Construction Notice South Coshocton - Wooster 138 kV Transmission Line Cut-In and Salt Creek Switch Project

PUCO Case No. 22-1086-EL-BNR

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

Submitted by:
AEP Ohio Transmission Company, Inc.

December 13, 2022

Construction Notice

AEP Ohio Transmission Company, Inc.
South Coshocton – Wooster 138 kV Transmission Line Cut-In and Salt Creek Switch Project

4906-6-05

AEP Ohio Transmission Company, Inc. (the "Company") provides the following information in accordance with the requirements of Ohio Administrative Code Section 4906-6-05.

4906-6-05(B) General Information

B(1) Project Description

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 Construction Notice.

The Company proposes the South Coshocton-Wooster 138 kV Transmission Line Cut-In and Salt Creek Switch Project (the "Project") in Prairie Township, Holmes County, Ohio. The Project is necessitated by a request from Buckeye Power, Inc., on behalf of Holmes Wayne Electric Cooperative (HWN), for a new delivery point on the South Coshocton-Wooster 138 kV Transmission Line. The Project involves an approximately 0.2-mile cut-in along the South Coshocton-Wooster 138 kV Transmission Line and the installation of a new three-way phase-over-phase (PoP) switch (the "Salt Creek Switch"). An approximately 0.8-mile greenfield 138 kV transmission line, which will connect the Salt Creek Switch to HWN's, non-jurisdictional, distribution stepdown Holmesville Station, will be filed with the OPSB under separate cover (Case No. 22-1087-EL-BLN).

The Project meets the requirements for a Construction Notice (CN) because it is within the types of projects defined by item 2(a) of Ohio Administrative Code Section 4906-1-01 Appendix A of the Application Requirement Matrix For Electric Power Transmission Lines:

> *(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:*
>
> *(a) Two miles or less.*

The Project has been assigned PUCO Case No. 22-1086-EL-BNR

B(2) Statement of Need

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

Buckeye Power, Inc. on behalf of HWN, requested the Company provide a new 138 kV delivery point along the South Coshocton-Wooster 138 kV Transmission Line, specifically the eastern Wooster-West Millersburg 138 kV circuit, by mid-2023 to serve their new, non-jurisdictional Holmesville Station. The proposed HWN delivery point will have an expected peak demand of 4.4 MW and be used to serve growing commercial and light industrial load in the area. The delivery point will also be used to off-load HWN's existing Moreland Station, which has capacity concerns during peak periods. In order to install the new Salt Creek three-way switch and serve the HWN's customer, it is necessary to modify the existing South Coshocton – Wooster 138-kV Transmission Line. One structure to the north of the proposed Salt Creek Switch and one to the south will need to be replaced, due to design changes associated with the new switch placement and to meet necessary clearances.

Failure to move forward with the proposed project will result in the inability to serve the wholesale customer's load expectations as well as failing to address the capacity concerns experienced by the customer at their existing station in the area.

The need and solution for the entire customer project were presented and reviewed with stakeholders at the March 2021 and September 2021 PJM SRRTEP meetings, respectively. The Project was subsequently assigned PJM supplemental number s2641. This Project was included in the Company's 2022 Long Term Forecast Report, and is located on page 104 and 120, 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 Holmes County, Ohio. Figure 1 in Appendix A shows the location of the proposed Project in relation to the existing utility infrastructure in the area.

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.

The Company considered two switch locations and three greenfield route options for the overall project. The selected switch location reduces tree clearing, access road length, and was preferred by the property owner. The selected greenfield route reduces impacts to undeveloped land for future land development; follows the roadside to reduce access road impacts, and environmental impacts; and was preferred by the property owner along the greenfield extension.

The preferred location of the Project was dictated by existing infrastructure, the proposed placement of the Holmesville Station, minimizing impacts to property owners by locating the greenfield extension along road ROW, and minimizes impacts to the environment by avoiding tree clearing and impacts to streams and wetlands to the extent practicable. The preferred location of the Project minimizes impacts to the community and the environment, and represents the most suitable location and most appropriate solution for meeting the Company's 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 CN, the Company 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 notice will comply with all requirements of Ohio Revised Code ("OAC") Section 4906-6-08(A)(1-6)and 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 CN and the public notice for this CN. An electronic copy of the CN 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 March 2023, and the anticipated in-service date will be July 2023.

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.

Figure 1 provides the proposed Project area on a map of 1:24,000-scale (1-inch equals 2,000 feet) on the Holmesville United States Geological Survey (USGS) 7.5-minute topographic map of the Project area. Figure 2 shows the Project area on ESRI World Imagery at a scale of 1:12,000 (1 inch equals 1,000 feet). The ESRI World Imagery is dated May 2021.

To visit the Project site from Columbus, Ohio, take I-71 North for approximately 68.4 miles. Take Exit 176 to merge onto U.S. 30 East toward Wooster. Follow U.S. 30 East for approximately 25.4 miles. Exit onto Ohio State Route 302 East/Madison Avenue and follow for approximately 1 mile, and then bear right onto Ohio State Route 83 South. Remain on Ohio State Route 83 South for approximately 10 miles. The approximate address of the Salt Creek Switch site is 8231 OH-83, Holmesville, Ohio 44633, at latitude 40.641390, longitude -81.933032.

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.

The proposed Project will be constructed within existing ROW but will require supplemental easements. A list of properties required for the Project are provided in the table below.

Parcel ID	Agreement Type	Easement Agreement Obtained (Yes/No)
1700370000	Greenfield Easement Agreement	Yes
1700370000	Supplemental Easement	No
1700370002	Supplemental Easement	No

* The Company may supplement existing rights under all blanket and defined easements identified above.

B(9) Technical Features

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

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

The transmission line cut-in is anticipated to include the following:

Voltage: 138kV
Conductors: Three (3) 477 Kcm HAWK ACSR (26/7)

Static Wire:	Two (2) 5/16" Steel
Insulators:	Ceramic/Glass
ROW Width:	100 feet
Structure Type:	Two (2) Single circuit, monopole steel Davit Arm Structures with direct embedded foundations One (1) H-frame steel single circuit structure (This structure is not being replaced, but will be modified with new insulators and adding line weights.)

The Salt Creek Switch is anticipated to include the following:

Voltage:	138kV
Conductors:	Three (3) 795 Kcm DRAKE ACSR (26/7)
Static Wire:	One (1) 7#8 Alumoweld
Insulators:	Polymer
ROW Width:	100 feet
Structure Type:	One (1) Single circuit, monopole steel GOAB switch with drilled shaft concrete foundations

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.

No occupied residences or institutions are located within 100 feet of the Project.

B(9)(c) Project Cost

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 $1.1 million using a Class 4 estimates. Pursuant to the PJM OATT, the costs for this Project will be recovered in the AEP Ohio Transmission Company Inc.'s 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.

An aerial photograph of the Project vicinity is provided as Figure 2. The Project location and vicinity have historically been primarily agricultural land with scattered woodlots. The Project is mapped within Prairie Township in Holmes County. The Project vicinity is currently rural in nature, and is comprised primarily of open agricultural fields, forested land, scattered residences, and some industrial operations.

A small portion of the existing South Coshocton-Wooster 138 kV transmission line is located within the Killbuck Marsh Wildlife Area, a designated Ohio State Wildlife Area, that is managed by the Ohio Division of Natural Resources (ODNR)-Division of Wildlife (DOW). Approximately 0.2 miles of the proposed Project extends into the Killbuck Marsh Wildlife Area. This segment of the Project will be accessed by helicopter, and no impact to the Killbuck Marsh Wildlife Area is proposed. No other parks, preserves, or wildlife management areas are located in the vicinity 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.

The Holmes County Auditor maintains an online database of agricultural district land in Prairie Township. Holmes County was consulted on October 22, 2022, and there were no parcels within the Project ROW identified as agricultural district lands. As this Project is intended to replace existing transmission line infrastructure, including transmission poles, no new agricultural districts or other agricultural land uses would be converted as a result of the Project.

B(10)(c) Archaeological and Cultural Resources

Provide a description of the applicant's investigation concerning the presence or absence of significant archaeological 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 cultural resource survey and report were conducted by the Company's consultant for the Project in November 2022. The Company's consultant indicated in the Phase I Archaeological Investigations report that two previously unrecorded archaeological sites (33HS0384 and 33HS0385) were identified during the November 2022 investigations. Coordination with the State Historic Preservation Office ("SHPO") was completed on December 9, 2022 and the OHPO concurred with Weller's assessment that the two OAI sites identified by the project (OAI #33HS0384 and 33HS0385) were recommended for avoidance or Phase II investigations. The Company will continue coordination with the SHPO in order to complete Phase II work on both sites, prior to construction and following completion of coordination with the SHPO.

The Company's consultant also conducted a history/architecture investigation and indicated in the corresponding report that a total of seven resources older than fifty years of age were identified within the survey area. One resource is listed in the National Register of Historic Places (NRHP) (Ref. 85001342). None of the remaining resources were recommended as eligible for NRHP listing. SHPO concurred that the Project would not impact the significance or integrity of the NRHP-listed resource in a way that would alter

its National Register Status and the Project should have no impact on aboveground historic resources. Coordination with the State Historic Preservation Office ("SHPO") was completed on December 9, 2022 and the OHPO concurred with Weller's assessment that there are no adverse effect on above ground historic properties.

Correspondence from the SHPO was received on December 9, 2022 (Appendix C). The SHPO recommended Phase II archaeological work be completed on the impacted portion of archaeology sites 33HS0384 and 33HS0385.

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 OHCD000005. The Company will also coordinate storm water permitting needs with local government agencies, as necessary. The Company will implement and maintain best management practices as outlined in the Project-specific Storm Water Pollution Prevention Plan to minimize erosion control sediment to protect surface water quality during storm events.

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

The United States Fish and Wildlife Service (USFWS) and ODNR-DOW were contacted to identify the federally and state-listed threatened and endangered species known to occur in Holmes County, respectively. In November 2021, coordination letters were sent to USFWS and ODNR-DOW soliciting responses. Separate letters were sent for each element of the Project, although the species identified are the same.

Responses were received from the USFWS on December 2, 2021. The USFWS advised that the Project area occurs within the range of the federally endangered Indiana bat (*Myotis sodalis*) and federally threatened northern long-eared bat (*Myotis septentrionalis*). The USFWS proposed implementation of seasonal tree cutting (clearing of trees ≥3 inches diameter at breast height between October 1 and March 31) to avoid impacts to Indiana bats and northern long-eared bats, if suitable habitat occurs within the Project area. If

seasonal tree cutting is implemented, adverse impacts to these species are not likely. If seasonal tree cutting is not possible, USFWS requests that a mist net survey be conducted between June 1 and August 15, prior to cutting. No tree clearing is anticipated for the Project.

Responses were received from the ODNR-DOW on December 28, 2021 and April 1, 2022. The ODNR-DOW advised that the Project area occurs within the range of the state and federally endangered Indiana bat, the state endangered and federally threatened northern long-eared bat, the state endangered little brown bat (*Myotis lucifugus*), and the state endangered tricolored bat (*Perimyotis subflavus*). Presence of these bat species has been established in the Project area and summer tree clearing is not recommended. If trees must be cut during the summer months, ODNR-DOW recommends performing a mist net or acoustic survey between June 1 and August 15, in accordance with agency guidance for bat surveys and tree clearing. If state-listed bats are documented, ODNR-DOW recommends tree cutting between October 1 and March 31; however, the ODNR-DOW may accept limited tree cutting inside after further coordination. No tree clearing is anticipated for the Project.

The ODNR-DOW also recommends that a desktop habitat assessment be conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the Project area. If a habitat assessment finds that a potential hibernaculum is present within 0.25 miles of the Project area, further coordination with ODNR-DOW is required. If potential or known hibernaculum is found, the DOW recommends a 0.25-mile tree cutting and subsurface disturbance buffer around the hibernaculum entrance. If no tree cutting or subsurface impacts to a hibernaculum are proposed, the Project is not likely to impact these species. Desktop review in accordance with the Ohio Division of Wildlife and the U.S. Fish and Wildlife Service (OH-Field Office) Joint Guidance for Bat Surveys and Tree Clearing, dated May 2022, identified no documented underground or surface mines and no mine entrances/openings within one-quarter mile of the project area. No tree clearing or subsurface disturbances are proposed as part of the Project.

The ODNR-DOW advised that the Project area occurs within the range of the state endangered snuffbox (*Epioblasma triquetra*), a mussel species. Due to the location of the Project, and that there is no in-water work proposed in a perennial stream, the Project is not anticipated to impact this species.

The ODNR-DOW advised that the Project area occurs within the range of the state endangered Iowa darter (*Etheostoma exile*) and the state threatened lake chubsucker (*Erimyzon sucetta*), both state-listed fish species. Due to the location, and that there is no in-water work proposed in a perennial stream, the Project is not anticipated to impact these species.

The ODNR-DOW advised that the Project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, the Project is not anticipated to impact this species.

The ODNR-DOW advised that the Project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird; black tern (*Chlidonias niger*), a state endangered bird; northern harrier (*Circus cyaneus*), a state endangered bird; sandhill crane (*Grus canadensis*), a state threatened bird; trumpeter swan (*Cygnus buccinator*), a state threatened bird; and upland sandpiper (*Bartramia*

longicauda), a state endangered bird. On February 3, 2022, the Company's consultant surveyed the Project area to identify potential habitat for sensitive species as identified in the ODNR correspondence located in Appendix C. No potentially suitable habitat was identified within the Project survey corridor, and impacts to these state-listed bird species are not anticipated.

Additional details regarding species are provided in the agency correspondence letters and in the Wetland Delineation and Stream Assessment Report, see Appendix C and Appendix D.

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 Company's consultant prepared a Wetland Delineation and Stream Assessment Report, see Appendix D. The ecological survey of the Project identified two wetlands and no streams or ponds within the survey corridor. The wetlands identified are classified as palustrine emergent (PEM) wetlands. No temporary or permanent impact to the wetlands is anticipated.

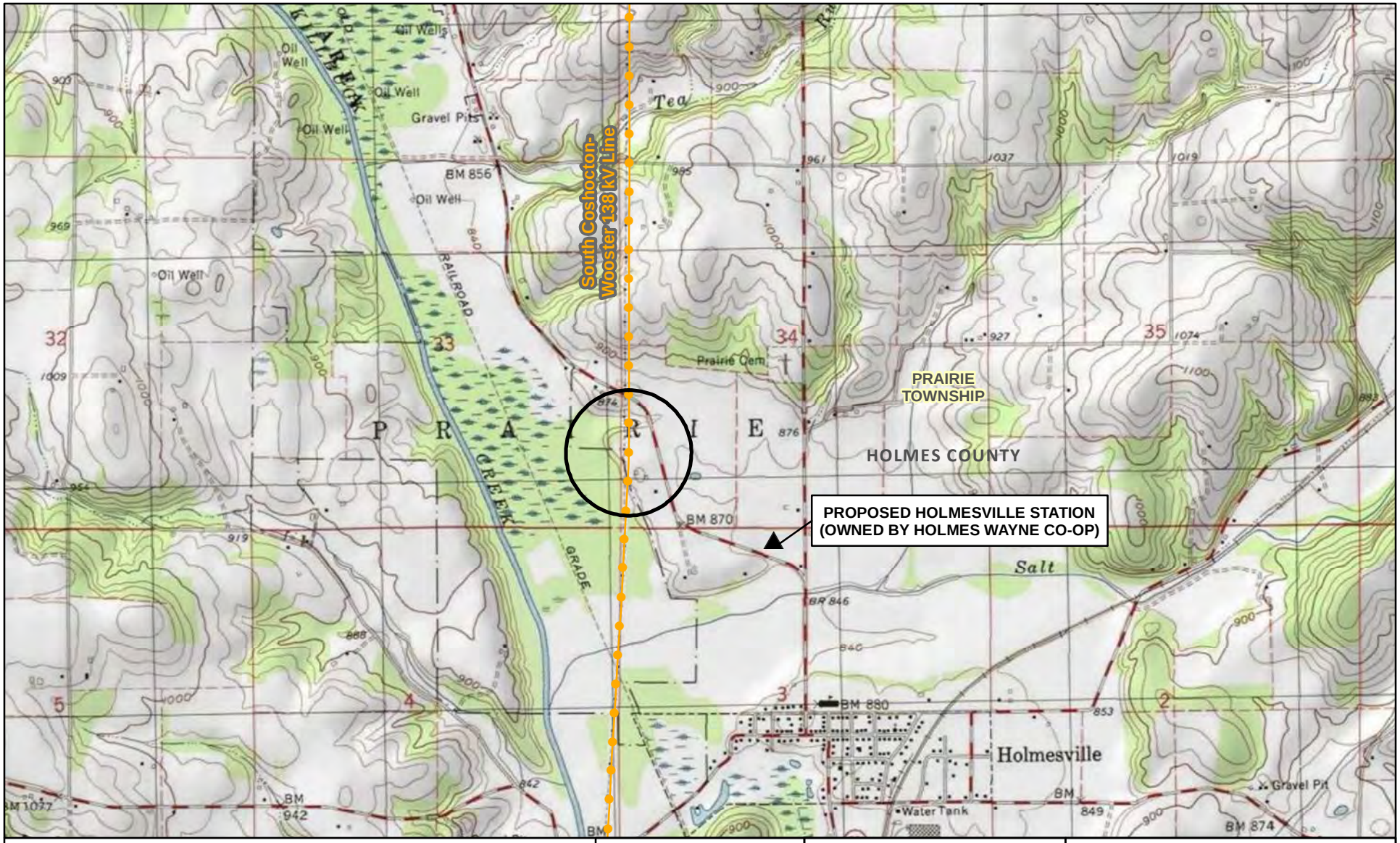
Federal Emergency Management Agency (FEMA)-designated 100-year floodplains are located within and around the Project survey corridor. These floodplains are associated with Killbuck Creek, and are located near the southwest end of the Project. The floodplains are shown on Flood Map 39075C0068D from the FEMA National Flood Hazard Layer (NFHL) datasets. No temporary or permanent impacts to the FEMA-regulated floodplain is anticipated.

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.

Appendix A Project Figures



Legend

- Proposed Station
- Existing Transmission Line (138-kV)
- Project Area

Data Sources: AEP (2022), ESRI (2013), PowerMap (2010) USGS 7.5 Topographic Quadrangle (Holmesville)

Coordinate System: State Plane Ohio North NAD 83

November 29, 2022

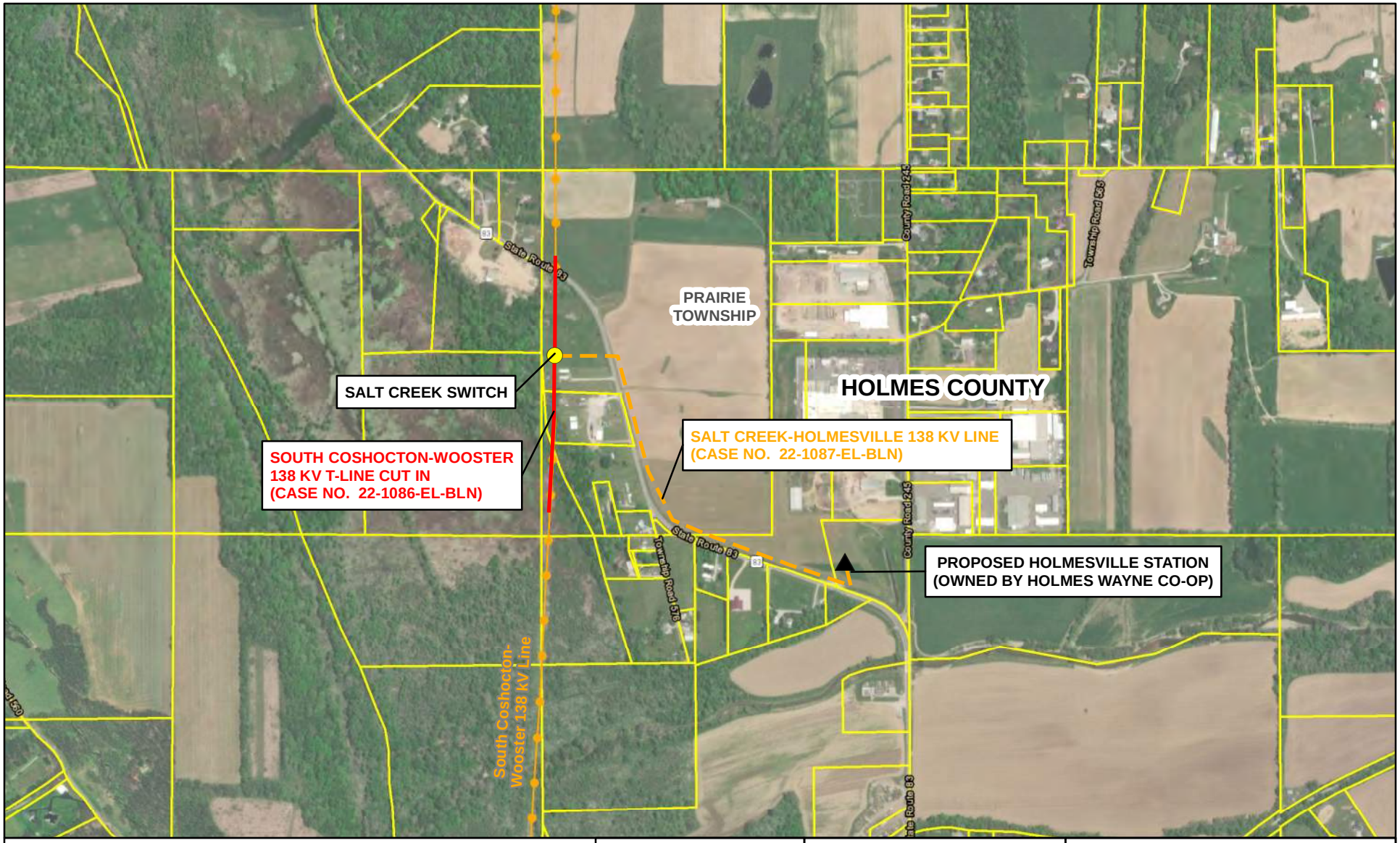
FIGURE 1
TOPOGRAPHIC OVERVIEW

AEP OHIO TRANSMISSION COMPANY

South Coshocton-Wooster 138 kV Transmission Line Cut-In and Salt Creek Switch Project

0 1,000 2,000 3,000 4,000

Feet



Legend

- Proposed Station
- Proposed Switch
- Salt Creek-Holmesville 138 kV Line (Case No. 22-1087-EL-BLN)
- South Coshocton-Wooster 138 kV T-Line Cut In (Case No. 22-1086-EL-BLN)
- Existing Transmission Line (138-kV)
- Parcel Boundary

Data Sources: AEP (2022), USDA (2019), PowerMap (2010) USGS 7.5 Topographic Quadrangle (Holmesville)

Coordinate System: State Plane Ohio North NAD 83

November 30, 2022

FIGURE 2
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY

South Coshocton-Wooster 138 kV Transmission Line Cut-In and Salt Creek Switch Project

0 500 1,000 1,500 2,000

Feet

Appendix B PJM Submittal and Long Term Forecast Report

PUCO Form FE-T9:
AEP Ohio
Specifications of Planned Transmission Lines

1.	**LINE NAME AND NUMBER:**	Salt Creek Extension (Wooster - West Millersburg 138kV) S2641 TP2021035
2.	**POINTS OF ORIGIN AND TERMINATION**	Salt Creek Switch - Holmes Wayne Coop Holmesville Station INTERMEDIATE STATION - N/A
3.	**RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS**	0.75 mi / 100ft / 1 circuit (of new construction)
4.	**VOLTAGE: DESIGN / OPERATE**	138 kV / 138 kV
5.	**APPLICATION FOR CERTIFICATE:**	2022
6.	**CONSTRUCTION:**	2022 - 2023
7.	**CAPITAL INVESTMENT:**	$1.4M
8.	**PLANNED SUBSTATION:**	Salt Creek Switch
9.	**SUPPORTING STRUCTURES:**	Steel
10.	**PARTICIPATION WITH OTHER UTILITIES**	N/A
11.	**PURPOSE OF THE PLANNED TRANSMISSION LINE**	New 138 kV extension to serve co-op transmission delivery point
12.	**CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION**	Unable to provide requested service to customer
13.	**MISCELLANEOUS:**	

PUCO Form FE-T9:
AEP Ohio
Specifications of Planned Transmission Lines

1.	**LINE NAME AND NUMBER:**	Wooster - West Millersburg 138kV (S2641 TP2021035)
2.	**POINTS OF ORIGIN AND TERMINATION**	Wooster - West Millersburg INTERMEDIATE STATION - Salt Creek Switch
3.	**RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS**	10.5 mi / 100ft / 1 circuit (0.1 mi of line work)
4.	**VOLTAGE: DESIGN / OPERATE**	138 kV / 138 kV
5.	**APPLICATION FOR CERTIFICATE:**	2022
6.	**CONSTRUCTION:**	2022 - 2023
7.	**CAPITAL INVESTMENT:**	$0.2M
8.	**PLANNED SUBSTATION:**	Salt Creek Switch
9.	**SUPPORTING STRUCTURES:**	Steel
10.	**PARTICIPATION WITH OTHER UTILITIES**	N/A
11.	**PURPOSE OF THE PLANNED TRANSMISSION LINE**	Reconfiguring the existing West Millersburg – Wooster 138kV circuit to add in Salt Fork Switch.
12.	**CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION**	Unable to provide requested service to customer
13.	**MISCELLANEOUS:**	

AEP Transmission Zone M-3 Process
Holmesville, Ohio

Need Number: AEP-2021-OH012

Process Stage: Need Meeting 3/19/2021

Supplemental Project Driver:

Customer Service

Specific Assumption Reference:

AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions slide 12)

Problem Statement:

- Buckeye is requesting, on behalf of Holmes- Wayne Electric co-op, a new 138kV delivery point on the West Millersburg- Wooster 138kV Circuit by August 2023. Anticipated load is 4.4 MW.

AEP Transmission Zone M-3 Process
Holmesville, Ohio

Need Number: AEP-2021-OH012

Process Stage: Solutions Meeting 9/17/2021

Previously Presented: Needs Meeting 3/19/2021

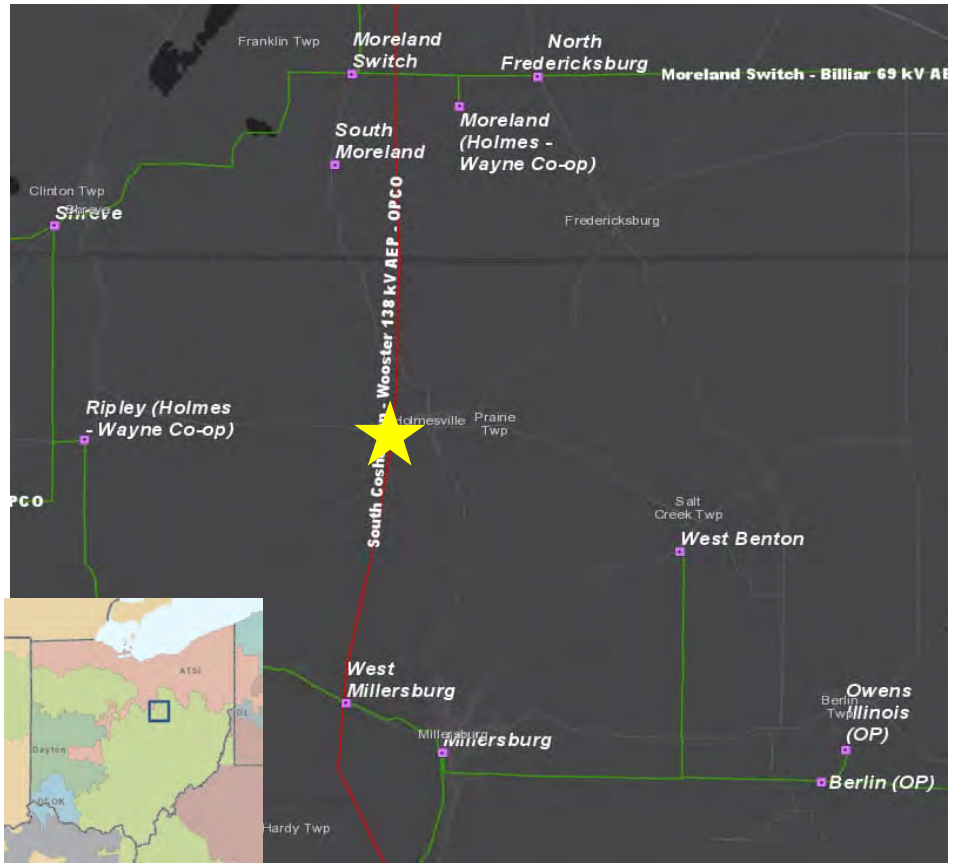
Supplemental Project Driver: Customer Service

Specific Assumption Reference:
AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions slide 8)

Problem Statement:

- Buckeye Power is requesting on behalf of Holmes- Wayne Electric co-op for a new 138kV delivery point on the West Millersburg- Wooster 138kV Circuit by August 2023. Anticipated load is 4.4 MW.

Model: PJM 2025 RTEP Series Cases



AEP Transmission Zone M-3 Process
Seneca County, Ohio

Need Number: AEP-2021-OH012

Process Stage: Solutions Meeting 9/17/2021

Proposed Solution:

- Reconfiguring the existing West Millersburg – Wooster 138kV circuit to add in Salt Fork Switch. $0.2 M
- Install a new 138kV three- way phase over phase switch named Salt Fork Switch. $0.87 M
- Construct ~ 0.75 miles of new 138 kV line between Salt Fork Switch and Holmesville delivery point using 556 ACSR conductor. $1.4 M
- Install new customer metering at Holmesville for Holmes Wayne Cooperative. $0.009 M

Cost estimate: $2.48 M

Ancillary Benefits:

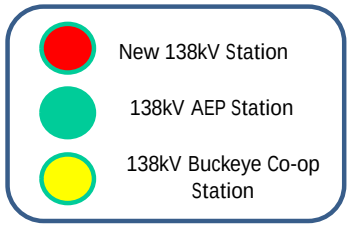
Provides Holmes- Wayne Electric Cooperative the ability to have supplementary service to the growing community and load demands as well as help to aid the loads currently served out of the Moreland delivery point.

