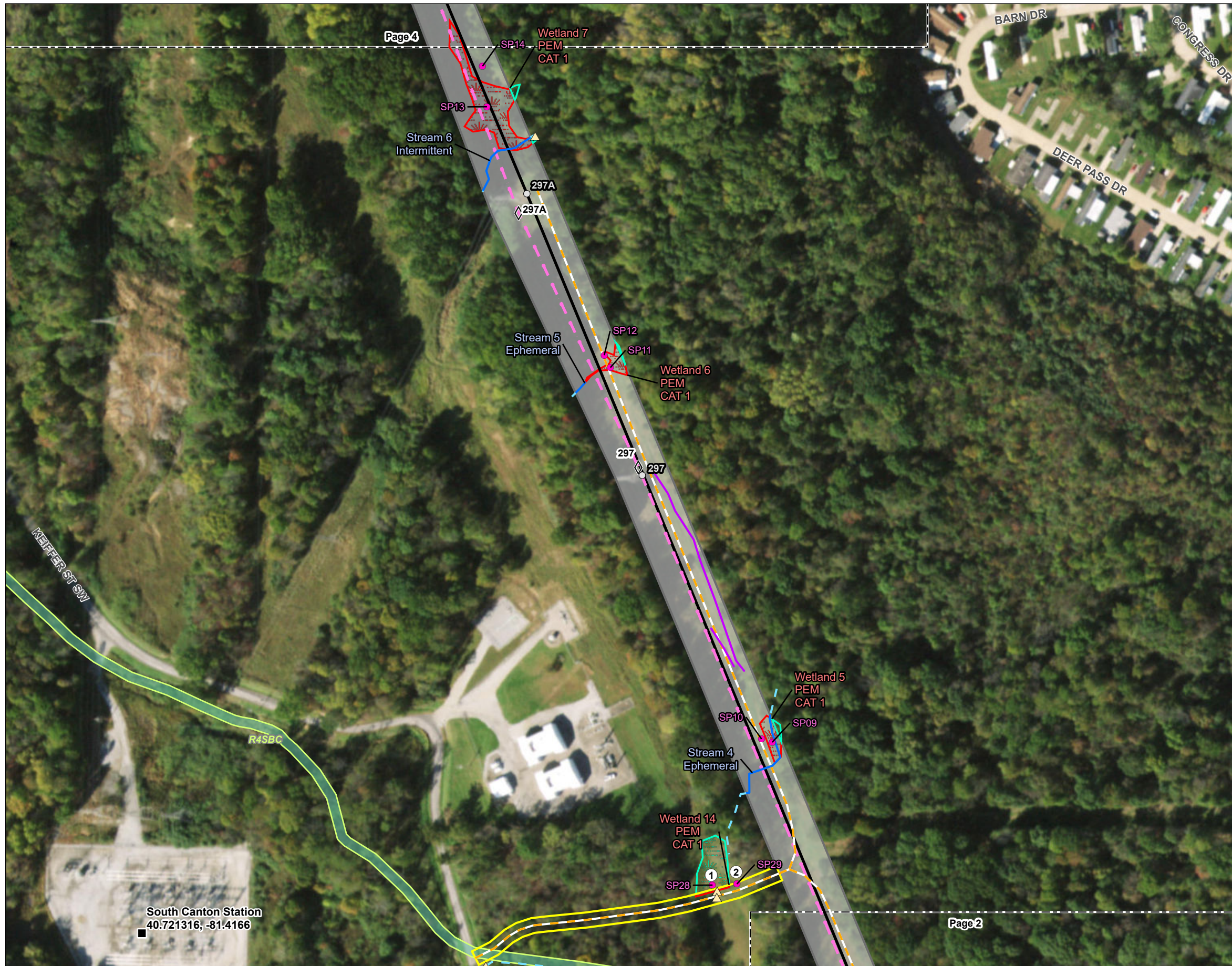
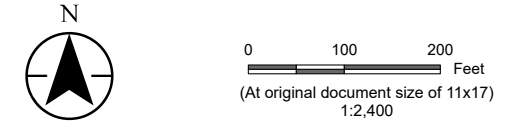
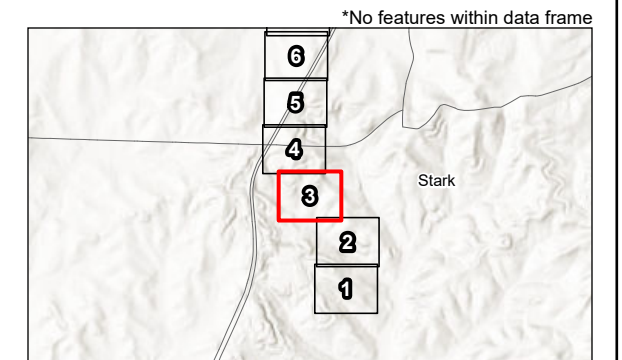


Figure No. **2**
Addendum Wetland and Waterbody Delineation Map
 Client/Project: AEP Ohio Transmission Company, Inc. 193708516
 South Canton-Torrey
 138 kV Line Rebuild Project
 Project Location: Stark County, Ohio
 Prepared by RA on 2023-01-09
 TR by JDP on 2023-01-09
 IR by AJK on 2023-03-13



- Legend**
- | | |
|---|--|
| ■ AEP Substation | ● Wetland Determination Sample Point |
| ○ Existing Structure to be Replaced | ○ Upland Drainage Feature |
| ◇ Proposed Structure | ○ Approximate Upland Drainage Feature |
| ◆ Proposed Distribution Structure | ○ Field Delineated Waterway |
| — Existing 138 kV Transmission Line to be Rebuilt | — Approximate Waterway |
| — Existing Distribution Line | ○ Field Delineated Emergent Wetland |
| — Proposed 138 kV Transmission Line | ○ Field Delineated Scrub-Shrub Wetland |
| — Proposed Access Road | ○ Approximate Wetland |
| □ Addendum Project Area | ○ National Wetlands Inventory Feature |
| ■ Project Area (Previously Surveyed) | ■ FEMA Flood Hazard Area* |
| ○ Photo Location | ■ 100-year Floodplain |
| ▲ Existing Culvert | ■ Floodway |



Notes
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 2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
 3. Orthophotography: 2019 NAIIP





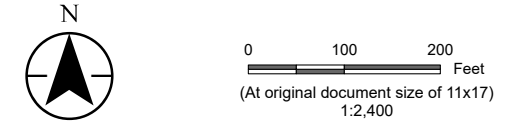
Figure No. 2

Addendum Wetland and Waterbody Delineation Map

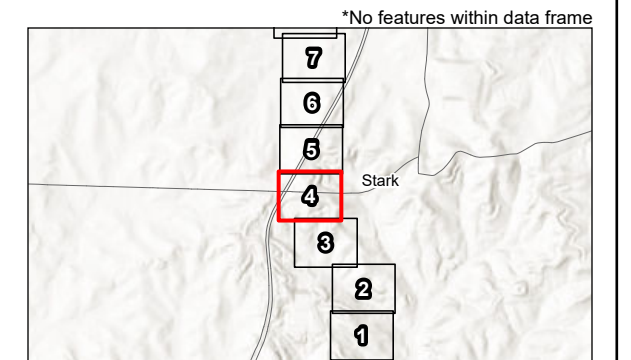
Client/Project
 AEP Ohio Transmission Company, Inc.
 South Canton-Torrey
 138 kV Line Rebuild Project

Project Location
 Stark County, Ohio

Prepared by RA on 2023-01-09
 TR by JDP on 2023-01-09
 IR by AJK on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - ◆ Proposed Distribution Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Existing Distribution Line
 - Proposed 138 kV Transmission Line
 - Proposed Access Road
 - Addendum Project Area
 - Project Area (Previously Surveyed)
 - Photo Location
 - ▲ Existing Culvert
 - Wetland Determination Sample Point
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Field Delineated Waterway
 - Approximate Waterway
 - Field Delineated Emergent Wetland
 - Field Delineated Scrub-Shrub Wetland
 - Approximate Wetland
 - National Wetlands Inventory Feature
 - FEMA Flood Hazard Area*
 - 100-year Floodplain
 - Floodway



Notes

- Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
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- Orthophotography: 2019 NAIP



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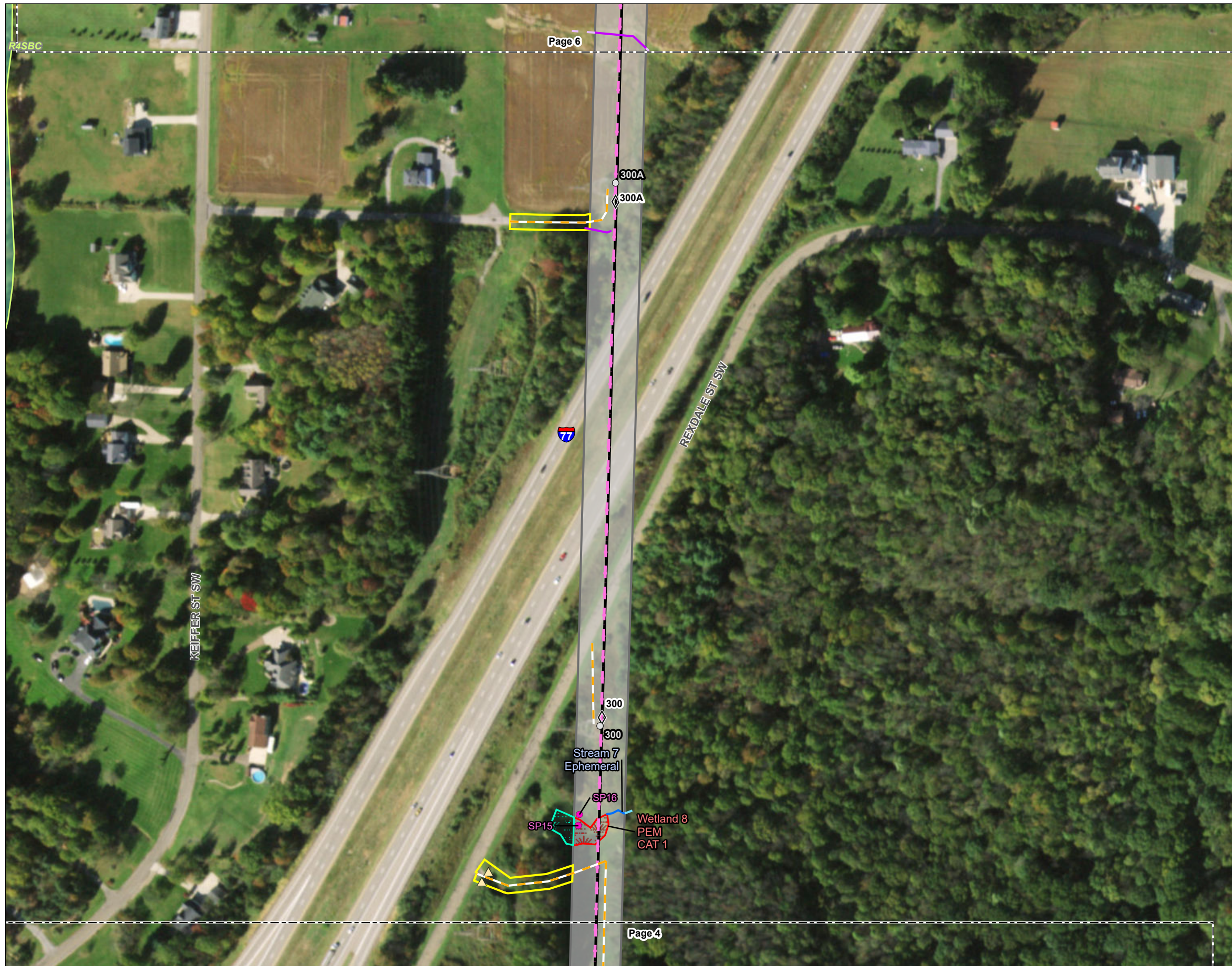
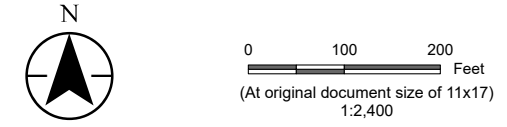


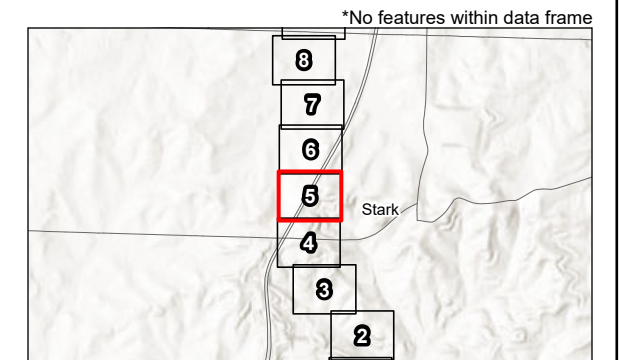
Figure No. **2**
Addendum Wetland and Waterbody Delineation Map

Client/Project: AEP Ohio Transmission Company, Inc. 193708516
 South Canton-Torrey
 138 kV Line Rebuild Project

Project Location: Stark County, Ohio
 Prepared by RA on 2023-01-09
 TR by JDP on 2023-01-09
 IR by AJK on 2023-03-13



- Legend**
- | | |
|---|--|
| ■ AEP Substation | ● Wetland Determination Sample Point |
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| □ Project Area (Previously Surveyed) | ○ FEMA Flood Hazard Area* |
| ○ Photo Location | ○ 100-year Floodplain |
| △ Existing Culvert | ○ Floodway |



Notes
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 3. Orthophotography: 2019 NAIP



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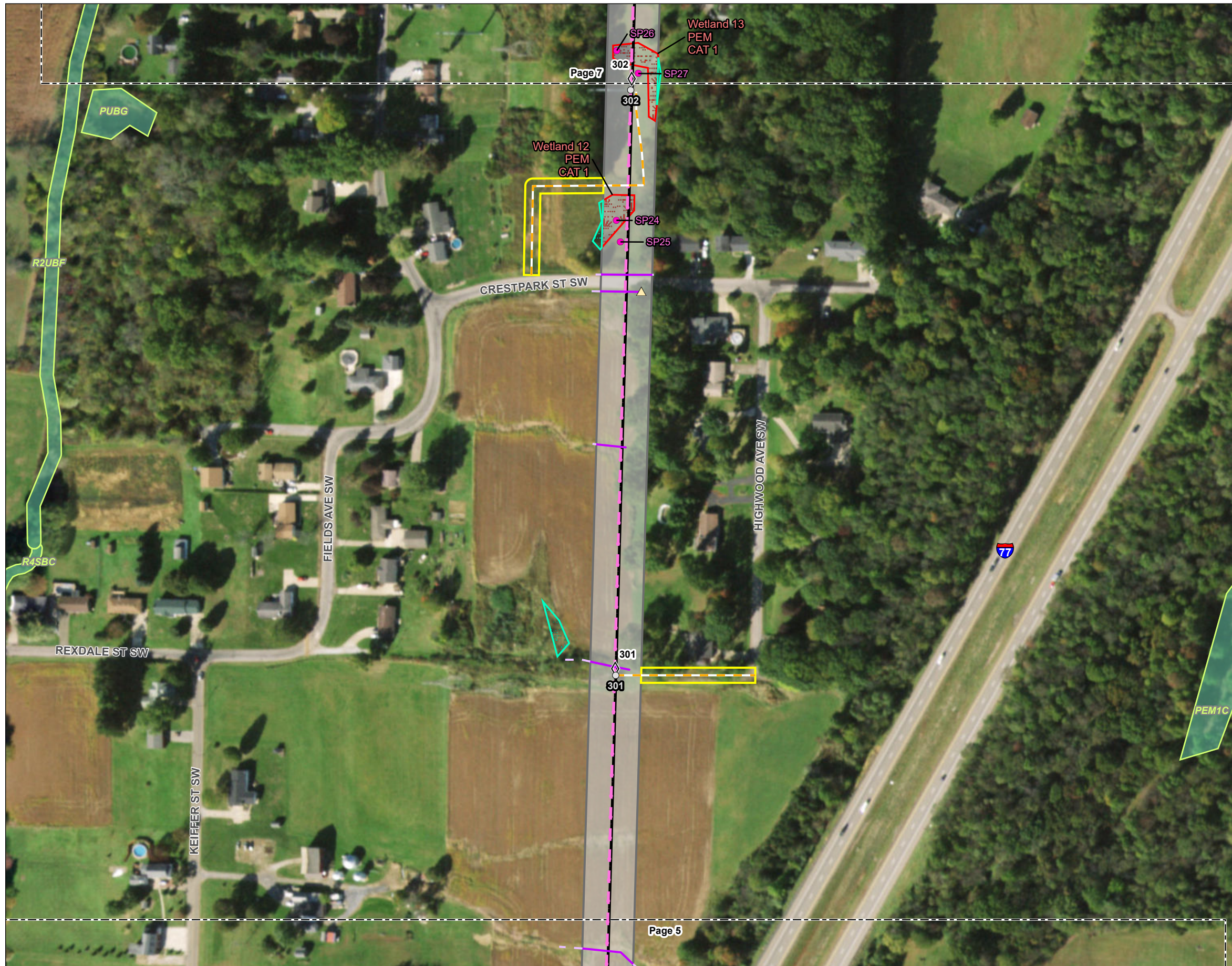
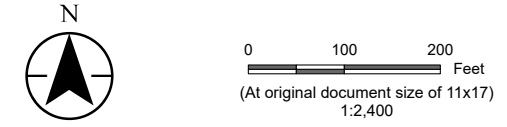
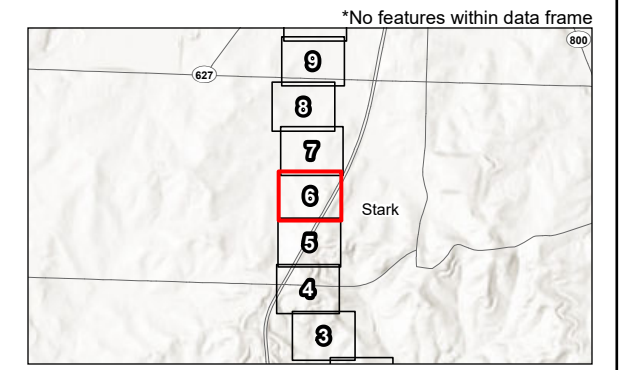


Figure No. **2**
 Title **Addendum Wetland and Waterbody Delineation Map**

Client/Project: AEP Ohio Transmission Company, Inc. 193708516
 South Canton-Torrey
 138 kV Line Rebuild Project
 Project Location: Stark County, Ohio
 Prepared by RA on 2023-01-09
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 IR by AJK on 2023-03-13



- Legend**
- | | |
|---|--|
| ■ AEP Substation | ● Wetland Determination Sample Point |
| ○ Existing Structure to be Replaced | ○ Upland Drainage Feature |
| ◇ Proposed Structure | ○ Approximate Upland Drainage Feature |
| ◆ Proposed Distribution Structure | ○ Field Delineated Waterway |
| — Existing 138 kV Transmission Line to be Rebuilt | — Approximate Waterway |
| — Existing Distribution Line | — Field Delineated Emergent Wetland |
| — Proposed 138 kV Transmission Line | — Field Delineated Scrub-Shrub Wetland |
| — Proposed Access Road | — Approximate Wetland |
| ■ Addendum Project Area | — National Wetlands Inventory Feature |
| ■ Project Area (Previously Surveyed) | ■ FEMA Flood Hazard Area* |
| ○ Photo Location | ■ 100-year Floodplain |
| ▲ Existing Culvert | ■ Floodway |