Alternatives Considered:

N/A

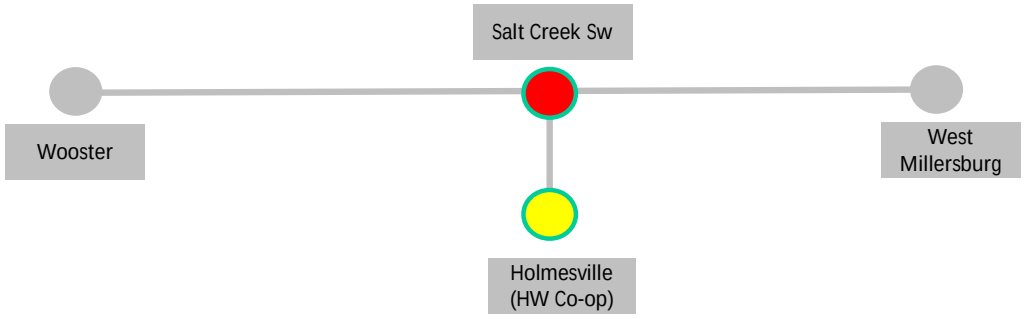
Projected In-Service: 7/31/2023

Project Status: Engineering

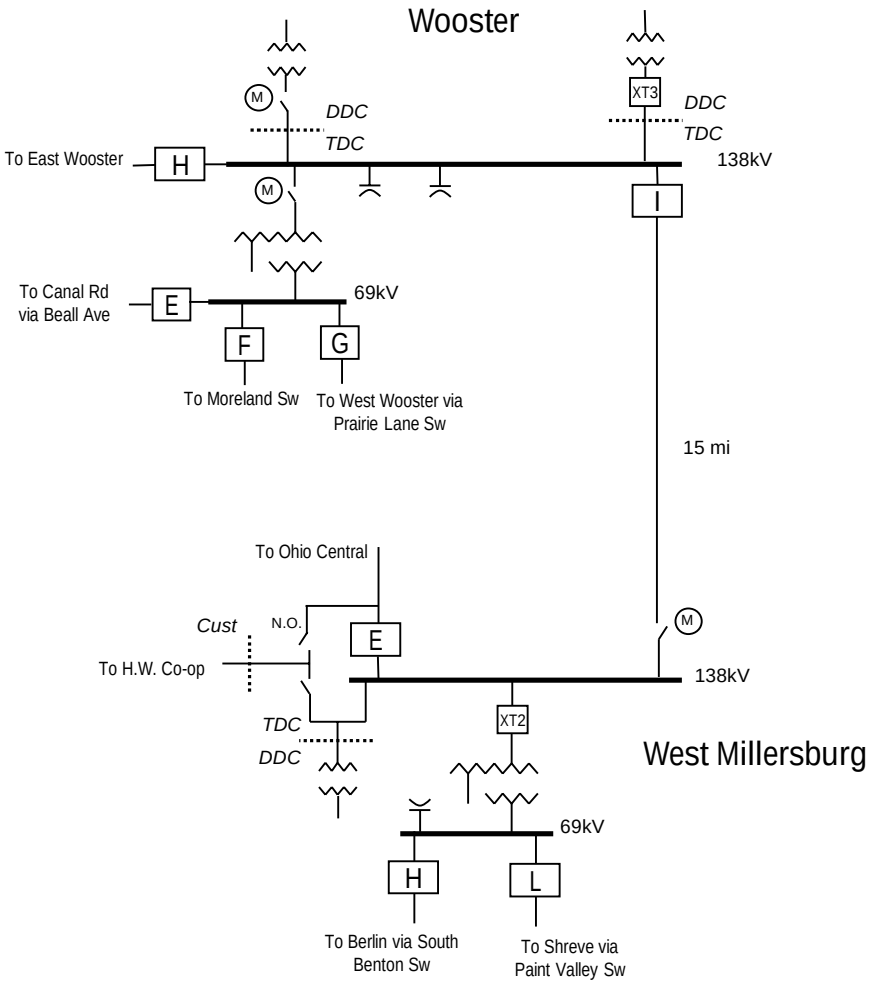


Existing:

Proposed:

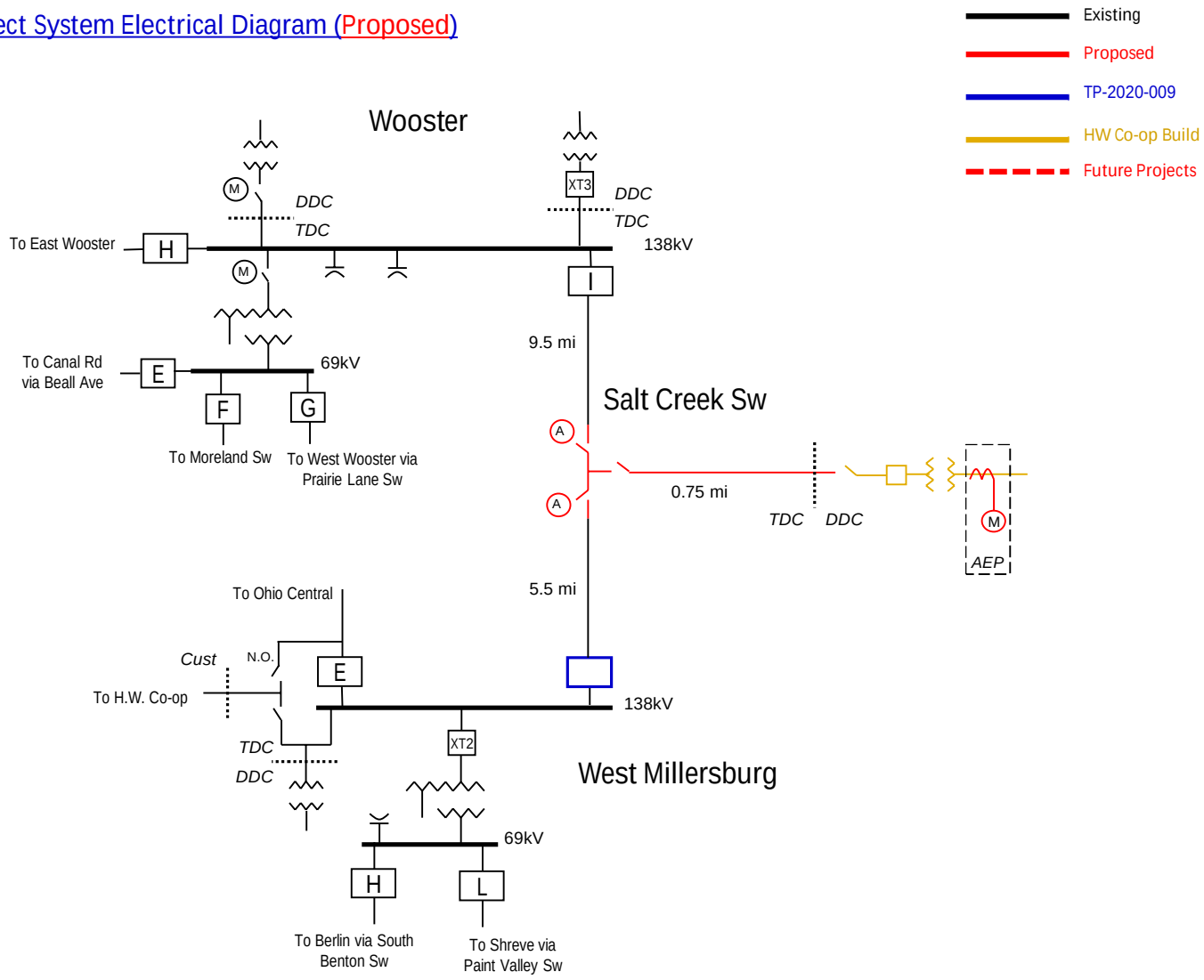


Master Project System Electrical Diagram (Existing)



Existing
Proposed
Related Projects
Future Projects

Master Project System Electrical Diagram (Proposed)



Appendix C Agency Coordination

Cooper, Brian

From: Ohio, FW3 <ohio@fws.gov>
Sent: Thursday, December 02, 2021 11:23 AM
To: Cooper, Brian
Cc: nathan.reardon@dnr.state.oh.us; Parsons, Kate; McKnight, Carol; ajtoohey@aep.com
Subject: [EXTERNAL] AEP - Salt Creek Switch Install Project, Holmes County, Ohio

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

TAILS# 03E15000-2022-TA-0348

Dear Mr. Cooper,

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 is it 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 Ashfield
Field Office Supervisor

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

American Electric Power
8600 Smith's Mill Road
New Albany, OH 43054
ajtoohey@ aep.com

November 23, 2021

Attention: Ms. Patrice Ashfield
U.S. Fish & Widlife Service
Ohio Ecological Field Office
4525 Morse Road, Suite 104
Columbus, Ohio 43230

Via email: ohio@fws.gov

Reference: Request for Technical Assistance
Salt Creek Switch Install Project
Holmes County, Ohio

Dear Ms. Ashfield:

AEP Ohio Transmission Company, Inc. (AEP), is formally requesting that the United States Fish and Wildlife Service (USFWS) complete a review for the Salt Creek Switch Install Project (Project) in Holmes County, Ohio. The Project is located within the Holmesville, Ohio U.S. Geologic Survey 7.5' topographical quadrangle and is shown on the attached Project Overview Map (Figure 1).

Please provide us with the results of the USFWS's environmental review at your earliest convenience. If you have questions or need additional information regarding the Project, please contact me at the phone number or email below. Thank you for your assistance with this request.

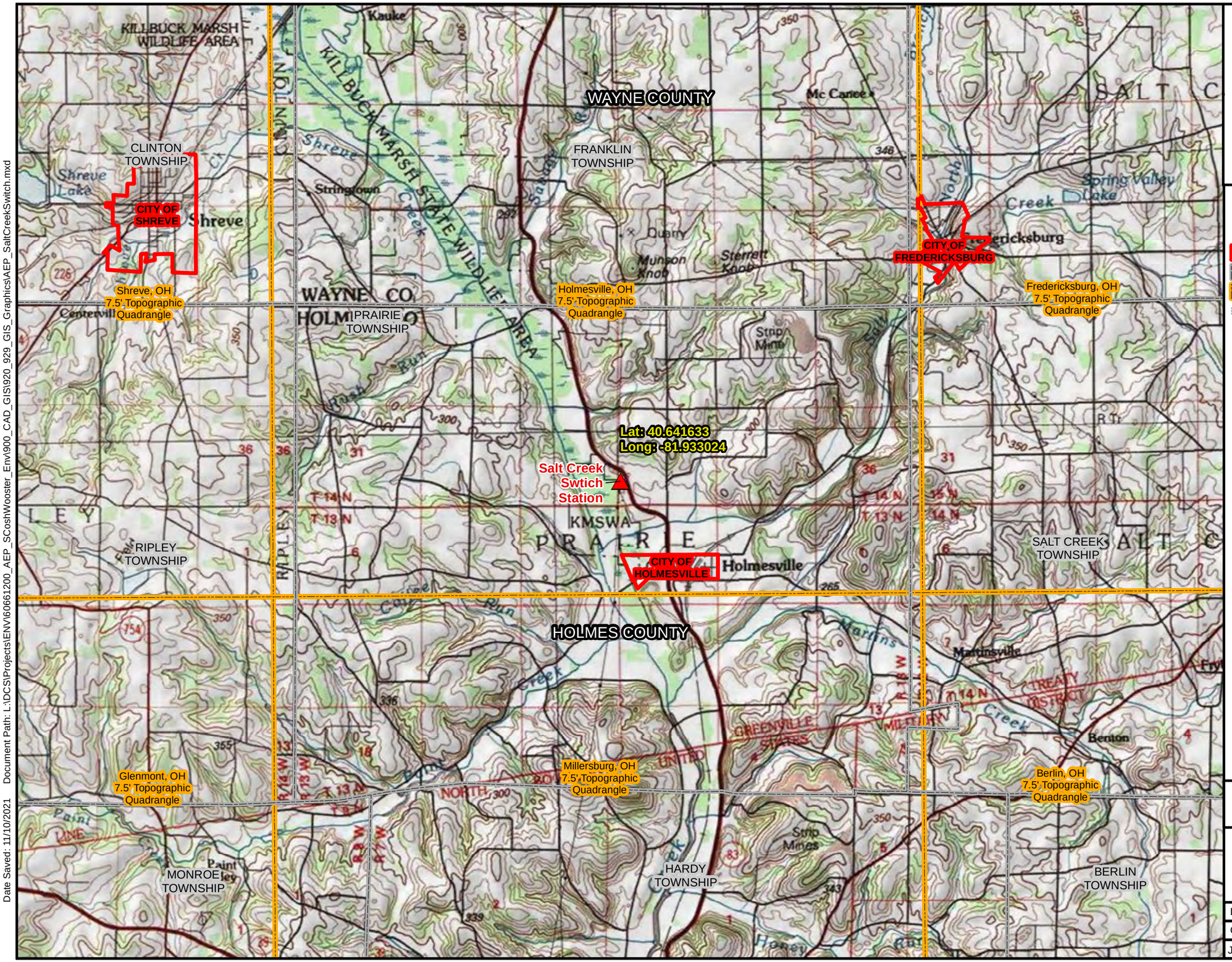
Sincerely,

Brian Cooper

Environmental Project Manager
Phone: (717-304-0578)
brian.cooper@aecom.com

Attachments: Figure 1 – Project Location Map
Electronic Shapefiles (.shp)

Cc: Amy J. Toohey
Environmental Specialist-Consultant
Phone: (614-565-1480)
ajtoohey@aep.com


KILLBUCK MARSH WILDLIFE AREA
Kauke
KILLBUCK MARSH STATE WILDLIFE AREA
WAYNE COUNTY
Mc Canee
CLINTON TOWNSHIP
FRANKLIN TOWNSHIP
Shreve Lake
Stringtown
CITY OF SHREVE
Shreve
Spring Valley Lake
CITY OF FREDERICKSBURG
Munson Knob
Sterrett Knob
Shreve, OH 7.5' Topographic Quadrangle
WAYNE CO
Holmesville, OH 7.5' Topographic Quadrangle
Fredericksburg, OH 7.5' Topographic Quadrangle
Centerville
PRAIRIE TOWNSHIP
Strip Mine
Lat: 40.641633
Long: -81.933024
Salt Creek Swtich Station
RIPLEY TOWNSHIP
KMSWA
PRAIRIE
CITY OF HOLMESVILLE
Holmesville
SALT CREEK TOWNSHIP
HOLMES COUNTY
Martinsville
Benton
Glenmont, OH 7.5' Topographic Quadrangle
Millersburg, OH 7.5' Topographic Quadrangle
Berlin, OH 7.5' Topographic Quadrangle
MONROE TOWNSHIP
HARDY TOWNSHIP
BERLIN TOWNSHIP
Wayne, Holmes, and Coshocton Counties
Legend
Existing Substation
City or Town Boundary
Township Boundary
7.5' Topographic Quadrangle Boundary
County Boundary
N
0
5,000
10,000
Feet
BASE MAP SOURCE:
ArcGIS Online, USA Topo Maps
AEP
Salt Creek Switch
FIGURE 1
PROJECT OVERVIEW
DATE: 11/10/2021
1 inch = 5,000 feet
CREATED BY: TCC
CHECKED BY: BC
Job No. 60661200
AECOM
Document Path: L:\DCS\Projects\ENV\60661200_AEP_SCoshWooster_Env\900_CAD_GIS\920_929_GIS_Graphics\AEP_SaltCreekSwitch.mxd
Date Saved: 11/10/2021

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

April 1, 2022

Brian Cooper
AECOM
6 Foster Plaza, 681 Andersen Drive
Pittsburgh, Pennsylvania 15220

Re: 22-0248; AEP - South Coshocton-Wooster 138-kV T-line Cut In

Project: The proposed project involves a 138 kV T-line cut in.

Location: The proposed project is located in Prairie Township, Holmes County, Ohio.

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

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

American Sweet-flag (*Acorus americanus*), P
Great St. John's-wort (*Hypericum ascyron* ssp. *pyramidatum*), T
Northern Adder's-tongue (*Ophioglossum pusillum*), T
Prairie Fringed Orchid (*Platanthera leucophaea*), T, FT
Sandhill Crane (*Antigone canadensis*), T
Lake Chubsucker (*Erimyzon sucetta*), T
Cerulean Warbler (*Setophaga cerulea*), SC
Barn Owl (*Tyto alba*), T
Buttonbush shrub swamp Plant Community
Mixed emergent marsh Plant Community

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

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

A search for unique ecological sites, scenic rivers, state nature preserves, wildlife areas, national wildlife refuges, parks, forests, and other protected natural areas indicates that the following sites occur within or adjacent to the project area:

Killbuck Marsh Wildlife Area – ODNR Division of Wildlife

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 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 species of bats 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. If trees are present within the project area, and trees must be cut, the DOW 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 $\geq$ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "*OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING*". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Erin Hazelton at Erin.hazelton@dnr.ohio.gov).

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 snuffbox (*Epioblasma triquetra*), a state endangered and federally 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, and the lake chubsucker (*Erimyzon sucetta*) a state threatened 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 these or other aquatic species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. This long-lived, entirely aquatic salamander inhabits perennial streams with large flat rocks. In-water work in hellbender streams can reduce availability of large cover rocks and can destroy hellbender nests and/or kill adults and juveniles. The contribution of additional sediment to hellbender streams can smother large cover rocks and gravel/cobble substrate (used by juveniles), making them unsuitable for refuge and nesting. Projects that contribute to altered flow regimes (e.g., by increasing areas of impervious surfaces or modifying the floodplain) can also adversely affect hellbender habitat. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the black tern (*Chlidonias niger*), a state endangered bird. The black tern prefers large, undisturbed inland marshes with fairly dense vegetation and pockets of open water. They nest in various kinds of marsh vegetation, but cattail marshes are generally favored. Nests are built on top of muskrat houses or on top of floating vegetation. If this type of habitat will be impacted, construction should be avoided in this habitat from April 1 through June 30 to reduce impacts to this species. If no wetland habitat will be impacted, the 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.

The project is within the range of the sandhill crane (*Grus canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through August 31. If this habitat will not be impacted, this project is not likely to have an impact on this species.

The project is within the range of the trumpeter swan (*Cygnus buccinator*), a state threatened bird. Trumpeter swans prefer large marshes and lakes ranging in size from 40 to 150 acres. They

like shallow wetlands one to three feet deep with a diverse mix of plenty of emergent and submergent vegetation and open water. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 through June 15. If this habitat will not be impacted, this project is not likely to have an impact on this species.

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). 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 type of 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

American Electric Power
8600 Smith's Mill Road
New Albany, OH 43054
ajtoohey@ aep.com

March 8, 2022

Attention: Mr. Mike Pettegrew
Ohio Department of Natural Resources
2045 Morse Road, Building E-2
Columbus, Ohio 43229-6693

Via email: environmentalreviewrequest@dnr.state.oh.us; NHDRequest@dnr.state.oh.us

Reference: Request for Technical Assistance
South Coshocton – Wooster 138-kV T-Line Cut In Project
Holmes County, Ohio

Dear Mr. Pettegrew:

AEP Ohio Transmission Company, Inc. (AEP), is formally requesting that the Ohio Department of Natural Resources (ODNR) complete a review for the proposed South Coshocton – Wooster 138-kV T-Line Cut In Project (Project) in Holmes County, Ohio. The Project is located within the Holmsville, Ohio U.S. Geologic Survey 7.5' topographical quadrangle and is shown on the attached Project Overview Map (Figure 1).

Please provide us with the results of the ODNR's environmental review, including results of the ODNR Natural Heritage Database search, at your earliest convenience. If you have questions or need additional information regarding the Project, please contact me at the phone number or email below. Thank you for your assistance with this request.

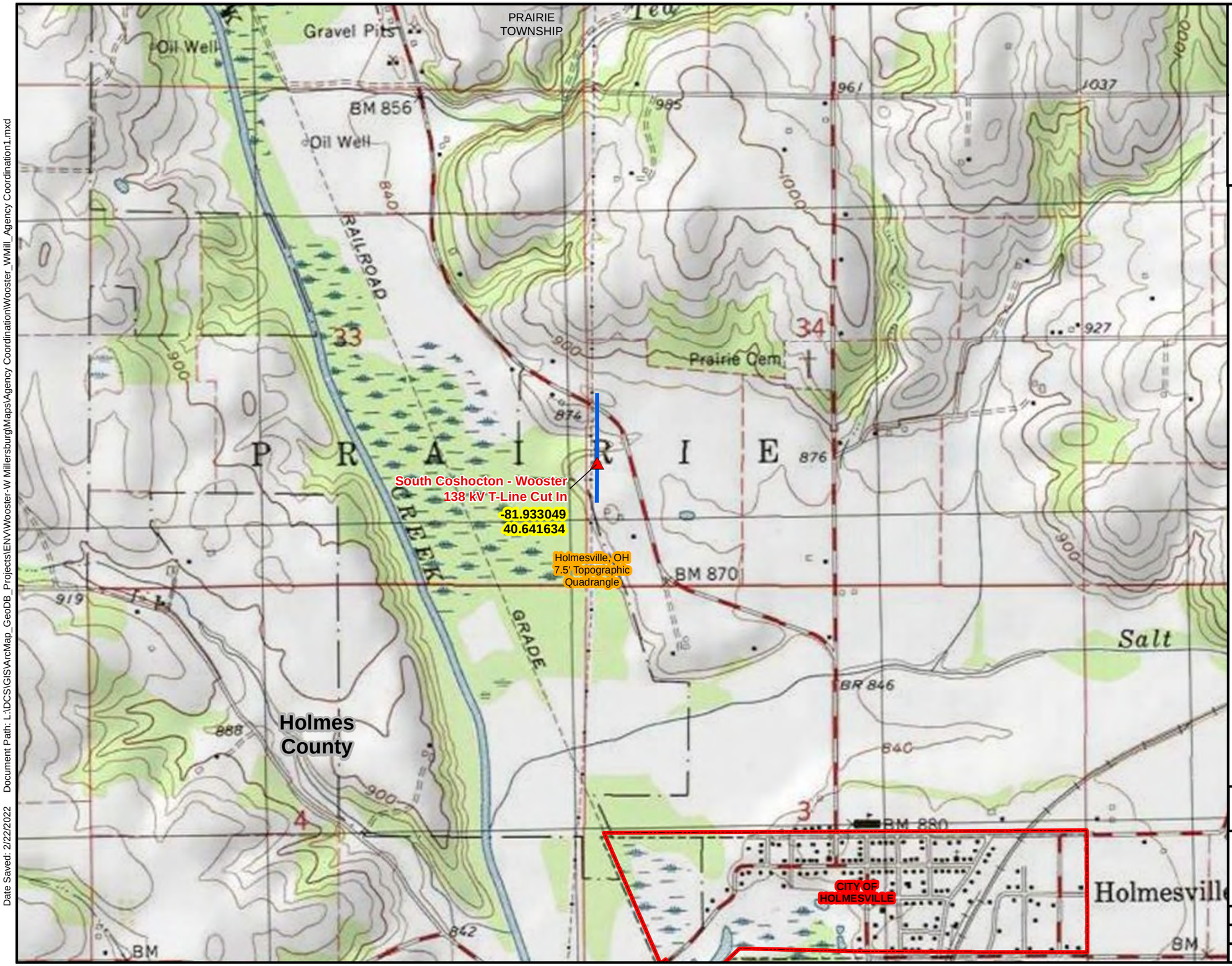
Sincerely,

Brian Cooper

Phone: (717-304-0578)
brian.cooper@aecom.com

Attachments: Figure 1 – Project Location Map
Electronic Shapefiles (.shp)

Cc: Amy J. Toohey
Environmental Specialist-Consultant
Phone: (614-565-1480)
ajtoohey@aep.com



Legend

- T-Line Cut In
- South Coshocton - Wooster 138 kV T-Line Cut In
- City or Town Boundary
- Township Boundary
- 7.5' Topographic Quadrangle Boundary

N

0 500 1,000 2,000

Feet

South Coshocton - Wooster
138 kV T-Line Cut In

FIGURE 1
PROJECT OVERVIEW

DATE: 2/22/2022	1 inch = 1,000 feet
CREATED BY: BSF	CHECKED BY: BC
Job No. 60661205	AECOM

Date Saved: 2/22/2022 Document Path: L:\DCS\GIS\ArcMap_GeoDB_Projects\ENV\Wooster-W Millersburg\Maps\Agency Coordination\Wooster_WMill_Agency Coordination1.mxd

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

December 28, 2021

Brian Cooper
AECOM
715 Washington Boulevard
Williamsport, PA 17701

Re: 21-1069; AEP - Salt Creek Switch Install

Project: The proposed project involves installation of a transfer switch.

Location: The proposed project is located in Prairie Township, Holmes 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:

American sweet-flag (*Acorus americanus*), P
Great St. John's-wort (*Hypericum ascyron* ssp. *pyramidatum*), T
Northern adder's-tongue (*Ophioglossum pusillum*), T
Prairie fringed orchid (*Platanthera leucophaea*), T, FT
Mixed emergent marsh plant community
Lake chubsucker (*Erimyzon sucetta*), T
Sandhill crane (*Antigone canadensis*), T
Killbuck Marsh Wildlife Area – ODNR Division of Wildlife

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 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 species of bats 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. If trees are present within the project area, and trees must be cut, the DOW 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 $\geq$ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "*OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING*". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Erin Hazelton at Erin.hazelton@dnr.ohio.gov).

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 snuffbox (*Epioblasma triquetra*), a state endangered and federally 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, and the lake chubsucker (*Erimyzon sucetta*) a state threatened 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 these or other aquatic species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. This long-lived,

entirely aquatic salamander inhabits perennial streams with large flat rocks. In-water work in hellbender streams can reduce availability of large cover rocks and can destroy hellbender nests and/or kill adults and juveniles. The contribution of additional sediment to hellbender streams can smother large cover rocks and gravel/cobble substrate (used by juveniles), making them unsuitable for refuge and nesting. Projects that contribute to altered flow regimes (e.g., by increasing areas of impervious surfaces or modifying the floodplain) can also adversely affect hellbender habitat. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the black tern (*Chlidonias niger*), a state endangered bird. The black tern prefers large, undisturbed inland marshes with fairly dense vegetation and pockets of open water. They nest in various kinds of marsh vegetation, but cattail marshes are generally favored. Nests are built on top of muskrat houses or on top of floating vegetation. If this type of habitat will be impacted, construction should be avoided in this habitat from April 1 through June 30 to reduce impacts to this species. If no wetland habitat will be impacted, the 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.

The project is within the range of the sandhill crane (*Grus canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through August 31. If this habitat will not be impacted, this project is not likely to have an impact on this species.

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

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the

Conservation Reserve Program (CRP). 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 type of 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)

American Electric Power
8600 Smith's Mill Road
New Albany, OH 43054
ajtoohey@ aep.com

November 23, 2021

Attention: Mr. Mike Pettegrew
Ohio Department of Natural Resources
2045 Morse Road, Building E-2
Columbus, Ohio 43229-6693

Via email: environmentalreviewrequest@dnr.state.oh.us; NHDRequest@dnr.state.oh.us

Reference: Request for Technical Assistance
Salt Creek Switch Install Project
Holmes County, Ohio

Dear Mr. Pettegrew:

AEP Ohio Transmission Company, Inc. (AEP), is formally requesting that the Ohio Department of Natural Resources (ODNR) complete a review for the proposed Salt Creek Switch Install (Project) in Holmes County, Ohio. The Project is located within the Holmesville, Ohio U.S. Geologic Survey 7.5' topographical quadrangle and is shown on the attached Project Overview Map (Figure 1).

Please provide us with the results of the ODNR's environmental review, including results of the ODNR Natural Heritage Database search, at your earliest convenience. If you have questions or need additional information regarding the Project, please contact me at the phone number or email below. Thank you for your assistance with this request.

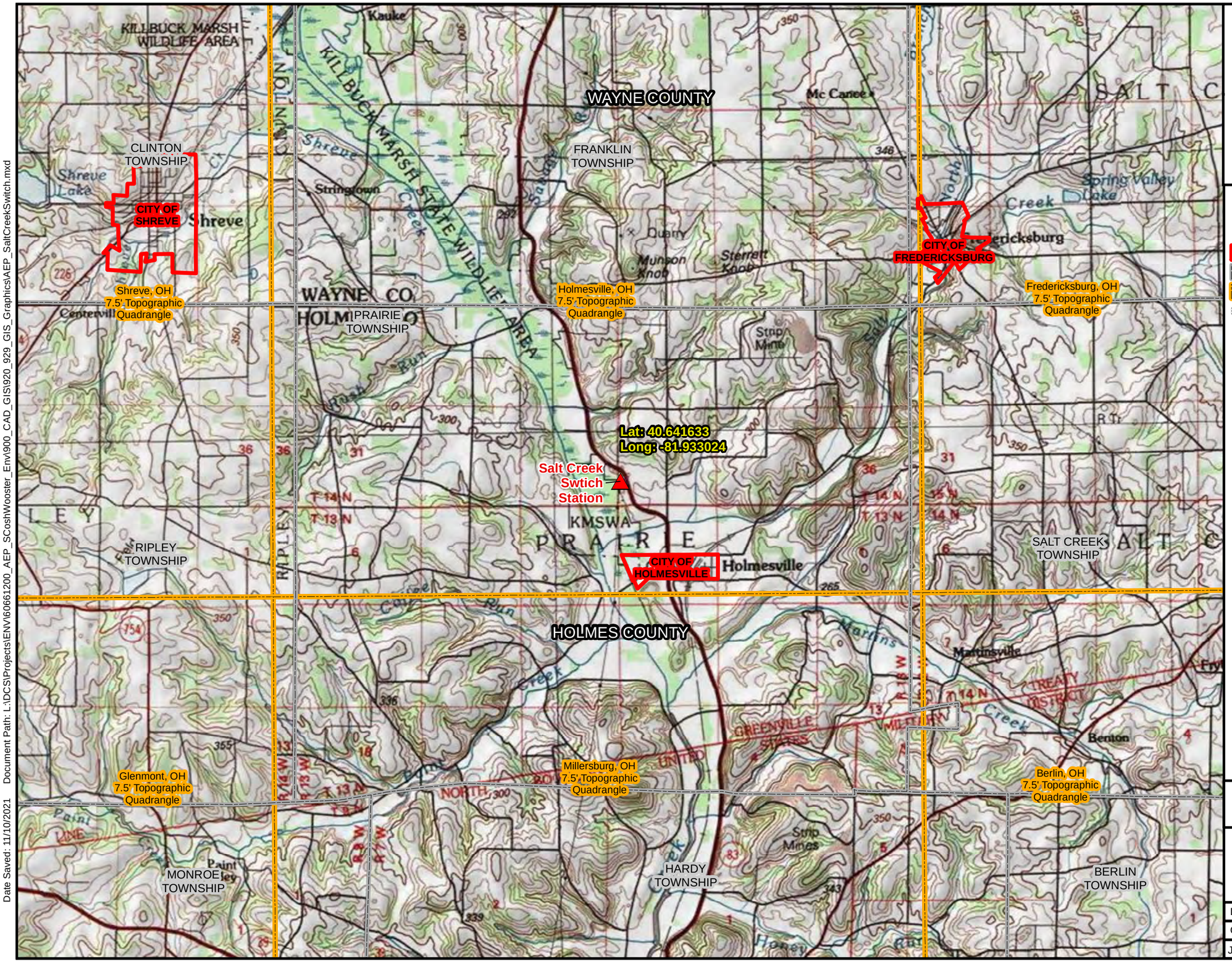
Sincerely,

Brian Cooper

Phone: (717-304-0578)
brian.cooper@aecom.com

Attachments: Figure 1 – Project Location Map
Electronic Shapefiles (.shp)

Cc: Amy J. Toohey
Environmental Specialist-Consultant
Phone: (614-565-1480)
ajtoohey@aep.com


KILLBUCK MARSH WILDLIFE AREA
Kauke
KILLBUCK MARSH STATE WILDLIFE AREA
WAYNE COUNTY
Mc Canee
CLINTON TOWNSHIP
FRANKLIN TOWNSHIP
Shreve Lake
Stringtown
CITY OF SHREVE
Shreve
Spring Valley Lake
CITY OF FREDERICKSBURG
Munson Knob
Sterrett Knob
Shreve, OH 7.5' Topographic Quadrangle
WAYNE CO
Holmesville, OH 7.5' Topographic Quadrangle
Fredericksburg, OH 7.5' Topographic Quadrangle
Centerville
PRAIRIE TOWNSHIP
Strip Mine
Lat: 40.641633
Long: -81.933024
Salt Creek Swtich Station
RIPLEY TOWNSHIP
KMSWA
PRAIRIE
CITY OF HOLMESVILLE
Holmesville
SALT CREEK TOWNSHIP
HOLMES COUNTY
Martinsville
Benton
Glenmont, OH 7.5' Topographic Quadrangle
Millersburg, OH 7.5' Topographic Quadrangle
Berlin, OH 7.5' Topographic Quadrangle
MONROE TOWNSHIP
HARDY TOWNSHIP
BERLIN TOWNSHIP
Wayne, Holmes, and Coshocton Counties
Legend
Existing Substation
City or Town Boundary
Township Boundary
7.5' Topographic Quadrangle Boundary
County Boundary
N
0
5,000
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BASE MAP SOURCE:
ArcGIS Online, USA Topo Maps
AEP
Salt Creek Switch
FIGURE 1
PROJECT OVERVIEW
DATE: 11/10/2021
1 inch = 5,000 feet
CREATED BY: TCC
CHECKED BY: BC
Job No. 60661200
AECOM
Document Path: L:\DCS\Projects\ENV\60661200_AEP_SCoshWooster_Env\900_CAD_GIS\920_929_GIS_Graphics\AEP_SaltCreekSwitch.mxd
Date Saved: 11/10/2021

Appendix D Wetland Delineation and Stream Assessment Report

WOOSTER-WEST MILLERSBURG 138 KV SWITCH AND TRANSMISSION LINE PROJECT

HOLMES COUNTY, OHIO

ECOLOGICAL REPORT

Prepared for:
American Electric Power Ohio Transmission Company
8600 Smiths Mill Road
New Albany, Ohio 43054

Prepared by:

525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

Project #: 60661172, 60661200 & 60661802

April 2022, Revised November 2022

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1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) is proposing to construct a new delivery point on the Wooster-West Millersburg 138-kV circuit in Holmes County, OH. The proposed project includes 3 construction components; a new 3-way switch (Salt Creek Switch) toward Wooster and West Millersburg, an approximately 0.2-mile cut into the South Coshocton-Wooster 138-kV asset for the new switch install (South Coshocton – Wooster 138 kV T-line Cut In), and approximately 0.75-mile greenfield 138-kV transmission line build leading to the new delivery point (Salt Creek – Holmesville 138 kV Line). The proposed Project location is illustrated on Figure 1.