Notes
 1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



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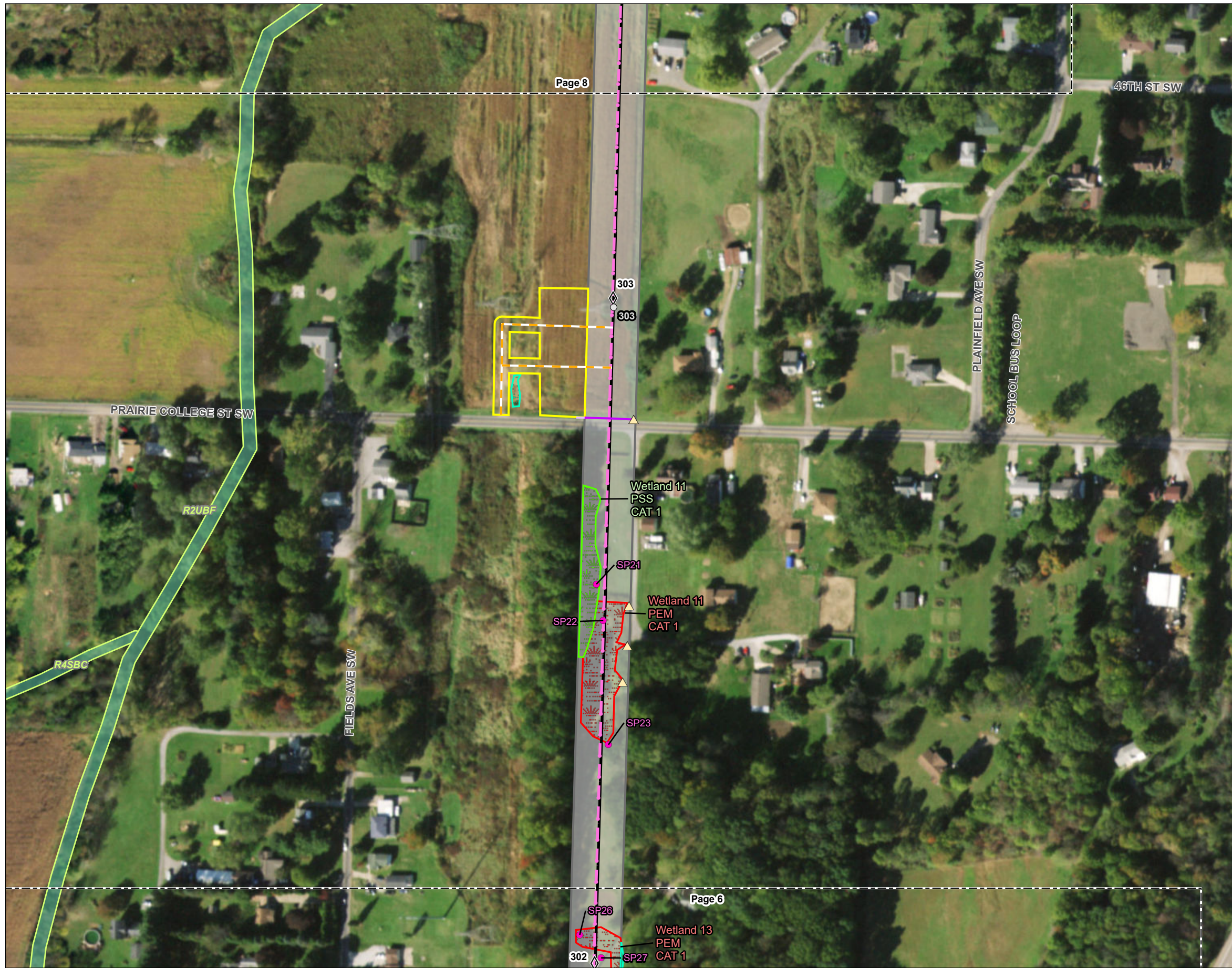


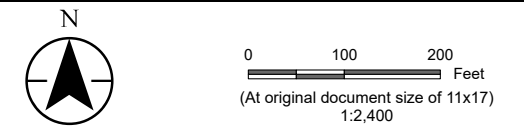
Figure No.
2

Title
Addendum Wetland and Waterbody Delineation Map

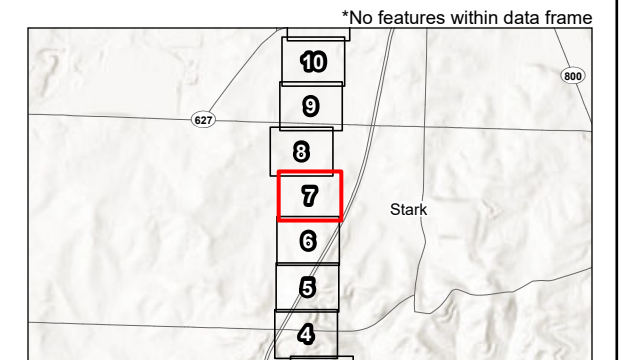
Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

Project Location
Stark County, Ohio

Prepared by RA on 2023-01-09
TR by JDP on 2023-01-09
IR by AJK on 2023-03-13



- Legend
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - ◆ Proposed Distribution Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Existing Distribution Line
 - Proposed 138 kV Transmission Line
 - Proposed Access Road
 - Addendum Project Area
 - Project Area (Previously Surveyed)
 - Photo Location
 - ▲ Existing Culvert
 - Wetland Determination Sample Point
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Field Delineated Waterway
 - Approximate Waterway
 - Field Delineated Emergent Wetland
 - Field Delineated Scrub-Shrub Wetland
 - Approximate Wetland
 - National Wetlands Inventory Feature
 - FEMA Flood Hazard Area*
 - 100-year Floodplain
 - Floodway



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
3. Orthophotography: 2019 NAIP



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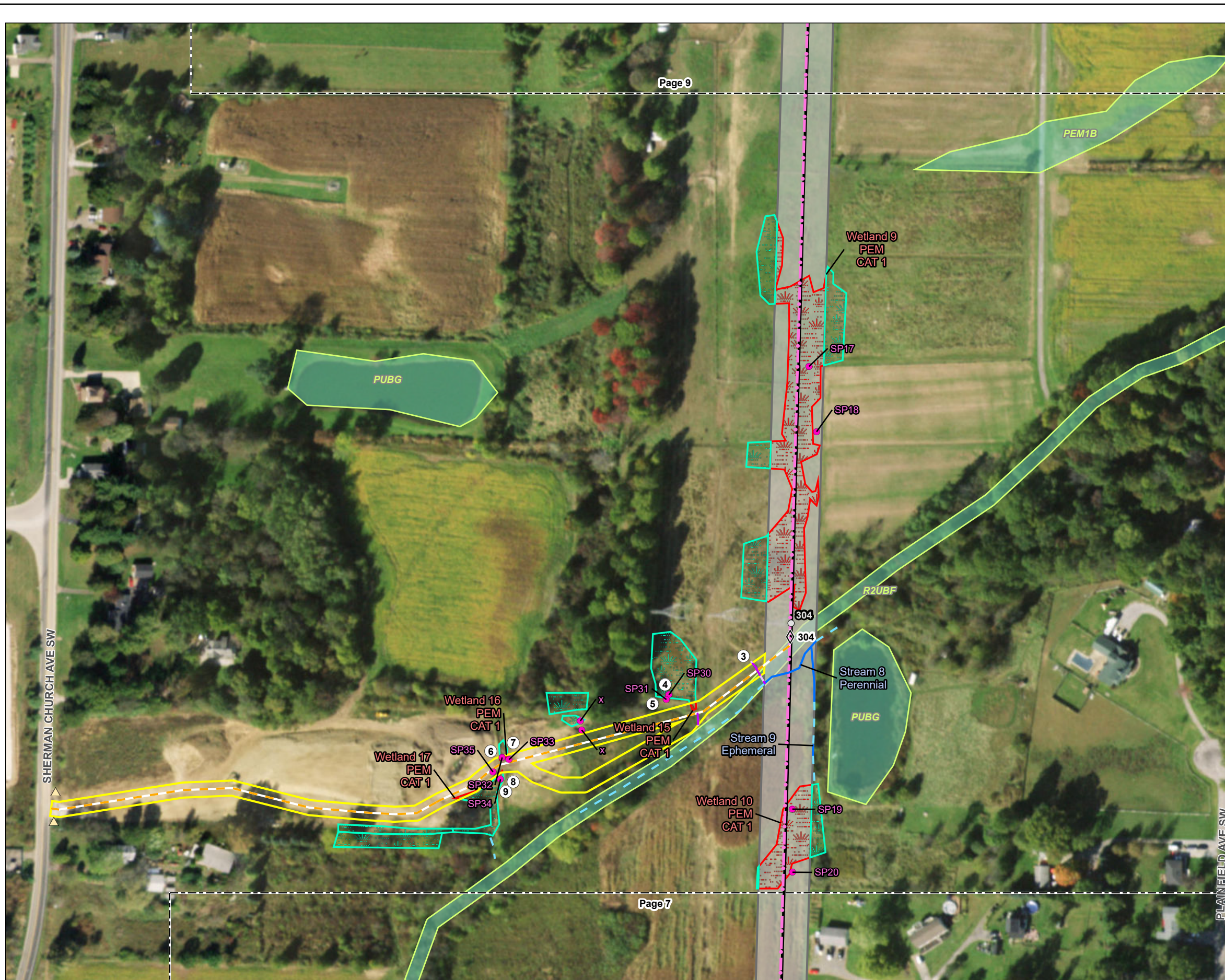
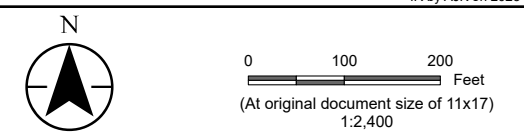
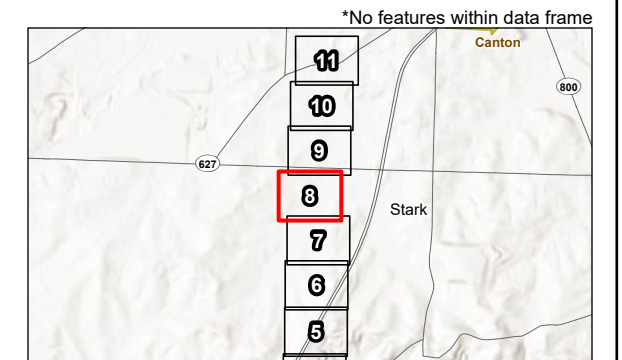


Figure No. **2**
Addendum Wetland and Waterbody Delineation Map

Client/Project: AEP Ohio Transmission Company, Inc. 193708516
 South Canton-Torrey
 138 kV Line Rebuild Project
 Project Location: Stark County, Ohio
 Prepared by RA on 2023-01-09
 TR by JDP on 2023-01-09
 IR by AJK on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - ◆ Proposed Distribution Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Existing Distribution Line
 - Proposed 138 kV Transmission Line
 - Proposed Access Road
 - Addendum Project Area
 - Project Area (Previously Surveyed)
 - Photo Location
 - ▲ Existing Culvert
 - Wetland Determination Sample Point
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Field Delineated Waterway
 - Approximate Waterway
 - Field Delineated Emergent Wetland
 - Field Delineated Scrub-Shrub Wetland
 - Approximate Wetland
 - National Wetlands Inventory Feature
 - FEMA Flood Hazard Area*
 - 100-year Floodplain
 - Floodway



Notes
 1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



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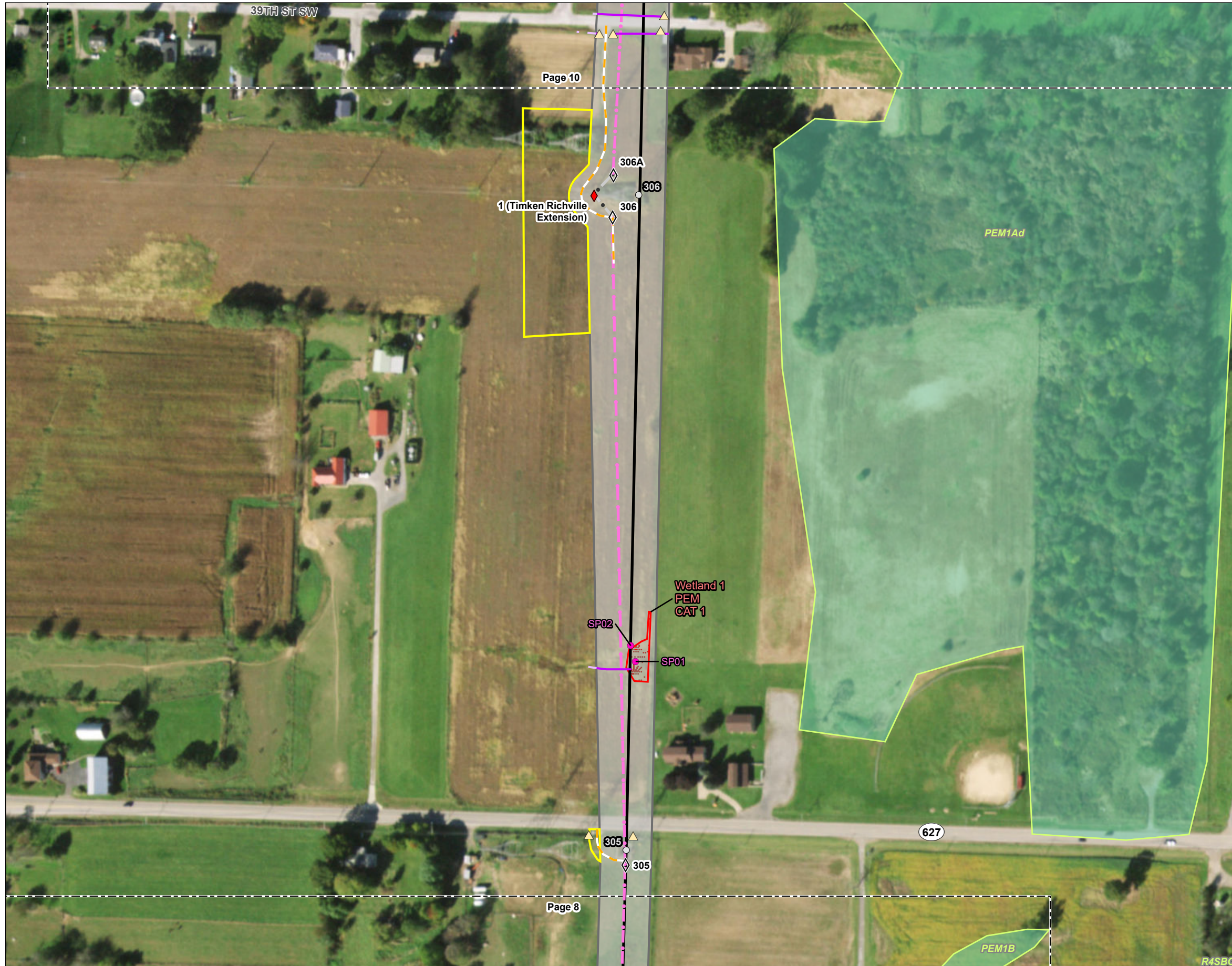


Figure No.

2

Title

Addendum Wetland and Waterbody Delineation Map

Client/Project
AEP Ohio Transmission Company, Inc.
South Canton-Torrey
138 kV Line Rebuild Project

193708516

Project Location
Stark County, Ohio

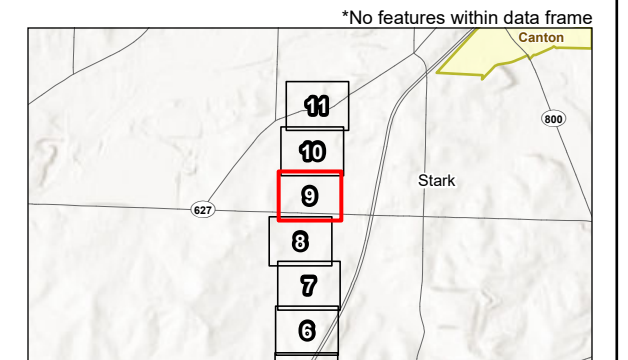
Prepared by RA on 2023-01-09
TR by JDP on 2023-01-09
IR by AJK on 2023-03-13



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Legend

- AEP Substation
- Existing Structure to be Replaced
- ◇ Proposed Structure
- ◆ Proposed Distribution Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Existing Distribution Line
- Proposed 138 kV Transmission Line
- Proposed Access Road
- Addendum Project Area
- Project Area (Previously Surveyed)
- Photo Location
- ▲ Existing Culvert
- Wetland Determination Sample Point
- Upland Drainage Feature
- Approximate Upland Drainage Feature
- Field Delineated Waterway
- Approximate Waterway
- Field Delineated Emergent Wetland
- Field Delineated Scrub-Shrub Wetland
- Approximate Wetland
- National Wetlands Inventory Feature
- FEMA Flood Hazard Area*
 - 100-year Floodplain
 - Floodway



- Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



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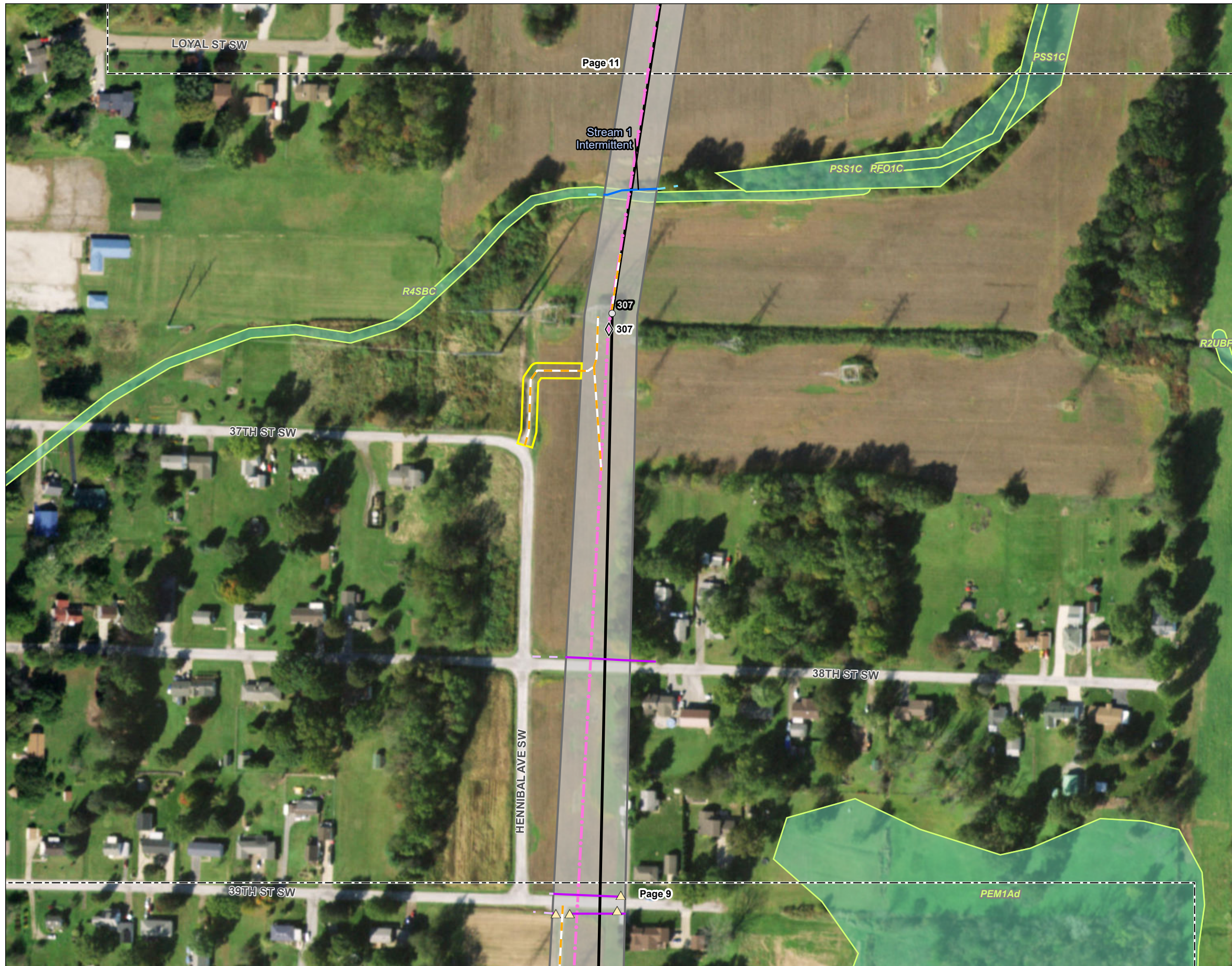


Figure No.