The purpose of the field survey was to assess the presence of wetlands and other "waters of the United States" (WOTUS) that occur along the proposed Project alignment. Secondarily, land uses were also recorded to classify and characterize potential habitat for rare, threatened, and endangered species. This report will be used to assist AEP Ohio Transco's efforts to identify potential WOTUS and rare, threatened, and endangered species habitat present along the proposed Project alignment to avoid or minimize impacts during construction activities.

2.0 METHODOLOGY

The field survey was conducted over a 100-foot survey corridor consisting of a 50-foot buffer on each side of the transmission centerline, composing a Project survey corridor of approximately 10.6 acres. Prior to conducting field surveys, digital U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey data, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) data, and U.S. Geological Survey (USGS) National Hydrography Dataset (NHD), FEMA 100-year floodplain data (FEMA), and USGS 7.5-minute topographic maps were reviewed as an exercise to identify the occurrence and location of potential wetland areas.

Field survey activities included recording the physical boundaries of observed water features using sub-meter capable EOS Arrow Global Positioning System (GPS) units in conjunction with ArcCollector application on iPad tablets. The GPS data was imported into ArcMap Geographic Information System (GIS) software, where the data was reviewed, edited for accuracy, and compiled in a format suitable for transfer and use by AEP Ohio Transco. Water features were delineated and assessed based upon the appropriate procedures detailed below. Land uses observed within the Project survey corridor were assigned a general classification based upon the principal land characteristics and vegetation cover of the location.

2.1 WETLAND DELINEATION

The Project survey corridor was evaluated according to the procedures outlined in the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual (*1987 Manual*) (Environmental Laboratory, 1987)

and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (*Version 2.0*) (*NCNE Regional Supplement*) (USACE, 2012).

During field survey activities AECOM utilized the routine on-site delineation method described in the *1987 Manual* and *Regional Supplements* that consisted of a pedestrian site reconnaissance, including identifying the vegetation communities, soils identification, a geomorphologic assessment of hydrology, and notation of disturbance. If a wetland was identified, AECOM completed a USACE Wetland Determination Data form (USACE Data form) within each unique wetland habitat to serve as a representative of the wetland hydrology, vegetative community, and soil characteristics. Adjacent to each wetland complex, AECOM completed an additional USACE Data form as a representative of the upland community.

Additionally, USACE Data forms and representative photographs were also taken to represent upland communities where desktop review indicated the potential presence of an aquatic feature based on aerial imagery, two or less wetland criteria were observed, and/or an absence of an aquatic features was observed for areas mapped as an NWI and/or NHD feature.

2.1.1 WETLAND CLASSIFICATION

Wetlands identified in the field were classified based on the naming convention found in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin *et al*, 1979). The unique wetland habitats were classified as palustrine emergent (PEM), palustrine forested (PFO), palustrine unconsolidated bottom (PUB), palustrine scrub-shrub (PSS), or other classifications. For some wetlands, multiple Cowardin classifications may be present where more than one classification's vegetation is dominant (vegetation covers 30 percent or more of the substrate). Where multiple Cowardin classifications are present, the Cowardin classification of the plants that constitute the uppermost layer of vegetation having 30% or greater coverage is listed.

2.1.2 WETLAND ASSESSMENT

Each delineated wetland was assessed following the Ohio Environmental Protection Agency (OEPA) *Ohio Rapid Assessment Method for Wetlands v. 5.0* (ORAM) (Mack, 2001). Wetland assessments utilized the 10-page ORAM form, providing a final Category rating for each wetland.

2.2 STREAM ASSESSMENT

Streams were identified by the presence of a defined bed and bank and evidence of an ordinary high-water mark (OHWM). The USACE defines OHWM as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (USACE, 2005).

2.2.1 OEPA PRIMARY HEADWATER HABITAT ASSESSMENT

Stream assessments were conducted using the methods described in the OEPA's *Methods for Assessing Habitat in Flowing Waters*: *Using OEPA's Qualitative Habitat Evaluation Index* (Rankin, 2006) and in the OEPA's *Field Methods for Evaluating Primary Headwater Streams in Ohio* (OEPA, 2018). Streams associated with watershed area less than or equal to 1.0 mi^2 (259ha), and a maximum depth of water pools equal to or less than 15.75 inches were evaluated utilizing the HHEI methodology and all other streams assessed as QHEI. Flow regime (ephemeral, intermittent, perennial) was determined by the appropriate stream assessment score per OEPA manuals (OEPA, 2018) and by AECOM's professional judgment.

Streams assessed in the Project survey corridor were reviewed for existing OEPA Aquatic Life Use Designations per OEPA's Water Quality Standards (OAC Chapter 3745-1). Those without an existing use designation were assigned a provisional aquatic life use designation based upon habitat assessment results (Rankin, 1989; OEPA 2018).

2.2.2 OEPA 401 WATER QUALITY CERTIFICATION FOR NATIONWIDE PERMIT ELIGIBILITY

The OEPA has designated each watershed in the state on the basis of whether it may be ineligible for coverage under Ohio EPA's 401 Water Quality Certification for Nationwide Permits. Mapping provided by OEPA illustrate the eligibility of streams in the area for a nationwide 401 permit. Three categories are identified: eligible, ineligible, and possibly eligible with additional field screening required. Impacts to streams within each watershed would then have eligibility for 401 Water Quality Certification determined by the watershed category. The three categories are defined as:

Eligible: Streams within the watershed are eligible for coverage under Ohio EPA's water quality certification for the nationwide permits if all other general and regional special terms and conditions are met.

Ineligible: Projects affecting high quality streams and undesignated streams draining directly to high quality streams, as represented in the map, must undergo an individual 401 Water Quality Certification review process.

Possibly Eligible: Additional field screening procedures are required for streams in the watershed to determine appropriate eligibility. Projects affecting undesignated streams within those HUC12 watersheds that do not directly but eventually drain into high quality waters, might be eligible for coverage under Ohio EPA's 401 Water Quality Certification for Nationwide Permits depending on the results of a field screening assessment. The procedures for determining individual stream eligibility in this scenario are specified in Appendix D "Stream Eligibility Determination Process" of the OEPA Ohio State Water Quality Certification of the 2017 Nationwide Permit Reauthorization.

2.2.3 UPLAND DRAINAGE FEATURES

An upland drainage feature (UDF) is a non-jurisdictional drainage that does not meet the criteria of either a jurisdictional stream or a wetland. A UDF generally lacks an OWHM (USACE, 2005), and are equivalent to a swale or an erosional feature as described by the USACE: "generally shallow features in the landscape that may convey water across upland areas during and following storm events. Swales usually occur on nearly flat slopes and typically have grass or other low-lying vegetation throughout the swale" (USACE, 2007).

A roadside ditch may also be documented as a UDF if it meets the "not potentially jurisdictional" characterization as described in the Office of Environmental Services *Roadway Ditch Characterization Flowchart* (Ohio Department of Transportation, 2014). This would include a ditch that originates entirely within the roadway right-of-way, has a seasonal flow regime, was not constructed to drain a wetland, and does not have hydrophytic vegetation extending more than an insignificant amount beyond its original configuration.

In addition, UDF's (including swales, ditches, and other erosional features) are generally not "waters of the U.S." except in certain circumstances, such as relocated streams.

2.3 RARE, THREATENED, AND ENDANGERED SPECIES

AECOM conducted a rare, threatened, and endangered species review and general field habitat surveys within the Project survey corridor. AECOM submitted requests to Ohio Department of Natural Resources (ODNR) Office of Real Estate – Environmental Review Section and the United States Fish and Wildlife Service (USFWS) Ohio Ecological Services Field Office soliciting comments on the proposed Project. Since responses from these agencies have not been received at this time, AECOM used the USFWS Information for Planning and Consultation (IPaC) tool to acquire a list of federally listed species that may be present in or near the Project survey corridor and a response letter from ODNR regarding a nearby project (Salt Creek-Holmesville 138kV Line Project – December 20, 2021). The results of the IPaC investigation and ODNR's response to a nearby project are included in this report in Table 4 (Appendix D). Agency-identified species information and available species-specific information was reviewed to identify the various habitat types that listed species are known to inhabit.

AECOM field ecologists conducted a general habitat survey in conjunction with the stream and wetland field surveys as part of assessing potential impacts to rare, threatened, and endangered species. Land uses within the Project survey corridor were assigned a general classification based upon the principal land characteristics and vegetative cover as observed during the field surveys.

AECOM conducted a desktop assessment of the Project survey corridor and a quarter-mile buffer around it to identify potentially occurring winter bat hibernaculum that may be present near the Project which is

located in Appendix D. This assessment was conducted by reviewing data on mining activity and karst geology from the ODNR Division of Mineral Resources and United States Geological Survey websites.

3.0 RESULTS

On February 3, 2022, AECOM ecologists walked the Project survey corridor to conduct the wetland delineation, stream assessment and habitat survey. Within the Project survey corridor, AECOM delineated two (2) wetlands. No streams or ponds were delineated. The delineated features are discussed in detail in the following sections.

3.1 WETLAND DELINEATION

3.1.1 PRELIMINARY SOILS EVALUATION

Soils in delineated wetlands were observed and documented as part of the delineation methodology. According to the USDA/NRCS Web Soil Survey, 4 soil series are mapped within the Project survey corridor, inclusive of mapped soil units (USDA NRCS 2022a and 2022b). Of these, three (3) soil map units are identified as hydric, comprising approximately 7.4% of the mapped unit areas. Table 1 below provides a detailed overview of all soil series and soil map units present within the Project survey corridor. Soil map units located in the Project survey corridor and vicinity are shown on Figure 2.

TABLE 1 - SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE SOUTH COSHOCTON – WOOSTER 138 KV CUT IN PROJECT SURVEY CORRIDOR

Soil Series	Map Unit Symbol	Map Unit Description	Topographic Setting	Hydric	Hydric Component (%)
Bogart	BtA	Bogart silt loam, 0 to 2 percent slopes	Terraces	No	Fitchville (5%)
Chili	CnB	Chili loam, 2 to 6 percent slopes	Terraces	No	Fitchville (5%)
	CnC2	Chili loam, 6 to 12 percent slopes, eroded	Terraces	No	Fitchville (5%)
	CnD2	Chili loam, 12 to 18 percent slopes, eroded	Terraces	No	N/A
	CnE	Chili loam, 18 to 25 percent slopes	Terraces	No	N/A
Melvin	Md	Melvin silt loam, 0 to 3 percent slopes, frequently flooded	Flood plains	Yes	Melvin (85%) Orrville (5%)
	Mg	Melvin silt loam, frequently ponded, 0 to 3 percent slopes	Flood plains	Yes	Melvin (90%)
Orrville	Or	Orrville silt loam, 0 to 3 percent slopes, occasionally flooded	Flood plains	Yes	Orrville (5%) Melvin (5%) Lobdell (5%)

NA = Not Applicable or Not Available

3.1.2 NATIONAL WETLAND INVENTORY MAP REVIEW

According to NWI data covering the Project location, the Project survey corridor contains no mapped NWI wetlands. The locations of NWI mapped wetlands in the Project vicinity are shown on Figure 2.

3.1.3 DELINEATED WETLANDS

During the field survey, AECOM identified two (2) wetlands within the Project survey corridor. Both are classified as palustrine emergent (PEM) wetlands. AECOM has given each wetland within the Project survey corridor a provisional determination of jurisdiction (non-isolated, i.e., WOTUS). AECOM assessments are provisional, as final jurisdictional status can only be determined by the USACE. The locations and approximate extent of the wetlands identified within the Project survey corridor are shown on Figure 3. Details for each delineated wetland in the survey corridor are provided in Table 2. Completed USACE data forms and photographs of each wetland are provided in Appendix A.

3.1.4 DELINEATED WETLANDS ASSESSMENT

Within the Project survey corridor, the 2 delineated wetlands were assessed as follows:

- 1 - Category 1 Wetland, and
- 1 - Category 2 Wetland

Individual wetland assessment results (ORAM score) are provided in Table 2. Wetland assessment ORAM forms are provided in Appendix A.

Category 1 Wetlands

One (1) Category 1 wetland was delineated within the Project survey corridor having a combined total area of approximately 0.7 acres. The size of the delineated wetland in the Project survey corridor is approximately 0.31 acres.

Category 2 Wetlands

One (1) Category 2 wetland was delineated within the Project survey corridor with a total area of approximately 0.5 acre. The size of the delineated wetland in the Project survey corridor is approximately 0.21 acre.

TABLE 2 – SUMMARY OF DELINEATED WETLANDS WITHIN THE SOUTH COSHOCTON – WOOSTER 138 KV CUT IN PROJECT SURVEY CORRIDOR

Wetland ID	Location		Isolated?	Habitat Type	Delineated Area (acre)	ORAM		Nearest Structure # (Existing / Proposed)	Existing Structure # in Wetland	Proposed Structure # in Wetland	Structure Installation Method	Proposed Impacts	
	Latitude	Longitude				Score	Category					Temporary Matting Area (acre)	Permanent Impact Area (acre)
Wetland 01	40.63699	-81.92461	No	PEM	0.21	26	1	7 (proposed)	None	None	N/A	None	None
Wetland 02	40.64232	-81.93306	No	PEM	0.31	36	2	188 (proposed)	None	None	N/A	None	None
Total:					**0.52**							**0.000**	**0.000**

3.2 STREAM DELINEATION

During the field survey, AECOM did not delineate any streams within the Project survey corridor.

3.2.1 OEPA STREAM ELIGIBILITY

OEPA stream eligibility for 401 Water Quality Certification mapping was reviewed for the Project. The Project occurs across two watersheds designated by 401 WQC eligibility. These watersheds include Tea Run-Killbuck Creek (HUC12: 050400030607) and Salt Creek (HUC12: 050400030606). Both watersheds are listed as “eligible”. OEPA stream eligibility mapping for the Project vicinity, is provided on Figure 4.

3.3 FEMA 100 YEAR FLOODPLAINS

FEMA designated 100-year floodplains are mapped in and around the Project survey corridor (FEMA, 2011). The mapped floodplain from Salt Creek is near the southeast end of the Project survey corridor. Mapped floodplains are presented in Figure 2.

3.4 PONDS

No ponds were observed within the Project survey corridor.

3.5 VEGETATIVE COMMUNITIES WITHIN THE PROJECT SURVEY CORRIDOR

AECOM ecologists conducted a general habitat survey in conjunction with the stream and wetland field surveys. A variety of woody and herbaceous lands, as described in Table 3 below, are present within the Project survey corridor, including old field, scrub-shrub, agricultural land, pasture/hay fields, residential landscaped areas, stream/wetland areas, and urban areas. Habitat descriptions applicable to the Project are provided below. Vegetative communities are depicted visually on aerial photography in Figure 5.

TABLE 3- VEGETATIVE COMMUNITIES WITHIN THE SOUTH COSHOCTON – WOOSTER 138 KV CUT IN PROJECT SURVEY CORRIDOR

Vegetative Community	Description	Approximate Acreage Within the Project Survey Corridor	Approximate Percentage Within the Project Survey Corridor
Agricultural	Agricultural lands being utilized for row-crop production and associated activities, typically devoid of vegetation outside of the target crop and opportunistic/invasive species.	5.29	49.7%
Landscaped Areas	Landscaped areas, including residential properties and commercial properties, were observed within the Project vicinity. These landscaped areas within the Project survey corridor and adjacent areas are frequently mowed grasses and forbs.	0.25	2.3%
Old Field	Herbaceous cover exists alongside roads, field borders, and abandoned fields within the survey corridor of the Project in the form of successional old-field communities. These communities are the earliest stages of recolonization by plants following disturbance. This community type is typically short-lived, giving way progressively to shrub and forest communities unless periodically re-disturbed, in which case they remain as old fields. The old-field areas within the study corridors and adjacent areas are infrequently mowed areas of grasses, forbs, and occasional shrubs.	1.67	15.7%
Scrub-Shrub	Scrub-shrub habitats represent the successional stage between old-field and second growth forest, and often emerge in recently harvested forests responding to the lightness of the remaining canopy. Dominant species consist of herbaceous communities similar to that of old field habitat with a few woody species, to a community dominated by forest herbs and woody species.	0.27	2.5%
Streams/Wetlands	Streams and wetlands were observed both within and beyond the survey corridor for the Project.	0.52	4.9%
Successional Hardwood Woodlands	Successional mixed hardwood woodlands are present along the Project survey corridor. Woody species dominating these areas ranged between 2-6" DBH and included red elm (*Ulmus rubra*), white ash (*Fraxinus americana*), black maple (*Acer negundo*), black cherry (*Prunus serotina*), and quaking aspen (*Populus tremuloides*). The dominant shrub-layer species included Morrow's honeysuckle (*Lonicera morrowii*), black cherry (*Prunus serotina*), multiflora rose (*Rosa multiflora*) and blackberry (*Rubus occidentalis*).	0.27	2.5%
Urban	Urban areas are areas developed with residential and commercial land uses, including roads, buildings and parking lots. These areas are generally devoid of significant woody and herbaceous vegetation.	2.38	22.4%
Totals:		**10.65**	**100%**

3.6 RARE, THREATENED AND ENDANGERED SPECIES AGENCY COORDINATION

Protected Species Agency Consultation

AECOM conducted a rare, threatened, and endangered species review for areas within the Project survey corridor. Correspondence letters from the USFWS and ODNR are included in Appendix D. Table 4 provides a list of species of concern identified by the ODNR Division of Wildlife (DOW) and USFWS as potentially occurring within the vicinity of the Project and provides a brief synopsis for each species based on the field findings and agency remarks.

TABLE 4- ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY CORRIDOR

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey corridor	Potential Impacts and Avoidance Dates	Agency Comments
Mammals						
Indiana bat (*Myotis sodalis*)	Endangered	Endangered	Winter Indiana bat hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. The 8- to 10-inch diameter size classes of several species of hickory (*Carya* spp.), oak (*Quercus* spp.), ash (*Fraxinus* spp.), birch (*Betula* spp.), and elm (*Ulmus* spp.) have been found to be utilized by the Indiana bat. These tree species and many others may be used when dead, if there are adequately sized patches of loosely-adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes a mixture of loose-barked trees with 60 to 80 percent canopy closure and a low-density sub-canopy (less than 30 percent between about 6 feet high and the base canopy). The suitability of roosting habitat for foraging or the proximity to suitable foraging habitat is important to the suitability of a particular tree stand. An open subcanopy zone, under a moderately dense canopy, allows maneuvering while catching insect prey.	Yes - Within the Project survey corridor, areas of young successional forest were identified which appear to be potentially suitable summer roosting and foraging habitat.	ODNR-DOW commented If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If trees must be cut, the DOW recommends cutting occur between October 1 and March 31. USFWS commented that if no caves or abandoned mines are present and tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31.	Potentially suitable habitat is present within the Project area. If tree removal is unavoidable, it is recommended that any cutting of trees ≥5 inches DBH occur between October 1 and March 31.
Northern long-eared bat (*Myotis septentrionalis*)	Endangered	Threatened	Suitable summer habitat for northern long-eared bats consists of a wide variety of forested/wooded habitats where they roost, forage, and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts (i.e., live trees and/or snags ≥3 inches dbh that have any exfoliating bark, cracks, crevices, hollows and/or cavities), as well as linear features such as fencerows, riparian forests, and other wooded corridors. These wooded areas may be dense or loose aggregates of trees with variable amounts of canopy closure. Individual trees may be considered suitable habitat when they exhibit the characteristics of a potential roost tree and are located within 1,000 feet (305 meters) 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, northern long-eared bats hibernate in caves and abandoned mines.	Yes - Within the Project survey corridor, areas of young successional forest were identified which appear to be potentially suitable summer roosting and foraging habitat.	USFWS commented that if no caves or abandoned mines are present and tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31. ODNR did not comment on this species	Potentially suitable habitat is present within the Project area. If tree removal is unavoidable, it is recommended that any cutting of trees ≥3 inches DBH occur between October 1 and March 31.

TABLE 4- ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY CORRIDOR

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey corridor	Potential Impacts and Avoidance Dates	Agency Comments
Little brown bat (*Myotis lucifugus*)	Endangered	None	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.	Yes - Within the Project survey corridor, areas of young successional forest were identified which appear to be potentially suitable summer roosting habitat.	The DOW 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.	Potentially suitable habitat is present within the Project area. If tree removal is unavoidable, it is recommended that any cutting of trees ≥3 inches DBH occur between October 1 and March 31.
Tricolored bat (*Perimyotis subflavus*)	Endangered	None	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.	Yes - Within the Project survey corridor, areas of young successional forest were identified which appear to be potentially suitable summer roosting habitat.	The DOW 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.	Potentially suitable habitat is present within the Project area. If tree removal is unavoidable, it is recommended that any cutting of trees ≥3 inches DBH occur between October 1 and March 31.
Birds						
Northern harrier (*Circus hudsonis*)	Endangered	None	A common migrant and winter species. Nesters are much rarer, though they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies, building a nest out of stick on the ground, often on top of a mount. Harriers hunt over grasslands.	No- within the Project survey corridor, no large areas of marsh or grassland were identified.	No potentially suitable habitat was observed within the Project survey corridor.	ODNR stated that if this type of habitat will be impacted, construction should be avoided during the species' nesting period between May 15 to August 1.

TABLE 4- ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY CORRIDOR

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey corridor	Potential Impacts and Avoidance Dates	Agency Comments
Trumpeter swan (*Cygnus buccinator*)	Threatened	None	Trumpeter swans prefer large marshes and lakes ranging in size from 40 to 150 acres. They like shallow wetlands one to three feet deep with a diverse mix of plenty of emergent and submergent vegetation and open water.	No - within the Project survey corridor, areas were not identified that may provide potentially suitable habitat	No potentially suitable habitat (wetlands with 1-3 feet of standing water) were observed within the Project survey corridor.	ODNR stated that if this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 to June 15. If this habitat will not be impacted, the Project is not likely to impact this species.
American bittern (Botaurus lentiginosus)	Endangered	None	Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation; occasionally occupying bogs, wet meadows or densely vegetated swamps.	No – wetland areas within the Project survey corridor are either disturbed or have no standing water, and therefore do not provide suitable habitat	No potentially suitable habitat (undisturbed wetland with surface pools) was observed within the Project survey corridor.	ODNR stated that if this type of habitat will be impacted, construction should be avoided in the habitat during the species' nesting period of May 1 through July 31.
Black tern (*Chlidonias niger*)	Endangered	None	The black tern prefers large, undisturbed marshes with dense vegetative structure and pockets of open water, favoring cattail marshes.	No – wetland areas within the Project survey corridor are either disturbed or have no standing water, and therefore do not provide suitable habitat	No potentially suitable habitat (undisturbed wetland with surface pools) was observed within the Project survey corridor.	ODNR stated that if this type of habitat will be impacted, construction should be avoided in the habitat during the species' nesting period of April 1 through June 30..
Sandhill crane (*Grus canadensis*)	Threatened	None	Sandhill cranes are primarily a wetland-dependent species. Wintering grounds utilize agricultural fields, while roosting in shallow or standing water. Breeding grounds require large sections of wet meadow, shallow marshes or bogs for nesting.	No – wetland habitat areas identified within the Project survey corridor are not suitable as nesting grounds.	No potentially suitable nesting habitat was observed within the Project survey corridor.	ODNR stated that potential nesting habitat will be impacted, construction should be avoided in the habitat during the species' nesting period of April 1 through August 30.

TABLE 4- ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY CORRIDOR

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey corridor	Potential Impacts and Avoidance Dates	Agency Comments
Upland sandpiper (*Bartramia longicauda*)	Endangered	None	During the nesting season, sandpipers will utilize dry grassland areas including seeded grasslands, grazed and ungrazed pasture, hayfields and CRP grasslands.	No – small areas of pastureland are present but no contiguous grasslands greater than 5 acres. Most habitat within the survey corridor is agricultural row crop and road shoulder.	No potentially suitable nesting habitat was observed within the Project survey corridor.	ODNR stated that if potential nesting habitat will be impacted, construction should be avoided in the habitat during the species' nesting period of April 15 through July 31.
Mussels						
Snuffbox (*Epioblasma triquetra*)	Endangered	Endangered	Prefers medium to large rivers with gravel riffles.	No-there were no streams or sufficient aquatic habitat identified within the Project survey corridor.	No potentially suitable habitat within the Project survey corridor and no in-stream work proposed.	Due to location and no in-water work proposed, the project is not likely to impact this species.
Fish						
Iowa darter (*Etheostoma exile*)	Endangered	None	This species is typically found in lakes or slow-moving streams with dense aquatic vegetation. Most commonly located in glacially formed natural lakes.	No-there were no streams or sufficient aquatic habitat identified within the Project survey corridor.	No potentially suitable habitat within the Project survey corridor and no in-stream work proposed.	The DOW recommends no in-water work in perennial streams from March 15-June 30 to reduce impacts to indigenous aquatic species and their associated habitat. Due to location and no in-water work proposed, the project is not likely to impact this species.

TABLE 4- ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY CORRIDOR

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey corridor	Potential Impacts and Avoidance Dates	Agency Comments
Lake chubsucker (*Erimyzon sucetta*)	Threatened	None	This species is typically found in lakes or slow-moving streams with dense aquatic vegetation. Most commonly located in glacially formed natural lakes.	No-there were no streams or sufficient aquatic habitat identified within the Project survey corridor.	No potentially suitable habitat was identified within the Project survey corridor and no in-stream work proposed.	The DOW recommends no in-water work in perennial streams from March 15-June 30 to reduce impacts to indigenous aquatic species and their associated habitat. Due to location and no in-water work proposed, the project is not likely to impact this species.
Reptiles						
Eastern hellbender (*Cryptobranchus alleganiensis alleganienses*)	Endangered	Species of Concern	The hellbender is an aquatic species that inhabits perennial streams with large flat rocks. Generally inhabits swiftly moving water rather than slow water with muddy banks.	No-there were no streams or sufficient aquatic habitat identified within the Project survey corridor.	No potentially suitable habitat was identified within the Project survey corridor and no in-stream work proposed.	The DOW recommends no in-water work in perennial streams from March 15-June 30 to reduce impacts to indigenous aquatic species and their associated habitat. Due to location and no in-water work proposed, the project is not likely to impact this species.

ODNR Coordination –

Coordination with the ODNR was initiated during the planning stages of the Project to obtain records of protected species located in the vicinity of the Project. Each of the three Project components was reviewed separately, and responses from the ODN Office of Real Estate Environmental Review were received on December 20, 2021, December 28, 2021, and April 1, 2022. The ODNR Office of Real Estate Environmental Review Section replied to a request for records of protected species within one mile of the Project site. The Ohio Natural Heritage Database (ONHD) review found records of eight (8) state-protected species and three (3) state protected resource areas at or within a one-mile radius of the Project survey corridor. The state listed species are as follows: American sweet-flag, great St. John's-wort, northern adder's-tongue, prairie fringed orchid, sandhill crane, lake chubsucker, cerulean warbler, and barn owl. The two state protected resource areas are a buttonbush shrub swamp plant community, mixed emergent marsh plant community, and Killbuck Marsh Wildlife Area.

The ODNR recommended 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. In addition, the DOW listed multiple state-listed species with known ranges crossed by the Project survey corridor, including:

- Four mammal species: Indiana bat, northern long-eared bat, little brown bat and tricolored bat;
- One mussel species: snuffbox;
- Two fish species: Iowa darter: lake chubsucker;
- One salamander species: Eastern hellbender;
- Six bird species: American bittern, black tern, northern harrier, sandhill crane, trumpeter swan and upland sandpiper.

Potentially suitable habitat for the four bats was identified in the Project survey corridor. These areas consist of woody vegetation with dbh measurements ranging from two (2) to six (6) inches. The DOW recommended that if suitable habitat occurs within the Project area, trees be conserved or cut between October 1 and March 31. If trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. No tree clearing is anticipated for the project. Therefore, no impact to these bat species is anticipated.

The DOW also recommended that a desktop habitat assessment be conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the Project area. This desktop habitat assessment was performed and is contained in Appendix D. The habitat assessment did not result in locating potential hibernaculum(a) within 0.25 mile of the Project survey corridor.

The DOW noted that the Project is within the range of the northern harrier, a state endangered bird. ODNR-DOW has previously indicated that the potential habitat ground cover types that are smaller than two acres in size do not constitute adequate nesting habitat for the northern harrier. The Project survey corridor does not contain suitable northern harrier nesting habitat. Agricultural land (corn, soybean and row crop cultivation), commercial/residential landscaped areas, and urban areas are frequently mechanically maintained and do not provide suitable grassland habitat for nesting. Certain old field habitats located within the existing ROW which were surrounded by wooded areas and not contiguous to other larger grassland habitats would not be considered suitable habitat for the northern harrier.

The DOW noted that the Project is within the range of the trumpeter swan, a state threatened bird. ODNR-DOW state that the species prefer large marshes and lakes ranging in size from 40 to 150 acres. During field surveys, no wetlands were identified that are greater than or equal to 40 acres. Therefore, no wetlands in the Project survey corridor appear to provide suitable habitat for the species.

The DOW noted that the Project is within the range of the American bittern and the black tern, both state endangered birds. ODNR-DOW state that these species prefer large undisturbed wetland and marsh areas for nesting. During the field surveys, no undisturbed wetlands with significant surface water were observed. Therefore, no wetlands in the Project survey corridor appear to provide suitable habitat for the species.

The DOW noted that the Project is within the range of the sandhill crane, a state threatened species. ODNR-DOW stated that the sandhill crane roosts within shallow, standing water or moist bottomlands. However, the wetlands identified within the Project area are too small to be considered habitat for breeding or nesting sandhill cranes. Further, the tree line along the western edge of the Project screens the Project actions from any sandhill cranes that could be breeding or nesting in the nearby Killbuck Marsh wetlands. Lastly, no wetlands will be impacted by construction by the Project.

The DOW noted that the Project is within the range of the upland sandpiper, a state endangered species. ODNR-DOW stated that the upland sandpiper nests within dry grassland and hayfields. Although the Project crosses one small pasture and there are some hayfields nearby, the Project is primarily located within active agricultural production along the shoulder of a highway. Furthermore, none of the hayfield or pasture areas within the survey corridor form contiguous grassland habitats greater than five acres. Therefore, no suitable habitat was identified within the Project survey corridor.

Several aquatic species were identified to have overlapping ranges with the Project survey corridor including the snuffbox, Iowa darter, lake chubsucker, and Eastern hellbender. Due to the location of the project and the absence of in-water work, no potentially suitable habitat was identified or at risk for disturbance.

USFWS Coordination –

Coordination with the USFWS was also initiated during the planning stages of the Project to obtain technical assistance regarding federally listed species that may occur within the vicinity of each Project facility. In their responses, the USFWS noted that the Project lies within the range of the federally endangered Indiana bat and the federally threatened northern long-eared bat. Potentially suitable habitat for these species was identified in the Project survey corridor. USFWS recommends that trees ≥3 inches dbh, be saved wherever possible. If no caves or abandoned mines are present and trees ≥3 inches cannot be avoided, USFWS recommends that tree removal occur between October 1 and March 31 to avoid adverse effects to Indiana bats and northern long-eared bats during the brood-rearing months. No tree clearing is anticipated for the project. Therefore, no impact to these bat species is anticipated.

4.0 SUMMARY

The ecological survey of the Project survey corridor identified a total of two (2) wetlands, no streams and no ponds. The wetlands within the Project survey corridor included two palustrine emergent (PEM) wetlands. One wetland was identified as a Category 1 wetland and one was identified as a Category 2 wetland. No Category 3 wetlands were identified within the Project survey corridor. Both wetlands have been provisionally classified as jurisdictional WOTUS.

Fourteen state and/or federal listed threatened or endangered species were reported by the ODNR or the USFWS as possibly occurring within the Project vicinity. These species included four mammals: Indiana bat, northern long-eared bat, little brown bat and tricolored bat; one mussel: snuffbox; two fish: Iowa darter and lake chubsucker; one salamander: Eastern hellbender; and six birds: American bittern, black tern, northern harrier, sandhill crane, trumpeter swan and upland sandpiper.

Based on general observations during the ecology survey, part of the Project survey corridor contained potential summer habitat for the various bat species. USFWS and ODNR commented that if no caves or abandoned mines are present and tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31 to avoid adverse effects to Indiana bats and northern long-eared bats during the brood-rearing months. No tree clearing is anticipated for the project. Therefore, no impact to these bat species is anticipated.

The ODNR noted that the Project is within the range of the northern harrier, a state endangered species. During the field surveys, no large marshes or grassland habitats suitable for nesting were observed. Therefore, no suitable nesting habitat for the species is present within the Project survey corridor.

The ODNR noted that the Project is within the range of the trumpeter swan, a state threatened bird. During field surveys, no wetlands were identified that are greater than or equal to 40 acres with 1-3 feet of standing water. Therefore, no suitable habitat for the species is present within the Project survey corridor.

ODNR-DOW noted that the Project is within the range of the American bittern and the black tern. Both state endangered birds prefer large undisturbed wetland and marsh areas for nesting. During the field surveys, no undisturbed wetlands with significant surface water were observed. No wetlands in the Project survey corridor appear to provide suitable habitat for the species. Therefore, this Project is not likely to adversely affect these species.

ODNR-DOW noted that the range of the sandhill crane covers the Project survey corridor, and that this species nests within shallow standing water and moist bottomland, and breeds with large tracts of wet meadow, shallow marsh, or bogs. No standing water or large wetlands were identified within the Project survey corridor. Therefore, no suitable nesting or breeding habitat for the species is present within the Project survey corridor.

ODNR-DOW noted that the upland sandpiper's range covers the Project survey corridor and that this species nests within dry grasslands. Only small, fragmented areas of grassland (small pasture and small hayfield) are present within the Project survey corridor. No large, contiguous grasslands are present, and the Project survey corridor is mostly highly disturbed row crops, business properties, residences, and road shoulder. Therefore, no suitable habitat for this species is present within the Project survey corridor.

Several aquatic species were noted by ODNR-DOW for having overlapping ranges with the Project survey corridor including the snuffbox, Iowa darter, lake chubsucker, and Eastern hellbender. Due to the location of the project and the absence of in-water work, no potentially suitable habitat was identified or at risk for disturbance.

The reported results of the ecological survey conducted by AECOM on this Project are limited to the areas within the Project survey corridor provided in Figure 3: Wetland Delineation and Stream Assessment Map. Areas that fall outside of the Project survey corridor were not evaluated in the field and are not included in the reporting of this survey.

The information contained in this wetland delineation report is for a study corridor that may be much larger than the actual Project limits-of-disturbance; therefore, lengths and acreages listed in this report may not constitute the actual impacts of the Project defined in subsequent permit applications. If necessary, a separate report that identifies the actual Project impacts will be provided with agency submittals.

The field survey results presented herein apply to the existing and reasonably foreseeable site conditions at the time of our assessment. They cannot apply to site changes of which AECOM is unaware and has not had the opportunity to review. Changes in the condition of a property may occur with time due to natural processes or human impacts at the project site or on adjacent properties. Changes in applicable standards may also occur as a result of legislation or the expansion of knowledge over time. Accordingly, the findings of this report may be invalidated, wholly or in part, by changes beyond the control of AECOM.

5.0 REFERENCES

Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States.* Office of Biological Services, U.S. Fish and Wildlife Service, Washington, D.C.

Environmental Laboratory. 1987. *U.S. Corps of Engineers Wetlands Delineation Manual.* Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station: Vicksburg, Mississippi.

Federal Emergency Management Agency (FEMA). 2011. National Flood Hazard Layer, Holmes County, Ohio. https://msc.fema.gov/portal/home. Published August 16, 2011.

Kollmorgen Corporation. 2010. Munsell Soil Color Charts. Baltimore, Maryland.

U.S. Army Corps of Engineers. 2018. *National Wetland Plant List*, version 3.3. Engineer Research and Development Center. Cold Regions Research and Engineering Laboratory, Hanover, NH. http://wetland_plants.usace.army.mil/

Mack, John J. 2001. *Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms. OEPA Technical Report WET/2001-1*. Ohio Environmental Protection Agency, Division of Surface Water, 401/Wetland Ecology Unit, Columbus, Ohio.

Ohio Department of Transportation. 2014. Roadway Ditch Characterization Flowchart. From: Ecological Manual, April 2014. Office of Environmental Services.

Ohio Environmental Protection Agency (OEPA). 2017. Section 401 Water Quality Certification for the 2017 Nationwide Permits. Appendix D Stream Eligibility Determination Process. Effective March 17, 2017. Ohio Environmental Protection Agency, Division of Surface Water, 401 Water Quality Certification and Isolated Wetland Permitting Section, Columbus, Ohio.

OEPA. 2017. 401 Water Quality Certification for the Nationwide Permits Stream Eligibility Web Map (2017 Reissuance). https://data-oepa.opendata.arcgis.com/datasets/401-water-quality-certification-for-nationwide-permits

OEPA, 2018. *Field Methods for Evaluating Primary Headwater Streams in Ohio*. Version 4.0. Ohio EPA Division of Surface Water, Columbus, Ohio. 129 pp.

Rankin, Edward T. 1989. T*he Qualitative Habitat Evaluation Index (QHEI*): *Rationale, Methods, and Application*. Ohio EPA Ecological Assessment Section, Division of Surface Water, Columbus, Ohio.

Rankin, Edward T. 2006. *Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI)*. OEPA Ecological Assessment Section, Division of Surface Water, Columbus, Ohio.

U.S. Army Corps of Engineers. 2005. Regulatory Guidance Letter No. 05-05: Guidance on Ordinary High Water Mark Identification.

U.S. Army Corps of Engineers. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Northcentral and Northeast Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, J. F. Berkowitz, and C. V. Noble. ERDC/EL TR-12-9. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Army Corps of Engineers. 2020. *National Wetland Plant List*, version 3.5. Engineer Research and Development Center. Cold Regions Research and Engineering Laboratory, Hanover, NH. http://wetland_plants.usace.army.mil/

U.S. Department of Agriculture, Natural Resources Conservation Service. 2021a. National Hydric Soils List. http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. Accessed February, 2022.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2021b. Web Soil Survey (GIS Shapefile). http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed February, 2022.

U.S. Fish and Wildlife Service. 2018. National Wetlands Inventory Geodatabase for Ohio. Available online at http://www.fws.gov/wetlands/Data/Mapper.html. Accessed February, 2022.

U.S. Geological Survey. 2016. National Hydrography Dataset, Ohio Statewide Geodatabase. Published August 2016. Earth Science Information Center, USGS, Reston, VA.

ESRI, 2020. World Imagery obtained from Earthstar Geographics (TerraColor NextGen) imagery.

Ohio Department of Natural Resources. 2020a. Division of Mineral Resources and Geological Survey, Mines of Ohio Interactive Map access at https://gis.ohiodnr.gov/MapViewer/?config=OhioMines on February 21, 2022.

Ohio Department of Natural Resources. 2020b. Division of Geological Survey, Karst Interactive Map access at https://gis.ohiodnr.gov/website/dgs/karst_interactivemap/ on February 21, 2022.

U.S. Geological Survey, 2019. USGS US Topo 7.5-minute maps for Holmesville, OH 2019: USGS - National Geospatial Technical Operations Center (NGTOC).

Holmesville Quadrangle

Holmes County

Millersburg Quadrangle

Legend

- Holmesville Delivery Point
- Salt Creek Switch
- South Coshocton-Wooster 138 kV T-line Cut In
- Salt Creek-Holmesville 138 kV Line
- Ohio USGS 7.5' Topographic Quadrangle
- County

N

0 1,000 2,000 4,000

Feet

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 1
PROJECT OVERVIEW

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JOB NO. 60661200	AECOM

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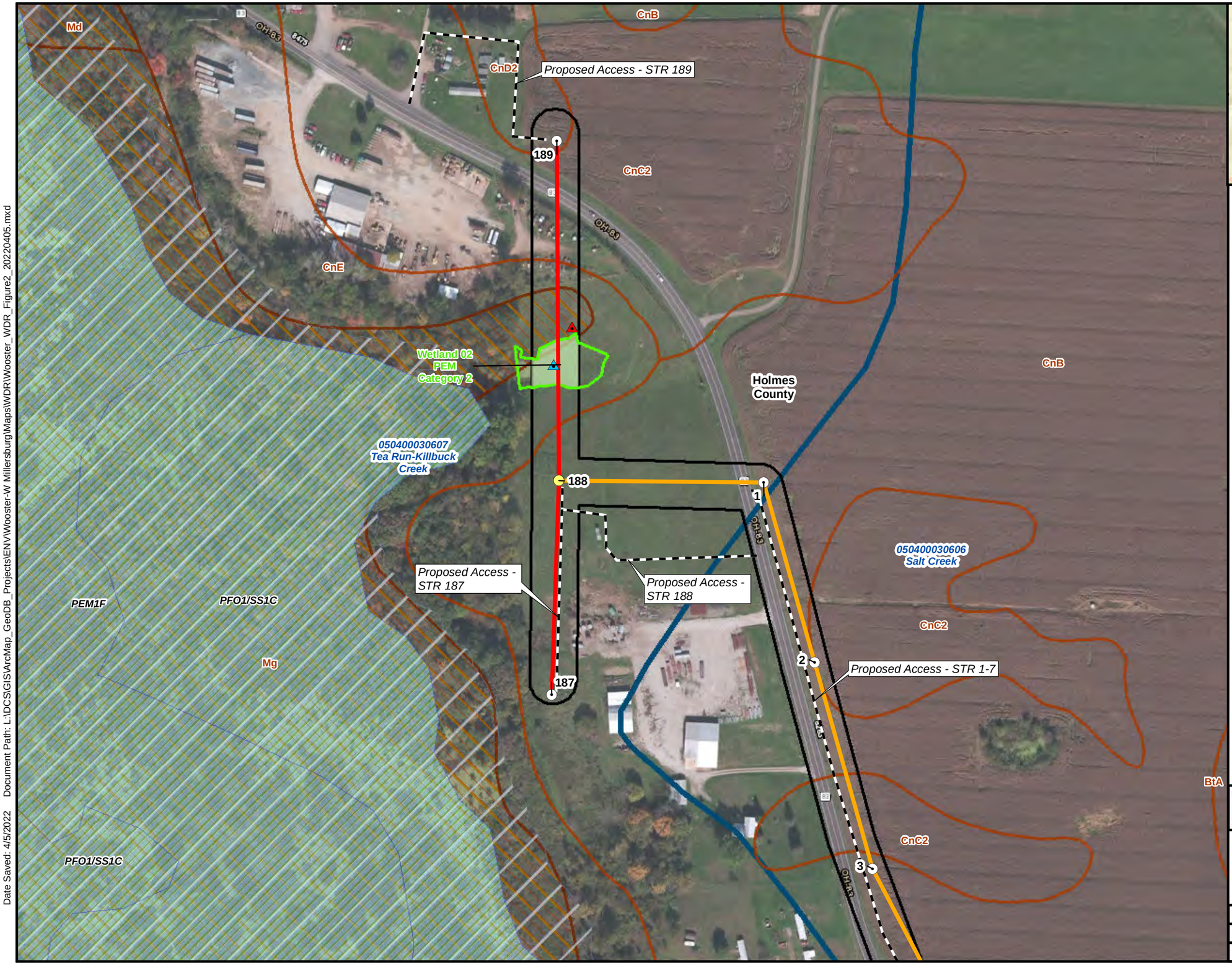

Legend

- Salt Creek Switch
- Proposed Structure Locations
- Wetland Data Point
- Upland Data Point
- Proposed Access Route
- South Coshocton-Wooster 138 kV T-line Cut In
- Salt Creek-Holmesville 138 kV Line
- Delineated PEM Wetland
- Approximate PEM Wetland
- Project Survey Corridor
- NWI Wetland (USFWS)
- 100-Year Floodplain (FEMA)
- HUC 12 (USGS)
- County
- SSURGO Soil Map Unit (NRCS)
- Hydric SSURGO Soil Map Unit (NRCS)

Soil Map Unit Description

BtA, Bogart silt loam, 0 to 2 percent slopes
CnB, Chili loam, 2 to 6 percent slopes
CnC2, Chili loam, 6 to 12 percent slopes, eroded
CnD2, Chili loam, 12 to 18 percent slopes, eroded
CnE, Chili loam, 18 to 25 percent slopes
Md, Melvin silt loam, frequently flooded
Mg, Melvin silt loam, ponded

N

0 100 200 400

Feet

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 2A
SOIL MAP UNIT AND
NATIONAL WETLAND INVENTORY MAP

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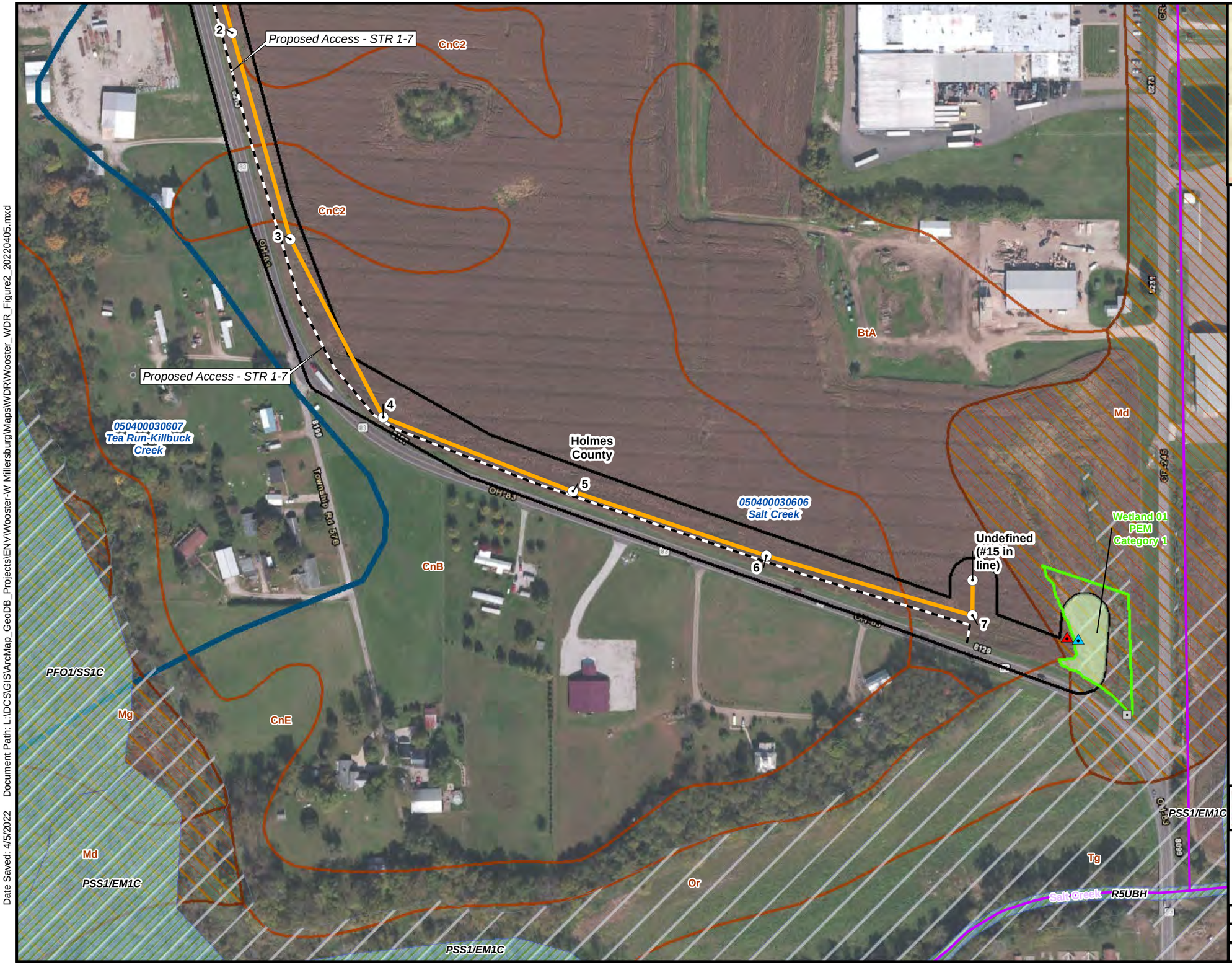

Legend

- Proposed Structure Locations
- Culvert
- Wetland Data Point
- Upland Data Point
- Proposed Access Route
- Salt Creek-Holmesville 138 kV Line
- NHD Stream (USGS)
- Delineated PEM Wetland
- Approximate PEM Wetland
- Project Survey Corridor
- NWI Wetland (USFWS)
- 100-Year Floodplain (FEMA)
- HUC 12 (USGS)
- County
- SSURGO Soil Map Unit (NRCS)
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Soil Map Unit Description

BtA, Bogart silt loam, 0 to 2 percent slopes
CnB, Chili loam, 2 to 6 percent slopes
CnC2, Chili loam, 6 to 12 percent slopes, eroded
CnE, Chili loam, 18 to 25 percent slopes
Md, Melvin silt loam, frequently flooded
Mg, Melvin silt loam, ponded
Or, Orrville silt loam, occasionally flooded
Tg, Tioga loam, occasionally flooded

N

0 100 200 400

Feet

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 2B
SOIL MAP UNIT AND
NATIONAL WETLAND INVENTORY MAP

DATE: 4/5/2022	1 INCH = 200 FEET
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Proposed Access - STR 189

189

PH8

PH5

Upland 02

PH6

Wetland 02
PEM
Category 2

Holmes
County

188

1

PH3

Proposed Access -
STR 187

Proposed Access -
STR 188

PH1

PH7

2

Proposed Access - STR 1-7

187

PH2

3

OH-83

Legend

- Salt Creek Switch
- Photo Location
- Proposed Structure Locations
- Wetland Data Point
- Upland Data Point
- Proposed Access Route
- South Coshocton-Wooster 138 kV T-line Cut In
- Salt Creek-Holmesville 138 kV Line
- Contour (5-Ft)
- Delineated PEM Wetland
- Approximate PEM Wetland
- 100-Year Floodplain (FEMA)
- Project Survey Corridor
- County

N

0 100 200 400

Feet

AEP

Wooster-West Millersburg 138 kV
Switch and Transmission Line Project

FIGURE 3A
WETLAND DELINEATION AND
STREAM ASSESSMENT MAP

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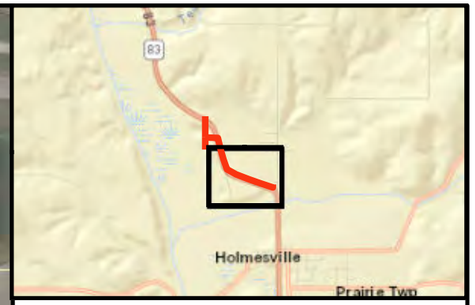

Legend

- Photo Location
- Proposed Structure Locations
- Culvert
- Wetland Data Point
- Upland Data Point
- Proposed Access Route
- NHD Stream (USGS)
- Salt Creek-Holmesville 138 kV Line
- Contour (5-Ft)
- Delineated PEM Wetland
- Approximate PEM Wetland
- 100-Year Floodplain (FEMA)
- Project Survey Corridor
- County

N

0 100 200 400

Feet

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 3B
WETLAND DELINEATION AND
STREAM ASSESSMENT MAP

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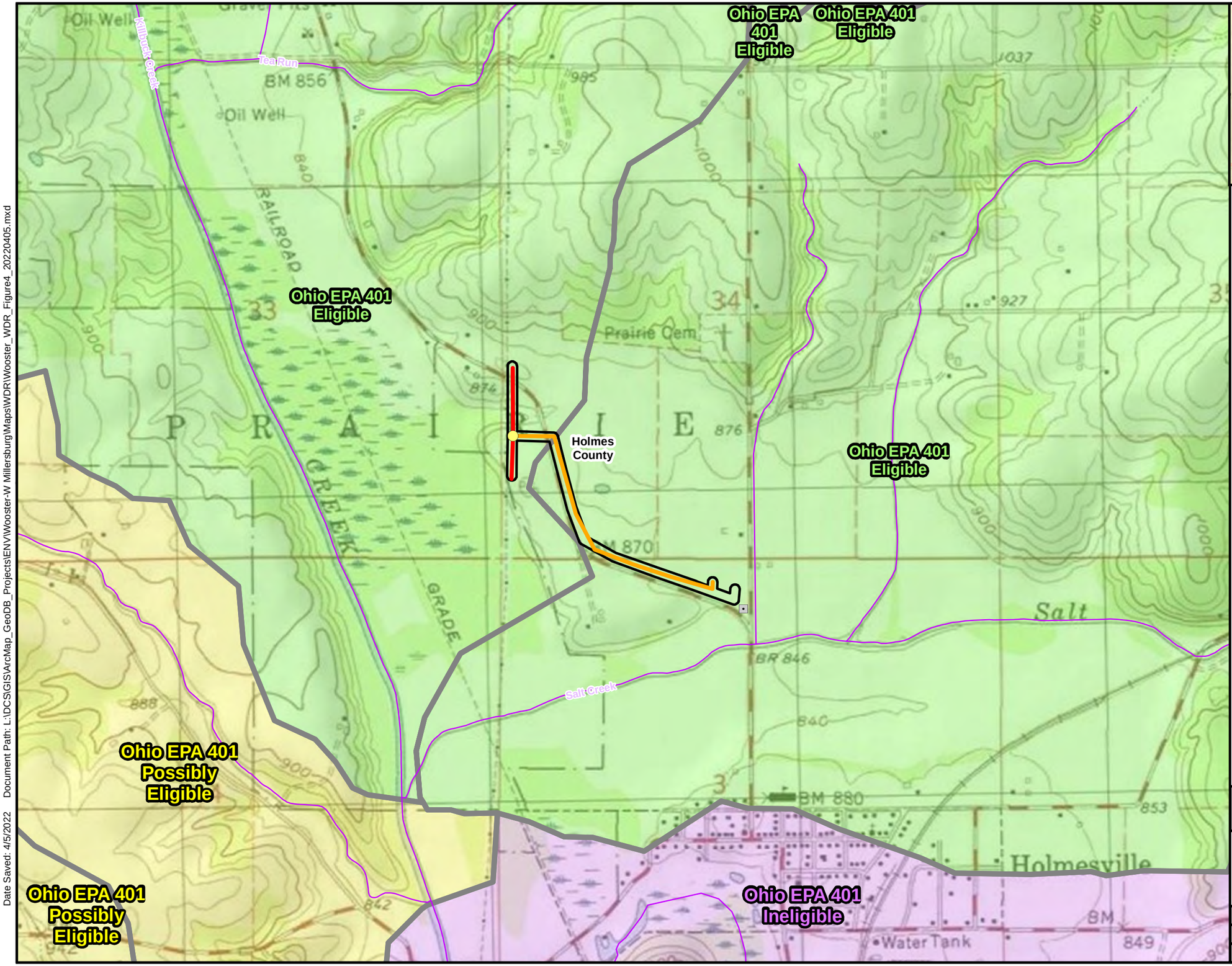

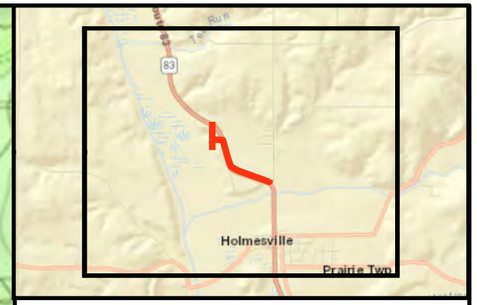

Legend

- Salt Creek Switch
- Culvert
- South Coshocton-Wooster 138 kV T-line Cut In
- Salt Creek-Holmesville 138 kV Line
- NHD Stream (USGS)
- Project Survey Corridor
- County

OEPA Stream Eligibility:

- Eligible
- Ineligible
- Possibly Eligible

N

0 500 1,000 2,000

Feet

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 4
STREAM ELIGIBILITY MAP

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JOB NO. 60661200	AECOM

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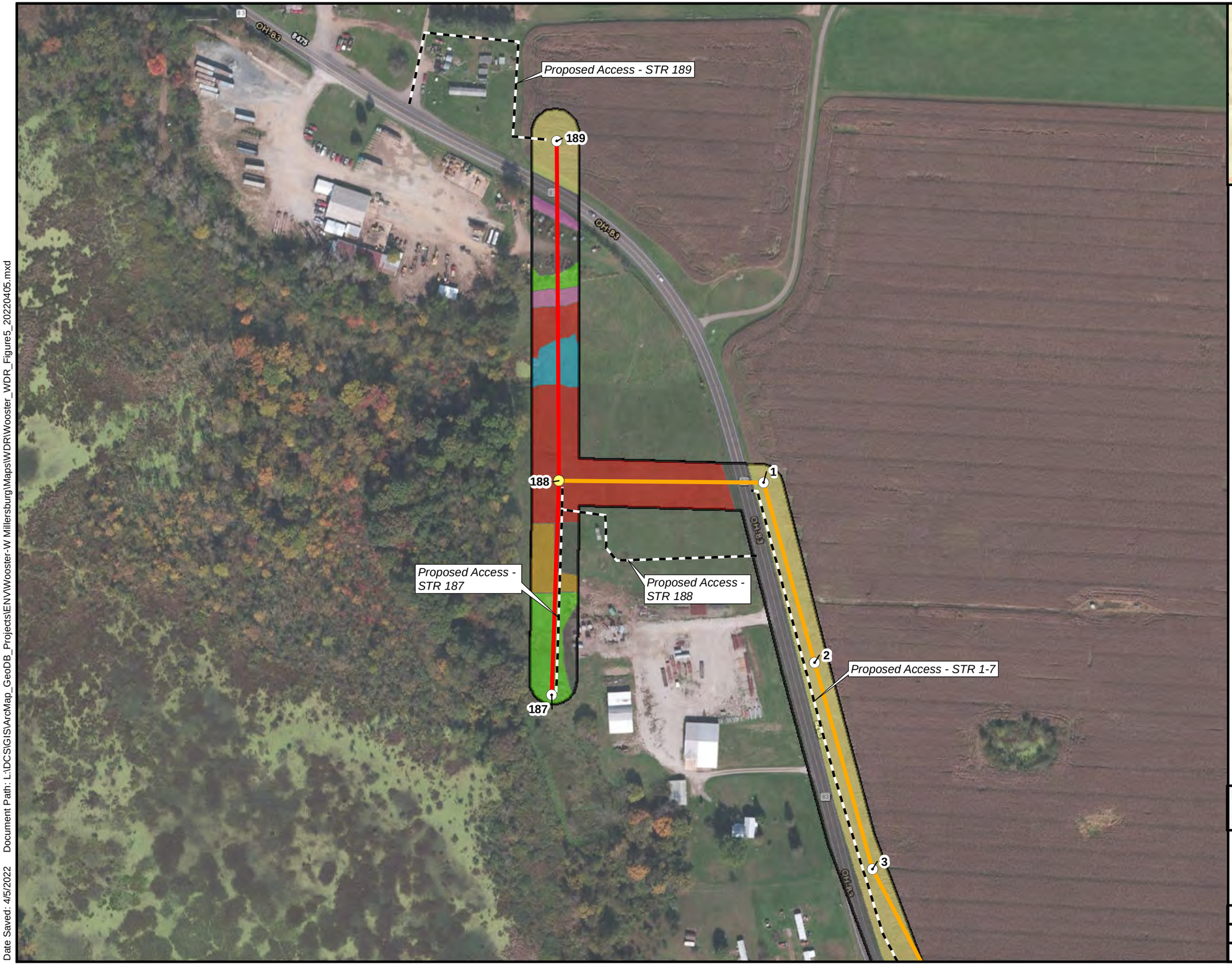


Legend

- Salt Creek Switch
- Proposed Structure Locations
- Proposed Access Route
- South Coshocton-Wooster 138 kV T-line Cut In
- Salt Creek-Holmesville 138 kV Line
- Project Survey Corridor

Vegetation Community Type

- Agriculture
- Forest
- Maintained Lawn
- Old Field
- Scrub Shrub
- Stream/Wetland
- Urban

N

0 100 200 400

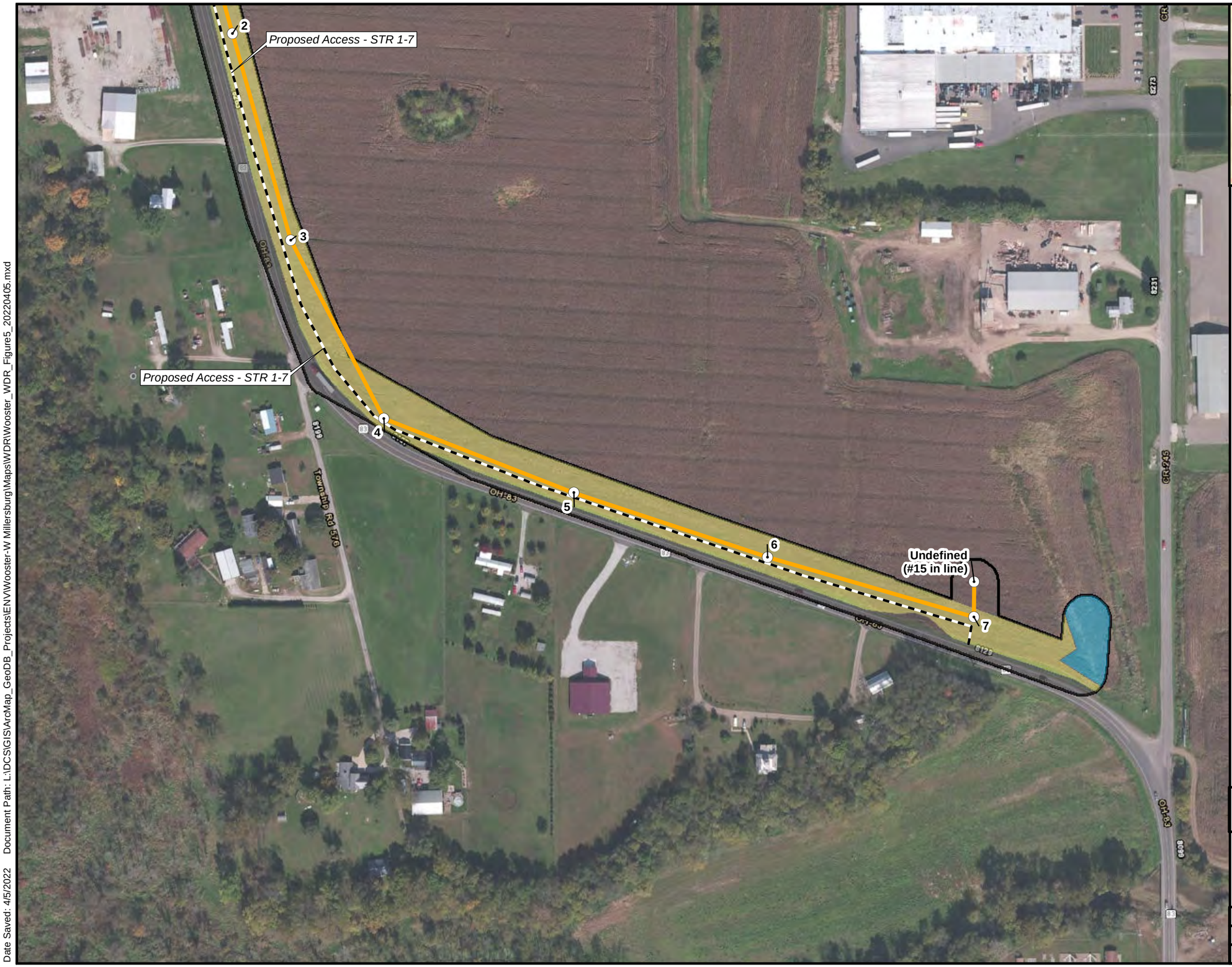
Feet

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 5A
VEGETATIVE COMMUNITIES ASSESSMENT MAP

DATE: 4/5/2022	1 INCH = 200 FEET
CREATED BY: PMH	CHECKED BY: BC
JOB NO. 60661200	AECOM

Date Saved: 4/5/2022 Document Path: L:\DCS\GIS\ArcMap_GeoDB_Projects\ENV\Wooster-W Millersburg\Maps\WDR\Wooster_WDR_Figure5_20220405.mxd



Legend

- Proposed Structure Locations
- Proposed Access Route
- Salt Creek-Holmesville 138 kV Line
- Project Survey Corridor

Vegetation Community Type

- Agriculture
- Stream/Wetland
- Urban

N

0 100 200 400

Feet

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 5B
VEGETATIVE COMMUNITIES
ASSESSMENT MAP

DATE: 4/5/2022	1 INCH = 200 FEET
CREATED BY: PMH	CHECKED BY: BC
JOB NO. 60661200	AECOM

Date Saved: 4/5/2022 Document Path: L:\DCS\GIS\ArcMap_GeoDB_Projects\ENV\Wooster-W Millersburg\Maps\WDR\Wooster_WDR_Figure5_20220405.mxd

APPENDIX A

U.S. ARMY CORPS OF ENGINEERS WETLAND DETERMINATION DATA FORMS

OEPA WETLAND ORAM FORMS

DELINEATED FEATURES PHOTOGRAPHS (WETLANDS)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wooster-West Millersburg 138 kV T-Line Replacement Project City/County: Holmes County Sampling Date: 2/3/2022

Applicant/Owner: AEP State: OH Sampling Point: W-WRL-20220203-01

Investigator(s): Bill Leopold, Josiah Kleinhenz Section, Township, Range: S3 T13N R13W

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope %: 1

Subregion (LRR or MLRA): LRR R Lat: 40.636992 Long: -81.924607 Datum: NAD83

Soil Map Unit Name: Md—Melvin silt loam, 0 to 3 percent slopes, frequently flooded NWI classification: N/A

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation X, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point in for Wetland 01. Wetland is disturbed by mowing and drainage ditch to the east. Vegetation is naturally problematic due to seasonal variability, is open to the east and north. Boundary delineated based on topography, wetness, vegetation. Within mapped 100-year floodplain.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 4
Water Table Present?	Yes X	No ____	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

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

Remarks:
Multiple primary and secondary hydrology indicators present. Wetland extends to North and East of Study Area, drains to south under road to NHD-mapped stream flowing south to Salt Creek that flows west to Killbuck Creek that flows south to Muskingum River, a TNW.