2

Title

Addendum Wetland and Waterbody Delineation Map

Client/Project
AEP Ohio Transmission Company, Inc.
South Canton-Torrey
138 kV Line Rebuild Project

193708516

Project Location
Stark County, Ohio

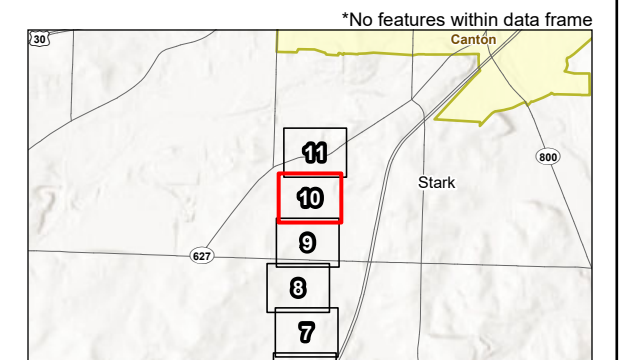
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TR by JDP on 2023-01-09
IR by AJK on 2023-03-13



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Legend

- AEP Substation
- Existing Structure to be Replaced
- ◇ Proposed Structure
- ◆ Proposed Distribution Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Existing Distribution Line
- Proposed 138 kV Transmission Line
- Proposed Access Road
- Addendum Project Area
- Project Area (Previously Surveyed)
- Photo Location
- ▲ Existing Culvert
- Wetland Determination Sample Point
- Upland Drainage Feature
- Approximate Upland Drainage Feature
- Field Delineated Waterway
- Approximate Waterway
- Field Delineated Emergent Wetland
- Field Delineated Scrub-Shrub Wetland
- Approximate Wetland
- National Wetlands Inventory Feature
- FEMA Flood Hazard Area*
- 100-year Floodplain
- Floodway



- Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



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Figure No.

2

Title

Addendum Wetland and Waterbody Delineation Map

Client/Project
AEP Ohio Transmission Company, Inc.
South Canton-Torrey
138 kV Line Rebuild Project

193708516

Project Location
Stark County, Ohio

Prepared by RA on 2023-01-09
TR by JDP on 2023-01-09
IR by AJK on 2023-03-13

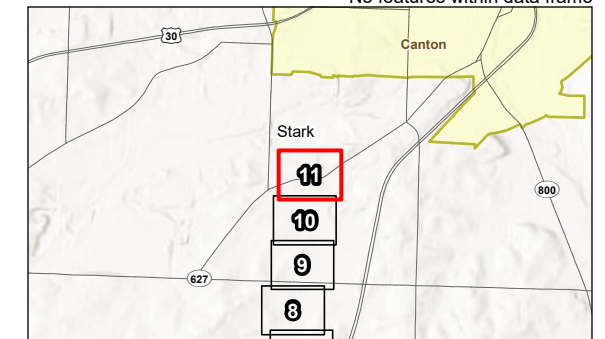


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Legend

- AEP Substation
- Existing Structure to be Replaced
- ◇ Proposed Structure
- ◆ Proposed Distribution Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Existing Distribution Line
- Proposed 138 kV Transmission Line
- Proposed Access Road
- Addendum Project Area
- Project Area (Previously Surveyed)
- Photo Location
- ▲ Existing Culvert
- Wetland Determination Sample Point
- Upland Drainage Feature
- Approximate Upland Drainage Feature
- Field Delineated Waterway
- Approximate Waterway
- Field Delineated Emergent Wetland
- Field Delineated Scrub-Shrub Wetland
- Approximate Wetland
- National Wetlands Inventory Feature
- FEMA Flood Hazard Area*
 - 100-year Floodplain
 - Floodway

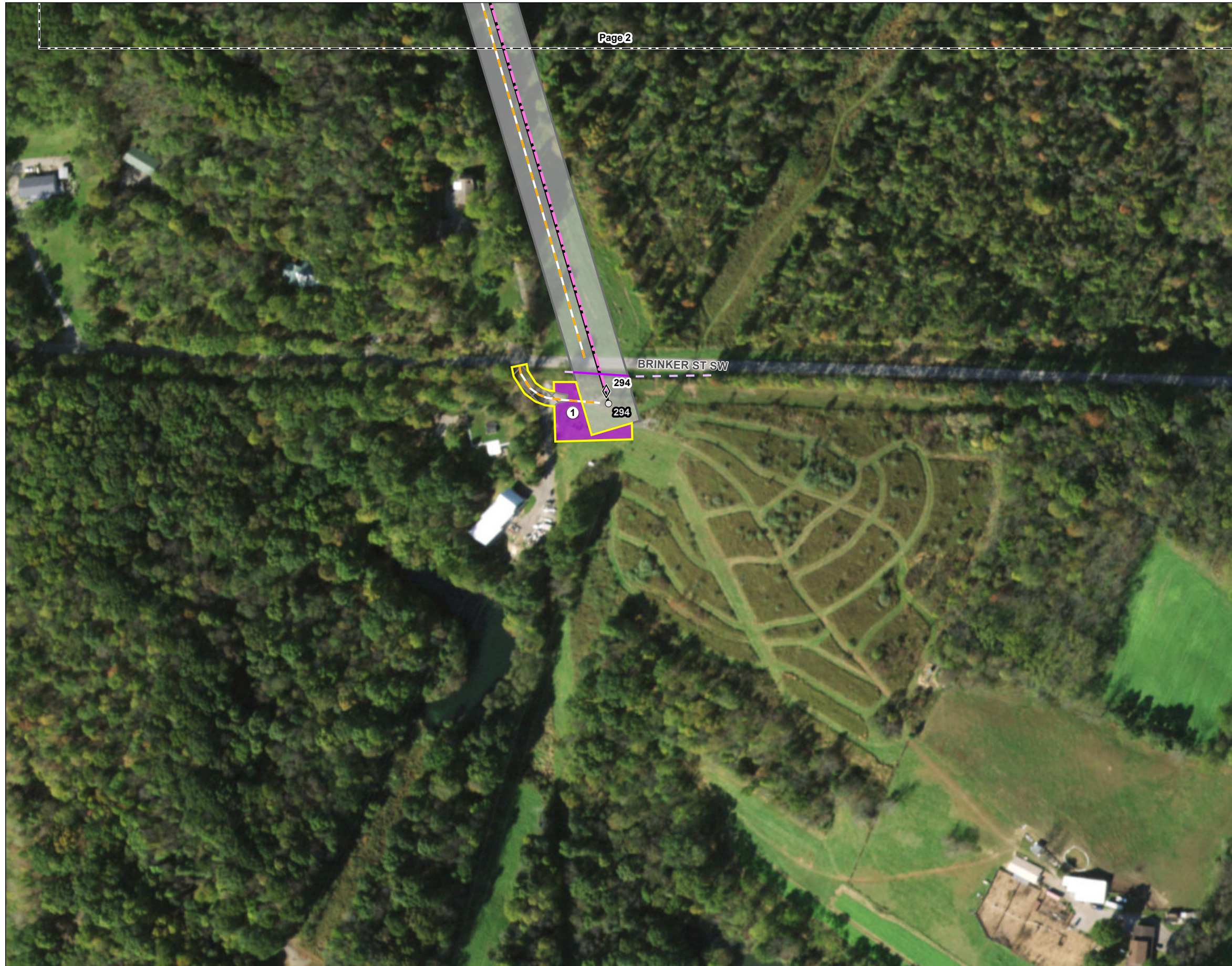
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- Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
 2. Data Sources: Stantec, AEP, USGS, USFWS, FEMA, NADS, OGRIP
 3. Orthophotography: 2019 NAIP



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Page 2

Figure No.

3

Title

Addendum Habitat Assessment Map

Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

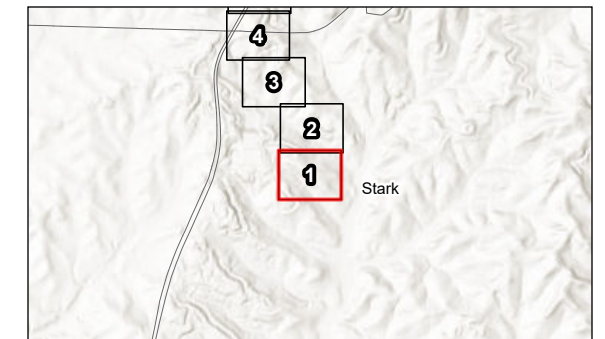
Project Location
Stark County, Ohio
Prepared by RA on 2023-01-09
TR by JDP on 2023-01-09
IR by AJK on 2023-03-13



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Legend

- AEP Substation
- Existing Structure to be Replaced
- ◇ Proposed Structure
- ◆ Proposed Distribution Structure
- Existing 138 kV Transmission Line to be Rebuilt
- Proposed 138 kV Transmission Line
- Existing Distribution Line
- Proposed Access Road
- Addendum Project Area
- Project Area (Previously Surveyed)
- Photo Location
- △ Existing Culvert
- Upland Drainage Feature
- Approximate Upland Drainage Feature
- Field Delineated Waterway
- Approximate Waterway
- Field Delineated Emergent Wetland
- Field Delineated Scrub-Shrub Wetland
- Approximate Wetland
- Habitat Area
 - Agricultural Field
 - Mixed Early Successional Second Growth Deciduous Forest
 - New Field
 - Old Field
 - Pasture
 - Residential Lawn
 - Industrial
 - Existing Paved Road
 - Existing Gravel Road



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
3. Orthophotography: 2019 NAIP



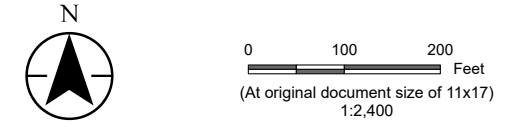
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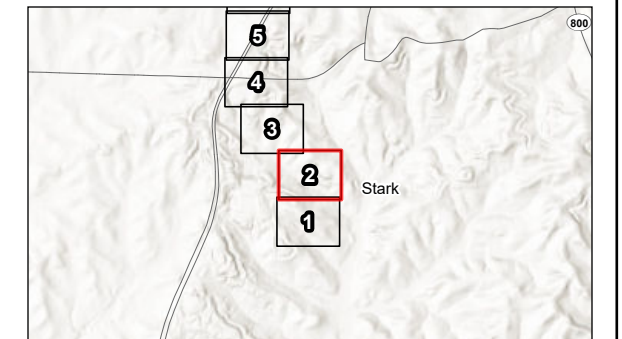
Figure No. **3**
Title **Addendum Habitat Assessment Map**

Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

Project Location
Stark County, Ohio
Prepared by RA on 2023-01-09
TR by JDP on 2023-01-09
IR by AJK on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - ◆ Proposed Distribution Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Proposed 138 kV Transmission Line
 - Existing Distribution Line
 - Proposed Access Road
 - Addendum Project Area
 - Project Area (Previously Surveyed)
 - Photo Location
 - △ Existing Culvert
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Field Delineated Waterway
 - Approximate Waterway
 - Field Delineated Emergent Wetland
 - Field Delineated Scrub-Shrub Wetland
 - Approximate Wetland
- Habitat Area**
- Agricultural Field
 - Mixed Early Successional Second Growth Deciduous Forest
 - New Field
 - Old Field
 - Pasture
 - Residential Lawn
 - Industrial
 - Existing Paved Road
 - Existing Gravel Road



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
3. Orthophotography: 2019 NAIP



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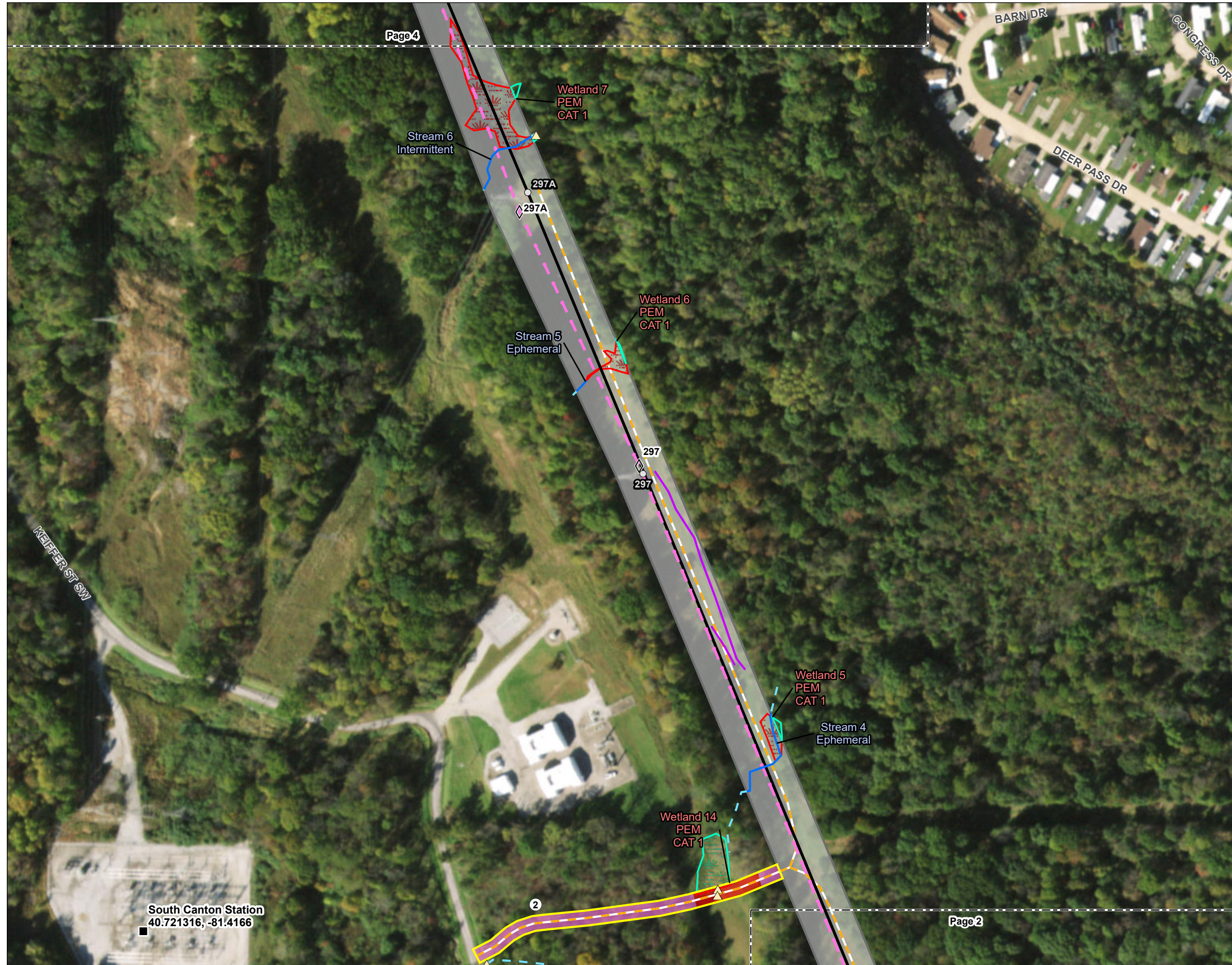
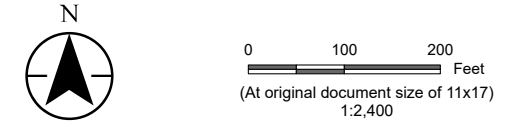
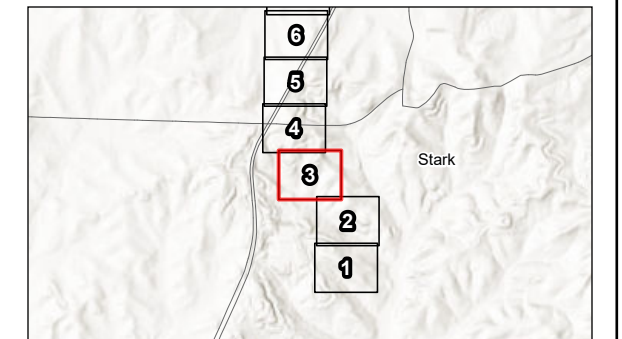


Figure No. **3**
Title **Addendum Habitat Assessment Map**
Client/Project AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project
Project Location Stark County, Ohio Prepared by RA on 2023-01-09
TR by JDP on 2023-01-09
IR by AJK on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - ◆ Proposed Distribution Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Proposed 138 kV Transmission Line
 - Existing Distribution Line
 - Proposed Access Road
 - Addendum Project Area
 - Project Area (Previously Surveyed)
 - Photo Location
 - △ Existing Culvert
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Field Delineated Waterway
 - Approximate Waterway
 - Field Delineated Emergent Wetland
 - Field Delineated Scrub-Shrub Wetland
 - Approximate Wetland
 - Habitat Area
 - Agricultural Field
 - Mixed Early Successional Second Growth Deciduous Forest
 - New Field
 - Old Field
 - Pasture
 - Residential Lawn
 - Industrial
 - Existing Paved Road
 - Existing Gravel Road



Notes
1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
3. Orthophotography: 2019 NAIP



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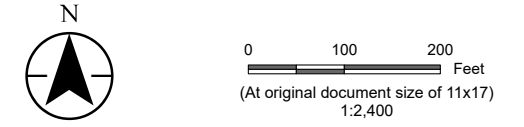


Figure No. **3**
Title **Addendum Habitat Assessment Map**

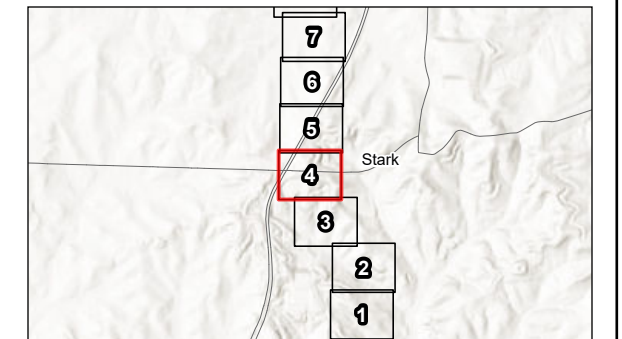
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AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

Project Location
Stark County, Ohio

Prepared by RA on 2023-01-09
TR by JDP on 2023-01-09
IR by AJK on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - ◆ Proposed Distribution Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Proposed 138 kV Transmission Line
 - Existing Distribution Line
 - Proposed Access Road
 - Addendum Project Area
 - Project Area (Previously Surveyed)
 - Photo Location
 - △ Existing Culvert
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Field Delineated Waterway
 - Approximate Waterway
 - Field Delineated Emergent Wetland
 - Field Delineated Scrub-Shrub Wetland
 - Approximate Wetland
- Habitat Area**
- Agricultural Field
 - Mixed Early Successional Second Growth Deciduous Forest
 - New Field
 - Old Field
 - Pasture
 - Residential Lawn
 - Industrial
 - Existing Paved Road
 - Existing Gravel Road



Notes
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2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
3. Orthophotography: 2019 NAIP



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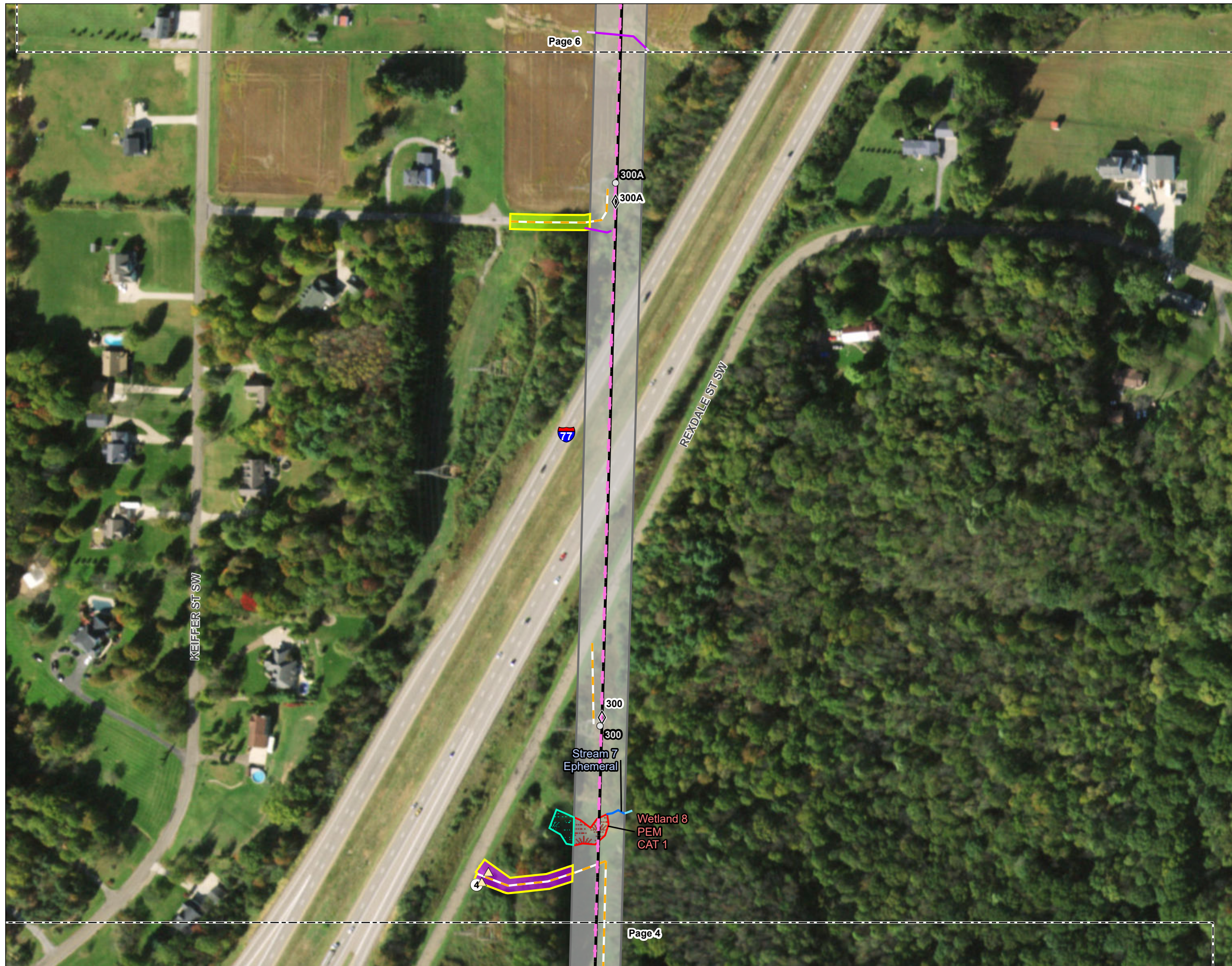
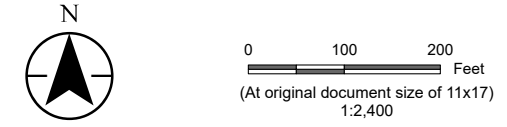


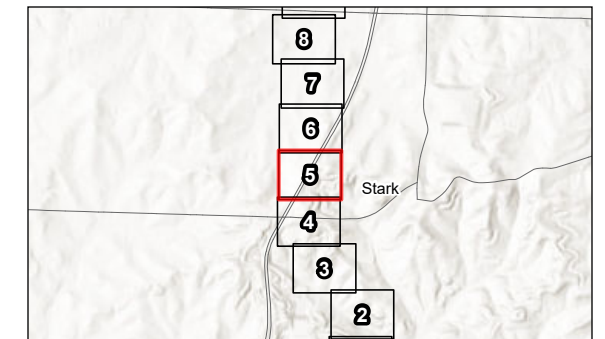
Figure No. **3**
Title **Addendum Habitat Assessment Map**

Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

Project Location
Stark County, Ohio
Prepared by RA on 2023-01-09
TR by JDP on 2023-01-09
IR by AJK on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - ◆ Proposed Distribution Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Proposed 138 kV Transmission Line
 - Existing Distribution Line
 - Proposed Access Road
 - Addendum Project Area
 - Project Area (Previously Surveyed)
 - Photo Location
 - △ Existing Culvert
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
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 - Approximate Waterway
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 - Field Delineated Scrub-Shrub Wetland
 - Approximate Wetland
- Habitat Area**
- Agricultural Field
 - Mixed Early Successional Second Growth Deciduous Forest
 - New Field
 - Old Field
 - Pasture
 - Residential Lawn
 - Industrial
 - Existing Paved Road
 - Existing Gravel Road



Notes
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2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
3. Orthophotography: 2019 NAIP



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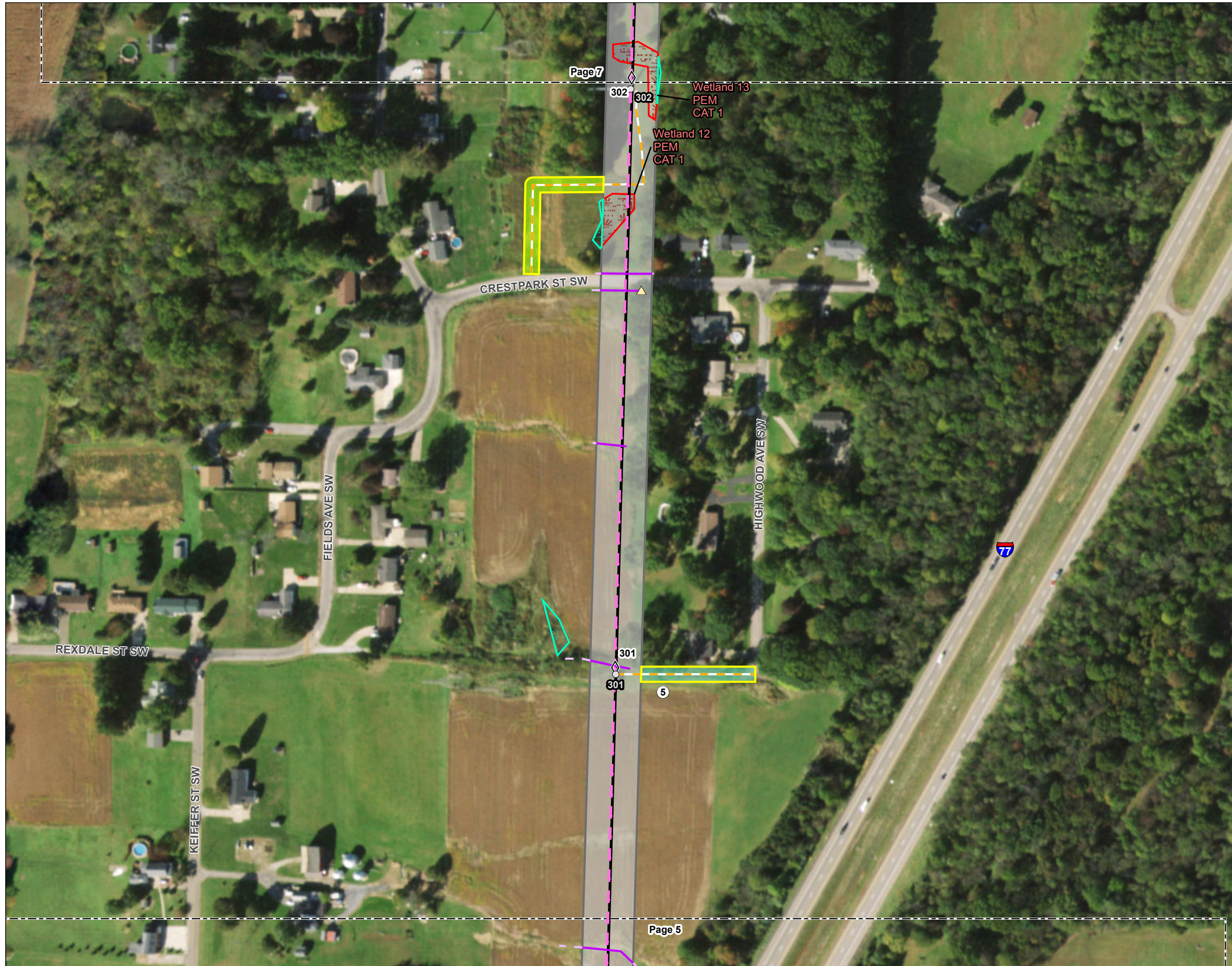


Figure No.

3

Title

Addendum Habitat Assessment Map

Client/Project
AEP Ohio Transmission Company, Inc.
South Canton-Torrey
138 kV Line Rebuild Project

193708516

Project Location
Stark County, Ohio

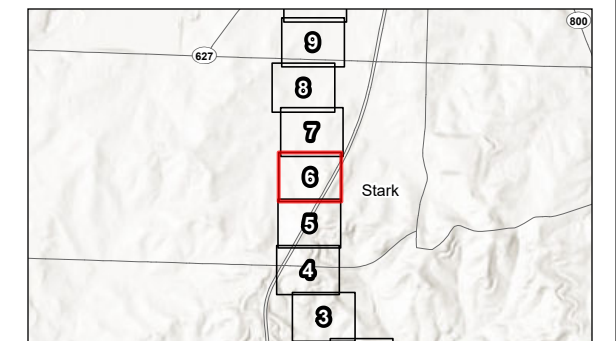
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TR by JDP on 2023-01-09
IR by AJK on 2023-03-13



0 100 200 Feet
(At original document size of 11x17)
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Legend

- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - ◆ Proposed Distribution Structure
 - ⚡ Existing 138 kV Transmission Line to be Rebuilt
 - ⚡ Proposed 138 kV Transmission Line
 - ⚡ Existing Distribution Line
 - ⚡ Proposed Access Road
 - ▭ Addendum Project Area
 - ▭ Project Area (Previously Surveyed)
 - Photo Location
 - △ Existing Culvert
 - ⤴ Upland Drainage Feature
 - ⤴ Approximate Upland Drainage Feature
 - ⤴ Field Delineated Waterway
 - ⤴ Approximate Waterway
 - ⬭ Field Delineated Emergent Wetland
 - ⬭ Field Delineated Scrub-Shrub Wetland
 - ⬭ Approximate Wetland
- Habitat Area
- ▭ Agricultural Field
 - ▭ Mixed Early Successional Second Growth Deciduous Forest
 - ▭ New Field
 - ▭ Old Field
 - ▭ Pasture
 - ▭ Residential Lawn
 - ▭ Industrial
 - ▭ Existing Paved Road
 - ▭ Existing Gravel Road



- Notes
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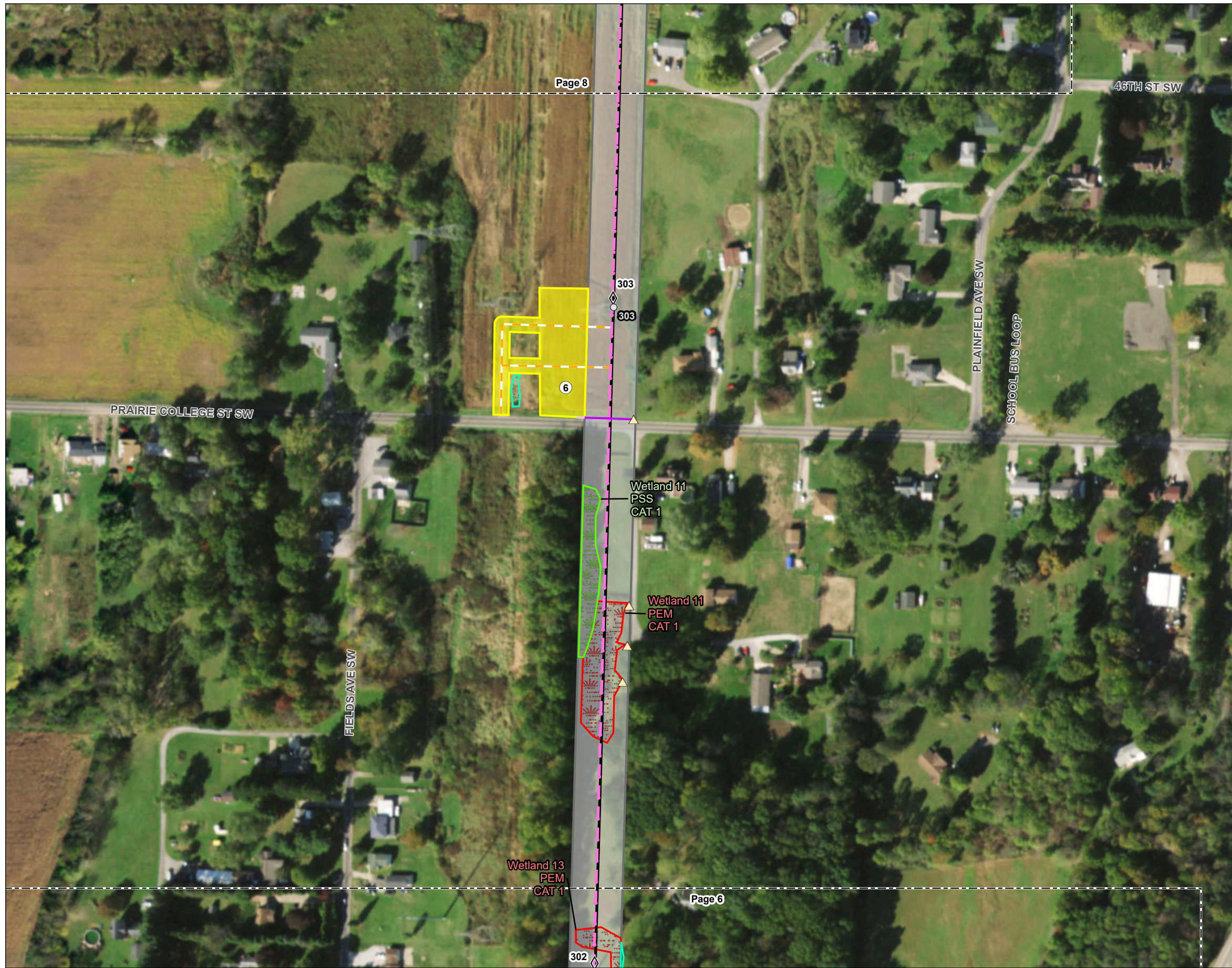
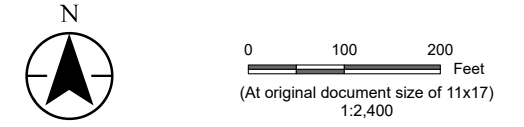


Figure No.
3
Title
Addendum Habitat Assessment Map

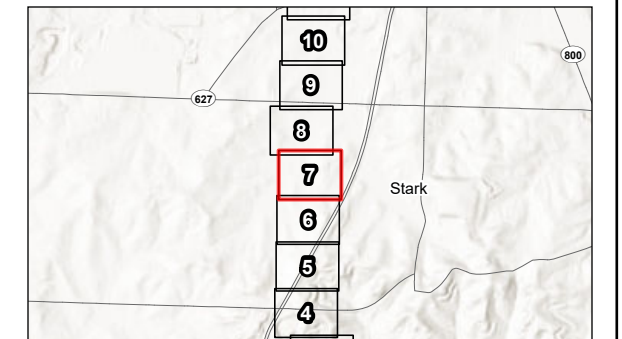
Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

Project Location
Stark County, Ohio

Prepared by RA on 2023-01-09
TR by JDP on 2023-01-09
IR by AJK on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - ◆ Proposed Distribution Structure
 - ~ Existing 138 kV Transmission Line to be Rebuilt
 - ~ Proposed 138 kV Transmission Line
 - ~ Existing Distribution Line
 - ~ Proposed Access Road
 - ▭ Addendum Project Area
 - ▭ Project Area (Previously Surveyed)
 - Photo Location
 - ▲ Existing Culvert
 - ~ Upland Drainage Feature
 - ~ Approximate Upland Drainage Feature
 - ~ Field Delineated Waterway
 - ~ Approximate Waterway
 - Field Delineated Emergent Wetland
 - Field Delineated Scrub-Shrub Wetland
 - Approximate Wetland
- Habitat Area**
- ▭ Agricultural Field
 - ▭ Mixed Early Successional Second Growth Deciduous Forest
 - ▭ New Field
 - ▭ Old Field
 - ▭ Pasture
 - ▭ Residential Lawn
 - ▭ Industrial
 - ▭ Existing Paved Road
 - ▭ Existing Gravel Road



Notes

1. Coordinate System: NAD 1983 StatePlane Ohio South FIPS 3402 Feet
2. Data Sources: Stantec, AEP, USGS, NADS, OGRIP
3. Orthophotography: 2019 NAIP



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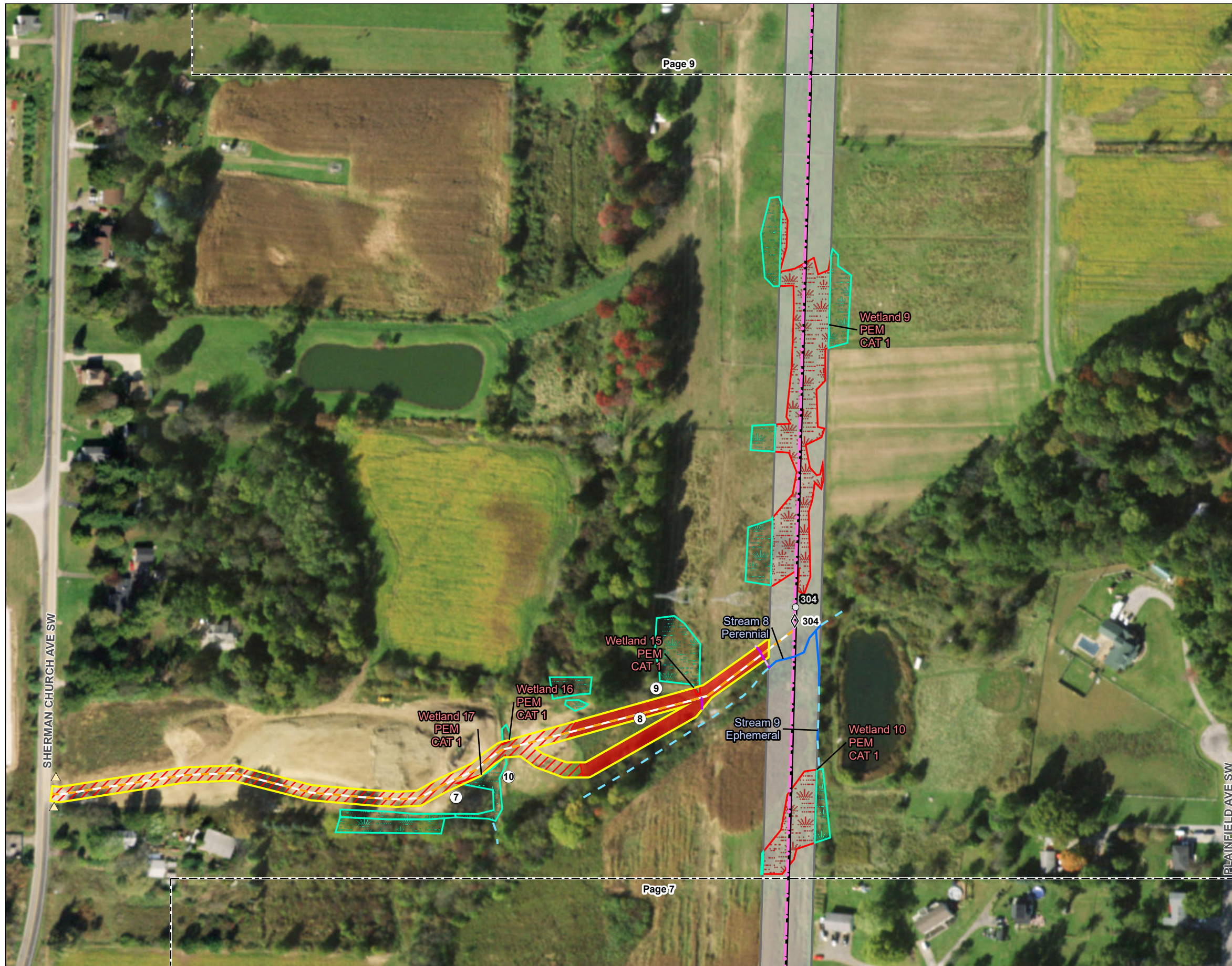
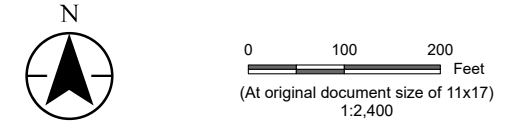