VEGETATION – Use scientific names of plants. Sampling Point: WRL-20220203

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. *Juncus effusus*	15	Yes	OBL
2. *Phalaris arundinacea*	10	Yes	FACW
3. *Setaria faberi*	10	Yes	FACU
4. *Panicum dichotomiflorum*	10	Yes	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	45 =Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1. *N/A*			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15
FACW species	20	x 2 =	40
FAC species	0	x 3 =	0
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	45 (A)		95 (B)

Prevalence Index = B/A = 2.11

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicator present, dominance test > 50%, dominant species are OBL, FACW and FACU. Solidago Sp. 5%, Symphyotrichum Sp. 25% absolute cover not included due to lack of specific identification.

SOIL

Sampling Point·WRL-20220203·

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-1	10YR 4/4	100					Loamy/Clayey	
1-9	10YR 5/2	85	10YR 6/8	15	C	PL/M	Loamy/Clayey	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ? Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Hydric soil indicators present, high chroma/low value (depleted) matrix with prominent redox concentrations present.

Upland 01

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wooster-West Millersburg 138 kV T-Line Replacement Project City/County: Holmes County Sampling Date: 2/3/2022

Applicant/Owner: AEP State: OH Sampling Point: UPL-WRL-20220203-01

Investigator(s): Bill Leopold, Josiah Kleinhenz Section, Township, Range: S3 T13N R13W

Landform (hillside, terrace, etc.): terrace Local relief (concave, convex, none): none Slope %: 3

Subregion (LRR or MLRA): LRR R Lat: 40.636994 Long: -81.92469 Datum: NAD83

Soil Map Unit Name: Md—Melvin silt loam, 0 to 3 percent slopes NWI classification: N/A

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

Are Vegetation X, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point out, UPL-WRL-20220203-01, for wetland W-WRL-20220203-01. Point is about 15' west of wetland in hayfield (vegetation disturbed, atypical situation). Not a wetland point as no wetland criteria met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

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

Remarks:
No primary or secondary hydrology indicators present.

VEGETATION – Use scientific names of plants. Sampling Point: -WRL-2022020

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. *Schedonorus arundinaceus*	50	Yes	FACU
2. *Setaria pumila*	40	Yes	FAC
3. *Trifolium repens*	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1. *N/A*			
2.			
3.			
4.			
	=Total Cover		

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: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	100 (A)		360 (B)

Prevalence Index = B/A = 3.60

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicators not present, as dominance test = 50% and prevalence index > 3. substantial snow cover on ground; vegetation has been mowed/cut.

Upland 01

SOIL

Sampling Point-WRL-2022020

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/2	100				M	Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Hydric soil indicators not present.

Background Information

Name:	**Bill Leopold, Josiah Kleinhenz**
Date:	**2/3/2022**
Affiliation:	**AECOM**
Address:	**525 Vine Street Suite 1800, Cincinnati, OH 45202**
Phone Number:	**513-207-3011**
e-mail address:	josiah.kleinhenz@aecom.com
Name of Wetland:	**Wetland 01**
Vegetation Communit(ies):	**PEM**
HGM Class(es):	**Depressional**

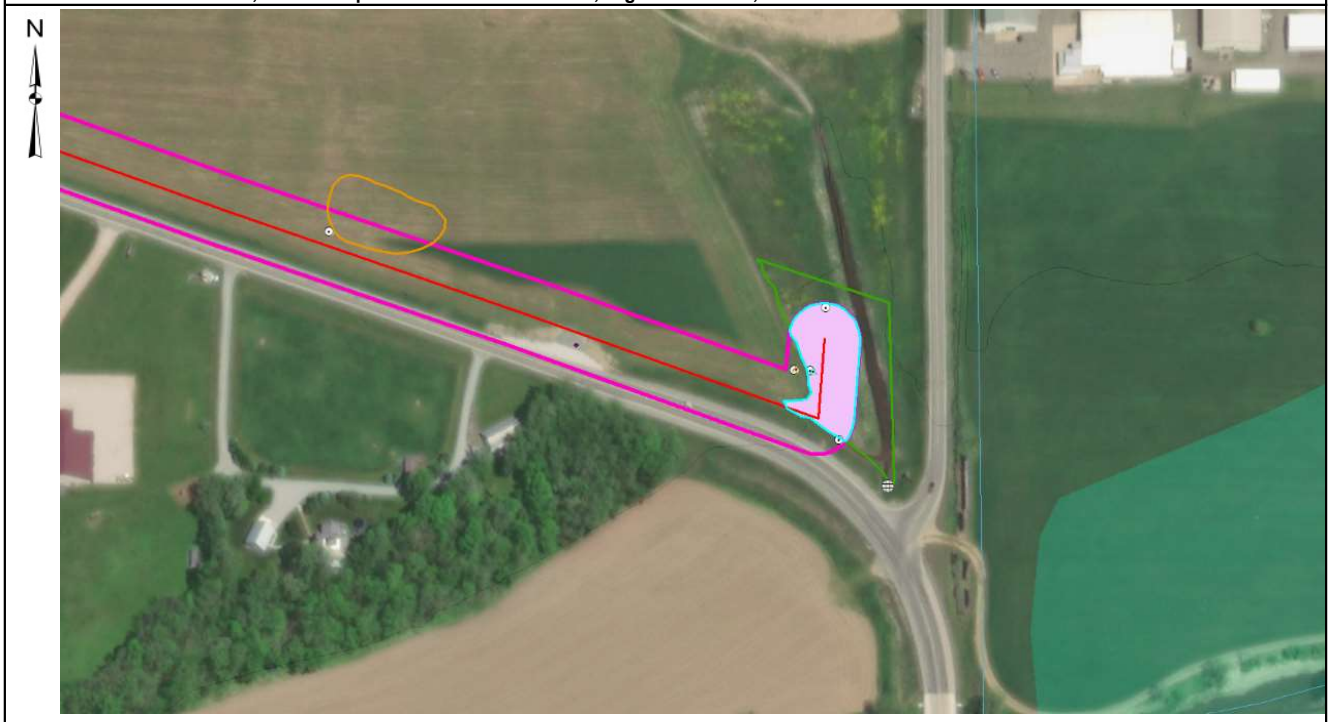
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.

N

Lat/Long or UTM Coordinate:	**40.63699 -81.92461**
USGS Quad Name:	**Holmesville**
County:	**Holmes**
Township:	**Prairie Township**
Section and Subsection:	**S3 T13N R13W**
Hydrologic Unit Code:	**050400030606**
Site Visit:	**2/3/2022**
National Wetland Inventory Map:	**See Figure 2**
Ohio Wetland Inventory Map:	**See Figure 2**
Soil Survey:	**See Figure 2**
Delineation report/map:	**See Figure 3**

Name of Wetland:	Wetland 01		
Wetland Size (delineated acres):	0.31	Wetland Size (Estimated total acres):	Approximately 0.7

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

Sample point in for wetland W-WRL-20220203-01. Wetland is disturbed by mowing and drainage ditch to the east. Vegetation is naturally problematic due to seasonal variability. Wetland is open to the east and north. Boundary delineated based on topography, wetness, and vegetation. Within 100-year floodplain. Drains to culvert to south under road likely to NHD mapped stream flowing south to Salt Creek that flows west to Killbuck Creek that flows south to Muskingum River, a TNW.

Final score:	26	Category:	1

Wetland ID:	Wetland 01

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.	X	
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.	X	
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.	X	
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.		X
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.	X	

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

Wetland ID:	Wetland 01

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 *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis* , 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 *Sphagnum* 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

Wetland ID:	Wetland 01

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 ID:	Wetland 01

Table 1. Characteristic plant species.

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

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

Wetland ID:	Wetland 01

Site:	AEP Wooster-West Millersburg T-Line	Rater(s):	Bill Leopold, Josiah Kleinhenz	Date:	2/3/2022

Field ID:

W-WRL-20220203-01

Delineated acres:	0.31
Total acres:	Approximately 0.7

2.0 / 2.0 Metric 1. Wetland Area (size).

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)
- [x] 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)

2.0 / 4.0 Metric 2. Upland buffers and surrounding land use.

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)
- [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), shrubland, 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)

12.0 / 16.0 Metric 3. Hydrology.

max 30 pts. | subtotal

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

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

3b. Connectivity. Score all that apply.

- [x] 100 year floodplain (1)
- [x] 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 one.

- [ ] >0.7 (27.6in) (3)
- [ ] 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)
- [ ] Regularly inundated/saturated (3)
- [x] 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)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [x] filling/grading
- [x] road bed/RR track
- [ ] dredging
- [ ] Other:

8.0 / 24.0 Metric 4. Habitat Alteration and Development.

max 20 pts. | subtotal

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

- [ ] None or none apparent (4)
- [x] 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)
- [x] Poor to fair (2)
- [ ] Poor (1)

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

- [ ] None or none apparent (9)
- [ ] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

24.0

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID:	Wetland 01

Site:	AEP Wooster-West Millersburg T-Line	Rater(s):	Bill Leopold, Josiah Kleinhenz	Date:	2/3/2022

Field ID:
W-WRL-20220203-01

24.0 subtotal this page

0.0 max 10 pts. | **24.0** 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 Praires (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 5 Qualitative Rating (-10)

2.0 max 20pts. | **26.0** subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] 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)
- [x] None (0)

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

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [x] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- [1] Vegetated hummucks/tussucks
- [0] Coarse woody debris >15cm (6in)
- [0] Standing dead >25cm (10in) dbh
- [1] Amphibian breeding pools

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species
Native spp are dominant component of the vegetation, mod although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to
A predominance of native species, with nonnative spp high 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

26.0 TOTAL (Max 100 pts)

1 Category

Wetland ID:	Wetland 01

ORAM Summary Worksheet

		Circle answer or insert score		Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2		
	Metric 2. Buffers and surrounding land use	2		
	Metric 3. Hydrology	12		
	Metric 4. Habitat	8		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	2		
	TOTAL SCORE	26		Category based on score breakpoints **1**

Complete Wetland Categorization Worksheet.

Wetland ID:	Wetland 01

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 *less* than the Category 2 scoring threshold (*excluding* 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 *greater* than the Category 2 scoring threshold *(including* 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 *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	***NO** Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	***Category 1**	Category 2	Category 3	

End of Ohio Rapid Assessment Method for Wetlands.

AECOM

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project	60661200

Wetland 01 **Date:** February 03, 2022 **Description:** PEM Category 1 Facing North	

Wetland 01 **Date:** February 03, 2022 **Description:** PEM Category 1 Facing East	

AECOM

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project	60661200

Wetland 01

Date:
February 03, 2022

Description:

PEM

Category 1

Facing South

Wetland 01

Date:
February 03, 2022

Description:

PEM

Category 1

Facing West

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project	60661200

Wetland 01

Date:
February 03, 2022

Description:

PEM

Category 1

Soil Pit

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wooster-West Millersburg 138 kV T-Line Replacement Project City/County: Holmes County Sampling Date: 2/3/2022

Applicant/Owner: AEP State: OH Sampling Point: W-WRL-20220203-02

Investigator(s): Bill Leopold, Josiah Kleinhenz Section, Township, Range: S34 T14N R13W

Landform (hillside, terrace, etc.): Swale Local relief (concave, convex, none): concave Slope %: 5

Subregion (LRR or MLRA): LRR R Lat: 40.64232 Long: -81.933059 Datum: NAD83

Soil Map Unit Name: CnE - Chili loam, 18 to 25 percent slopes NWI classification: N/A

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point in for wetland Wetland 02. Wetland is located beneath powerline ROW and is open to the west towards NWI mapped wetland. Boundary delineated based on topography, wetness, vegetation. Includes old pond, mostly filled in now.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

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

Remarks:
Multiple primary and secondary hydrology indicators present. Wetland extends to west possibly to extensive NWI-mapped wetland; wetland drains to west to Killbuck Creek that flows south to Muskingum River, a TNW.

VEGETATION – Use scientific names of plants. Sampling Point: WRL-20220203

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. *Scirpus atrovirens*	20	Yes	OBL
2. *Panicum virgatum*	20	Yes	FAC
3. *Setaria faberi*	10	No	FACU
4. *Verbesina alternifolia*	10	No	FACW
5. *Vernonia gigantea*	20	Yes	FAC
6. *Typha angustifolia*	5	No	OBL
7.			
8.			
9.			
10.			
11.			
12.			
	85 =Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1. *N/A*			
2.			
3.			
4.			
	=Total Cover		

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: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	10	x 2 =	20
FAC species	40	x 3 =	120
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	85 (A)		205 (B)

Prevalence Index = B/A = 2.41

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

_X_ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicator present, dominance test > 50%, dominant species are OBL and FAC.

SOIL

Sampling Point·WRL-20220203·

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/2	100					Loamy/Clayey	
5-10	10YR 4/1	80	10YR 5/4	20	C	PL	Loamy/Clayey	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7)
___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ High Chroma Sands (S11) (**LRR K, L)**
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
_X_ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
_?_ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _X_ **No** _____

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Hydric soil indicators present, high chroma/low value (depleted) matrix with prominent redox concentrations present.

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Wooster-West Millersburg 138 kV T-Line Replacement Project City/County: Holmes County Sampling Date: 2/3/2022

Applicant/Owner: AEP State: OH Sampling Point: UPL-WRL-20220203-02

Investigator(s): Bill Leopold, Josiah Kleinhenz Section, Township, Range: S34 T14N R13W

Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): concave Slope %: 10

Subregion (LRR or MLRA): LRR R Lat: 40.642529 Long: -81.93291 Datum: NAD83

Soil Map Unit Name: Mg - Melvin silt loam, frequently ponded, 0 to 3 percent slopes NWI classification: N/A

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Sample point, UPL-WRL-20220203-02, out for Wetland 02. Sample point is about 10' north of wetland in old filed/ scrub shrub area beneath powerline ROW. Not a wetland point as hydric soil and wetland hydrology criteria not met.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

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

Remarks:
No primary or secondary hydrology indicators present.

VEGETATION – Use scientific names of plants.

Sampling Point: -WRL-2022020

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Rosa multiflora*	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10 =Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. *Panicum virgatum*	30	Yes	FAC
2. *Setaria pumila*	10	No	FAC
3. *Vernonia gigantea*	15	Yes	FAC
4. *Verbesina alternifolia*	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60 =Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1. *N/A*			
2.			
3.			
4.			
	=Total Cover		

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: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	55	x 3 =	165
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	70 (A)		215 (B)

Prevalence Index = B/A = 3.07

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicator present ad dominance test > 50%, 40% absolute cover is occupied by Solidago Sp. Suspected to be upland species as it occcupies dry areas of hillside, not included in dominance calculation.

Upland 02

SOIL

Sampling Point: -WRL-2022020

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	7.5YR 3/3	100				M	Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Hydrophytic soil indicators not present.

Background Information

Name:	**Bill Leopold, Josiah Kleinhenz**
Date:	**2/3/2022**
Affiliation:	**AECOM**
Address:	**525 Vine Street Suite 1800, Cincinnati, OH 45202**
Phone Number:	**513-207-3011**
e-mail address:	josiah.kleinhenz@aecom.com
Name of Wetland:	**Wetland 02**
Vegetation Communit(ies):	**PEM**
HGM Class(es):	**Depressional**

Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.

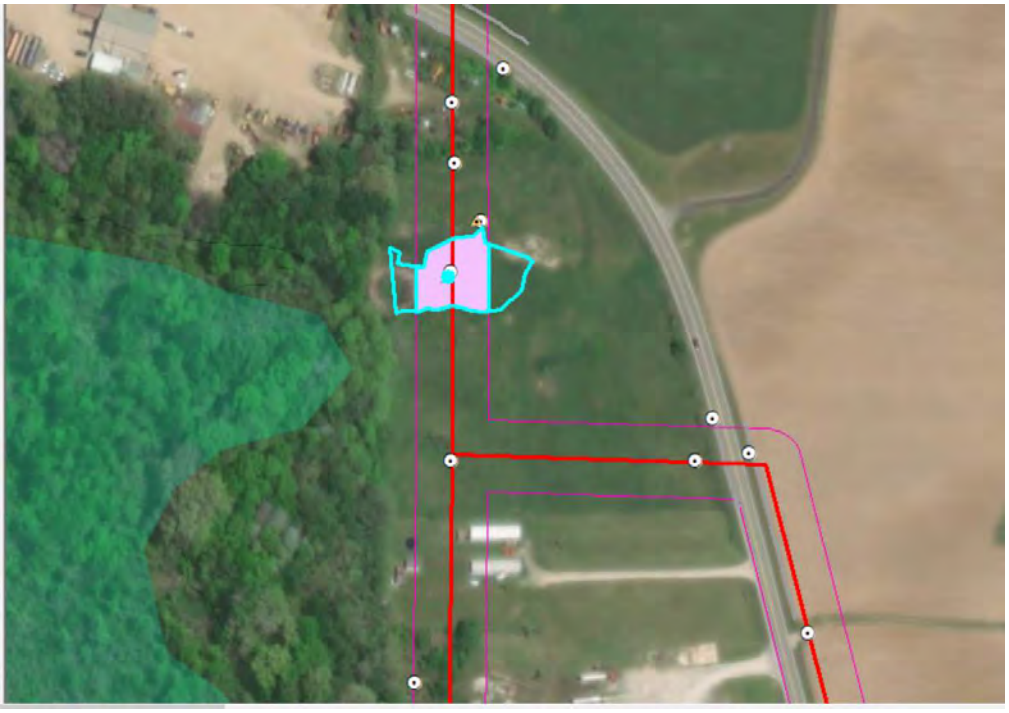
N

Lat/Long or UTM Coordinate:	**40.64232, -81.93306**
USGS Quad Name:	**Holmesville**
County:	**Holmes**
Township:	**Prairie Township**
Section and Subsection:	**S34 T14N R13W**
Hydrologic Unit Code:	**050400030606**
Site Visit:	**2/3/2022**
National Wetland Inventory Map:	**See Figure 2**
Ohio Wetland Inventory Map:	**See Figure 2**
Soil Survey:	**See Figure 2**
Delineation report/map:	**See Figure 3**

Name of Wetland:	Wetland 02		
Wetland Size (delineated acres):	0.21	Wetland Size (Estimated total acres):	0.50

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.

N



Comments, Narrative Discussion, Justification of Category Changes:

Sample point in for wetland Wetland 02. Wetland is located beneath powerline ROW and is open to the west towards NWI mapped wetland. Boundary delineated based on topography, wetness, vegetation. Includes old pond, mostly filled in now. Hydrophytic vegetation indicator present, dominance test > 50%, dominant species are OBL and FAC. Hydric soil indicators present, high chroma/low value (depleted) matrix with prominent redox concentrations present. Multiple primary and secondary hydrology indicators present. Wetland extends to west possibly to extensive NWI-mapped wetland; wetland drains to west to Killbuck Creek that flows south to Muskingum River, a TNW.

Final score:	36	Category:	2

Wetland ID:	Wetland 02

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.	X	
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.	X	
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.	X	
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.		X
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.	X	

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

Wetland ID:	Wetland 02

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 *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis* , 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 *Sphagnum* 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

Wetland ID:	Wetland 02

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 ID:	Wetland 02

Table 1. Characteristic plant species.

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

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

Wetland ID:	Wetland 02

Site:	AEP Wooster-West Millersburg T-Line	Rater(s):	Bill Leopold, Josiah Kleinhenz	Date:	2/3/2022

Field ID:

W-WRL-20220203-02

Delineated acres:	0.21
Total acres:	0.50

Metric 1. Wetland Area (size).

2.0 | 2.0 (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)
- [x] 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)

Metric 2. Upland buffers and surrounding land use.

5.0 | 7.0 (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)
- [x] 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)
- [x] LOW. Old field (>10 years), shrubland, young second growth forest. (5)
- [x] 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.

16.0 | 23.0 (max 30 pts. | subtotal)

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

- [ ] High pH groundwater (5)
- [ ] Other groundwater (3)
- [x] Precipitation (1)
- [ ] Seasonal/Intermittent surface water (3)
- [ ] 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)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select one.

- [x] >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)
- [x] 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)
- [x] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [x] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [x] road bed/RR track
- [ ] dredging
- [ ] Other:

Metric 4. Habitat Alteration and Development.

9.0 | 32.0 (max 20 pts. | subtotal)

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

- [ ] None or none apparent (4)
- [x] 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)
- [x] 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)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [x] mowing
- [ ] grazing
- [ ] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

32.0 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID:	Wetland 02

Site:	AEP Wooster-West Millersburg T-Line	Rater(s):	Bill Leopold, Josiah Kleinhenz	Date:	2/3/2022

Field ID:

W-WRL-20220203-02

32.0 subtotal this page

0.0 max 10 pts. | **32.0** 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 Praires (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 5 Qualitative Rating (-10)

4.0 max 20pts. | **36.0** subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [2] 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)
- [x] None (0)

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

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [x] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [ ] Absent (1)

6d. Microtopography.

Score all present using 0 to 3 scale.

- [1] Vegetated hummucks/tussucks
- [0] Coarse woody debris >15cm (6in)
- [0] Standing dead >25cm (10in) dbh
- [2] 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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species
Native spp are dominant component of the vegetation, mod although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to
A predominance of native species, with nonnative spp high 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

36.0 TOTAL (Max 100 pts)

2 Category

Wetland ID:	Wetland 02

ORAM Summary Worksheet

		Circle answer or insert score		Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2		
	Metric 2. Buffers and surrounding land use	5		
	Metric 3. Hydrology	16		
	Metric 4. Habitat	9		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	4		
	TOTAL SCORE	36		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID:	Wetland 02

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 *less* than the Category 2 scoring threshold (*excluding* 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 *greater* than the Category 2 scoring threshold *(including* 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 *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	***NO** Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	Category 1	***Category 2**	Category 3	

End of Ohio Rapid Assessment Method for Wetlands.

PHOTOGRAPHIC RECORD
HABITAT

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project	60661200

Wetland 2

Date:
February 03, 2022

Description:

PEM

Category 2

Facing North

Wetland 2

Date:
February 03, 2022

Description:

PEM

Category 2

Facing East

AECOM

PHOTOGRAPHIC RECORD
HABITAT

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project	60661200

Wetland 2

Date:
February 03, 2022

Description:

PEM

Category 2

Facing South

Wetland 2

Date:
February 03, 2022

Description:

PEM

Category 2

Facing West

AECOM

PHOTOGRAPHIC RECORD
HABITAT

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project	60661200

Wetland 2

Date:
February 03, 2022

Description:

PEM

Category 2

Facing Soil pit

APPENDIX B

HABITAT PHOTOGRAPHIC RECORD

AECOM

PHOTOGRAPHIC RECORD
HABITAT

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project	60661200

Photo 1	
Date: February 03, 2022	
Description: Agricultural field within the proposed ROW. Facing East	

Photo 2	
Date: February 03, 2022	
Description: Landscapd area within the proposed ROW. Facing West	

AECOM

PHOTOGRAPHIC RECORD
HABITAT

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project	60661200

Photo 3	
Date: February 03, 2022	
Description: Old field habitat within the proposed ROW. Facing West	

Photo 4	
Date: February 03, 2022	
Description: Pasture/Hay field habitat within the proposed ROW. Facing West	

AECOM

PHOTOGRAPHIC RECORD
HABITAT

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project	60661200

Photo 5	
Date: February 03, 2022	
Description: Scrub-shrub habitat within the proposed ROW. Facing East	

Photo 6	
Date: February 03, 2022	
Description: Wetland habitat within the proposed ROW. Facing North	

AECOM

PHOTOGRAPHIC RECORD
HABITAT

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project	60661200

Photo 7	
Date: February 03, 2022	
Description: Successional hardwood woodland habitat within the proposed ROW. Facing South	

Photo 8	
Date: February 03, 2022	
Description: Urban area within the proposed ROW. Facing West	

APPENDIX C

AGENCY COORDINATION

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

December 20, 2021

Brian Cooper
AECOM
715 Washington Boulevard
Williamsport, PA 17701

Re: 21-1071; AEP - Salt Creek-Holmesville 138-kV Line Project

Project: The proposed project involves the installation of a 138-kV transmission line.

Location: The proposed project is located in Prairie Township, Holmes 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:

American sweet-flag (*Acorus americanus*), P
Great St. John's-wort (*Hypericum ascyron* ssp. *pyramidatum*), T
Northern adder's-tongue (*Ophioglossum pusillum*), T
Prairie fringed orchid (*Platanthera leucophaea*), T, FT
Buttonbush shrub swamp plant community
Mixed emergent marsh plant community
Lake chubsucker (*Erimyzon sucetta*), T
Sandhill crane (*Antigone canadensis*), T
Barn owl (*Tyto alba*), T
Killbuck Marsh Wildlife Area – ODNR Division of Wildlife

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 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 species of bats 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. If trees are present within the project area, and trees must be cut, the DOW 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 $\geq$ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "*OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING*". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Erin Hazelton at Erin.hazelton@dnr.ohio.gov).

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 snuffbox (*Epioblasma triquetra*), a state endangered and federally endangered mussel. Due to the location, and that there is no in-water work proposed in a perennial stream, 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, and the lake chubsucker (*Erimyzon sucetta*) a state threatened 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 these or other aquatic species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. This long-lived, entirely aquatic salamander inhabits perennial streams with large flat rocks. In-water work in hellbender streams can reduce availability of large cover rocks and can destroy hellbender nests and/or kill adults and juveniles. The contribution of additional sediment to hellbender streams can smother large cover rocks and gravel/cobble substrate (used by juveniles), making them unsuitable for refuge and nesting. Projects that contribute to altered flow regimes (e.g., by increasing areas of impervious surfaces or modifying the floodplain) can also adversely affect hellbender habitat. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact this species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the black tern (*Chlidonias niger*), a state endangered bird. The black tern prefers large, undisturbed inland marshes with fairly dense vegetation and pockets of open water. They nest in various kinds of marsh vegetation, but cattail marshes are generally favored. Nests are built on top of muskrat houses or on top of floating vegetation. If this type of habitat will be impacted, construction should be avoided in this habitat from April 1 through June 30 to reduce impacts to this species. If no wetland habitat will be impacted, the 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.

The project is within the range of the sandhill crane (*Grus canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through August 31. If this habitat will not be impacted, this project is not likely to have an impact on this species.

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

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). 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 type of 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)

American Electric Power
8600 Smith's Mill Road
New Albany, OH 43054
ajtoohey@ aep.com

March 8, 2022

Attention: Mr. Mike Pettegrew
Ohio Department of Natural Resources
2045 Morse Road, Building E-2
Columbus, Ohio 43229-6693

Via email: environmentalreviewrequest@dnr.state.oh.us; NHDRequest@dnr.state.oh.us

Reference: Request for Technical Assistance
South Coshocton – Wooster 138-kV T-Line Cut In Project
Holmes County, Ohio

Dear Mr. Pettegrew:

AEP Ohio Transmission Company, Inc. (AEP), is formally requesting that the Ohio Department of Natural Resources (ODNR) complete a review for the proposed South Coshocton – Wooster 138-kV T-Line Cut In Project (Project) in Holmes County, Ohio. The Project is located within the Holmsville, Ohio U.S. Geologic Survey 7.5' topographical quadrangle and is shown on the attached Project Overview Map (Figure 1).

Please provide us with the results of the ODNR's environmental review, including results of the ODNR Natural Heritage Database search, at your earliest convenience. If you have questions or need additional information regarding the Project, please contact me at the phone number or email below. Thank you for your assistance with this request.

Sincerely,

Brian Cooper

Phone: (717-304-0578)
brian.cooper@aecom.com

Attachments: Figure 1 – Project Location Map
Electronic Shapefiles (.shp)

Cc: Amy J. Toohey
Environmental Specialist-Consultant
Phone: (614-565-1480)
ajtoohey@aep.com

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
Phone: (614) 416-8993 Fax: (614) 416-8994

In Reply Refer To: March 08, 2022
Project Code: 2022-0017246
Project Name: AEP South Coshocton - Wooster 138-kV Cut In

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
(614) 416-8993

Project Summary

Project Code: 2022-0017246
Event Code: None
Project Name: AEP South Coshocton - Wooster 138-kV Cut In
Project Type: Transmission Line - New Constr - Above Ground
Project Description: AEP Ohio Transmission Company, Inc. (AEP), is formally requesting that the United States Fish and Wildlife Service (USFWS) complete a review for the proposed South Coshocton - Wooster 138-kV T-Line Cut In Project (Project) in Holmes County, Ohio.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.642069750000005,-81.93305465,14z

Counties: Holmes County, Ohio

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Eastern Prairie Fringed Orchid *Platanthera leucophaea*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/601

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: AECOM
Name: Brian Cooper
Address: 715 Washington Boulevard
City: Williamsport
State: PA
Zip: 17701
Email brian.cooper@aecom.com
Phone: 7173040578

APPENDIX D

DESKTOP ASSESSMENT FOR WINTER BAT HABITAT

SOUTH COSHOCTON - WOOSTER 138KV CUT IN PROJECT

HOLMES COUNTY, OHIO

DESKTOP ASSESSMENT FOR WINTER BAT HABITAT

Prepared for:

American Electric Power Ohio Transmission Company

8600 Smith Mill Road

New Albany, Ohio 43054

Prepared by:

AECOM

525 Vine Street, Suite 1800

Cincinnati, Ohio 45202

Project #: 60661200

March 2022

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LIST OF FIGURES

LIST OF ATTACHMENTS

1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) is proposing to construct a new delivery point on the Wooster-West Millersburg 138-kV circuit in Holmes County, OH. The proposed project includes 3 construction components; a new 3-way switch (Salt Creek Switch) toward Wooster and West Millersburg, an approximately 0.1-mile cut into the South Coshocton-Wooster 138-kV asset for the new switch install, and approximately 0.75-mile greenfield 138-kV transmission line build leading to the new delivery point. The Project is located in Holmes County within the Holmesville, U.S. Geologic Survey 7.5" topographic quadrangle (Appendix A, Figure 1 – Agency Overview Map).

The Project is designed to be predominately within the former maintained transmission line ROW located mostly within agricultural fields, grassy area, and old fields. AEP Ohio Transco plans to utilize new and existing access roads to the transmission line ROW. The Project is not expected to require substantial clearing of forested habitat, although minor tree trimming along the edge of the Project survey area may occur. AEP Ohio Transco intends for tree clearing activities to occur between October 1st and March 31st to avoid adverse effects to state and/or federally listed bat species.

2.0 METHODS

AECOM reviewed publicly available data to identify underground voids which could be potential hibernation sites for overwintering bats (hibernacula). Typical hibernation sites for the *Myotis* bats native to Ohio include natural karst caves/sinkholes, underground mines with exposed entrances/air vents, and other underground voids which maintain suitable temperatures, humidity, and air circulation throughout the winter months. To identify such features, AECOM reviewed the following desktop resources:

- USGS topographical maps (U.S. Geological Survey, 2019 and USGS 2016)
- Aerial photography (ESRI, 2020)
- USFWS Technical Assistance (Attachment B)
- ODNR Division of Mineral Resources and Geological Survey data for:
    - Known mining activity (ODNR, 2020a)
    - Karst geology and sinkholes (ODNR, 2020b)

AECOM compared the Project survey area and 0.25-mile buffer to the information provided by each of these resources and reviewed them for indications of likely underground voids. Figure 2 – USGS Topographical Map shows the Project and it's 0.25-mile buffer on a USGS background. Figure 3 – Known Mining Activity Map depicts the Project and it's 0.25-mile buffer in relation to known records of mining activity as recorded by the ODNR. Figure 4 – Karst Geology and Sinkholes Map depicts the Project and it's 0.25-mile buffer with known locations of karst geology and sinkholes. Aerial photography is shown as the background in Figure 3 and Figure 4.