Figure No. **3**
Title **Addendum Habitat Assessment Map**

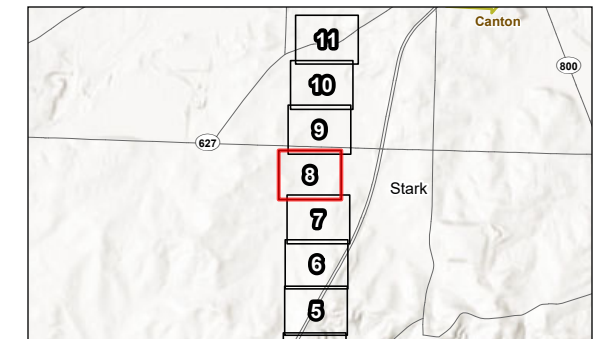
Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

Project Location
Stark County, Ohio

Prepared by RA on 2023-01-09
TR by JDP on 2023-01-09
IR by AJK on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - ◆ Proposed Distribution Structure
 - Existing 138 kV Transmission Line to be Rebuilt
 - Proposed 138 kV Transmission Line
 - Existing Distribution Line
 - Proposed Access Road
 - Addendum Project Area
 - Project Area (Previously Surveyed)
 - Photo Location
 - △ Existing Culvert
 - Upland Drainage Feature
 - Approximate Upland Drainage Feature
 - Field Delineated Waterway
 - Approximate Waterway
 - Field Delineated Emergent Wetland
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 - Approximate Wetland
- Habitat Area**
- Agricultural Field
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 - New Field
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3. Orthophotography: 2019 NAIP



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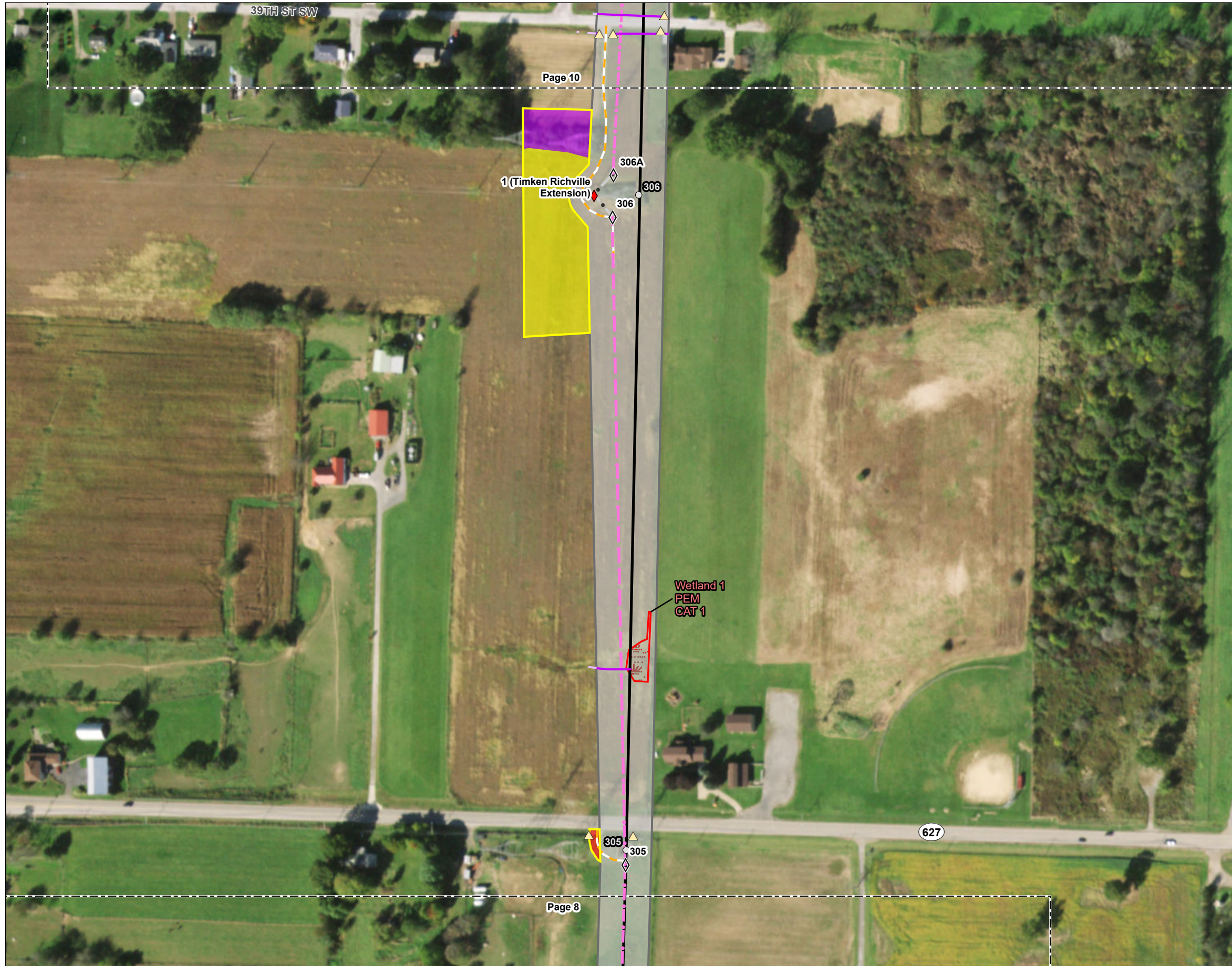
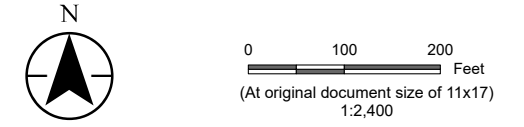


Figure No. **3**
Addendum Habitat Assessment Map

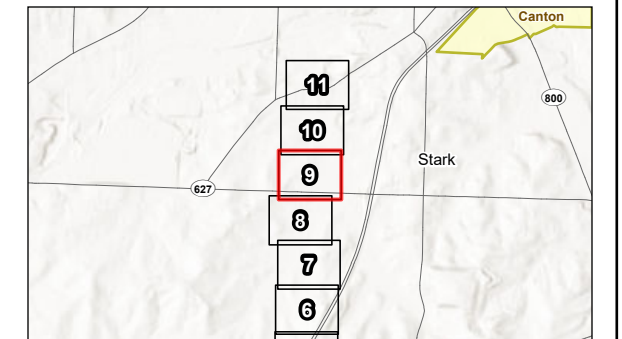
Client/Project
 AEP Ohio Transmission Company, Inc. 193708516
 South Canton-Torrey
 138 kV Line Rebuild Project

Project Location
 Stark County, Ohio

Prepared by RA on 2023-01-09
 TR by JDP on 2023-01-09
 IR by AJK on 2023-03-13



- Legend**
- | | | | | | | | | | | | | | | | | |
|-------------------------------------|--|-----------------------|-----------------------------------|---|-------------------------------------|------------------------------|---|-------------------------|--------------------------------------|------------------|--------------------|---------------------------|---------------------------------------|-----------------------------|------------------------|--|
| ■ AEP Substation | ○ Existing Structure to be Replaced | ◇ Proposed Structure | ◆ Proposed Distribution Structure | ⚡ Existing 138 kV Transmission Line to be Rebuilt | ⚡ Proposed 138 kV Transmission Line | ⚡ Existing Distribution Line | ⚡ Proposed Access Road | ▭ Addendum Project Area | ▭ Project Area (Previously Surveyed) | ○ Photo Location | ▲ Existing Culvert | ⤵ Upland Drainage Feature | ⤵ Approximate Upland Drainage Feature | ⤵ Field Delineated Waterway | ⤵ Approximate Waterway | |
| ○ Field Delineated Emergent Wetland | ○ Field Delineated Scrub-Shrub Wetland | ○ Approximate Wetland | Habitat Area | | | ▭ Agricultural Field | ▭ Mixed Early Successional Second Growth Deciduous Forest | ▭ New Field | ▭ Old Field | ▭ Pasture | ▭ Residential Lawn | ▭ Industrial | ▭ Existing Paved Road | ▭ Existing Gravel Road | | |



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 3. Orthophotography: 2019 NAIP



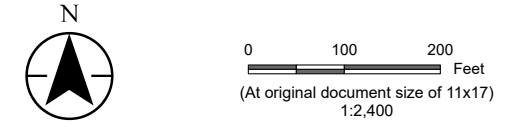
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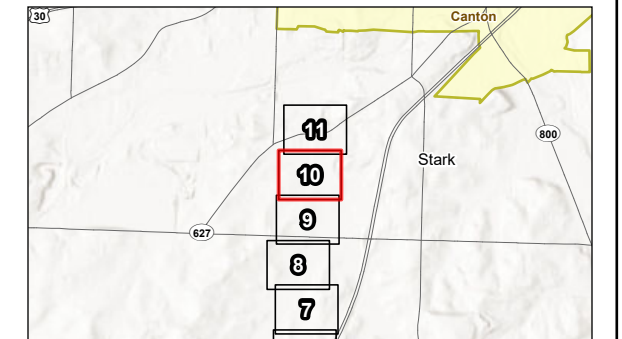
Figure No. **3**
Title **Addendum Habitat Assessment Map**

Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

Project Location
Stark County, Ohio
Prepared by RA on 2023-01-09
TR by JDP on 2023-01-09
IR by AJK on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
 - ◇ Proposed Structure
 - ◆ Proposed Distribution Structure
 - ⚡ Existing 138 kV Transmission Line to be Rebuilt
 - ⚡ Proposed 138 kV Transmission Line
 - ⚡ Existing Distribution Line
 - ⚡ Proposed Access Road
 - ▭ Addendum Project Area
 - ▭ Project Area (Previously Surveyed)
 - Photo Location
 - △ Existing Culvert
 - ⤴ Upland Drainage Feature
 - ⤴ Approximate Upland Drainage Feature
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 - ⤴ Approximate Waterway
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 - ⦶ Field Delineated Scrub-Shrub Wetland
 - ⦶ Approximate Wetland
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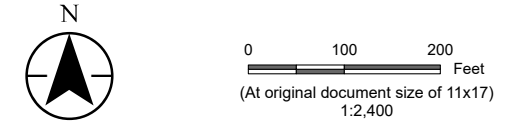


Figure No.
3

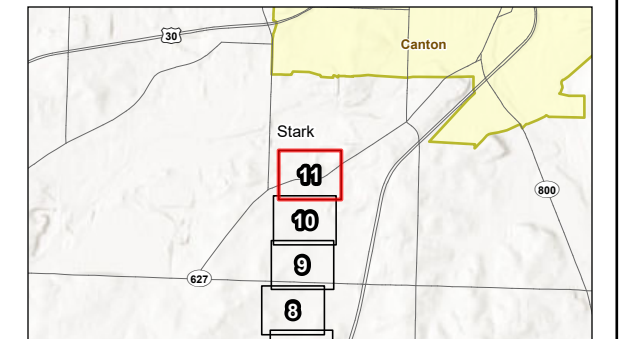
Title
Addendum Habitat Assessment Map

Client/Project
AEP Ohio Transmission Company, Inc. 193708516
South Canton-Torrey
138 kV Line Rebuild Project

Project Location
Stark County, Ohio Prepared by RA on 2023-01-09
TR by JDP on 2023-01-09
IR by AJK on 2023-03-13



- Legend**
- AEP Substation
 - Existing Structure to be Replaced
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 - ◆ Proposed Distribution Structure
 - ⚡ Existing 138 kV Transmission Line to be Rebuilt
 - ⚡ Proposed 138 kV Transmission Line
 - ⚡ Existing Distribution Line
 - 🛣️ Proposed Access Road
 - 🟡 Addendum Project Area
 - 🟠 Project Area (Previously Surveyed)
 - 📍 Photo Location
 - 📐 Existing Culvert
 - 🌊 Upland Drainage Feature
 - 🌊 Approximate Upland Drainage Feature
 - 🌊 Field Delineated Waterway
 - 🌊 Approximate Waterway
 - 🌊 Field Delineated Emergent Wetland
 - 🌊 Field Delineated Scrub-Shrub Wetland
 - 🌊 Approximate Wetland
- Habitat Area**
- 🟡 Agricultural Field
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 - 🟢 New Field
 - 🟣 Old Field
 - 🔴 Pasture
 - 🟩 Residential Lawn
 - 🔴 Industrial
 - 🛣️ Existing Paved Road
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3. Orthophotography: 2019 NAIP



AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 1. View of Wetland 14. Photograph taken facing north.



Photograph Location 1. View of Wetland 14. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 1. View of Wetland 14. Photograph taken facing south.



Photograph Location 1. View of Wetland 14. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 1. View of soil profile at wetland determination sample point SP28.



Photograph Location 2. View of upland (pasture habitat) at wetland determination sample point SP29. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 2. View of upland (pasture habitat) at wetland determination sample point SP29. Photograph taken facing south.



Photograph Location 3. Representative view of an upland drainage feature within the Project area. Photograph taken facing southeast.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 4. View of Wetland 15. Photograph taken facing north.



Photograph Location 4. View of Wetland 15. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 4. View of Wetland 15. Photograph taken facing south.



Photograph Location 4. View of Wetland 15. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 4. View of soil profile at wetland determination sample point SP30.



Photograph Location 5. View of upland (pasture habitat) at wetland determination sample point SP31. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 5. View of upland (pasture habitat) at wetland determination sample point SP31. Photograph taken facing west.



Photograph Location 6. View of Wetland 16. Photograph taken facing north.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 6. View of Wetland 16. Photograph taken facing east.



Photograph Location 6. View of Wetland 16. Photograph taken facing south.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 6. View of Wetland 16. Photograph taken facing west.



Photograph Location 6. View of soil profile at wetland determination sample point SP32.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 7. View of upland (industrial land) at wetland determination sample point SP33. Photograph taken facing south.



Photograph Location 7. View of upland (industrial land) at wetland determination sample point SP33. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 8. View of Wetland 17. Photograph taken facing north.



Photograph Location 8. View of Wetland 17. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 8. View of Wetland 17. Photograph taken facing south.



Photograph Location 8. View of Wetland 17. Photograph taken facing west.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 8. View of soil profile at wetland determination sample point SP34.



Photograph Location 9. View of upland (industrial land) at wetland determination sample point SP35. Photograph taken facing east.

AEP Ohio Transmission Company, Inc.
South Canton-Torrey 138 kV Line Rebuild Project, Stark County, Ohio
Addendum Ecological Survey Memo



Photograph Location 9. View of upland (industrial land) at wetland determination sample point SP35. Photograph taken facing north.

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 12/21/22
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	County: Stark
Investigator #2: Malea Casey		Soil Unit: MsD- Muskingum silt loam, 12 to 18 percent slopes	State: Ohio
Soil Unit: MsD- Muskingum silt loam, 12 to 18 percent slopes		NWI/WWI Classification: N/A	Wetland ID: Wetland 14
Landform: Toeslope	Local Relief: Concave	Datum: NAD83	Sample Point: SP28
Slope (%): 1-2	Latitude: 40.721541	Longitude: -81.412516	Community ID: PEM
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Township: --		Dir: --	
Range: --			

SUMMARY OF FINDINGS			
Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks:			

HYDROLOGY		
Wetland Hydrology Indicators (Check here if indicators are not present): <input type="checkbox"/>		
Primary:		Secondary:
<input type="checkbox"/> A1 - Surface Water	<input type="checkbox"/> B9 - Water-Stained Leaves	<input type="checkbox"/> B6 - Surface Soil Cracks
<input type="checkbox"/> A2 - High Water Table	<input type="checkbox"/> B13 - Aquatic Fauna	<input type="checkbox"/> B10 - Drainage Patterns
<input type="checkbox"/> A3 - Saturation	<input type="checkbox"/> B15 - Marl Deposits	<input type="checkbox"/> B16 - Moss Trim Lines
<input type="checkbox"/> B1 - Water Marks	<input type="checkbox"/> C1 - Hydrogen Sulfide Odor	<input type="checkbox"/> C2 - Dry-Season Water Table
<input type="checkbox"/> B2 - Sediment Deposits	<input checked="" type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots	<input type="checkbox"/> C8 - Crayfish Burrows
<input type="checkbox"/> B3 - Drift Deposits	<input type="checkbox"/> C4 - Presence of Reduced Iron	<input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery
<input type="checkbox"/> B4 - Algal Mat or Crust	<input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils	<input type="checkbox"/> D1 - Stunted or Stressed Plants
<input type="checkbox"/> B5 - Iron Deposits	<input type="checkbox"/> C7 - Thin Muck Surface	<input checked="" type="checkbox"/> D2 - Geomorphic Position
<input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> D3 - Shallow Aquitard
<input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface		<input type="checkbox"/> D4 - Microtopographic Relief
		<input type="checkbox"/> D5 - FAC-Neutral Test

Field Observations:		Wetland Hydrology Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A		
Remarks:		

SOILS		
Map Unit Name: MsD- Muskingum silt loam, 12 to 18 percent slopes		
Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)		

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	3	1	10YR	4/2	85	2.5YR	4/6	15	C	M	clay loam
3	18	1	10YR	5/3	80	5YR	5/8	20	C	PL	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present): <input type="checkbox"/>			Indicators for Problematic Soils¹		
<input type="checkbox"/> A1 - Histosol	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B)	<input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B)	<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)
<input type="checkbox"/> A2 - Histic Epipedon	<input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R)	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L)
<input type="checkbox"/> A3 - Black Histic	<input type="checkbox"/> S11 - High Chroma Sands	<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)	<input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L)
<input type="checkbox"/> A4 - Hydrogen Sulfide	<input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L)	<input type="checkbox"/> F6 - Redox Dark Surface	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)	<input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R)
<input type="checkbox"/> A5 - Stratified Layers	<input type="checkbox"/> F2 - Loamy Gleyed Matrix	<input type="checkbox"/> F7 - Depleted Dark Surface	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)	<input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B)
<input type="checkbox"/> A11 - Depleted Below Dark Surface	<input checked="" type="checkbox"/> F3 - Depleted Matrix	<input type="checkbox"/> F8 - Redox Depressions	<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)	<input type="checkbox"/> F21 - Red Parent Material
<input type="checkbox"/> A12 - Thick Dark Surface	<input type="checkbox"/> F6 - Redox Dark Surface		<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)	<input type="checkbox"/> TA6 - Mesc Spodic (MLRA 144A, 145, 149B)
<input type="checkbox"/> S1 - Sandy Muck Mineral	<input type="checkbox"/> F7 - Depleted Dark Surface		<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)	<input type="checkbox"/> TF12 - Very Shallow Dark Surface
<input type="checkbox"/> S4 - Sandy Gleyed Matrix	<input type="checkbox"/> F8 - Redox Depressions		<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> S5 - Sandy Redox			<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)	
<input type="checkbox"/> S6 - Stripped Matrix			<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)	
<input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)			<input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R)	<input type="checkbox"/> S7 - Dark Surface (LRR K, L, M)	

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type:	Depth:	Hydric Soil Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
Remarks:			

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 14** Sample Point: **SP28**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	<i>Echinochloa crus-galli</i>	70	Y	FAC
2.	<i>Juncus effusus</i>	30	Y	OBL
3.	<i>Carex sp.</i>	5	N	--
4.	<i>Scirpus cyperinus</i>	4	N	OBL
5.	<i>Solidago canadensis</i>	2	N	FACU
6.	<i>Onoclea sensibilis</i>	1	N	FACW
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		112		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	2 (A)
Total Number of Dominant Species Across All Strata:	2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100% (A/B)
Prevalence Index Worksheet	
Total % Cover of:	Multiply by:
OBL spp. 34	x 1 = 34
FACW spp. 1	x 2 = 2
FAC spp. 70	x 3 = 210
FACU spp. 2	x 4 = 8
UPL spp. 0	x 5 = 0
Total 107 (A)	254 (B)
Prevalence Index = B/A = 2.374	
Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Vegetation Strata:	
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.	
Woody Vines - All woody vines greater than 3.28 ft. in height.	
Hydrophytic Vegetation Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 12/20/21
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Kate Bomar	County: Stark
Investigator #2: Malea Casey		Soil Unit: MsD- Muskingum silt loam, 12 to 18 percent slopes	State: Ohio
Soil Unit: MsD- Muskingum silt loam, 12 to 18 percent slopes		NWI/WWI Classification: N/A	Wetland ID: Wetland 14
Landform: Hillslope	Local Relief: Linear	Datum: NAD83	Sample Point: SP29
Slope (%): 2-4	Latitude: 40.721546	Longitude: -81.412341	Community ID: UPL
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks)			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present?	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Township: --		Dir: --	
Range: --			

SUMMARY OF FINDINGS			
Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p>Primary:</p> <ul style="list-style-type: none"> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface 	<ul style="list-style-type: none"> <input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks) 	<p>Secondary:</p> <ul style="list-style-type: none"> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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<p>Field Observations:</p> <p>Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.)</p> <p>Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.)</p> <p>Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.)</p>	<p>Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: N/A

Remarks:

SOILS

Map Unit Name: **MsD- Muskingum silt loam, 12 to 18 percent slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)
			Color (Moist)	%		Color (Moist)	%	Type	Location	
0	4	1	10YR	4/3	100	--	--	--	--	clay loam
4	16	1	10YR	4/3	70	--	--	--	--	clay loam
--	--	--	10YR	5/6	30	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present): <input checked="" type="checkbox"/>		Indicators for Problematic Soils ¹	
<ul style="list-style-type: none"> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B) 	<ul style="list-style-type: none"> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesc Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks) 		

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type:	Depth:	Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 14** Sample Point: **SP29**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<u>Species Name</u>	<u>% Cover</u>	<u>Dominant</u>	<u>Ind. Status</u>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Schedonorus arundinaceus</i>	80	Y	FACU
2.	<i>Pycnanthemum virginianum</i>	10	N	FACW
3.	<i>Symphotrichum ericoides</i>	10	N	FACU
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		100		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet		
Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A)		
Total Number of Dominant Species Across All Strata: <u>1</u> (B)		
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)		
Prevalence Index Worksheet		
Total % Cover of:	Multiply by:	
OBL spp. <u>0</u>	x 1 = <u>0</u>	
FACW spp. <u>10</u>	x 2 = <u>20</u>	
FAC spp. <u>0</u>	x 3 = <u>0</u>	
FACU spp. <u>90</u>	x 4 = <u>360</u>	
UPL spp. <u>0</u>	x 5 = <u>0</u>	
Total <u>100</u> (A)	<u>380</u> (B)	
Prevalence Index = B/A = <u>3.800</u>		
Hydrophytic Vegetation Indicators:		
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Dominance Test is > 50%
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
Definitions of Vegetation Strata:		
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.		
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.		
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.		
Woody Vines - All woody vines greater than 3.28 ft. in height.		
Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 02/14/23
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Malea Casey	County: Stark
Investigator #2: Matt Denzler	Soil Unit: Sb-Sebring silt loam, 0-2 percent slopes	State: Ohio
Landform: Depression	NWI/WWI Classification: N/A	Wetland ID: Wetland 15
Slope (%): 1	Local Relief: Concave	Sample Point: SP30
Latitude: 40.747256	Longitude: -81.415270	Community ID: PEM
Datum: WGS84		Section: --
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Range: -- Dir: --
Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p>Primary:</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface 	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks) 	<p>Secondary:</p> <ul style="list-style-type: none"> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input checked="" type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 2 (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0 (in.)	
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0 (in.)	

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

Remarks:

SOILS

Map Unit Name: **Sb-Sebring silt loam, 0-2 percent slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	2	1	10YR	3/2	100	--	--	--	--	clay loam, fibrous	
2	18	2	2.5Y	6/2	75	7.5YR	5/8	25	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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

<ul style="list-style-type: none"> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B) 	<ul style="list-style-type: none"> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions 	<p>Indicators for Problematic Soils¹</p> <ul style="list-style-type: none"> <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesc Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: _____ Depth: _____ **Hydric Soil Present?** Yes No

Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 15** Sample Point: **SP30**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	<i>Cornus amomum</i>	6	Y	FACW
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		6		
Herb Stratum (Plot size: 2 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	<i>Juncus effusus</i>	7	N	OBL
2.	<i>Symphyotrichum pilosum</i>	4	N	FACU
3.	<i>Lysimachia nummularia</i>	40	Y	FACW
4.	<i>Penthorum sedoides</i>	2	N	OBL
5.	<i>Elodea nuttallii</i>	25	Y	OBL
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		78		
Woody Vine Stratum (Plot size: 10 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet		
Number of Dominant Species that are OBL, FACW, or FAC:	2 (A)	
Total Number of Dominant Species Across All Strata:	3 (B)	
Percent of Dominant Species That Are OBL, FACW, or FAC:	67% (A/B)	
Prevalence Index Worksheet		
Total % Cover of:	Multiply by:	
OBL spp. 34	x 1 = 34	
FACW spp. 46	x 2 = 92	
FAC spp. 0	x 3 = 0	
FACU spp. 2	x 4 = 8	
UPL spp. 0	x 5 = 0	
Total 82 (A)	134 (B)	
Prevalence Index = B/A = 1.634		
Hydrophytic Vegetation Indicators:		
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Dominance Test is > 50%
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
Definitions of Vegetation Strata:		
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.		
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.		
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.		
Woody Vines - All woody vines greater than 3.28 ft. in height.		
Hydrophytic Vegetation Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 02/14/23
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Malea Casey	County: Stark
Investigator #2: Matt Denzler	Soil Unit: Sb-Sebring silt loam, 0-2 percent slopes	State: Ohio
Landform: Hillslope	NWI/WWI Classification: N/A	Wetland ID: N/A
Slope (%): 2-4	Local Relief: Convex	Sample Point: SP31
Latitude: 40.747231	Longitude: -81.415288	Community ID: UPL
Datum: WGS84		Section: --
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?	Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Range: -- Dir: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		

SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

Primary:	Secondary:
<input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test	

Field Observations: Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.) Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.) Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: **N/A**

Remarks:

SOILS

Map Unit Name: **Sb-Sebring silt loam, 0-2 percent slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	3	1	10YR	4/3	100	--	--	--	--	clay loam	
3	18	2	10YR	4/3	95	10YR	5/6	5	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present): <input checked="" type="checkbox"/>	Indicators for Problematic Soils ¹
<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesc Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed)	Type:	Depth:	Hydric Soil Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Remarks:

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **N/A** Sample Point: **SP31**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	<i>Rosa multiflora</i>	4	N	FACU
2.	<i>Rubus allegheniensis</i>	5	Y	FACU
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		9		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Prunella vulgaris</i>	3	N	FAC
2.	<i>Glechoma hederacea</i>	8	N	FACU
3.	<i>Daucus carota</i>	2	N	UPL
4.	<i>Solidago canadensis</i>	4	N	FACU
5.	<i>Dichanthelium clandestinum</i>	4	N	FACW
6.	<i>Poa pratensis</i>	75	Y	FACU
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		96		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	<u>0</u> (A)
Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>0%</u> (A/B)

Prevalence Index Worksheet	
Total % Cover of:	Multiply by:
OBL spp. <u>0</u>	x 1 = <u>0</u>
FACW spp. <u>4</u>	x 2 = <u>8</u>
FAC spp. <u>3</u>	x 3 = <u>9</u>
FACU spp. <u>96</u>	x 4 = <u>384</u>
UPL spp. <u>2</u>	x 5 = <u>10</u>
Total <u>105</u> (A)	<u>411</u> (B)
Prevalence Index = B/A = <u>3.914</u>	

Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Rapid Test for Hydrophytic Vegetation
 Dominance Test is > 50%
 Prevalence Index is ≤ 3.0 *
 Morphological Adaptations (Explain) *
 Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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

Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 02/14/23
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Malea Casey	County: Stark
Soil Unit: Sb-Sebring silt loam, 0-2 percent slopes	Investigator #2: Matt Denzler	State: Ohio
Landform: Depression	NWI/WWI Classification: N/A	Wetland ID: Wetland 16
Slope (%): 0	Local Relief: Concave	Sample Point: SP32
Latitude: 40.746925	Longitude: -81.416475	Community ID: PEM
Datum: WGS84		Section: --
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Township: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Range: -- Dir: --
Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p>Primary:</p> <ul style="list-style-type: none"> <input type="checkbox"/> A1 - Surface Water <input checked="" type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface 	<ul style="list-style-type: none"> <input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks) 	<p>Secondary:</p> <ul style="list-style-type: none"> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input checked="" type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 7 (in.)	
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0 (in.)	

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

Remarks:

SOILS

Map Unit Name: **Sb-Sebring silt loam, 0-2 percent slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	18	1	10YR	4/2	80	10YR	4/1	4	C	M	clay loam, fibrous
--	--	--	--	--	--	5YR	4/6	10	C	PL	clay loam
--	--	--	--	--	--	10YR	6/6	6	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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

<ul style="list-style-type: none"> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B) 	<ul style="list-style-type: none"> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions 	<p>Indicators for Problematic Soils¹</p> <ul style="list-style-type: none"> <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesc Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
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¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: Depth:	Hydric Soil Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
--	--

Remarks: **Recently graded, fill material**

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 16** Sample Point: **SP32**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Typha latifolia</i>	8	N	OBL
2.	<i>Juncus effusus</i>	10	N	OBL
3.	<i>Scirpus cyperinus</i>	5	N	OBL
4.	<i>Phalaris arundinacea</i>	55	Y	FACW
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		78		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC: <u>1</u> (A)	
Total Number of Dominant Species Across All Strata: <u>1</u> (B)	
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
Prevalence Index Worksheet	
Total % Cover of:	Multiply by:
OBL spp. <u>23</u>	x 1 = <u>23</u>
FACW spp. <u>55</u>	x 2 = <u>110</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>78</u> (A)	<u>133</u> (B)
Prevalence Index = B/A = <u>1.705</u>	
Hydrophytic Vegetation Indicators:	
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
Definitions of Vegetation Strata:	
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.	
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.	
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.	
Woody Vines - All woody vines greater than 3.28 ft. in height.	
Hydrophytic Vegetation Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project		Stantec Project #: 193708516	Date: 02/14/23
Applicant: AEP Ohio Transmission Company, Inc.		Investigator #1: Malea Casey	County: Stark
Investigator #2: Matt Denzler		Soil Unit: Sb-Sebring silt loam, 0-2 percent slopes	State: Ohio
Landform: Hillslope		NWI/WWI Classification: N/A	Wetland ID: N/A
Slope (%): 2-4		Local Relief: Convex	Sample Point: SP33
Latitude: 40.746912		Longitude: -81.416426	Community ID: UPL
Datum: WGS84		Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		Township: --	
		Range: -- Dir: --	

SUMMARY OF FINDINGS	
Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface 	<ul style="list-style-type: none"> <input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks) 	<p><u>Secondary:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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<p>Field Observations:</p> <p>Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.)</p> <p>Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.)</p> <p>Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Depth: (in.)</p>	<p>Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
--	--

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

Remarks:

SOILS

Map Unit Name: **Sb-Sebring silt loam, 0-2 percent slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	18	1	10YR	4/2	80	7.5YR	5/6	20	C	M	clay loam, fill material
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present): <input type="checkbox"/>		Indicators for Problematic Soils ¹	
<ul style="list-style-type: none"> <input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B) 	<ul style="list-style-type: none"> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions 	<ul style="list-style-type: none"> <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mescic Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks) 	

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: Depth:	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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Remarks: **Recently graded, fill material**

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **N/A** Sample Point: **SP33**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
1.	<i>Symphytichum pilosum</i>	10	N	FACU
2.	<i>Setaria faberi</i>	75	Y	FACU
3.	<i>Datura stramonium</i>	4	N	UPL
4.	<i>Xanthium strumarium</i>	7	N	UPL
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		96		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	0 (A)
Total Number of Dominant Species Across All Strata:	1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0% (A/B)

Prevalence Index Worksheet	
Total % Cover of:	Multiply by:
OBL spp. 0	x 1 = 0
FACW spp. 0	x 2 = 0
FAC spp. 0	x 3 = 0
FACU spp. 85	x 4 = 340
UPL spp. 11	x 5 = 55
Total 96 (A)	395 (B)
Prevalence Index = B/A = 4.115	

Hydrophytic Vegetation Indicators:	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Rapid Test for Hydrophytic Vegetation
 Dominance Test is > 50%
 Prevalence Index is ≤ 3.0 *
 Morphological Adaptations (Explain) *
 Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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

Hydrophytic Vegetation Present	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 02/14/23
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Malea Casey	County: Stark
Investigator #2: Matt Denzler	NWI/WWI Classification: N/A	State: Ohio
Soil Unit: Sb-Sebring silt loam, 0-2 percent slopes	Local Relief: Concave	Wetland ID: Wetland 17
Landform: Depression	Datum: WGS84	Sample Point: SP34
Slope (%): 0	Latitude: 40.746805	Longitude: -81.416489
Are climatic/hydrologic conditions on the site typical for this time of year? (If no, explain in remarks) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Community ID: PEM
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> significantly disturbed?		Township: --
Are normal circumstances present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Range: -- Dir: --
Are Vegetation <input type="checkbox"/> , Soil <input type="checkbox"/> , or Hydrology <input type="checkbox"/> naturally problematic?		

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<p><u>Primary:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input checked="" type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface 	<ul style="list-style-type: none"> <input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks) 	<p><u>Secondary:</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input checked="" type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test
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Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Depth: 0 (in.)	

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

Remarks:

SOILS

Map Unit Name: **Sb-Sebring silt loam, 0-2 percent slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	5	1	2.5Y	5/2	100	--	--	--	--	clay loam, fibrous	
5	18	2	2.5Y	5/2	85	7.5YR	5/8	15	C	M	clay loam
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

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

<ul style="list-style-type: none"> <input type="checkbox"/> A1- Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B) 	<ul style="list-style-type: none"> <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions 	<p>Indicators for Problematic Soils¹</p> <ul style="list-style-type: none"> <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesc Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)
--	---	--

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: Depth:	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---

Remarks: **Recently graded, fill material**

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **Wetland 17** Sample Point: **SP34**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	<i>Typha latifolia</i>	8	N	OBL
2.	<i>Juncus effusus</i>	10	N	OBL
3.	<i>Scirpus cyperinus</i>	4	N	OBL
4.	<i>Phalaris arundinacea</i>	35	Y	FACW
5.	<i>Epilobium ciliatum</i>	8	N	FACW
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		65		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet	
Number of Dominant Species that are OBL, FACW, or FAC:	1 (A)
Total Number of Dominant Species Across All Strata:	1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100% (A/B)

Prevalence Index Worksheet	
Total % Cover of:	Multiply by:
OBL spp. <u>22</u>	x 1 = <u>22</u>
FACW spp. <u>43</u>	x 2 = <u>86</u>
FAC spp. <u>0</u>	x 3 = <u>0</u>
FACU spp. <u>0</u>	x 4 = <u>0</u>
UPL spp. <u>0</u>	x 5 = <u>0</u>
Total <u>65</u> (A)	<u>108</u> (B)
Prevalence Index = B/A = <u>1.662</u>	

Hydrophytic Vegetation Indicators:	
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

Rapid Test for Hydrophytic Vegetation
 Dominance Test is > 50%
 Prevalence Index is ≤ 3.0 *
 Morphological Adaptations (Explain) *
 Problem Hydrophytic Vegetation (Explain) *

* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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

Hydrophytic Vegetation Present	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Additional Remarks:

Project/Site: South Canton-Torrey 138 kV Line Rebuild Project	Stantec Project #: 193708516	Date: 02/14/23
Applicant: AEP Ohio Transmission Company, Inc.	Investigator #1: Malea Casey	County: Stark
Investigator #2: Matt Denzler	Soil Unit: Sb-Sebring silt loam, 0-2 percent slopes	State: Ohio
Landform: Hillslope	NWI/WWI Classification: N/A	Wetland ID: N/A
Slope (%): 2-4	Local Relief: Convex	Sample Point: SP35
Latitude: 40.746846	Longitude: -81.416543	Community ID: UPL
Datum: WGS84		Section: --

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

Are Vegetation , Soil , or Hydrology significantly disturbed? Yes No

Are normal circumstances present? Yes No

Are Vegetation , Soil , or Hydrology naturally problematic? Yes No

Township: **--** Dir: **--**

Range: **--**

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is This Sampling Point Within A Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators (Check here if indicators are not present):

<u>Primary:</u>	<u>Secondary:</u>
<input type="checkbox"/> A1 - Surface Water <input type="checkbox"/> A2 - High Water Table <input type="checkbox"/> A3 - Saturation <input type="checkbox"/> B1 - Water Marks <input type="checkbox"/> B2 - Sediment Deposits <input type="checkbox"/> B3 - Drift Deposits <input type="checkbox"/> B4 - Algal Mat or Crust <input type="checkbox"/> B5 - Iron Deposits <input type="checkbox"/> B7 - Inundation Visible on Aerial Imagery <input type="checkbox"/> B8 - Sparsely Vegetated Concave Surface	<input type="checkbox"/> B9 - Water-Stained Leaves <input type="checkbox"/> B13 - Aquatic Fauna <input type="checkbox"/> B15 - Marl Deposits <input type="checkbox"/> C1 - Hydrogen Sulfide Odor <input type="checkbox"/> C3 - Oxidized Rhizospheres on Living Roots <input type="checkbox"/> C4 - Presence of Reduced Iron <input type="checkbox"/> C6 - Recent Iron Reduction in Tilled Soils <input type="checkbox"/> C7 - Thin Muck Surface <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> B6 - Surface Soil Cracks <input type="checkbox"/> B10 - Drainage Patterns <input type="checkbox"/> B16 - Moss Trim Lines <input type="checkbox"/> C2 - Dry-Season Water Table <input type="checkbox"/> C8 - Crayfish Burrows <input type="checkbox"/> C9 - Saturation Visible on Aerial Imagery <input type="checkbox"/> D1 - Stunted or Stressed Plants <input type="checkbox"/> D2 - Geomorphic Position <input type="checkbox"/> D3 - Shallow Aquitard <input type="checkbox"/> D4 - Microtopographic Relief <input type="checkbox"/> D5 - FAC-Neutral Test	

Field Observations:

Surface Water Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	Wetland Hydrology Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Water Table Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	
Saturation Present? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Depth: (in.)	