3.0 RESULTS

Based on the available desktop resources, no documented underground or surface mines, and no mine entrances/openings are within 0.25-mile of the Project. ODNR mining records indicate that the nearest mining features are gravel/sand/barrow pits approximately 0.8-mile away, and two historic surface mines approximately 1.0-mile away; however, those features are located well outside of the Project survey area (Figure 3 – Known Mining Activity Map).

Review of the ODNR Karst Interactive Map identified no karst features within 0.25-mile of the Project survey area (Figure 4 – Karst Geology and Sinkholes Map).

4.0 CONCLUSION AND DISCUSSION

AECOM completed the due diligence winter bat habitat desktop assessment in March 2022. As result, no records of underground mines or mine openings were identified within 0.25-mile of the Project. Additionally, no karst features are located within the Project survey area or within a 0.25-mile buffer around it. Project activities are unlikely to significantly affect any potential hibernacula associated with karst features outside of a 0.25-mile buffer of the Project survey area.

The proposed clearing activities for the Project are associated with minor vegetation removal of saplings, shrubs, and/or minor trimming along the edge of the existing transmission line corridor without any trees being removed. Therefore, representative photographs of the habitat within the Project survey area are provided as Attachment C and locations of photographs are displayed on Appendix A, Figure 5: Photograph Location Map.

5.0 LITERATURE CITED

ESRI, 2020. World Imagery obtained from Earthstar Geographics (TerraColor NextGen) imagery.

Ohio Department of Natural Resources. 2020a. Division of Mineral Resources and Geological Survey, Mines of Ohio Interactive Map access at https://gis.ohiodnr.gov/MapViewer/?config=OhioMines on February 21, 2022.

Ohio Department of Natural Resources. 2020b. Division of Geological Survey, Karst Interactive Map access at https://gis.ohiodnr.gov/website/dgs/karst_interactivemap/ on February 21, 2022.

U.S. Geological Survey, 2019. USGS US Topo 7.5-minute maps for Holmesville, OH 2019: USGS - National Geospatial Technical Operations Center (NGTOC).

FIGURES

PRAIRIE TOWNSHIP

Gravel Pits

Oil Well

Oil Well

BM 856

RAILROAD

Prairie Cem

South Coshocton - Wooster 138 kV T-Line Cut In
-81.933049
40.641634

Holmesville

Holmesville (31-26) Delivery Point
-81.924555
40.637116

BM 870

BM 880

BR 846

GRADE

CREEK

Salt

Holmes County

Holmesville

BM

BM

PRAIRIE

33

34

4

3

961

1037

985

1000

927

900

874

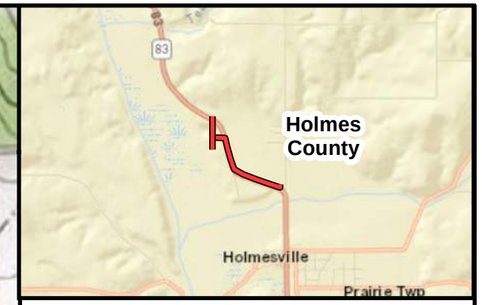
876

840

888

842

919



Legend

- Existing Structure
- Proposed Wooster-West Millersburg 138 kV Transmission Line
- Ohio USGS 7.5' Topographic Quadrangle
- Township Boundary

N

0 500 1,000 2,000

Feet

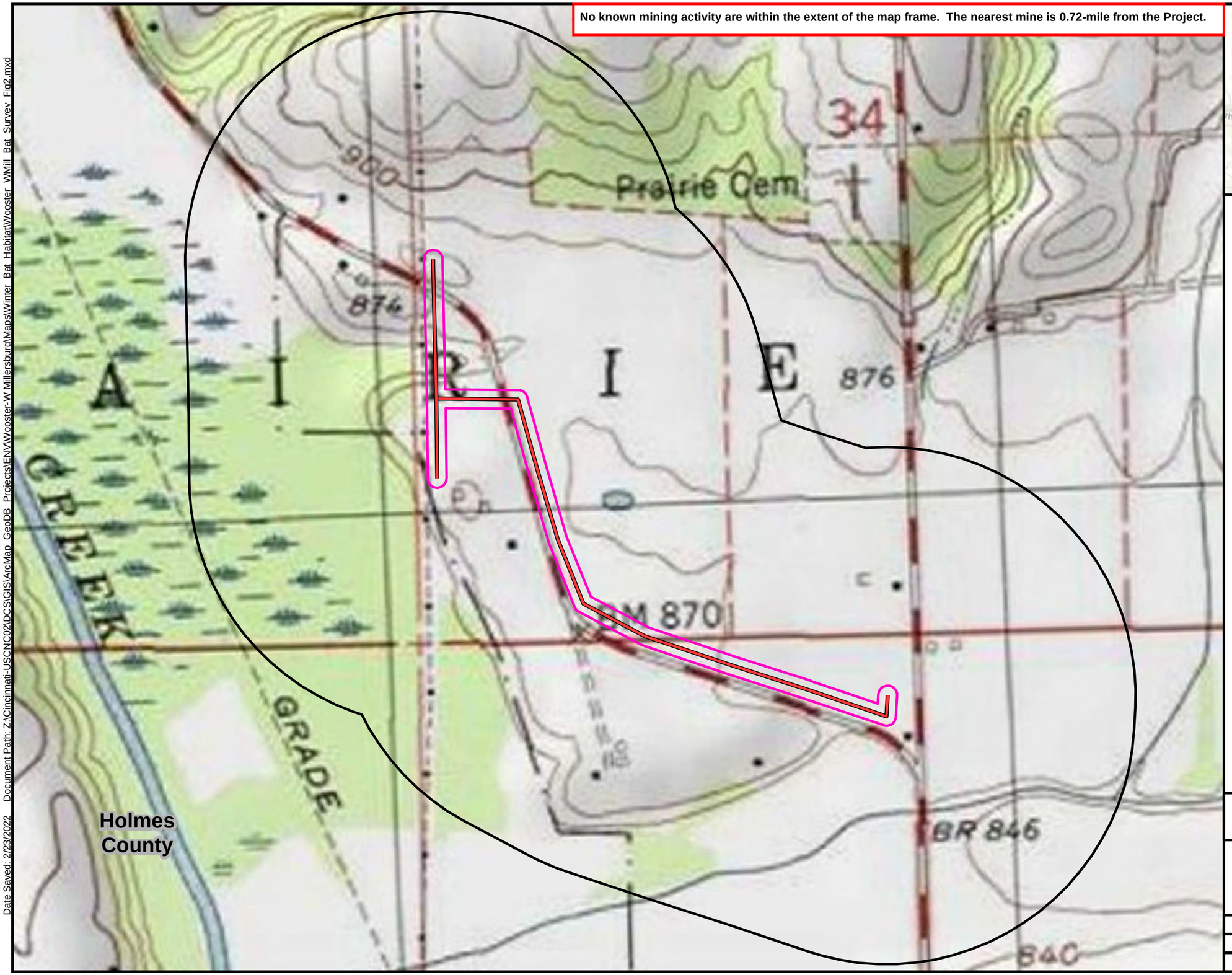
South Coshocton - Wooster 138 kV Cut In Project

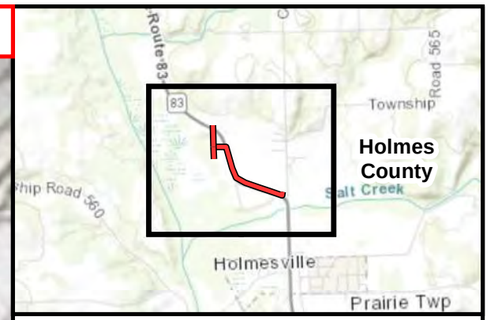
FIGURE 1
PROJECT OVERVIEW

DATE: 2/23/2022	1 INCH = 1,000 FEET
CREATED BY: PMH	CHECKED BY:
JOB NO. 60661172	AECOM

Date Saved: 2/23/2022 Document Path: Z:\Cincinnati-USCNC02\DCS\GIS\ArcMap_GeoDB_Projects\EN\VWooster-W Millersburg\Maps\Winter_Bat_Habitat\Wooster_WMill_Bat_Survey_Fig1.mxd

No known mining activity are within the extent of the map frame. The nearest mine is 0.72-mile from the Project.





Legend

- Proposed Wooster-West Millersburg 138 kV Transmission Line
- Survey Boundary
- Survey Area Quarter Mile Buffer

N

0 250 500 1,000

Feet

South Coshocton - Wooster 138 kV Cut In Project

FIGURE 2
USGS TOPOGRAPHICAL MAP

DATE: 2/23/2022	1 INCH = 500 FEET
CREATED BY: PMH	CHECKED BY:
JOB NO. 60661172	AECOM

Date Saved: 2/23/2022 Document Path: Z:\Cincinnati-USCNC02\DCS\GIS\ArcMap_GeoDB_Projects\ENV\Wooster-W Millersburg\Maps\Winter_Bat_HabitatWooster_WMill_Bat_Survey_Fig2.mxd

Holmes County

Holmes County

Legend

- Mine Location Point from Bedrock Geologic Maps (ODNR) - Pit
- Proposed Wooster-West Millersburg 138 kV Transmission Line
- Survey Boundary
- Survey Area Quarter Mile Buffer

N

0 500 1,000 2,000

Feet

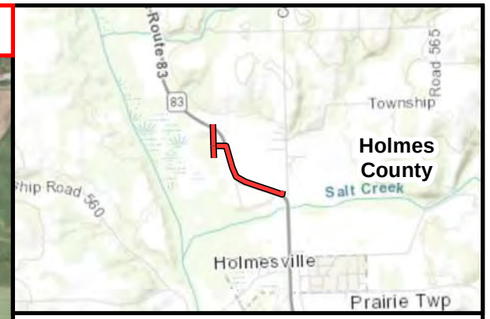
South Coshocton - Wooster 138 kV Cut In Project

FIGURE 3
KNOWN MINING ACTIVITY MAP

DATE: 2/23/2022	1 INCH = 1,000 FEET
CREATED BY: PMH	CHECKED BY:
JOB NO. 60661172	AECOM

Date Saved: 2/23/2022 Document Path: Z:\Cincinnati-USCNC02\DCS\GIS\ArcMap GeoDB Projects\ENVWooster-W Millersburg\Maps\Winter Bat HabitatWooster WMill Bat Survey Fig3.mxd

No known karst geology or sinkholes are within the extent of the map frame.



Legend

- Proposed Wooster-West Millersburg 138 kV Transmission Line
- Survey Boundary
- Survey Area Quarter Mile Buffer

Holmes County

N

0 500 1,000 2,000

Feet

South Coshocton - Wooster 138 kV Cut In Project

FIGURE 4
KARST GEOLOGY AND SINKHOLES MAP

DATE: 2/23/2022	1 INCH = 1,000 FEET
CREATED BY: PMH	CHECKED BY:
JOB NO. 60661172	AECOM

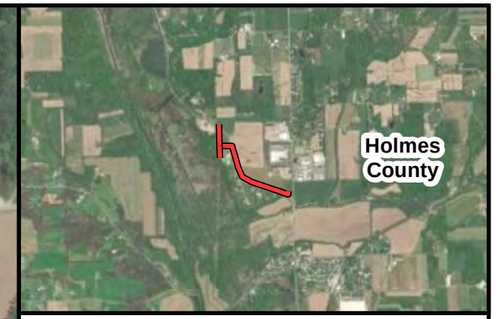
Date Saved: 2/23/2022 Document Path: Z:\Cincinnati-USCNC02\DCS\GIS\ArcMap_GeoDB_Projects\ENV\Wooster-W.Millersburg\Maps\Winter_Bat_Habitat\Wooster_WMill_Bat_Survey_Fig4.mxd

Photo 3

Photo 2

Photo 1

Holmes County



Legend

- Photo Location
- Proposed Wooster-West Millersburg 138 kV Transmission Line
- Survey Area Quarter Mile Buffer

N

0 250 500 1,000

Feet

South Coshocton - Wooster 138 kV Cut In Project

FIGURE 5
PHOTOGRAPH LOCATION MAP

DATE: 2/23/2022	1 INCH = 500 FEET
CREATED BY: PMH	CHECKED BY:
JOB NO. 60661172	AECOM

Date Saved: 2/23/2022 Document Path: Z:\Cincinnati-USCNC02\DCS\GIS\ArcMap_GeoDB_Projects\ENV\Wooster-W.Millersburg\Maps\Winter_Bat_Habitat\Wooster_WMill_Bat_Survey_Fig5.mxd

ATTACHMENT A:

ODNR ENVIRONMENTAL REVIEW - 21-1071; AEP – SALT CREEK-HOLMESVILLE 138KV LINE PROJECT

DATED DECEMBER 20, 2021

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

December 20, 2021

Brian Cooper
AECOM
715 Washington Boulevard
Williamsport, PA 17701

Re: 21-1071; AEP - Salt Creek-Holmesville 138-kV Line Project

Project: The proposed project involves the installation of a 138-kV transmission line.

Location: The proposed project is located in Prairie Township, Holmes 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:

American sweet-flag (*Acorus americanus*), P
Great St. John's-wort (*Hypericum ascyron* ssp. *pyramidatum*), T
Northern adder's-tongue (*Ophioglossum pusillum*), T
Prairie fringed orchid (*Platanthera leucophaea*), T, FT
Buttonbush shrub swamp plant community
Mixed emergent marsh plant community
Lake chubsucker (*Erimyzon sucetta*), T
Sandhill crane (*Antigone canadensis*), T
Barn owl (*Tyto alba*), T
Killbuck Marsh Wildlife Area – ODNR Division of Wildlife

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 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 species of bats 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. If trees are present within the project area, and trees must be cut, the DOW 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 $\geq$ 20 if possible. If trees are present within the project area, and trees must be cut during the summer months, the DOW recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to any cutting. Mist net and acoustic surveys should be conducted in accordance with the most recent version of the "*OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING*". If state listed bats are documented, DOW recommends cutting only occur from October 1 through March 31. However, limited summer tree cutting may be acceptable after consultation with the DOW (contact Erin Hazelton at Erin.hazelton@dnr.ohio.gov).

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 snuffbox (*Epioblasma triquetra*), a state endangered and federally endangered mussel. Due to the location, and that there is no in-water work proposed in a perennial stream, 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, and the lake chubsucker (*Erimyzon sucetta*) a state threatened 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 these or other aquatic species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. This long-lived, entirely aquatic salamander inhabits perennial streams with large flat rocks. In-water work in hellbender streams can reduce availability of large cover rocks and can destroy hellbender nests and/or kill adults and juveniles. The contribution of additional sediment to hellbender streams can smother large cover rocks and gravel/cobble substrate (used by juveniles), making them unsuitable for refuge and nesting. Projects that contribute to altered flow regimes (e.g., by increasing areas of impervious surfaces or modifying the floodplain) can also adversely affect hellbender habitat. Due to the location, and that there is no in-water work proposed in a perennial stream, this project is not likely to impact this species.

The project is within the range of the American bittern (*Botaurus lentiginosus*), a state endangered bird. Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation. They occasionally occupy bogs, large wet meadows, and dense shrubby swamps. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 through July 31. If this type of habitat will not be impacted, this project is not likely to impact this species.

The project is within the range of the black tern (*Chlidonias niger*), a state endangered bird. The black tern prefers large, undisturbed inland marshes with fairly dense vegetation and pockets of open water. They nest in various kinds of marsh vegetation, but cattail marshes are generally favored. Nests are built on top of muskrat houses or on top of floating vegetation. If this type of habitat will be impacted, construction should be avoided in this habitat from April 1 through June 30 to reduce impacts to this species. If no wetland habitat will be impacted, the 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.

The project is within the range of the sandhill crane (*Grus canadensis*), a state threatened species. Sandhill cranes are primarily a wetland-dependent species. On their wintering grounds, they will utilize agricultural fields; however, they roost in shallow, standing water or moist bottomlands. On breeding grounds they require a rather large tract of wet meadow, shallow marsh, or bog for nesting. If grassland, prairie, or wetland habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 1 through August 31. If this habitat will not be impacted, this project is not likely to have an impact on this species.

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

The project is within the range of the upland sandpiper (*Bartramia longicauda*), a state endangered bird. Nesting upland sandpipers utilize dry grasslands including native grasslands, seeded grasslands, grazed and ungrazed pasture, hayfields, and grasslands established through the Conservation Reserve Program (CRP). 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 type of 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)

ATTACHMENT B:

USFWS INFORMATION FOR PLANNING AND CONSULTATION (2022-0017246); AEP WOOSTER-WEST MILLERSBURG 138KV TRANSMISSION LINE REPLACEMENT PROJECT

DATED MARCH 8, 2022

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
Phone: (614) 416-8993 Fax: (614) 416-8994

In Reply Refer To: March 08, 2022
Project Code: 2022-0017246
Project Name: AEP South Coshocton - Wooster 138-kV Cut In

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
(614) 416-8993

Project Summary

Project Code: 2022-0017246
Event Code: None
Project Name: AEP South Coshocton - Wooster 138-kV Cut In
Project Type: Transmission Line - New Constr - Above Ground
Project Description: AEP Ohio Transmission Company, Inc. (AEP), is formally requesting that the United States Fish and Wildlife Service (USFWS) complete a review for the proposed South Coshocton - Wooster 138-kV T-Line Cut In Project (Project) in Holmes County, Ohio.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.642069750000005,-81.93305465,14z

Counties: Holmes County, Ohio

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Eastern Prairie Fringed Orchid *Platanthera leucophaea*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/601

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: AECOM
Name: Brian Cooper
Address: 715 Washington Boulevard
City: Williamsport
State: PA
Zip: 17701
Email brian.cooper@aecom.com
Phone: 7173040578

ATTACHMENT C:

REPRESENTATIVE PHOTOGRAPHS OF HABITAT WITHIN PROJECT SURVEY AREA

PHOTOGRAPHIC RECORD
HABITAT

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project	60661200

Photo 1	
Date: February 03, 2022	
Description: Agricultural habitat within the proposed ROW. Facing East	

Photo 2	
Date: February 03, 2022	
Description: Landscaped area within the proposed ROW. Facing South	

PHOTOGRAPHIC RECORD
HABITAT

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project	60661200

Photo 3	
Date: February 03, 2022	
Description: Old field habitat within proposed ROW. Facing West	

Photo 4	
Date: February 03, 2022	
Description: Stream/wetland habitat within the proposed ROW. Facing South	

AECOM

PHOTOGRAPHIC RECORD
HABITAT

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project	60661200

Photo 5	
Date: February 03, 2022	
Description: Successional hardwood woodlands habitat within the proposed ROW. Facing North	

Photo 6	
Date: February 03, 2022	
Description: Urban area within the proposed ROW. Facing West	

WOOSTER-WEST MILLERSBURG 138 KV SWITCH AND TRANSMISSION LINE PROJECT ADDENDUM – ACCESS TO STR 186

HOLMES COUNTY, OHIO

ADDENDUM ECOLOGICAL REPORT

Prepared for:

American Electric Power Ohio Transmission Company
8600 Smiths Mill Road
New Albany, Ohio 43054

Prepared by:

AECOM

525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

Project #: 60661172, 60661200 & 60661802

November 2022

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APPENDICES

1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) is proposing to construct a new delivery point on the Wooster-West Millersburg 138-kV circuit in Holmes County, OH. The proposed project includes 3 construction components; a new 3-way switch (Salt Creek Switch) toward Wooster and West Millersburg, an approximately 0.2-mile cut into the South Coshocton-Wooster 138-kV asset for the new switch install (South Coshocton – Wooster 138 kV T-line Cut In), and approximately 0.75-mile greenfield 138-kV transmission line build leading to the new delivery point (Salt Creek – Holmesville 138 kV Line). The proposed Project location is illustrated on Figure 1.

The initial wetland delineation and stream assessment report was completed in April 2022, titled as: *Wooster-West Millersburg 138 kV Switch and Transmission Line Project – Eclogical Report – April 2022, Revised November 2022* (AECOM, 2022), and is herein referred to as the "Original Report".

In October 2022, AEP Ohio Transco retained AECOM Technical Services, Inc. (AECOM) to conduct a survey of an additional approximately 14.1-acres associated with establishing access to the existing structure 186, in Holmes County, Ohio (herein referred to as the "Addendum Project survey area"). The Addendum Project survey area includes approximately 700-feet of additional ROW along the South Coshocton-Wooster 138 kV line, as well as additional sections of existing transmission line ROW, as a result of final work pad selection (Figure 2). The results of the field efforts are included within this report.

The identified features that were originally provided in the Original Report are not referenced within. None of the originally identified features fall within the current Addendum Project survey area. Previously identified features, data forms, photographs, and supporting information of the previous field efforts of the Project are contained within the Original Report.

This addendum wetland delineation and stream assessment report includes the results (data forms, photographs, and updated figures) associated with wetlands and/or streams identified only within the Addendum Project survey area (Figure 1).

2.0 METHODOLOGY

A comprehensive methodology of the field surveys and data reviews completed for this report are included in the Original Report. A brief summary of the delineation and agency coordination methodology has been provided below.

Delineations were conducted in accordance with the procedures outlined in the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual (1987 Manual) (Environmental Laboratory, 1987), and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and

Northeast Region (Version 2.0) (NCNE Regional Supplement) (USACE, 2012). In addition, delineated wetlands were classified using the Ohio Environmental Protection Agency (OEPA) Ohio Rapid Assessment Method for Wetlands v. 5.0 (ORAM; Mack, 2001). Stream assessments were conducted using the methods described in the OEPA's Methods for Assessing Habitat in Flowing Waters: Using OEPA's Qualitative Habitat Evaluation Index (Rankin, 2006) and OEPA's Field Methods for Evaluating Primary Headwater Streams in Ohio (OEPA, 2020).

AECOM submitted a request to Ohio Department of Natural Resources (ODNR) Office of Real Estate – Environmental Review Section, as well as the United States Fish and Wildlife Service (USFWS) in April 2022 soliciting comments on the proposed Project. Agency-identified species of concern and available species-specific information was reviewed to identify the various habitat types that listed species are known to inhabit.

3.0 RESULTS

AECOM ecologists accessed the Addendum Project survey area on October 26, 2022 to conduct a wetland delineation, stream assessment and habitat survey. During the field survey, one (1) wetland was identified within the Addendum Project survey area. The delineated features are discussed in detail in the following sections.

3.1 WETLAND DELINEATION

3.1.1 PRELIMINARY SOILS EVALUATION

Soils in delineated wetlands were observed and documented as part of the delineation methodology. According to the USDA/NRCS Web Soil Survey (USDA NRCS SSURGO, 2022), six (6) soil map units are mapped within the Addendum Project survey area (Figure 2). Of these soil map units, two (2) are characterized as hydric. Table 1 below provides a detailed overview of all soil series and soil map units within the Addendum Project survey corridor. Soil map units located are shown on Figure 2.

TABLE 1: SOIL MAP UNITS AND DESCRIPTION WITHIN THE ADDENDUM PROJECT SURVEY AREA

Soil Series	Symbol	Map Unit Description	Topographic Setting	Hydric	Hydric Component (%)
Bogart	BtA	Bogart silt loam, 0 to 2 percent slopes	Terraces	No	0
Chili	CnB	Chili loam, 2 to 6 percent slopes	Terraces	No	0
	CnC2	Chili loam, 6 to 12 percent slopes, eroded	Terraces	No	0
	CnE	Chili loam, 18 to 25 percent slopes	Terraces	No	0

Soil Series	Symbol	Map Unit Description	Topographic Setting	Hydric	Hydric Component (%)
Melvin	Md	Melvin silt loam, 0 to 3 percent slopes, frequently flooded	Flood plains	Yes	85
	Mg	Melvin silt loam, frequently ponded, 0 to 3 percent slopes	Flood plains	Yes	90

USDA, NRCS. Soil Survey Geographic (SSURGO) Database. Available online at: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed October 31, 2022.

3.1.2 NATIONAL WETLAND INVENTORY MAP REVIEW

National Wetland Inventory wetlands are areas of potential wetland that have been identified from USFWS aerial photograph interpretation which have typically not been field verified. Forested and heavy scrub/shrub wetlands are often not shown on NWI maps as foliage effectively hides the visual signature that indicates the presence of standing water and moist soils from an aerial view. In addition, small wetlands are typically not identified due to the scale of aerial photography. The USFWS website states that the NWI maps are not intended or designed for jurisdictional wetland identification or location. As a result, NWI maps do not show all the wetlands found in a particular area nor do they necessarily provide accurate wetland boundaries. NWI maps are useful for providing indications of potential wetland areas, which are often supported by soil mapping and hydrologic predictions, based upon topographical analysis using USGS topographic maps.

According to the National Wetland Inventory (NWI) data, the Addendum Project survey area contains one (1) mapped NWI wetland (USFWS, 2022). This NWI wetlands are described below in Table 2 and the locations of the mapped NWI wetland present within the Addendum Project survey area and surrounding area are illustrated on Figure 2.

TABLE 2: NWI DISPOSITION SUMMARY TABLE WITHIN THE ADDENDUM 2 PROJECT SURVEY AREA

NWI Code	Number of NWI Feature present	NWI Description	Figure Reference	Related Field Inventoried Resource (Wetland ID)	Comments
PFO1/SS1C	1	Palustrine, Forested/ Scrub-Shrub, Seasonally Flooded	2A	Wetland 03 (PEM)	Wetland extends outside Addendum Project survey area

3.1.3 DELINEATED WETLANDS

During the October 2022 field surveys, AECOM identified one (1) wetland complex within the Addendum Project survey area. The wetland complex (Wetland 03) was not provisionally determined to be isolated. Table 3 below summarizes the identified wetland. Wetland data forms (USACE and OEPA) and photographs are provided in Appendix A and B. The location of the wetland is displayed on Figure 3. Additional information on previously identified wetlands, including data forms and photographs, is provided within the Original Report.

TABLE 3 – SUMMARY OF DELINEATED WETLAND WITHIN THE ADDENDUM SURVEY AREA

Wetland ID	Location		Isolated?	Habitat Type	Delineated Area (acre)	ORAM		Nearest Structure # (Existing / Proposed)	Existing Structure # in Wetland	Proposed Structure # in Wetland	Structure Installation Method	Proposed Impacts	
	Latitude	Longitude				Score	Category					Temporary Matting Area (acre)	Permanent Impact Area (acre)
Wetland 03	40.63883	-81.93322	No	PEM	0.79	57.5	2	186	186	186	N/A	None	None
	40.63938	-81.93320	No	PSS	0.23			186/ 187	None	None	N/A	None	None
Total:					**1.02**							0.000	**0.000**

3.2 STREAM DELINEATION

No streams were delineated within the Addendum Project survey area.

3.3 OEPA STREAM ELIGIBILITY

OEPA stream eligibility for 401 Water Quality Certification mapping was reviewed for the Project. The Project occurs across two watersheds designated by 401 WQC eligibility. These watersheds include Tea Run-Killbuck Creek (HUC12: 050400030607) and Salt Creek (HUC12: 050400030606). Both watersheds are listed as "eligible". OEPA stream eligibility mapping for the Project vicinity, is provided on Figure 4.

3.4 PONDS

No ponds were delineated within the Addendum Project survey area.

3.5 FEMA 100-YEAR FLOODPLAINS

FEMA 100-year floodplains are mapped within the Addendum Project survey area. The mapped floodplain from Salt Creek is within the southeast portion of the Addendum Project survey area. Mapped floodplains are present in Figure 2.

3.6 UPLAND DRAINAGE FEATURES WITHIN THE ADDENDUM PROJECT SURVEY AREA

No upland drainage features (UDF) were identified within the Addendum Project survey area.

3.7 VEGETATIVE COMMUNITIES WITHIN THE ADDENDUM PROJECT SURVEY AREA

In conjunction with the stream and wetland field surveys in April 2022, AECOM ecologists conducted a general habitat survey. The Addendum Project survey area was identified as predominately wetland, scrub-shrub, agricultural row-crop, and hay field habitat. Vegetative community descriptions and approximate acreages within the Addendum Project survey area are provided below in Table 4 and illustrated on Figure 5. Representative photographs of the vegetative communities are provided in Appendix E.

TABLE 4: VEGETATIVE COMMUNITIES WITHIN THE ADDENDUM PROJECT SURVEY AREA

Vegetative Community	Description	Approximate Acreage Within the Addendum Project Survey Area	Approximate Percentage Within the Addendum Project Survey Area
Agricultural Row-Crop	Agricultural lands in the eastern portion of the survey area, being utilized for row-crop production and associated activities, typically devoid of vegetation outside of the target crop and opportunistic/invasive species.	0.74	22.5

Vegetative Community	Description	Approximate Acreage Within the Addendum Project Survey Area	Approximate Percentage Within the Addendum Project Survey Area
Hay Field/Pasture	Hay field was observed in northeastern portion of the Addendum Project survey area. This area is within the existing ROW and consists of seasonally mowed areas of grass and forbs. The dominant species was alfalfa (*Medicago sativa*).	0.72	22.1
Old Field	Herbaceous cover exists alongside roads, field borders, and abandoned fields within the survey in the form of successional old-field communities. These communities are the earliest stages of recolonization by plants following disturbance. This community type is typically short-lived, giving way progressively to shrub and forest communities unless periodically re-disturbed, in which case they remain as old fields. The old-field areas within the study corridors and adjacent areas are infrequently mowed areas of grasses, forbs, and occasional shrubs. Dominant species include yellow foxtail (*Setaria pumila*), orchardgrass (*Dactylis glomerata*), and alfalfa (*Medicago sativa*).	0.03	0.9
Wetland	Wetlands were observed both within and beyond the Addendum Project survey area. Dominant species included reed canary grass (*Phalaris arundinacea*), narrowleaf cattails (*Typha angustifolia*), gray alder (*Alnus incana*), crack willow (*Salix fragilis*), and black elderberry (*Sambucus nigra*).	0.94	28.5
Scrub-Shrub	Scrub-shrub habitats represent the successional stage between old-field and second growth forest, and often emerge in recently harvested forests responding to the lightness of the remaining canopy. Dominant species consist of herbaceous communities similar to that of old field habitat with a few woody species, to a community dominated by forest herbs and woody species.	0.74	22.5
Urban	Urban areas are areas developed with residential and commercial land uses, including roads, buildings and parking lots. These areas are generally devoid of significant woody and herbaceous vegetation.	0.11	3.5
	Totals:	**3.28**	**100%**

3.8 RARE, THREATENED AND ENDANGERED SPECIES AGENCY COORDINATION

Protected Species Agency Consultation –

AECOM conducted a survey for potential rare, threatened, and endangered species habitat within the Addendum Project survey area. A summary of the agency coordination responses is provided below in Table 5. Correspondence letters from the USFWS and ODNR are included as Appendix F.

TABLE 5: ODNR AND USFWS LISTED SPECIES WITHIN THE ADDENDUM PROJECT SURVEY AREA

Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Habitat Description	Potential Habitat Observed in the Addendum Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts
Mammals							
Indiana bat (*Myotis sodalis*)	Endangered	Endangered	Winter Indiana bat hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. The 8- to 10-inch diameter size classes of several species of hickory (*Carya* spp.), oak (*Quercus* spp.), ash (*Fraxinus* spp.), birch (*Betula* spp.), and elm (*Ulmus* spp.) have been found to be utilized by the Indiana bat. These tree species and many others may be used when dead if there are adequately sized patches of loosely-adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes a mixture of loose-barked trees with 60 to 80 percent canopy closure and a low-density sub-canopy (less than 30 percent between about 6 feet high and the base canopy). The suitability of roosting habitat for foraging or the proximity to suitable foraging habitat is critical to the evaluation of a particular tree stand. An open subcanopy zone, under a moderately dense canopy, is important to allow maneuvering while catching insect prey.	No- Within the Addendum Project survey area, no areas appear to be potentially suitable summer roosting and foraging habitat.	Summer Tree Clearing April 1 – September 30	ODNR-DOW commented If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If trees must be cut, the DOW recommends cutting occur between October 1 and March 31. USFWS commented that if no caves or abandoned mines are present and tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31.	No potentially suitable habitat was identified within the Addendum Project survey area.