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

Remarks:

SOILS

Map Unit Name: **Sb-Sebring silt loam, 0-2 percent slopes**

Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators.) (Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered/Coated Sand Grains; Location: PL=Pore Lining, M=Matrix)

Top Depth	Bottom Depth	Horizon	Matrix			Redox Features				Texture (e.g. clay, sand, loam)	
			Color (Moist)	%		Color (Moist)	%	Type	Location		
0	18	1	10YR	4/2	80	7.5YR	5/6	20	C	M	clay loam, fill material
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--
--	--	--	--	--	--	--	--	--	--	--	--

NRCS Hydric Soil Field Indicators (check here if indicators are not present): <input type="checkbox"/>	Indicators for Problematic Soils ¹
<input type="checkbox"/> A1 - Histosol <input type="checkbox"/> A2 - Histic Epipedon <input type="checkbox"/> A3 - Black Histic <input type="checkbox"/> A4 - Hydrogen Sulfide <input type="checkbox"/> A5 - Stratified Layers <input type="checkbox"/> A11 - Depleted Below Dark Surface <input type="checkbox"/> A12 - Thick Dark Surface <input type="checkbox"/> S1 - Sandy Muck Mineral <input type="checkbox"/> S4 - Sandy Gleyed Matrix <input type="checkbox"/> S5 - Sandy Redox <input type="checkbox"/> S6 - Stripped Matrix <input type="checkbox"/> S7 - Dark Surface (LRR R, MLRA 149B)	<input type="checkbox"/> S8 - Polyvalue Below Surface (LRR R, MLRA 149B) <input type="checkbox"/> S9 - Thin Dark Surface (LRR R, MLRA 149B) <input type="checkbox"/> S11 - High Chroma Sands <input type="checkbox"/> F1 - Loamy Mucky Mineral (LRR K, L) <input type="checkbox"/> F2 - Loamy Gleyed Matrix <input checked="" type="checkbox"/> F3 - Depleted Matrix <input type="checkbox"/> F6 - Redox Dark Surface <input type="checkbox"/> F7 - Depleted Dark Surface <input type="checkbox"/> F8 - Redox Depressions <input type="checkbox"/> A10 - 2 cm Muck (LRR K, L, MLRA 149B) <input type="checkbox"/> A16 - Coast Prairie Redox (LRR K, L, R) <input type="checkbox"/> S3 - 5cm Mucky Peat of Peat (LRR K, L, R) <input type="checkbox"/> S7 - Dark Surface (LRR K, L, M) <input type="checkbox"/> S8 - Polyvalue Below Surface (LRR K, L) <input type="checkbox"/> S9 - Thin Dark Surface (LRR K, L) <input type="checkbox"/> F12 - Iron-Manganese Masses (LRR K, L, R) <input type="checkbox"/> F19 - Piedmont Floodplain Soils (MLRA 149B) <input type="checkbox"/> F21 - Red Parent Material <input type="checkbox"/> TA6 - Mesc Spodic (MLRA 144A, 145, 149B) <input type="checkbox"/> TF12 - Very Shallow Dark Surface <input type="checkbox"/> Other (Explain in Remarks)

¹ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If Observed) Type: Depth:	Hydric Soil Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
--	---

Remarks: **Recently graded, fill material**

Project/Site: **South Canton-Torrey 138 kV Line Rebuild Project** Wetland ID: **N/A** Sample Point: **SP35**

VEGETATION (Species identified in all uppercase are non-native species.)				
Tree Stratum (Plot size: 10 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Sapling/Shrub Stratum (Plot size: 5 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
Total Cover =		0		
Herb Stratum (Plot size: 2 meter radius)				
	<i>Species Name</i>	<i>% Cover</i>	<i>Dominant</i>	<i>Ind. Status</i>
1.	<i>Symphytotrichum pilosum</i>	9	N	FACU
2.	<i>Setaria faberi</i>	80	Y	FACU
3.	<i>Datura stramonium</i>	2	N	UPL
4.	<i>Xanthium strumarium</i>	5	N	UPL
5.	--	--	--	--
6.	--	--	--	--
7.	--	--	--	--
8.	--	--	--	--
9.	--	--	--	--
10.	--	--	--	--
11.	--	--	--	--
12.	--	--	--	--
13.	--	--	--	--
14.	--	--	--	--
15.	--	--	--	--
Total Cover =		96		
Woody Vine Stratum (Plot size: 10 meter radius)				
1.	--	--	--	--
2.	--	--	--	--
3.	--	--	--	--
4.	--	--	--	--
5.	--	--	--	--
Total Cover =		0		
Remarks:				

Dominance Test Worksheet		
Number of Dominant Species that are OBL, FACW, or FAC:	0 (A)	
Total Number of Dominant Species Across All Strata:	1 (B)	
Percent of Dominant Species That Are OBL, FACW, or FAC:	0% (A/B)	
Prevalence Index Worksheet		
Total % Cover of:	Multiply by:	
OBL spp. 0	x 1 = 0	
FACW spp. 0	x 2 = 0	
FAC spp. 0	x 3 = 0	
FACU spp. 89	x 4 = 356	
UPL spp. 7	x 5 = 35	
Total 96 (A)	391 (B)	
Prevalence Index = B/A = 4.073		
Hydrophytic Vegetation Indicators:		
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Rapid Test for Hydrophytic Vegetation
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Dominance Test is > 50%
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Prevalence Index is ≤ 3.0 *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Morphological Adaptations (Explain) *
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Problem Hydrophytic Vegetation (Explain) *
* Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.		
Definitions of Vegetation Strata:		
Tree - Woody plants 3 in. (7.6cm) or more in diameter at breast height (DBH), regardless of height.		
Sapling/Shrub - Woody plants less than 3 in. DBH and greater than 3.28 ft. tall.		
Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.		
Woody Vines - All woody vines greater than 3.28 ft. in height.		
Hydrophytic Vegetation Present <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

Additional Remarks:

Background Information

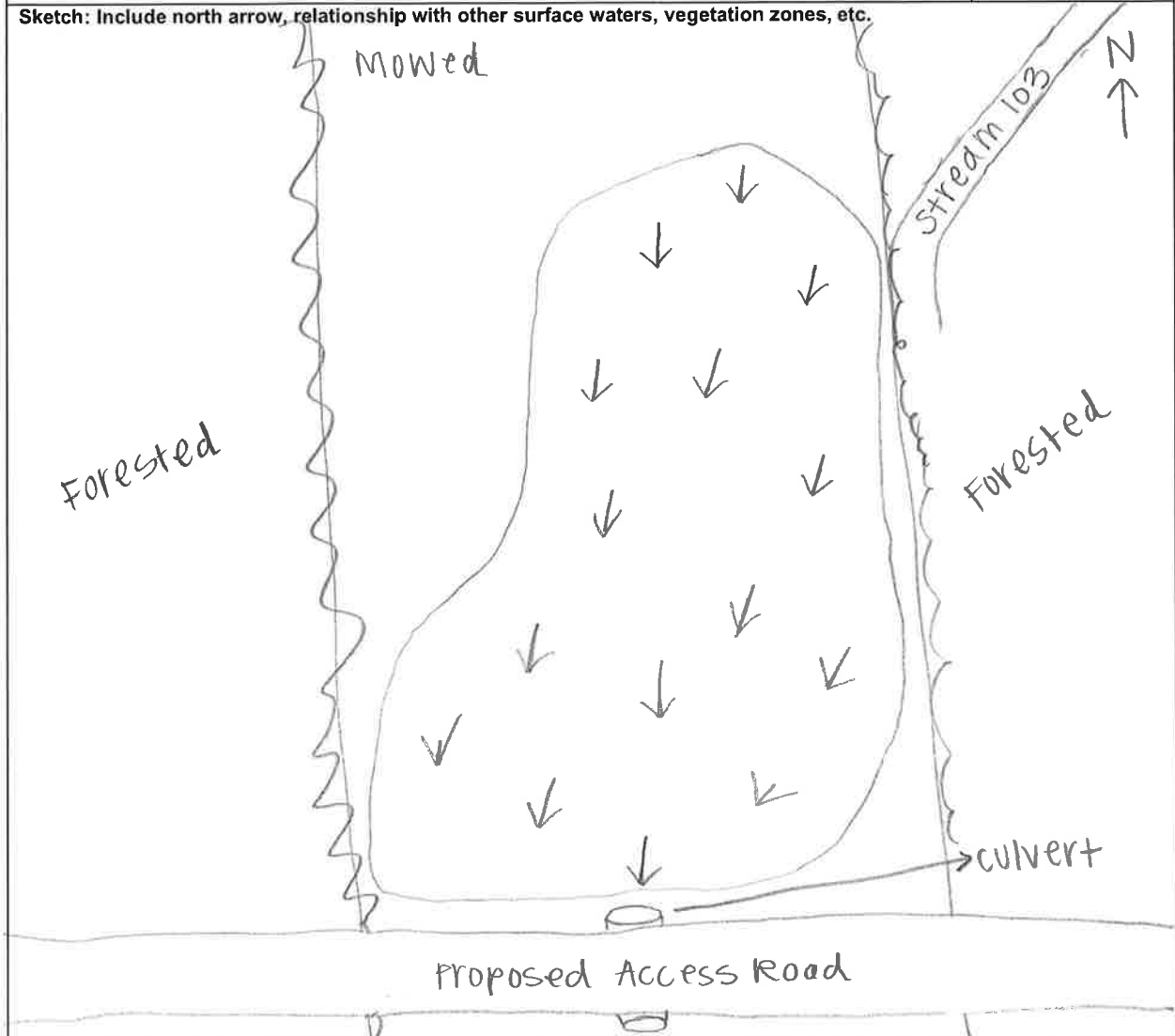
Name:	Malea Casey
Date:	12/21/21
Affiliation:	stantec Consulting Services, Inc.
Address:	10200 Alliance Road, suite 300 Cincinnati, OH 45242
Phone Number:	(513) 526-4084
e-mail address:	malea.casey@stantec.com
Name of Wetland:	Wetland 14
Vegetation Communit(ies):	PEM
HGM Class(es):	depressional
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	
Lat/Long or UTM Coordinate	40.721541, -81.412516
USGS Quad Name	Canton West
County	STARK COUNTY
Township	TION ROW
Section and Subsection	S19
Hydrologic Unit Code	050400010505
Site Visit	12/21/22
National Wetland Inventory Map	N/A
Ohio Wetland Inventory Map	N/A
Soil Survey	MSD - MUSKINGUM silt loam, 12-101B percent slopes
Delineation report/map	see Ecological Resources Inventory Report

Name of Wetland: **Wetland 14**

Wetland Size (acres, hectares):

0.007 acres

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Final score : **27**

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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✓
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

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

Table 1. Characteristic plant species.

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

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

Site: Wetland 14 Rater(s): MC, KB, CC Date: 12/2/22

0	0
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

4	4
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

9	13
max 30 pts.	subtotal

Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.

<p>None or none apparent (12)</p> <p><input type="checkbox"/> Recovered (7)</p> <p><input checked="" type="checkbox"/> Recovering (3)</p> <p><input checked="" type="checkbox"/> Recent or no recovery (1)</p>	<p>Check all disturbances observed</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> ditch</td> <td><input type="checkbox"/> point source (nonstormwater)</td> </tr> <tr> <td><input type="checkbox"/> tile</td> <td><input type="checkbox"/> filling/grading</td> </tr> <tr> <td><input type="checkbox"/> dike</td> <td><input type="checkbox"/> road bed/RR track</td> </tr> <tr> <td><input type="checkbox"/> weir</td> <td><input type="checkbox"/> dredging</td> </tr> <tr> <td><input type="checkbox"/> stormwater input</td> <td><input type="checkbox"/> other _____</td> </tr> </table>	<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)	<input type="checkbox"/> tile	<input type="checkbox"/> filling/grading	<input type="checkbox"/> dike	<input type="checkbox"/> road bed/RR track	<input type="checkbox"/> weir	<input type="checkbox"/> dredging	<input type="checkbox"/> stormwater input	<input type="checkbox"/> other _____
<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)										
<input type="checkbox"/> tile	<input type="checkbox"/> filling/grading										
<input type="checkbox"/> dike	<input type="checkbox"/> road bed/RR track										
<input type="checkbox"/> weir	<input type="checkbox"/> dredging										
<input type="checkbox"/> stormwater input	<input type="checkbox"/> other _____										

10	23
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.

<p>None or none apparent (9)</p> <p><input type="checkbox"/> Recovered (6)</p> <p><input checked="" type="checkbox"/> Recovering (3)</p> <p><input checked="" type="checkbox"/> Recent or no recovery (1)</p>	<p>Check all disturbances observed</p> <table style="width: 100%;"> <tr> <td><input checked="" type="checkbox"/> mowing</td> <td><input type="checkbox"/> shrub/sapling removal</td> </tr> <tr> <td><input type="checkbox"/> grazing</td> <td><input type="checkbox"/> herbaceous/aquatic bed removal</td> </tr> <tr> <td><input type="checkbox"/> clearcutting</td> <td><input type="checkbox"/> sedimentation</td> </tr> <tr> <td><input type="checkbox"/> selective cutting</td> <td><input type="checkbox"/> dredging</td> </tr> <tr> <td><input type="checkbox"/> woody debris removal</td> <td><input type="checkbox"/> farming</td> </tr> <tr> <td><input type="checkbox"/> toxic pollutants</td> <td><input type="checkbox"/> nutrient enrichment</td> </tr> </table>	<input checked="" type="checkbox"/> mowing	<input type="checkbox"/> shrub/sapling removal	<input type="checkbox"/> grazing	<input type="checkbox"/> herbaceous/aquatic bed removal	<input type="checkbox"/> clearcutting	<input type="checkbox"/> sedimentation	<input type="checkbox"/> selective cutting	<input type="checkbox"/> dredging	<input type="checkbox"/> woody debris removal	<input type="checkbox"/> farming	<input type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment
<input checked="" type="checkbox"/> mowing	<input type="checkbox"/> shrub/sapling removal												
<input type="checkbox"/> grazing	<input type="checkbox"/> herbaceous/aquatic bed removal												
<input type="checkbox"/> clearcutting	<input type="checkbox"/> sedimentation												
<input type="checkbox"/> selective cutting	<input type="checkbox"/> dredging												
<input type="checkbox"/> woody debris removal	<input type="checkbox"/> farming												
<input type="checkbox"/> toxic pollutants	<input type="checkbox"/> nutrient enrichment												

23
subtotal this page

Site: Wetland 14	Rater(s): MC, KB, CC	Date: 2/21/22
-------------------------	-----------------------------	----------------------

23
subtotal first page

0	23
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

4	27
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

27

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

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

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

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

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

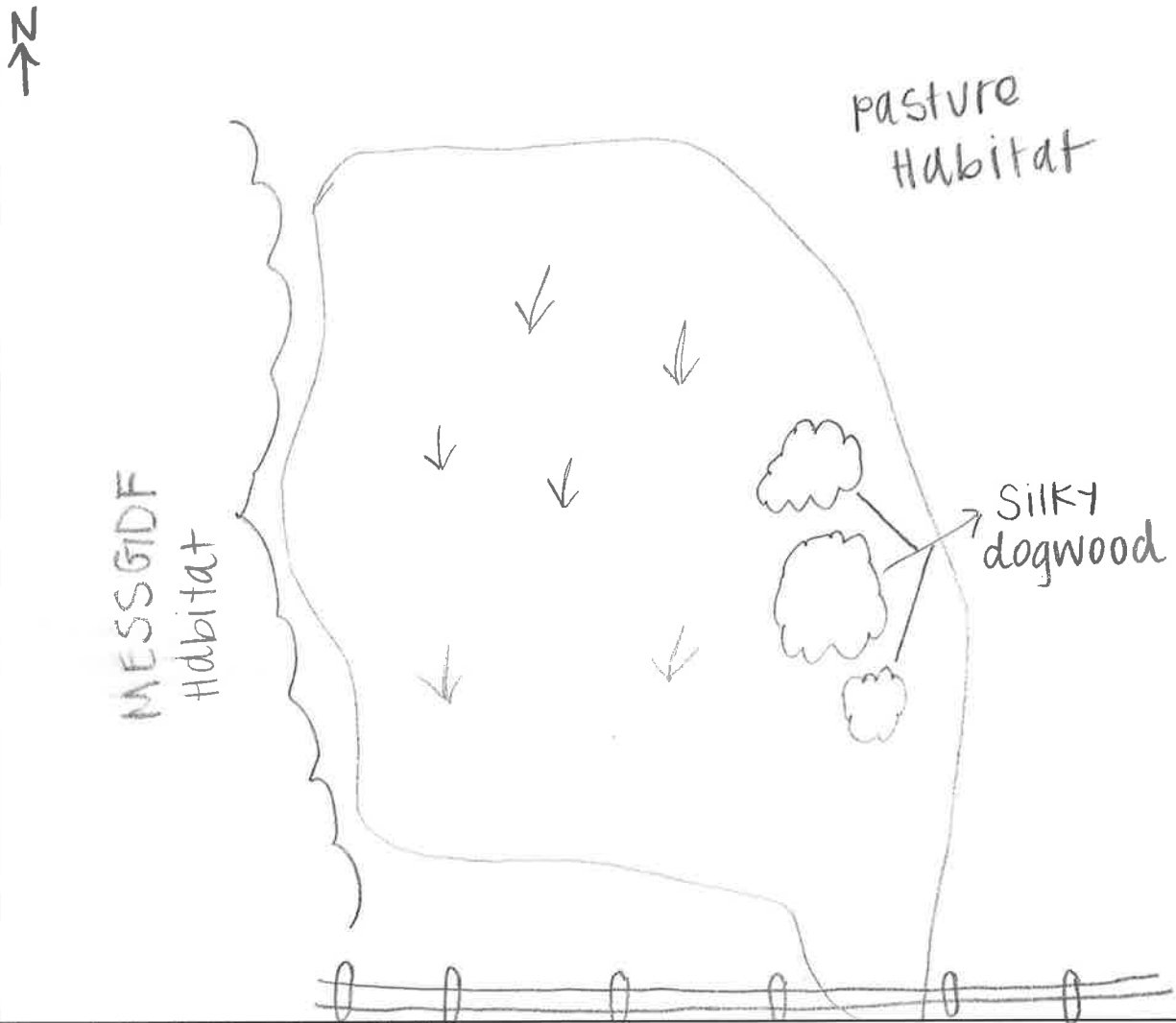
Name:	Malea Casey		
Date:	02/14/23		
Affiliation:	stantec consulting services, Inc.		
Address:	10200 Alliance Road, suite 300		
Phone Number:	(513) 526-4084		
e-mail address:	malea.casey@stantec.com		
Name of Wetland:	Wetland 15		
Vegetation Communit(ies):	PEM		
HGM Class(es):	Depressional		
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	<p>The map shows a site layout with several features. On the left, a vertical line is labeled 'Shelton Church Ave. SW'. To its right is a cloud-like shape labeled 'Forested'. Further right are three irregular shapes representing wetlands: 'Wetland 16' (a small oval), 'Wetland 17' (a horizontal elongated shape), and 'Wetland 15' (a larger, more complex shape). A 'Stream B' flows from the bottom right towards the center. A dashed line near the stream is labeled 'Soft'. A north arrow is located in the top right corner of the map area.</p>		
Lat/Long or UTM Coordinate	40.747256, -81.415270		
USGS Quad Name	Bolivar, OH		
County	Stark County		
Township	N/A		
Section and Subsection	N/A		
Hydrologic Unit Code	050400010505		
Site Visit	02/14/23		
National Wetland Inventory Map	N/A		
Ohio Wetland Inventory Map	N/A		
Soil Survey	Sb: Sebring silt loam, 0 to 2 percent slopes		
Delineation report/map	see Ecological Resources Report		

Name of Wetland: **NEHAND IS**

Wetland Size (acres, hectares):

0.003 ac

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Final score : 24.5

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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✗
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

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

Table 1. Characteristic plant species.

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

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

Site: Wetland 15 Rater(s): MC, MD Date: 02/14/2023

0	0
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

4	4
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

8	12
max 30 pts.	subtotal

Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.
- | | |
|---|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> None or none apparent (12) <input type="checkbox"/> Recovered (7) <input type="checkbox"/> Recovering (3) <input checked="" type="checkbox"/> Recent or no recovery (1) | <p>Check all disturbances observed</p> <ul style="list-style-type: none"> <input type="checkbox"/> ditch <input type="checkbox"/> tile <input type="checkbox"/> dike <input type="checkbox"/> weir <input type="checkbox"/> stormwater input <input type="checkbox"/> point source (nonstormwater) <input type="checkbox"/> filling/grading <input type="checkbox"/> road bed/RR track <input type="checkbox"/> dredging <input type="checkbox"/> other |
|---|---|

5.5	17.5
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- | | |
|--|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> None or none apparent (9) <input type="checkbox"/> Recovered (6) <input type="checkbox"/> Recovering (3) <input checked="" type="checkbox"/> Recent or no recovery (1) | <p>Check all disturbances observed</p> <ul style="list-style-type: none"> <input type="checkbox"/> mowing <input type="checkbox"/> grazing <input type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants <input type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input type="checkbox"/> farming <input type="checkbox"/> nutrient enrichment |
|--|---|

17.5
subtotal this page

Site: Wetland 15 Rater(s): MC/MD Date: 2/14/23

17.5

subtotal first page

0 17.5

max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

7 24.5

max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

24.5

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1. Critical Habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input checked="" type="radio"/> NO	If yes, Category 1.
	Question 6. Bogs	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 7. Fens	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input checked="" type="radio"/> NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES <input checked="" type="radio"/> NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES <input checked="" type="radio"/> NO	If yes, Category 3
Question 11. Relict Wet Prairies	YES <input checked="" type="radio"/> NO	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	4	
	Metric 3. Hydrology	8	
	Metric 4. Habitat	5.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersions, microtopography	7	
	TOTAL SCORE	24.5	Category based on score breakpoints <i>category I</i>

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Choose one
Category 1
Category 2
Category 3

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

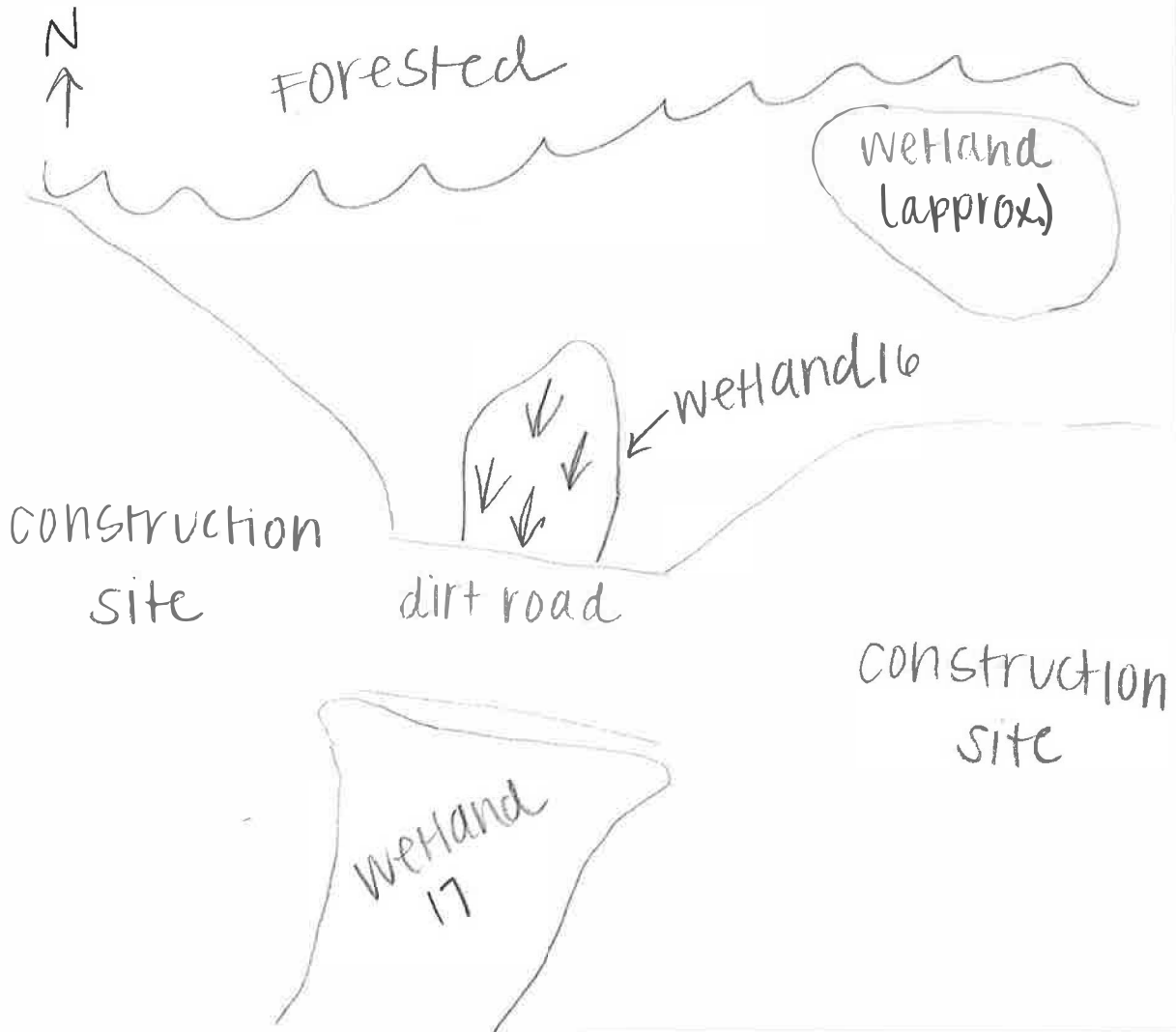
Name:	Malea Casey	
Date:	02/14/2023	
Affiliation:	Stantec Consulting Services, Inc.	
Address:	10200 Alliance Road, Suite 300	
Phone Number:	(513) 526-4084	
e-mail address:	malea.casey@stantec.com	
Name of Wetland:	Wetland 16	
Vegetation Community(ies):	PEM	
HGM Class(es):	Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.		
Lat/Long or UTM Coordinate	40.746918, -81.416467	
USGS Quad Name	Bolivar, OH	
County	Stark County	
Township	N/A	
Section and Subsection	N/A	
Hydrologic Unit Code	050400010505	
Site Visit	02/14/2023	
National Wetland Inventory Map	N/A	
Ohio Wetland Inventory Map	N/A	
Soil Survey	Sb; Sebring silt loam, 0 to 2 percent slopes	
Delineation report/map	See Ecological Resources Report	

Name of Wetland: Wetland 16

Wetland Size (acres, hectares):

0.001

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Final score : 12

Category: |

Scoring Boundary Worksheet

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

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		✗
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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

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

Table 1. Characteristic plant species.

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

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

Site: <u>Wetland 16</u>	Rater(s): <u>MC, MD</u>	Date: <u>02/14/23</u>
-------------------------	-------------------------	-----------------------

0	0
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

2	2
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

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

5	7
max 30 pts.	subtotal

Metric 3. Hydrology.

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

- | | | | | | | | | | | | |
|---|--|--------------------------------|---|-------------------------------|--|-------------------------------|--|-------------------------------|-----------------------------------|---|--------------------------------------|
| <ul style="list-style-type: none"> <input type="checkbox"/> None or none apparent (12) <input type="checkbox"/> Recovered (7) <input type="checkbox"/> Recovering (3) <input checked="" type="checkbox"/> Recent or no recovery (1) | <p style="font-size: 10px; margin: 0;">Check all disturbances observed</p> <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"><input type="checkbox"/> ditch</td> <td style="width:50%; border: none;"><input type="checkbox"/> point source (nonstormwater)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> tile</td> <td style="border: none;"><input type="checkbox"/> filling/grading</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> dike</td> <td style="border: none;"><input type="checkbox"/> road bed/RR track</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> weir</td> <td style="border: none;"><input type="checkbox"/> dredging</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> stormwater input</td> <td style="border: none;"><input type="checkbox"/> other _____</td> </tr> </table> | <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) | <input type="checkbox"/> tile | <input type="checkbox"/> filling/grading | <input type="checkbox"/> dike | <input type="checkbox"/> road bed/RR track | <input type="checkbox"/> weir | <input type="checkbox"/> dredging | <input type="checkbox"/> stormwater input | <input type="checkbox"/> other _____ |
| <input type="checkbox"/> ditch | <input type="checkbox"/> point source (nonstormwater) | | | | | | | | | | |
| <input type="checkbox"/> tile | <input type="checkbox"/> filling/grading | | | | | | | | | | |
| <input type="checkbox"/> dike | <input type="checkbox"/> road bed/RR track | | | | | | | | | | |
| <input type="checkbox"/> weir | <input type="checkbox"/> dredging | | | | | | | | | | |
| <input type="checkbox"/> stormwater input | <input type="checkbox"/> other _____ | | | | | | | | | | |

3	10
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

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

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

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

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

- | | | | | | | | | | | | | | |
|--|---|---------------------------------|--|----------------------------------|---|---------------------------------------|--|--|-----------------------------------|---|----------------------------------|---|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> None or none apparent (9) <input type="checkbox"/> Recovered (6) <input type="checkbox"/> Recovering (3) <input checked="" type="checkbox"/> Recent or no recovery (1) | <p style="font-size: 10px; margin: 0;">Check all disturbances observed</p> <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"><input type="checkbox"/> mowing</td> <td style="width:50%; border: none;"><input type="checkbox"/> shrub/sapling removal</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> grazing</td> <td style="border: none;"><input type="checkbox"/> herbaceous/aquatic bed removal</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> clearcutting</td> <td style="border: none;"><input type="checkbox"/> sedimentation</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> selective cutting</td> <td style="border: none;"><input type="checkbox"/> dredging</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> woody debris removal</td> <td style="border: none;"><input type="checkbox"/> farming</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> toxic pollutants</td> <td style="border: none;"><input type="checkbox"/> nutrient enrichment</td> </tr> </table> | <input type="checkbox"/> mowing | <input type="checkbox"/> shrub/sapling removal | <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal | <input type="checkbox"/> clearcutting | <input type="checkbox"/> sedimentation | <input type="checkbox"/> selective cutting | <input type="checkbox"/> dredging | <input type="checkbox"/> woody debris removal | <input type="checkbox"/> farming | <input type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment |
| <input type="checkbox"/> mowing | <input type="checkbox"/> shrub/sapling removal | | | | | | | | | | | | |
| <input type="checkbox"/> grazing | <input type="checkbox"/> herbaceous/aquatic bed removal | | | | | | | | | | | | |
| <input type="checkbox"/> clearcutting | <input type="checkbox"/> sedimentation | | | | | | | | | | | | |
| <input type="checkbox"/> selective cutting | <input type="checkbox"/> dredging | | | | | | | | | | | | |
| <input type="checkbox"/> woody debris removal | <input type="checkbox"/> farming | | | | | | | | | | | | |
| <input type="checkbox"/> toxic pollutants | <input type="checkbox"/> nutrient enrichment | | | | | | | | | | | | |

10
subtotal this page

Site: Wetland 16 Rater(s): MC, MD Date: 02/14/23

10

subtotal first page

0	0
max 10 pts.	subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

2	12
max 20 pts.	subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

12

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

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

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

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

End of Ohio Rapid Assessment Method for Wetlands.

Background Information

Name:	Marea Casey		
Date:	02/14/23		
Affiliation:	Stantec consulting services, Inc.		
Address:	10200 Alliance Road, Ste 300		
Phone Number:	(513) 526-4084		
e-mail address:	marea.casey@stantec.com		
Name of Wetland:	Wetland 17		
Vegetation Communit(ies):	PEM		
HGM Class(es):	Depressional		
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.			
Lat/Long or UTM Coordinate	40.746716, -81.416728		
USGS Quad Name	Bollivar, OH		
County	Stark county		
Township	N/A		
Section and Subsection	N/A		
Hydrologic Unit Code	050400010505		
Site Visit	02/14/23		
National Wetland Inventory Map	N/A		
Ohio Wetland Inventory Map	N/A		
Soil Survey	Sb: Sebring silt loam, 0 to 2 percent slopes		
Delineation report/map	See Ecological Resources Report		

Name of Wetland: Wetland 17	
Wetland Size (acres, hectares):	0.004 ac
Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.	
Comments, Narrative Discussion, Justification of Category Changes:	
Final score : 18.5	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 contiguous areas or heterogeneous complexes of wetland and upland. In separating wetlands for scoring purposes, the hydrologic regime of the wetland is the main criterion that should be used. Boundaries between contiguous or connected wetlands should be established where the volume, flow, or velocity of water moving through the wetland changes significantly. *Areas with a high degree of hydrologic interaction should be scored as a single wetland.* In determining a wetland’s scoring boundaries, use the guidelines in the ORAM Manual Section 5.0. In certain instances, it may be difficult to establish the scoring boundary for the wetland being rated. These problem situations include wetlands that form a patchwork on the landscape, wetlands divided by artificial boundaries like property fences, roads, or railroad embankments, wetlands that are contiguous with streams, lakes, or rivers, and estuarine or coastal wetlands. These situations are discussed below, however, it is recommended that Rater contact Ohio EPA, Division of Surface Water, 401/Wetlands Section if there are additional questions or a need for further clarification of the appropriate scoring boundaries of a particular wetland.

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	✓	
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.	✓	
Step 3	Delineate the boundary of the wetland to be rated such that all areas of interest that are contiguous to and within the areas where the hydrology does not change significantly, i.e. areas that have a high degree of hydrologic interaction are included within the scoring boundary.	✓	
Step 4	Determine if artificial boundaries, such as property lines, state lines, roads, railroad embankments, etc., are present. These should not be used to establish scoring boundaries unless they coincide with areas where the hydrologic regime changes.	✓	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		x
Step 6	Consult ORAM Manual Section 5.0 for how to establish scoring boundaries for wetlands that form a patchwork on the landscape, divided by artificial boundaries, contiguous to streams, lakes or rivers, or for dual classifications.	✓	

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	Circle one	
1	Critical Habitat. Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 5
5	Category 1 Wetlands. Is the wetland less than 0.5 hectares (1 acre) in size and hydrologically isolated and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by <i>Phalaris arundinacea</i> , <i>Lythrum salicaria</i> , or <i>Phragmites australis</i> , or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	<input checked="" type="radio"/> 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	<input checked="" type="radio"/> NO Go to Question 7
7	Fens. Is the wetland a carbon accumulating (peat, muck) wetland that is saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	<input checked="" type="radio"/> NO Go to Question 8a
8a	"Old Growth Forest." Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	<input checked="" type="radio"/> NO Go to Question 8b

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

Table 1. Characteristic plant species.

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

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

Site: Wetland 17 Rater(s): MC, MD Date: 02/14/23

0	0
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

- Select one size class and assign score.
- >50 acres (>20.2ha) (6 pts)
 - 25 to <50 acres (10.1 to <20.2ha) (5 pts)
 - 10 to <25 acres (4 to <10.1ha) (4 pts)
 - 3 to <10 acres (1.2 to <4ha) (3 pts)
 - 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
 - 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
 - <0.1 acres (0.04ha) (0 pts)

2	2
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

- 2a. Calculate average buffer width. Select only one and assign score. Do not double check.
- WIDE. Buffers average 50m (164ft) or more around wetland perimeter (7)
 - MEDIUM. Buffers average 25m to <50m (82 to <164ft) around wetland perimeter (4)
 - NARROW. Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 - VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
- 2b. Intensity of surrounding land use. Select one or double check and average.
- VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
 - LOW. Old field (>10 years), shrub land, young second growth forest. (5)
 - MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
 - HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

8	10
max 30 pts.	subtotal

Metric 3. Hydrology.

- 3a. Sources of Water. Score all that apply.
- High pH groundwater (5)
 - Other groundwater (3)
 - Precipitation (1)
 - Seasonal/Intermittent surface water (3)
 - Perennial surface water (lake or stream) (5)
- 3b. Connectivity. Score all that apply.
- 100 year floodplain (1)
 - Between stream/lake and other human use (1)
 - Part of wetland/upland (e.g. forest), complex (1)
 - Part of riparian or upland corridor (1)
- 3c. Maximum water depth. Select only one and assign score.
- >0.7 (27.6in) (3)
 - 0.4 to 0.7m (15.7 to 27.6in) (2)
 - <0.4m (<15.7in) (1)
- 3d. Duration inundation/saturation. Score one or dbl check.
- Semi- to permanently inundated/saturated (4)
 - Regularly inundated/saturated (3)
 - Seasonally inundated (2)
 - Seasonally saturated in upper 30cm (12in) (1)
- 3e. Modifications to natural hydrologic regime. Score one or double check and average.

<ul style="list-style-type: none"> <input type="checkbox"/> None or none apparent (12) <input type="checkbox"/> Recovered (7) <input checked="" type="checkbox"/> Recovering (3) <input checked="" type="checkbox"/> Recent or no recovery (1) 	<p>Check all disturbances observed</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> ditch</td> <td><input type="checkbox"/> point source (nonstormwater)</td> </tr> <tr> <td><input type="checkbox"/> tile</td> <td><input type="checkbox"/> filling/grading</td> </tr> <tr> <td><input type="checkbox"/> dike</td> <td><input type="checkbox"/> road bed/RR track</td> </tr> <tr> <td><input type="checkbox"/> weir</td> <td><input type="checkbox"/> dredging</td> </tr> <tr> <td><input type="checkbox"/> stormwater input</td> <td><input type="checkbox"/> other _____</td> </tr> </table>	<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)	<input type="checkbox"/> tile	<input type="checkbox"/> filling/grading	<input type="checkbox"/> dike	<input type="checkbox"/> road bed/RR track	<input type="checkbox"/> weir	<input type="checkbox"/> dredging	<input type="checkbox"/> stormwater input	<input type="checkbox"/> other _____
<input type="checkbox"/> ditch	<input type="checkbox"/> point source (nonstormwater)										
<input type="checkbox"/> tile	<input type="checkbox"/> filling/grading										
<input type="checkbox"/> dike	<input type="checkbox"/> road bed/RR track										
<input type="checkbox"/> weir	<input type="checkbox"/> dredging										
<input type="checkbox"/> stormwater input	<input type="checkbox"/> other _____										

5.5	15.5
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

- 4a. Substrate disturbance. Score one or double check and average.
- None or none apparent (4)
 - Recovered (3)
 - Recovering (2)
 - Recent or no recovery (1)
- 4b. Habitat development. Select only one and assign score.
- Excellent (7)
 - Very good (6)
 - Good (5)
 - Moderately good (4)
 - Fair (3)
 - Poor to fair (2)
 - Poor (1)
- 4c. Habitat alteration. Score one or double check and average.
- None or none apparent (9)
 - Recovered (6)
 - Recovering (3)
 - Recent or no recovery (1)

<p>Check all disturbances observed</p> <ul style="list-style-type: none"> <input type="checkbox"/> mowing <input type="checkbox"/> grazing <input type="checkbox"/> clearcutting <input type="checkbox"/> selective cutting <input type="checkbox"/> woody debris removal <input type="checkbox"/> toxic pollutants 	<ul style="list-style-type: none"> <input type="checkbox"/> shrub/sapling removal <input type="checkbox"/> herbaceous/aquatic bed removal <input type="checkbox"/> sedimentation <input type="checkbox"/> dredging <input type="checkbox"/> farming <input type="checkbox"/> nutrient enrichment
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15.5
subtotal this page

Site: Wetland 17 Rater(s): MC, MD Date: 02/14/23

15.5

subtotal first page

0	15.5
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max 10 pts. subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

3	18.5
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max 20 pts. subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- Aquatic bed
- Emergent
- Shrub
- Forest
- Mudflats
- Open water
- Other _____

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

18.5

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1. Critical Habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 4. Significant bird habitat	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 1.
	Question 6. Bogs	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 7. Fens	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8a. Old Growth Forest	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted with native plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3
Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.	
Question 10. Oak Openings	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, Category 3	
Question 11. Relict Wet Prairies	YES <input type="radio"/> NO <input checked="" type="radio"/>	If yes, evaluate for Category 3; may also be 1 or 2.	
Quantitative Rating	Metric 1. Size	0	
	Metric 2. Buffers and surrounding land use	2	
	Metric 3. Hydrology	8	
	Metric 4. Habitat	9.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	3	
	TOTAL SCORE	18.5	Category based on score breakpoints Category 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category
 Choose one Category 1 Category 2 Category 3

End of Ohio Rapid Assessment Method for Wetlands.



Photograph Location 1. Representative view of new field habitat within the Project area. Photograph taken facing northeast.



Photograph Location 2. Representative view of existing gravel access road in mixed early successional/second growth deciduous forest habitat within the Project area. Photograph taken facing east.



Photograph Location 3. Representative view of old field habitat and gas pipeline right-of-way within the Project area. Photograph taken facing south.



Photograph Location 4. Representative view of existing gravel road within the Project area. Photograph taken facing east.



Photograph Location 5. Representative view of residential lawn within the Project area.
Photograph taken facing east.



Photograph Location 6. Representative view of agricultural field within the Project area.
Photograph taken facing north.



Photograph Location 7. Representative view of industrial land within the Project area.
Photograph taken facing northeast.



Photograph Location 8. Representative view of pasture habitat within the Project area.
Photograph taken facing northeast.



Photograph Location 9. Representative view of pasture habitat within the Project area.
Photograph taken facing east.



Photograph Location 10. Representative view of industrial land within the Project area.
Photograph taken facing west.