TABLE 5: ODNR AND USFWS LISTED SPECIES WITHIN THE ADDENDUM PROJECT SURVEY AREA

Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Habitat Description	Potential Habitat Observed in the Addendum Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts
Northern long-eared bat (*Myotis septentrionalis*)	Threatened	Threatened	Winter hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. The 8- to 10-inch diameter size classes of several species of hickory (*Carya* spp.), oak (*Quercus* spp.), ash (*Fraxinus* spp.), birch (*Betula* spp.), and elm (*Ulmus* spp.) have been found to be utilized by this species. These tree species and many others may be used when dead if there are adequately sized patches of loosely-adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes a mixture of loose-barked trees with 60 to 80 percent canopy closure and a low-density sub-canopy (less than 30 percent between about 6 feet high and the base canopy). The suitability of roosting habitat for foraging or the proximity to suitable foraging habitat is critical to the evaluation of a particular tree stand. An open subcanopy zone, under a moderately dense canopy, is important to allow maneuvering while catching insect prey. Proximity to water is critical because insect prey density is greater over or near open water. This species has also been found, albeit rarely, roosting in structures like barns and sheds.	No- Within the Addendum Project survey area, no areas appear to be potentially suitable summer roosting and foraging habitat.	<u>Summer Tree Clearing</u> April 1 – September 30	USFWS commented that if no caves or abandoned mines are present and tree removal is unavoidable, it is recommended that removal of any trees ≥3 inches dbh only occur between October 1 and March 31. ODNR did not comment on this species	No potentially suitable habitat was identified within the Addendum Project survey area.

TABLE 5: ODNR AND USFWS LISTED SPECIES WITHIN THE ADDENDUM PROJECT SURVEY AREA

Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Habitat Description	Potential Habitat Observed in the Addendum Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts
Little brown bat (*Myotis lucifugus*)	Endangered	None	Little brown bats are habitat generalists, using most cover types available to them in a variety of ecosystems. Much of their foraging activity is associated with aquatic habitats, so lakes and streams play a significant factor in habitat use.	No- Within the Addendum Project survey area, no areas appear to be potentially suitable summer roosting and foraging habitat.	Summer Tree Clearing April 1 – September 30	The DOW 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.	No potentially suitable habitat was identified within the Addendum Project survey area.
Tricolored bat (*Perimyotis subflavus*)	Endangered	None	Tricolored bats are associated with forested landscapes, often in open woods. They can also be found over water and adjacent water edges. Tricolored bats commonly among the leaves or needles of live or dead trees but will also use buildings. The bats hibernate in caves, mines, and rock outcroppings.	No- Within the Addendum Project survey area, no areas appear to be potentially suitable summer roosting and foraging habitat.	Summer Tree Clearing April 1 – September 30	The DOW 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.	No potentially suitable habitat was identified within the Addendum Project survey area
Amphibian							
Eastern hellbender (*Cryptobranchus alleganiensis alleganienses*)	Endangered	Species of Concern	The eastern hellbender's habitat consists of shallow, fast-flowing rocky streams. They are generally found in areas with large, intermittent, irregularly shaped rocks, within swift water. They tend to stay away from slow-moving water and muddy banks with slab rock bottoms.	No-there were no streams or sufficient aquatic habitat identified within the Addendum Project survey area.	No in-water work in perennial streams from March 15 through June 30	The DOW recommends no in-water work in perennial streams from March 15-June 30 to reduce impacts to indigenous aquatic species and their associated habitat.	No potential impacts due to location and no in-water work proposed.
Fish							
Iowa darter (*Etheostoma exile*)	Endangered	None	This species is typically found in lakes or slow-moving streams with dense aquatic vegetation. Most commonly located in glacially formed natural lakes.	No-there were no streams or sufficient aquatic habitat identified within the Addendum Project survey area.	No in-water work in perennial streams from March 15 through June 30	The DOW recommends no in-water work in perennial streams from March 15-June 30 to reduce impacts to indigenous aquatic species and their associated habitat.	No potential impacts due to location and no in-water work proposed.

TABLE 5: ODNR AND USFWS LISTED SPECIES WITHIN THE ADDENDUM PROJECT SURVEY AREA

Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Habitat Description	Potential Habitat Observed in the Addendum Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts
Lake chubsucker (*Erimyzon sucetta*)	Threatened	None	This species is typically found in lakes or slow-moving streams with dense aquatic vegetation. Most commonly located in glacially formed natural lakes.	No-there were no streams or sufficient aquatic habitat identified within the Addendum Project survey area.	No in-water work in perennial streams from March 15 through June 30	The DOW recommends no in-water work in perennial streams from March 15-June 30 to reduce impacts to indigenous aquatic species and their associated habitat.	No potential impacts due to location and no in-water work proposed.
Bivalves							
Snuffbox (*Epioblasma triquetra*)	Endangered	Endangered	Prefers medium to large rivers with gravel riffles.	No-there were no streams or sufficient aquatic habitat identified within the Addendum Project survey area.	N/A	No potentially suitable habitat within the Addendum Project survey area and no in-stream work proposed.	No potential impacts due to location and no in-water work proposed.
Birds							
Northern harrier (*Circus hudsonis*)	Endangered	None	A common migrant and winter species. Nesters are much rarer, though they occasionally breed in large marshes and grasslands. Harriers often nest in loose colonies, building a nest out of stick on the ground, often on top of a mount. Harriers hunt over grasslands.	Yes- Wetland 03 would provide habitat and is a part of a larger wetland complex.	Nesting Period- May 15 to August 1	ODNR stated that if this type of habitat will be impacted, construction should be avoided during the species' nesting period between May 15 to August 1.	Potential impacts if the wetland is impacted during the species' nesting period.
Trumpeter swan (*Cygnus buccinator*)	Threatened	None	Trumpeter swans prefer large marshes and lakes ranging in size from 40 to 150 acres. They like shallow wetlands one to three feet deep with a diverse mix of plenty of emergent and submergent vegetation and open water.	No- Wetlands within the Addendum Project survey area are deep enough to provide habitat for this species.	Nesting Period- April 15 to June 15.	ODNR stated that if this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of April 15 to June 15. If this habitat will not be impacted, the Project is not likely to impact this species	No impacts due to lack of potentially suitable habitat (wetlands with 1-3 feet of standing water) within the Addendum Project survey area.
American bittern (Botaurus lentiginosus)	Endangered	None	Nesting bitterns prefer large undisturbed wetlands that have scattered small pools amongst dense vegetation, occasionally occupying bogs, wet meadows or densely vegetated swamps.	Yes– Wetland 03 is a part of a large, undisturbed complex that would provide suitable habitat.	Nesting Period- April 1 to June 30.	ODNR stated that if this type of habitat will be impacted, construction should be avoided in the habitat during the species' nesting period.	Potential impacts if work within the wetland occurs during the species' nesting period.

TABLE 5: ODNR AND USFWS LISTED SPECIES WITHIN THE ADDENDUM PROJECT SURVEY AREA

Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Habitat Description	Potential Habitat Observed in the Addendum Project Survey Area	Avoidance Dates	Agency Comments	Potential Impacts
Black tern (*Chlidonias niger*)	Endangered	None	The black tern prefers large, undisturbed marshes with dense vegetative structure and pockets of open water, favoring cattail marshes.	Yes– Wetland 03 is a part of a large, undisturbed complex that would provide suitable habitat.	Nesting Period- April 1 to June 30	ODNR stated that if this type of habitat will be impacted, construction should be avoided in the habitat during the species' nesting period of April 1 through June 30.	Potential impacts if work within the wetland occurs during the species' nesting period.
Sandhill crane (*Grus canadensis*)	Threatened	None	Sandhill cranes are primarily a wetland-dependent species. Wintering grounds utilize agricultural fields, while roosting in shallow or standing water. Breeding grounds require large sections of wet meadow, shallow marshes or bogs for nesting.	No- Wetlands within the Addendum Project survey area are deep enough to provide habitat for this species.	Nesting Period- April 1 to August 30.	ODNR stated that potential nesting habitat will be impacted, construction should be avoided in the habitat during the species' nesting period of April 1 through August 30.	No potentially suitable nesting habitat was observed within the Addendum Project survey area.
Upland sandpiper (*Bartramia longicauda*)	Endangered	None	During the nesting season, sandpipers will utilize dry grassland areas including seeded grasslands, grazed and ungrazed pasture, hayfields and CRP grasslands.	No – small areas of pastureland are present but no contiguous grasslands greater than 5 acres. Most habitat within the survey area is agricultural row crop and road shoulder.	Nesting Period- April 15 to July 31.	ODNR stated that if potential nesting habitat will be impacted, construction should be avoided in the habitat during the species' nesting period of April 15 through July 31.	No potentially suitable nesting habitat was observed within the Addendum Project survey area.

ODNR Coordination – Coordination with the ODNR was initiated during the planning stages of the Project to obtain records of protected species located in the vicinity of the Project. Each of the three Project components was reviewed separately, and responses from the ODNR Office of Real Estate Environmental Review were received on December 20, 2021, December 28, 2021, and April 1, 2022. The ODNR Office of Real Estate Environmental Review Section replied to a request for records of protected species within one mile of the original Project site. The Ohio Natural Heritage Database (ONHD) review found records of eight (8) state-protected species and three (3) state protected resource areas at or within a one-mile radius of the Project survey area. The state listed species are as follows: American sweet-flag, great St. John's-wort, northern adder's-tongue, prairie fringed orchid, sandhill crane, lake chubsucker, cerulean warbler, and barn owl. The two state protected resource areas are a buttonbush shrub swamp plant community, mixed emergent marsh plant community, and Killbuck Marsh Wildlife Area.

The ODNR recommended 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. In addition, the DOW listed multiple state-listed species with known ranges crossed by the Project survey area, including:

- Four mammal species: Indiana bat, northern long-eared bat, little brown bat and tricolored bat;
- One mussel species: snuffbox;
- Two fish species: Iowa darter: lake chubsucker;
- One salamander species: Eastern hellbender;
- Six bird species: American bittern, black tern, northern harrier, sandhill crane, trumpeter swan and upland sandpiper.

Potentially suitable habitat for the four bats was not identified in the Addendum Project survey area due to the lack of forests within these Addendum areas. The DOW recommended that if suitable habitat occurs within the Project area, trees be conserved or cut between October 1 and March 31. If trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. No tree clearing is anticipated for the project; therefore, no impact to these bat species is anticipated.

The DOW also recommended that a desktop habitat assessment be conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the Project area. This desktop habitat assessment was performed and is contained in Appendix D. The habitat assessment did not result in locating potential hibernaculum(a) within 0.25 mile of the Project survey corridor.

The DOW noted that the Project is within the range of the northern harrier, a state endangered bird. ODNR-DOW has previously indicated that the potential habitat ground cover types that are smaller than two acres in

size do not constitute adequate nesting habitat for the northern harrier. The Addendum Project survey area does contain suitable northern harrier nesting habitat, as Wetland 03 is a part of a large wetland complex.

The DOW noted that the Project is within the range of the trumpeter swan, a state threatened bird. ODNR-DOW state that the species prefer large marshes and lakes ranging in size from 40 to 150 acres. While Wetland 03 is estimated to be 445 acres in total, the 1.02-acre portion within the Addendum Project survey area does not contain portions with deep enough water to support the trumpeter swan.

The DOW noted that the Project is within the range of the American bittern and the black tern, both state endangered birds. ODNR-DOW state that these species prefer large undisturbed wetland and marsh areas for nesting. Wetland 03 is considered suitable habitat for these species, as it contains undisturbed wetland and connectivity to a larger wetland complex.

The DOW noted that the Project is within the range of the sandhill crane, a state threatened species. ODNR-DOW stated that the sandhill crane roosts within shallow, standing water or moist bottomlands. Wetland 03 does not contain portions deep enough water to support the species within the Addendum Project survey area.

The DOW noted that the Project is within the range of the upland sandpiper, a state endangered species. ODNR-DOW stated that the upland sandpiper nests within dry grassland and hayfields. Although the Addendum Project crosses one small pasture and there are some hayfields nearby, the Addendum Project is primarily located within active agricultural production along the shoulder of a highway, and scrub-shrub areas. Furthermore, none of the hayfield or pasture areas within the Addendum Project survey area form contiguous grassland habitats greater than five acres. Therefore, no suitable habitat was identified within the Addendum Project survey area.

Several aquatic species were identified to have overlapping ranges with the Addendum Project survey area including the snuffbox, Iowa darter, lake chubsucker, and Eastern hellbender. Due to the location of the project and the absence of in-water work, no potentially suitable habitat was identified or at risk for disturbance.

USFWS Coordination – Coordination with the USFWS was also initiated during the planning stages of the Project to obtain technical assistance regarding federally listed species that may occur within the vicinity of each Project facility. In their responses, the USFWS noted that the Project lies within the range of the federally endangered Indiana bat and the federally threatened northern long-eared bat. Potentially suitable habitat for these species was not identified in the Addendum Project survey area. USFWS recommends that trees ≥3 inches dbh, be saved wherever possible. If no caves or abandoned mines are present and trees ≥3 inches cannot be avoided, USFWS recommends that tree removal occur between October 1 and March 31 to avoid adverse effects to Indiana bats and northern long-eared bats during the brood-rearing months. No tree clearing is anticipated for the project; therefore, no impact to these bat species is anticipated.

4.0 SUMMARY

This addendum includes wetland delineation and habitat assessments, of the proposed selected final alignment (Addendum Project survey area) in Holmes, County Ohio. Identified wetlands within the original wetland delineation and stream assessment report, *Wooster-West Millersburg 138 kV Switch and Transmission Line Project – Wetland Delineation and Stream Assessment Report – April 2022* (AECOM, 2022a) are included not included within this report. Data forms, photographs, and supporting information of the previously identified features are provided within the Original Report.

The ecological survey of the Addendum Project survey area identified one (1) wetland complex. The wetland within the Addendum Project survey area includes one (1) PEM portion and one (1) PSS portion. The wetland (Wetland 03) was identified as Category 2 wetland and has been provisionally classified as jurisdictional WOTUS.

No streams were identified within the Addendum Project survey area.

The reported results of the ecological survey conducted by AECOM on this Project are limited to the areas within the Addendum Project survey area provided in Figure 3. Areas that fall outside of the Addendum Project survey area were not evaluated in the field and are not included in the reporting of this survey.

Fourteen state and/or federal listed threatened or endangered species were reported by the ODNR or the USFWS as possibly occurring within the Project vicinity. These species included four mammals: Indiana bat, northern long-eared bat, little brown bat and tricolored bat; one mussel: snuffbox; two fish: Iowa darter and lake chubsucker; one salamander: Eastern hellbender; and six birds: American bittern, black tern, northern harrier, sandhill crane, trumpeter swan and upland sandpiper.

Based on general observations during the ecology survey and initial coordination with USFWS and ODNR, no potential impacts to the Indiana bat, northern long-eared bat, little brown bat, tricolored bat, snuffbox; Iowa darter, lake chubsucker, Eastern hellbender, sandhill crane, trumpeter swan or the upland sandpiper. No impact to Wetland 3 is anticipated. Therefore, potential impacts to the American bittern, black tern, and northern harrier are not anticipated. No tree clearing is anticipated for the project. Therefore, no impact to bat species is anticipated.

The results of the ecological survey conducted by AECOM on October 26th, 2022 and provided in this Project addendum are limited to the areas within the Addendum Project survey area provided in Figure 3: Wetland Delineation and Stream Assessment Map. Areas that fall outside of the Addendum Project survey area were not evaluated in the field and are not included in the reporting of this survey.

The information contained in this report is for a study area that may be much larger than the actual Project limits-of-disturbance; therefore, lengths and acreages listed in this report may not constitute the actual

impacts of the Project defined in subsequent permit applications. If necessary, a separate report that identifies the actual Project impacts will be provided with agency submittals.

The field survey results presented herein apply to the existing and reasonably foreseeable site conditions at the time of our assessment. They cannot apply to site changes of which AECOM is unaware and has not had the opportunity to review. Changes in the condition of a property may occur with time due to natural processes or human impacts at the project site or on adjacent properties. Changes in applicable standards may also occur as a result of legislation or the expansion of knowledge over time. Accordingly, the findings of this report may be invalidated, wholly or in part, by changes beyond the control of AECOM.

5.0 REFERENCES

AECOM. 2022. *Wooster-West Millersburg 138 kV Switch and Transmission Line Project – Wetland Delineation and Stream Assessment Report.* Cincinnati, Ohio. April 2022.

Environmental Laboratory. 1987. *U.S. Corps of Engineers Wetlands Delineation Manual.* Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station: Vicksburg, Mississippi.

Mack, John J. 2001. *Ohio Rapid Assessment Method for Wetlands v. 5.0, User's Manual and Scoring Forms. OEPA Technical Report WET/2001-1*. Ohio Environmental Protection Agency, Division of Surface Water, 401/Wetland Ecology Unit, Columbus, Ohio.

Ohio EPA. 2017a. Section 401 Water Quality Certification for the 2017 Nationwide Permits. Appendix D Stream Eligibility Determination Process. Effective March 17, 2017. Ohio Environmental Protection Agency, Division of Surface Water, 401 Water Quality Certification and Isolated Wetland Permitting Section, Columbus, Ohio.

Ohio EPA. 2017b. 401 Water Quality Certification for the Nationwide Permits Stream Eligibility Web Map (2017 Reissuance). https://data-oepa.opendata.arcgis.com/datasets/401-water-quality-certification-for-nationwide-permits. Accessed 10/2022.

OEPA, 2020. Field Methods for Evaluating Primary Headwater Streams in Ohio. Version 4.1. Ohio EPA Division of Surface Water, Columbus, Ohio. May 2020. 130 pp.

Rankin, Edward T. 2006. *Methods for Assessing Habitat in Flowing Waters: Using the Qualitative Habitat Evaluation Index (QHEI)*. OEPA Ecological Assessment Section, Division of Surface Water, Columbus, Ohio.

U.S. Army Corps of Engineers (USACE). 2005. Regulatory Guidance Letter No. 05-05: Guidance on Ordinary High Water Mark Identification.

U.S. Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Northcentral and Northeast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, J. F. Berkowitz, and C. V. Noble. ERDC/EL TR-12-9. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2019. Soil Survey Geographic (SSURGO) Database for Holmes County, Ohio. 2019. Available online at: Web Soil Survey. http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

U.S. Fish and Wildlife Service. 2022. National Wetlands Inventory Geodatabase for Ohio. Available online at http://www.fws.gov/wetlands/Data/Mapper.html. Accessed 10/25/22.

U.S. Geological Survey. 2016. National Hydrography Dataset, Ohio Statewide Geodatabase. Published August 2016. Earth Science Information Center, USGS, Reston, VA.

FIGURES

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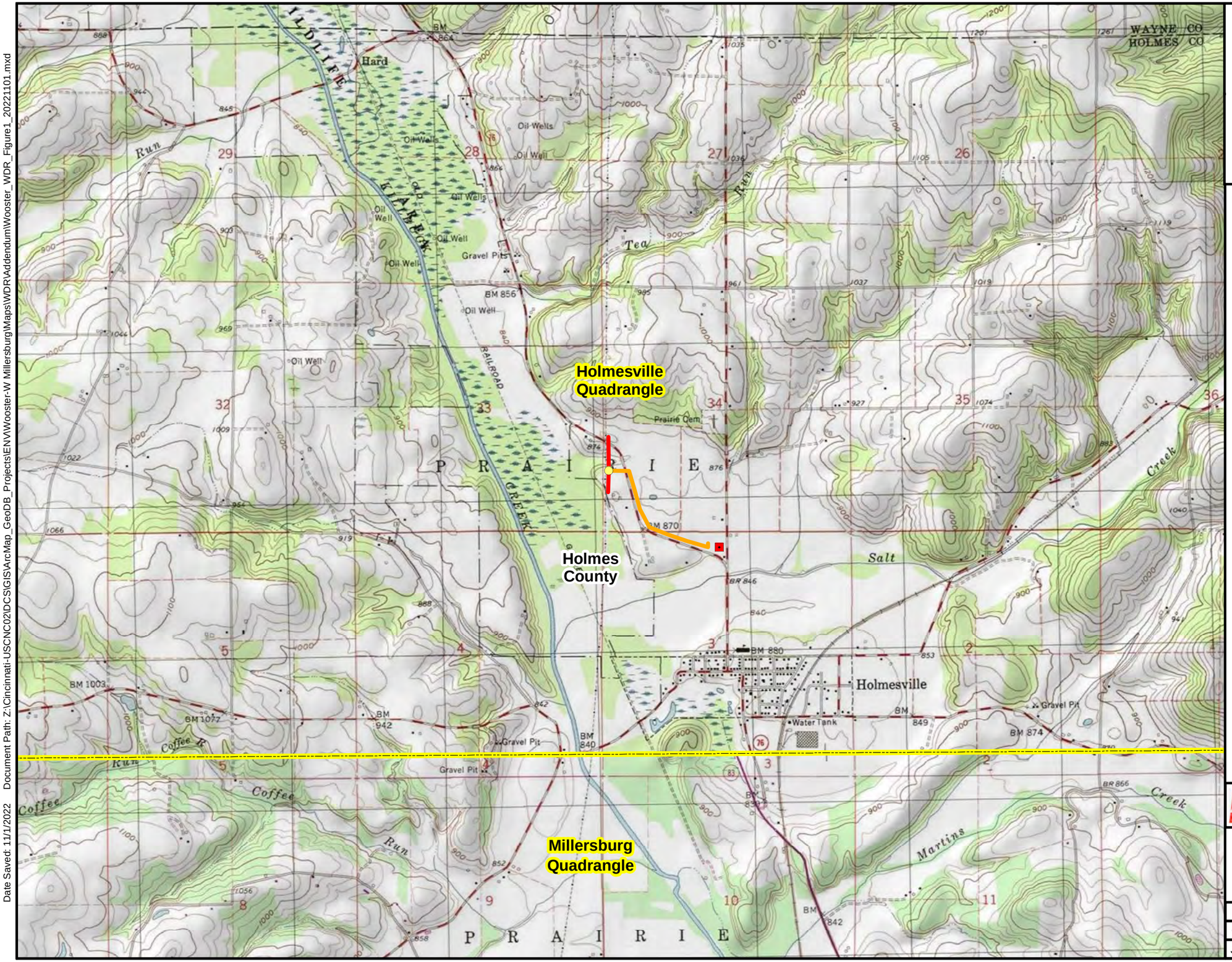

Legend

- Holmesville Delivery Point
- Salt Creek Switch
- South Coshocton-Wooster 138 kV T-line Cut
- Salt Creek-Holmesville 138 kV
- Ohio USGS 7.5' Topographic
- County
- USA Topo Maps

N

0 1,000 2,000 4,000

Feet

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 1
PROJECT OVERVIEW

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JOB NO. 60661200	AECOM

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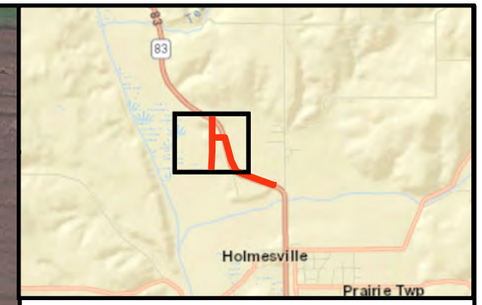
CnD2
CnC2
OH-83
Wetland 02
PEM
Category 2
CnE
Holmes
County
050400030607
Tea Run-Killbuck
Creek
Mg
PFO1/SS1C
PEM1F
PFO1/SS1C
Wetland 03
PSS
Category 2
Wetland 03
PEM
Category 2
CnB
CnC2
050400030606
Salt Creek
CnC2



Legend

- Proposed Salt Creek Switch
- Culvert
- Addendum Wetland Data Point
- Wetland Data Point
- Addendum Upland Data Point
- Upland Data Point
- South Coshocton-Wooster 138 kV T-line Cut In
- Salt Creek-Holmesville 138 kV Line
- Addendum Delineated PEM Wetland
- Addendum Delineated PSS Wetland
- Delineated PEM Wetland
- AECOM Addendum Study
- AECOM Original Study Area
- NWI Wetland (USFWS)
- 100-Year Floodplain (FEMA)
- HUC 12 (USGS)
- County Boundary
- SSURGO Soil Map Unit (NRCS)
- Hydric SSURGO Soil Map Unit (NRCS)

Soil Map Unit Description

CnB, Chili loam, 2 to 6 percent slopes
CnC2, Chili loam, 6 to 12 percent slopes, eroded
CnD2, Chili loam, 12 to 18 percent slopes, eroded
CnE, Chili loam, 18 to 25 percent slopes
Mg, Melvin silt loam, ponded

N

0 100 200 400
Feet

AEP

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 2A
SOIL MAP UNIT AND
NATIONAL WETLAND INVENTORY MAP

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JOB NO. 60661200	AECOM

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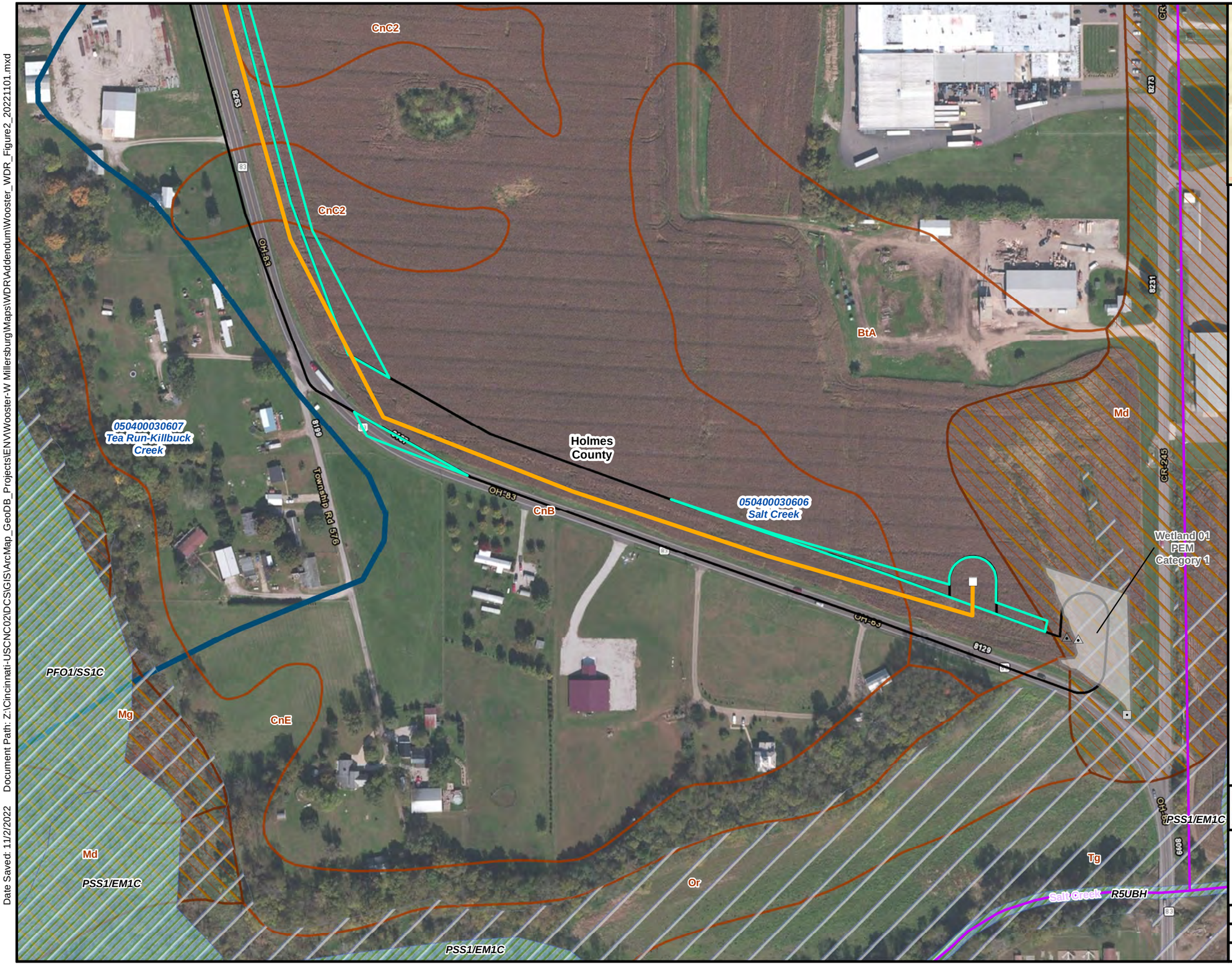

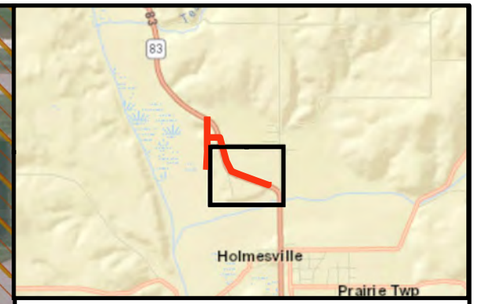

Legend

- Holmesville Station (owned by Holmes Wayne Co-op)
- Culvert
- Wetland Data Point
- Upland Data Point
- Salt Creek-Holmesville 138 kV Line
- NHD Stream (USGS)
- Delineated PEM Wetland
- AECOM Addendum Study
- AECOM Original Study Area
- NWI Wetland (USFWS)
- 100-Year Floodplain (FEMA)
- HUC 12 (USGS)
- County Boundary
- SSURGO Soil Map Unit (NRCS)
- Hydric SSURGO Soil Map Unit (NRCS)

Soil Map Unit Description

- BtA, Bogart silt loam, 0 to 2 percent slopes
- CnB, Chili loam, 2 to 6 percent slopes
- CnC2, Chili loam, 6 to 12 percent slopes, eroded
- CnE, Chili loam, 18 to 25 percent slopes
- Md, Melvin silt loam, frequently flooded
- Mg, Melvin silt loam, ponded
- Or, Orrville silt loam, occasionally flooded
- Tg, Tioga loam, occasionally flooded

N

0 100 200 400

Feet

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 2B
SOIL MAP UNIT AND
NATIONAL WETLAND INVENTORY MAP

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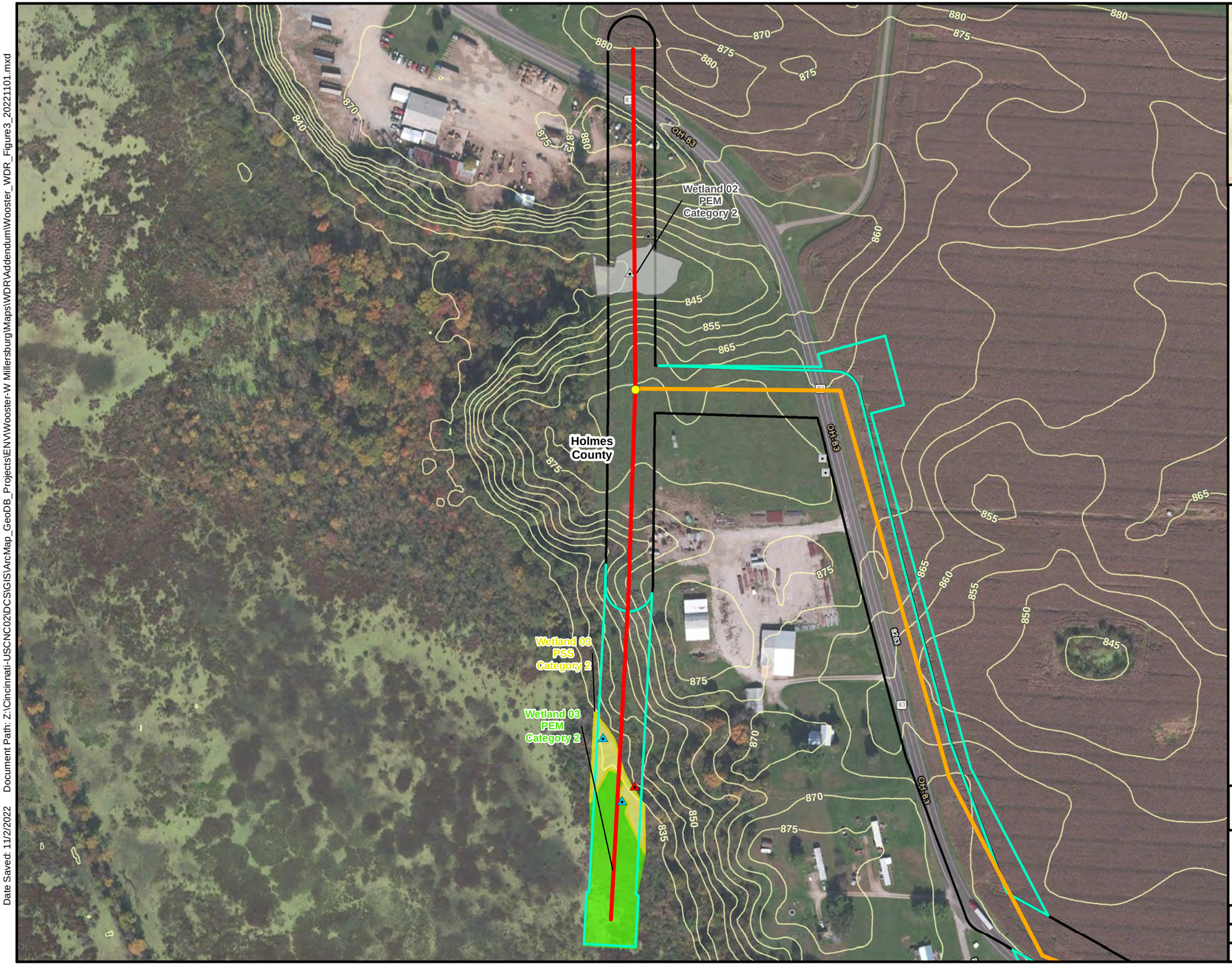

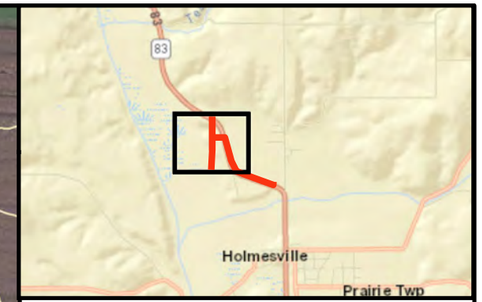

Legend

- Proposed Salt Creek Switch
- Culvert
- Addendum Wetland Data Point
- Wetland Data Point
- Addendum Upland Data Point
- Upland Data Point
- Contour (5-Ft)
- South Coshocton-Wooster 138 kV T-line Cut In
- Salt Creek-Holmesville 138 kV Line
- Addendum Delineated PEM Wetland
- Addendum Delineated PSS Wetland
- Delineated PEM Wetland
- AECOM Addendum Study
- AECOM Original Study Area
- County Boundary

N

0 100 200 400

Feet

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 3A
WETLAND DELINEATION AND
STREAM ASSESSMENT MAP

DATE: 11/2/2022	1 INCH = 200 FEET
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JOB NO. 60661200	AECOM

Holmesville

Prairie Twp

Legend

- Holmesville Station (owned by Holmes Wayne Co-op)
- Culvert
- Wetland Data Point
- Upland Data Point
- Contour (5-Ft)
- Salt Creek-Holmesville 138 kV Line
- NHD Stream (USGS)
- Delineated PEM Wetland
- AECOM Addendum Study
- AECOM Original Study Area
- County Boundary

Holmes County

Wetland 01
PEM
Category 1

Salt Creek

OH-83

Township Rd 576

GR-245

N

0 100 200 400

Feet

AEP

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 3B
WETLAND DELINEATION AND STREAM ASSESSMENT MAP

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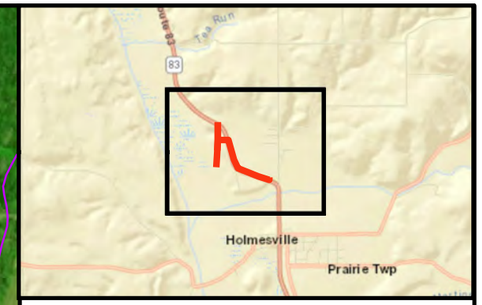
Ohio EPA 401 Eligible

Holmes County

Ohio EPA 401 Eligible

Killbuck Creek

Salt Creek



Legend

- Holmesville Station (owned by Holmes Wayne Co-op)
- Proposed Salt Creek Switch
- South Coshocton-Wooster 138 kV T-line Cut In
- Salt Creek-Holmesville 138 kV Line
- NHD Stream (USGS)
- AECOM Addendum Study
- Project Survey Corridor
- County Boundary

OEPA Stream Eligibility:

- Eligible

N

0 250 500 1,000

Feet

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 4
STREAM ELIGIBILITY MAP

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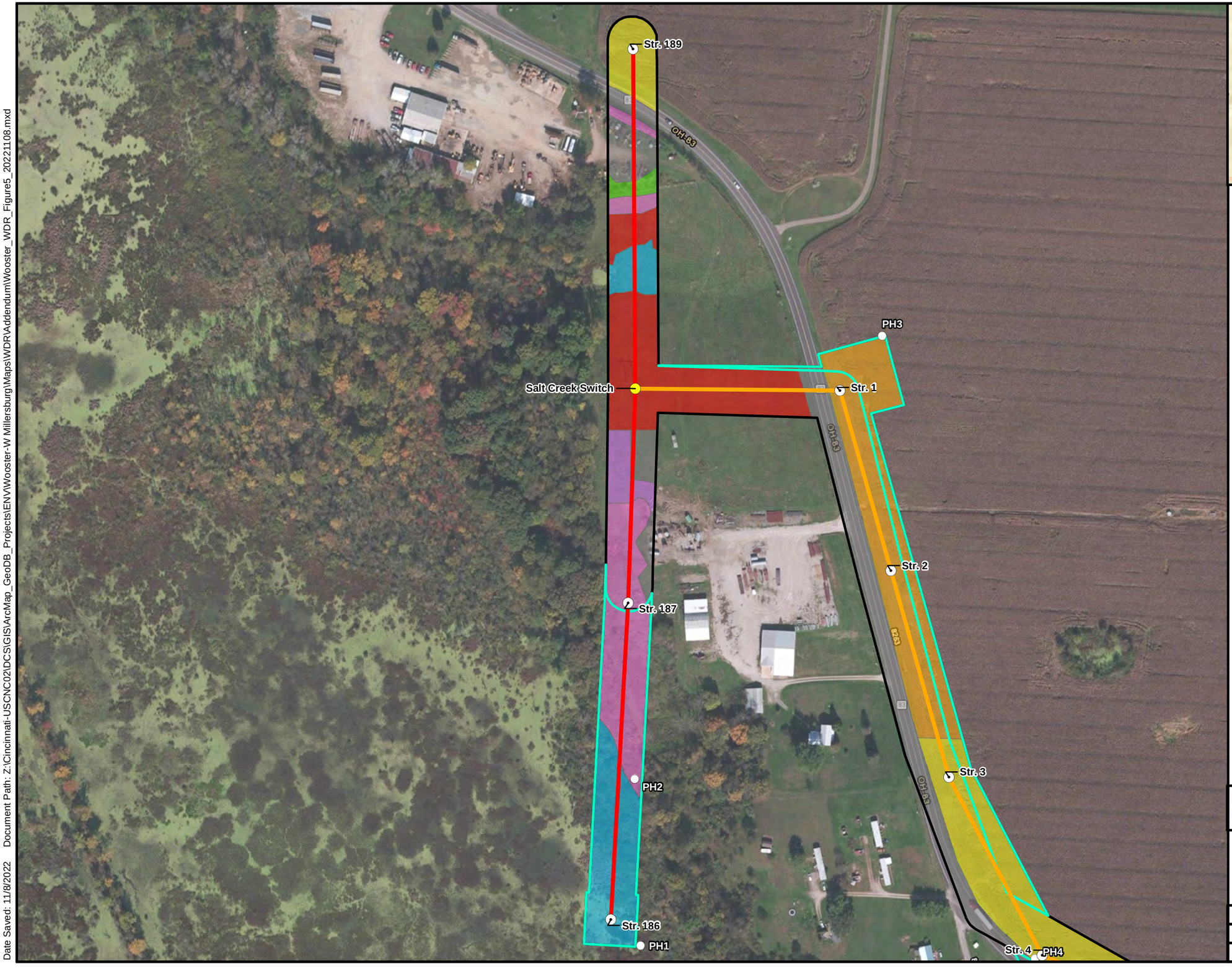
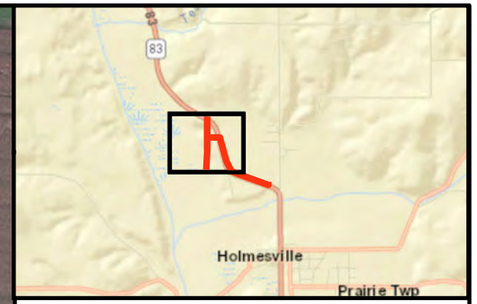




Legend

- Proposed Structure Location
- Proposed Switch
- Photograph Location
- South Coshocton-Wooster 138 kV T-line Cut In
- Salt Creek-Holmesville 138 kV Line
- AECOM Addendum Study
- Project Survey Corridor

Vegetation Community Type

- Agricultural Row-Crop
- Landscaped Areas
- Old Field
- Pasture/Hay Fields
- Scrub-Shrub
- Stream/Wetland
- Urban
- Woodlands

N

0 100 200 400

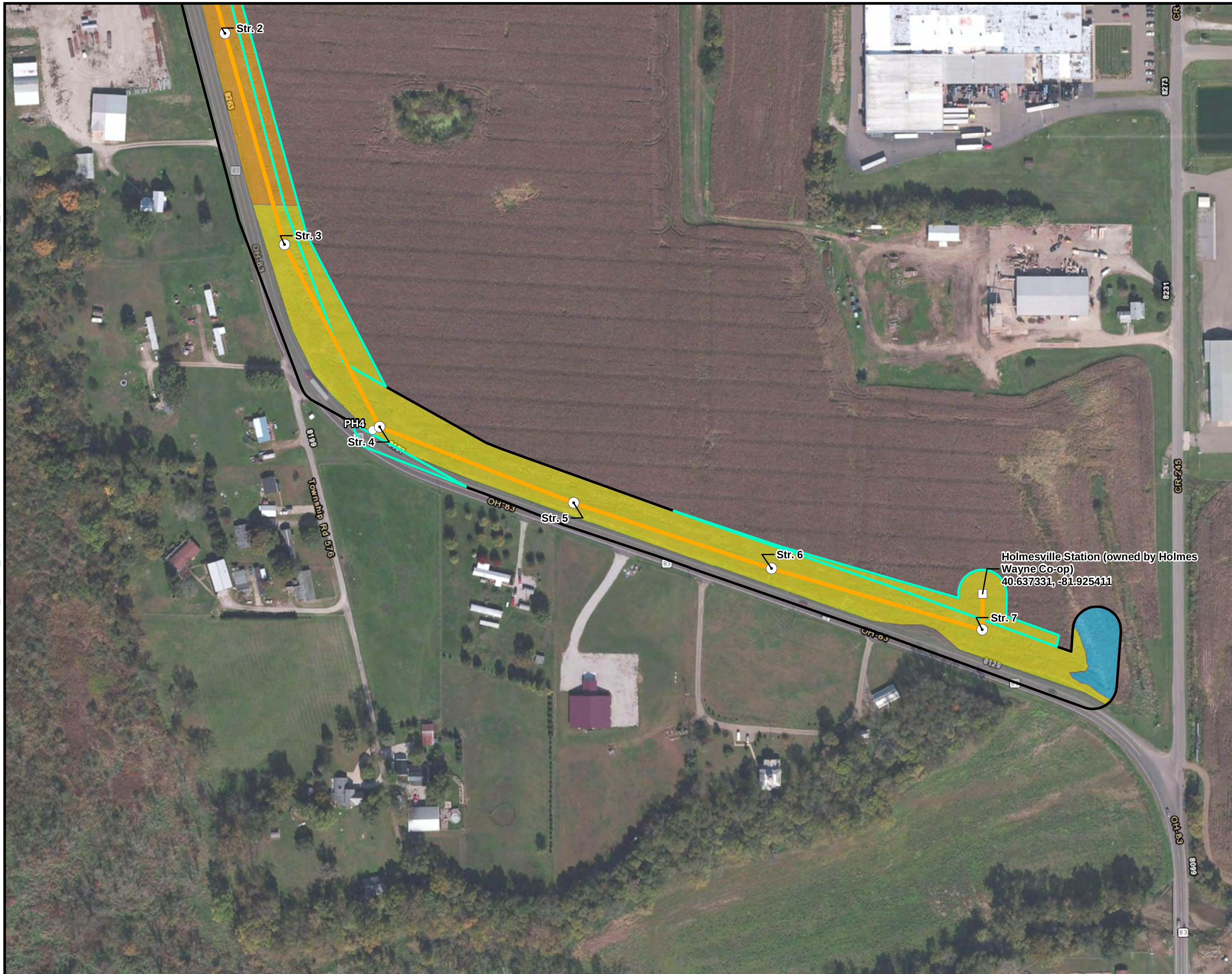
Feet

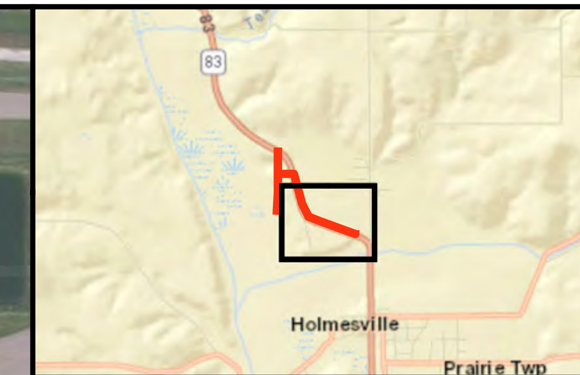
Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 5A
VEGETATIVE COMMUNITIES ASSESSMENT MAP

DATE: 11/8/2022	1 INCH = 200 FEET
CREATED BY: PMH	CHECKED BY: BC
JOB NO. 60661200	AECOM

Date Saved: 11/8/2022   Document Path: Z:\Cincinnati-USCNC02\DCS\GIS\ArcMap_GeoDB_Projects\ENV\Wooster-W Millersburg\Maps\WDR\Addendum\Wooster_WDR_Figure5_20221108.mxd





Legend

- Station
- Proposed Structure Location
- Photograph Location
- Salt Creek-Holmesville 138 kV Line
- AECOM Addendum Study
- Project Survey Corridor

Vegetation Community Type

- Agricultural Row-Crop
- Pasture/Hay Fields
- Stream/Wetland
- Urban

N

0 100 200 400

Feet

AEP

Wooster-West Millersburg 138 kV Switch and Transmission Line Project

FIGURE 5B
VEGETATIVE COMMUNITIES ASSESSMENT MAP

DATE: 11/8/2022	1 INCH = 200 FEET
CREATED BY: PMH	CHECKED BY: BC
JOB NO. 60661200	AECOM

APPENDIX A

U.S Army Corps of Engineers Wetland Determination Data Forms

OEPA Wetland ORAM Forms

Delineated Features Photographs

(combined per wetland and shown in numerical order)

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: WOOSTER-WEST MILLERSBURG 138 KV SWITCH AND TLINE PROJECT City/County: Holmes Sampling Date: 10/26/2022

Applicant/Owner: American Electric Power (AEP) State: OH Sampling Point: Wetland 03-PEM

Investigator(s): B. Leopold and L. Payne Section, Township, Range: S3 T13N R13W

Landform (hillside, terrace, etc.): Valley Bottom Swamp Local relief (concave, convex, none): Concave Slope %: 0

Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 40.63923 Long: -81.93314 Datum: WGS 84

Soil Map Unit Name: Mg: Melvin silt loam, frequently ponded, 0 to 3 percent slopes NWI classification: None

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Data point in PEM component of PEM/PSS wetland complex (Wetland 03) present within maintained ROW and 100-year floodplain. Wetland boundary open ended to east, south and west to large NWI wetland complex; boundary delineated by vegetation and topography.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- X Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 2
Water Table Present?	Yes X	No ____	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** ____

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

Remarks:
Multiple primary and secondary hydrology indicators present. Source of hydrology is precipitation and seasonal/intermittent surface water from contiguous larger wetland complex to west.

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland 03-PEM

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1. *Salix x fragilis*	10	Yes	FAC
2. *Rosa palustris*	1	No	OBL
3.			
4.			
5.			
6.			
7.			
	11 =Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Typha angustifolia*	90	Yes	OBL
2. *Iris pseudacorus*	2	No	OBL
3. *Rumex verticillatus*	2	No	OBL
4. *Symplocarpus foetidus*	2	No	OBL
5. *Phalaris arundinacea*	1	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	97 =Total Cover		
Woody Vine Stratum (Plot size: 15' r)			
1.			
2.			
3.			
4.			
	=Total Cover		

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: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	97	x 1 =	97
FACW species	1	x 2 =	2
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	108 (A)		129 (B)
Prevalence Index = B/A =			1.19

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicator met as prevalence index is <3.0

SOIL

Sampling Point: Wetland 03-PEM

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-19	N 2.5/	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- x Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Upper 19 inches is 100% organic soil material (muck).

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project Adendum	60661200

Wetland 03	
Date: October 26, 2022	
Description: PEM Category 2 Facing North	

Wetland 03	
Date: October 26, 2022	
Description: PEM Category 2 Facing East	

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project Adendum	60661200

Wetland 03	
Date: October 26, 2022	
Description: PEM Category 2 Facing South	

Wetland 03	
Date: October 26, 2022	
Description: PEM Category 2 Facing West	

AECOM

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project Adendum	60661200

Wetland 03

Date:
October 26, 2022

Description:

PEM

Category 2

Facing Soils

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: WOOSTER-WEST MILLERSBURG 138 KV SWITCH AND TLINE PROJECT City/County: Holmes Sampling Date: 10/26/2022

Applicant/Owner: American Electric Power (AEP) State: OH Sampling Point: Wetland 03-PSS

Investigator(s): B. Leopold and L. Payne Section, Township, Range: S3 T13N R13W

Landform (hillside, terrace, etc.): Valley Bottom Local relief (concave, convex, none): Concave Slope %: 2

Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 40.63960 Long: -81.93328 Datum: WGS 84

Soil Map Unit Name: Mg: Melvin silt loam, frequently ponded, 0 to 3 percent slopes NWI classification: None

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Data point in PSS component of PEM/PSS wetland complex (Wetland 03) present within maintained ROW and 100-year floodplain. Wetland boundary open ended to east, south and west; delineated by vegetation and topography.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- X Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 11
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 11

Wetland Hydrology Present? **Yes** X **No** ____

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

Remarks:
Multiple primary and secondary hydrology indicators present. Source of hydrology is precipitation and seasonal/intermittent surface water of large contiguous wetland complex.

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland 03-PSS

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1. *Alnus incana*	20	Yes	FACW
2. *Sambucus nigra*	20	Yes	FACW
3. *Cornus amomum*	10	No	FACW
4. *Rubus occidentalis*	5	No	UPL
5. *Salix x fragilis*	2	No	FAC
6.			
7.			
	57 =Total Cover		
Herb Stratum (Plot size: 5' r)			
1. *Phalaris arundinacea*	60	Yes	FACW
2. *Symplocarpus foetidus*	1	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	61 =Total Cover		
Woody Vine Stratum (Plot size: 15' r)			
1. *Lonicera japonica*	1	No	FACU
2.			
3.			
4.			
	1 =Total Cover		

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: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	1	x 1 =	1
FACW species	110	x 2 =	220
FAC species	2	x 3 =	6
FACU species	1	x 4 =	4
UPL species	5	x 5 =	25
Column Totals:	119 (A)		256 (B)

Prevalence Index = B/A = 2.15

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicator met as dominance test >50%.

SOIL

Sampling Point: Wetland 03-PSS

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/2	95	7.5YR 4/4	5	C	PL	Loamy/Clayey	Distinct redox concentrations
7-16	10YR 4/2	90	7.5YR 4/4	10	C	PL	Loamy/Clayey	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Several hydric soil indicators present.

AECOM

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project Adendum	60661200

Wetland 03

Date:
October 26, 2022

Description:

PSS

Category 2

Facing North

Wetland 03

Date:
October 26, 2022

Description:

PSS

Category 2

Facing East

AECOM

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project Adendum	60661200

Wetland 03	
Date: October 26, 2022	
Description: PSS Category 2 Facing South	

Wetland 03	
Date: October 26, 2022	
Description: PSS Category 2 Facing West	

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project Adendum	60661200

Wetland 03

Date:
October 26, 2022

Description:

PSS

Category 2

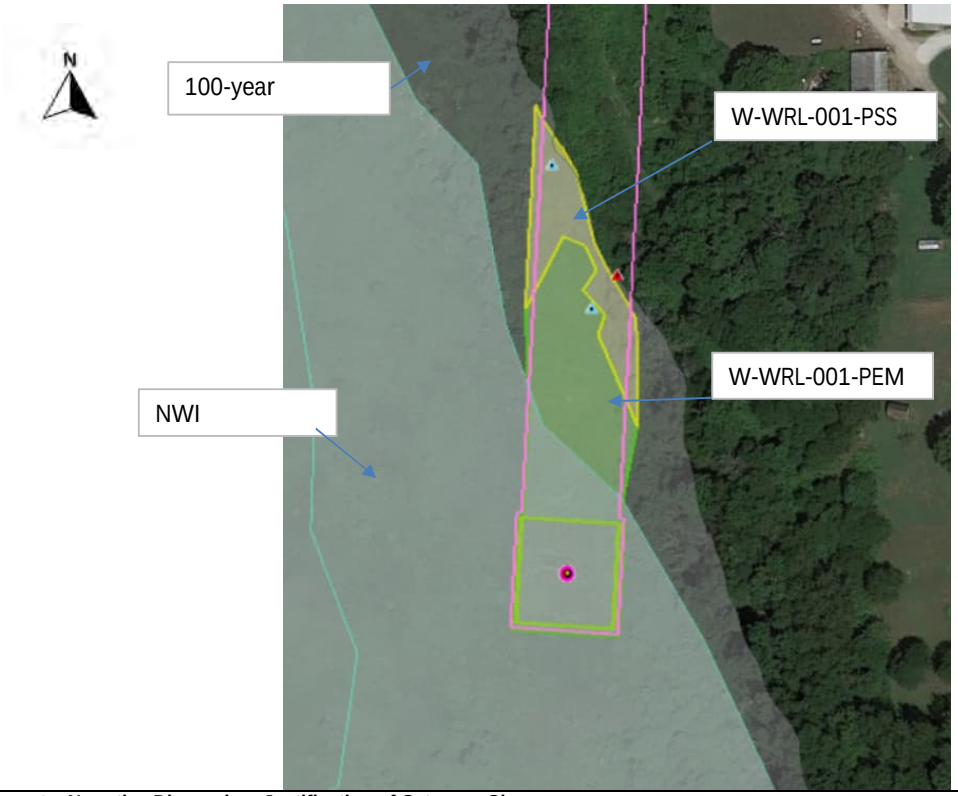
Facing Soils

Background Information	
Name:	**B. Leopold and L. Payne**
Date:	**10/26/2022**
Affiliation:	**AECOM**
Address:	**525 Vine St., Ste. 1800, Cincinnati, OH 45202**
Phone Number:	**513-419-3457**
e-mail address:	Bill.Leopold@aecom.com
Name of Wetland:	**Wetland 03**
Vegetation Communit(ies):	**PEM/PSS**
HGM Class(es):	**DEPRESSIONAL**
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	

Lat/Long or UTM Coordinate:	**40.6396, -81.93328**
USGS Quad Name:	**Holmesville**
County:	**Holmes**
Township:	**Prairie Township**
Section and Subsection:	**S3 T13N R13W**
Hydrologic Unit Code:	**Walhonding Watershed (HUC 8: 05040003)**
Site Visit:	**10/26/2022**
National Wetland Inventory Map:	**See Figure 2**
Ohio Wetland Inventory Map:	**N/A**
Soil Survey:	**See Figure 2**
Delineation report/map:	**See Figure 3**

Name of Wetland:	Wetland 03		
Wetland Size (delineated acres):	1.02	Wetland Size (Estimated total acres):	445.00

Sketch: Include north arrow, relationship with other surface waters, vegetation zones, etc.



Comments, Narrative Discussion, Justification of Category Changes:

PEM/PSS wetland complex (W-WRL-001) present within maintained ROW and 100-year floodplain. Southern end of delineated wetland is within a mapped NWI PFO1/SS1C wetland. Wetland boundary open ended to east, south and west; delineated by vegetation and topography.

Final score:	57.5	Category:	2

Wetland ID:	Wetland 03

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.	X	
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.	X	
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.	X	
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.	X	
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.		X

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

Wetland ID:	Wetland 03

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 *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis* , 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 *Sphagnum* 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

Wetland ID:	Wetland 03

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 ID:	Wetland 03

Table 1. Characteristic plant species.

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

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

Wetland ID:	Wetland 03

Site:	WOOSTER-WEST MILLERSBURG 1	Rater(s):	B. Leopold and L. Payne	Date:	10/26/2022

Field ID:

W-WRL-001-PEM/PSS

Delineated acres:	1.02
Total acres:	445.00

Metric 1. Wetland Area (size).

6.0 (max 6 pts) | 6.0 (subtotal)

Select one size class and assign score.

- [x] >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)

Metric 2. Upland buffers and surrounding land use.

6.0 (max 14 pts.) | 12.0 (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)
- [x] 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), shrubland, 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)

Metric 3. Hydrology.

25.0 (max 30 pts.) | 37.0 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select one.

- [ ] >0.7 (27.6in) (3)
- [x] 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.

- [x] 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.

- [x] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] ditch
- [ ] tile
- [ ] dike
- [ ] weir
- [ ] stormwater input
- [ ] point source (nonstormwater)
- [ ] filling/grading
- [ ] road bed/RR track
- [ ] dredging
- [ ] Other:

Metric 4. Habitat Alteration and Development.

13.5 (max 20 pts.) | 50.5 (subtotal)

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

- [x] 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)
- [x] 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)
- [x] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

- [ ] mowing
- [ ] grazing
- [ ] clearcutting
- [x] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

50.5 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID:	Wetland 03

Site:	WOOSTER-WEST MILLERSBURG 138 K	Rater(s):	B. Leopold and L. Payne	Date:	10/26/2022

Field ID:

W-WRL-001-PEM/PSS

50.5 subtotal this page

0.0 max 10 pts. | **50.5** 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 Praires (10)
- [ ] Known occurrence state/federal threatened or endangered species (10)
- [ ] Significant migratory songbird/water fowl habitat or usage (10)
- [ ] Category 1 Wetland. See Question 5 Qualitative Rating (-10)

7.0 max 20pts. | **57.5** subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [2] Emergent
- [0] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [x] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [x] 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.

- [2] Vegetated hummucks/tussucks
- [2] Coarse woody debris >15cm (6in)
- [0] Standing dead >25cm (10in) dbh
- [3] 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 1 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 2 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 3 vegetation and is of high quality

Narrative Description of Vegetation Quality

Low spp diversity and/or predominance of nonnative or low disturbance tolerant native species
Native spp are dominant component of the vegetation, mod although nonnative and/or disturbance tolerant native spp can also be present, and species diversity moderate to moderately high, but generallyw/o presence of rare threatened or endangered spp to
A predominance of native species, with nonnative spp high 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

57.5 **TOTAL (Max 100 pts)**

2 **Category**

Wetland ID:	Wetland 03

ORAM Summary Worksheet

		Circle answer or insert score		Result
Narrative Rating	Question 1 Critical Habitat	YES	*NO	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES	*NO	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES	*NO	If yes, Category 3.
	Question 4. Significant bird habitat	YES	*NO	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES	*NO	If yes, Category 1.
	Question 6. Bogs	YES	*NO	If yes, Category 3.
	Question 7. Fens	YES	*NO	If yes, Category 3.
	Question 8a. Old Growth Forest	YES	*NO	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands – Unrestricted with native plants	YES	NO	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES	NO	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES	*NO	If yes, Category 3
	Question 11. Relict Wet Prairies	YES	*NO	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	6		
	Metric 2. Buffers and surrounding land use	6		
	Metric 3. Hydrology	25		
	Metric 4. Habitat	13.5		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	7		
	TOTAL SCORE	57.5		Category based on score breakpoints **2**

Complete Wetland Categorization Worksheet.

Wetland ID:	Wetland 03

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 *less* than the Category 2 scoring threshold (*excluding* 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 *greater* than the Category 2 scoring threshold *(including* 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 *not* categorized as a Category 2 wetland (in the case of moderate functions) or a Category 3 wetland (in the case of superior functions) by this method?	YES Wetland was undercategorized by this method. A written justification for recategorization should be provided on Background Information Form	***NO** Wetland is assigned to category as determined by the ORAM.	A wetland may be undercategorized using this method, but still exhibit one or more superior functions, e.g. a wetland's biotic communities may be degraded by human activities, but the wetland may still exhibit superior hydrologic functions because of its type, landscape position, size, local or regional significance, etc. In this circumstance, the narrative criteria in OAC Rule 3745-1-54(C)(2) and (3) are controlling, and the under-categorization should be corrected. A written justification with supporting reasons or information for this determination should be provided.

Final Category

Choose one	Category 1	***Category 2**	Category 3	

End of Ohio Rapid Assessment Method for Wetlands.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: WOOSTER-WEST MILLERSBURG 138 KV SWITCH AND TLINE PROJECT City/County: Holmes Sampling Date: 10/26/2022

Applicant/Owner: American Electric Power (AEP) State: OH Sampling Point: Wetland 03-UPL

Investigator(s): B. Leopold and L. Payne Section, Township, Range: S3 T13N R13W

Landform (hillside, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope %: 5

Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 40.63931 Long: -81.93304 Datum: WGS 84

Soil Map Unit Name: Mg: Melvin silt loam, frequently ponded, 0 to 3 percent slopes NWI classification: None

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)
Upland data point associated with wetland Wetland 03; approximately 5' north of boundary on hillslope within maintained ROW.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No x	Depth (inches): ____
Water Table Present?	Yes ____	No x	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No x	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

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

Remarks:
No hydrology indicators present.

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland 03-UPL

Tree Stratum (Plot size: 30' r)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus americana*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' r)			
1. *Rubus occidentalis*	60	Yes	UPL
2. *Juglans nigra*	20	Yes	FACU
3. *Alnus incana*	10	No	FACW
4. *Rubus allegheniensis*	3	No	FACU
5. *Sambucus nigra*	3	No	FACW
6.			
7.			
	96	=Total Cover	
Herb Stratum (Plot size: 5' r)			
1. *Cinna arundinacea*	30	Yes	FACW
2. *Polystichum acrostichoides*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40	=Total Cover	
Woody Vine Stratum (Plot size: 15' r)			
1. *Vitis aestivalis*	15	Yes	FACU
2. *Smilax rotundifolia*	5	Yes	FAC
3.			
4.			
	20	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	43	x 2 =	86
FAC species	5	x 3 =	15
FACU species	53	x 4 =	212
UPL species	60	x 5 =	300
Column Totals:	161 (A)		613 (B)

Prevalence Index = B/A = 3.81

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

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

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicators not present.

SOIL

Sampling Point: Wetland 03-UPL

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/3	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

No hydric soil indicators present.

APPENDIX B

Habitat Photographs

PHOTOGRAPHIC RECORD
HABITAT

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project Adendum	60661200

Photo Location 1	
Date: October 26, 2022	
Description: Wetland (PEM) in the southern portion of the Addendum Project survey area at proposed workpad. Facing West	

Photo Location 2	
Date: February 03, 2022	
Description: Scrub/ shrub habitat within ROW, near a proposed workpad. Facing North	

PHOTOGRAPHIC RECORD
HABITAT

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project Adendum	60661200

Photo Location 3	
Date: February 03, 2022	
Description: Old field habitat within the proposed ROW. Facing West	

Photo Location 4	
Date: October 26, 2022	
Description: Pasture/Hay field habitat within the proposed ROW. Facing South	

PHOTOGRAPHIC RECORD
HABITAT

Client Name:	Site Location:	Project No.
AEP	Wooster-West Millersburg 138kV Transmission Line Replacement Project Adendum	60661200

Photo Location 5

Date:
October 26, 2022

Description:

Agricultural row crop habitat within the proposed ROW.

Facing North

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

12/13/2022 4:38:39 PM

in

Case No(s). 22-1086-EL-BNR

Summary: Correspondence Construction Notice electronically filed by Hector Garcia-Santana on behalf of AEP Ohio Transmission Company, Inc.