Letter of Notification West Dover 138 kV Transmission Line Relocations Project

BOUNDLESS ENERGY℠

PUCO Case No. 23-0656-EL-BLN

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

Submitted by:
Ohio Power Company

June 14, 2023

Letter of Notification

Ohio Power Company
West Dover 138 kV Transmission Line Relocations

4906-6-05

Ohio Power Company (the "Company") provides the following information to the Ohio Power Siting Board ("OPSB") pursuant to Ohio Administrative Code Section 4906-6-05.

4906-6-5(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 Letter of Notification.

The Company has identified the need to construct the West Dover 138 kV Transmission Line Relocations Project (the "Project") south of State Route 39 ("SR-39") in Dover Township, Tuscarawas County, Ohio. The Company plans to upgrade its West Dover distribution station. As a result of the distribution station upgrades, the Project will require relocating three, less than 0.1-mile segments of existing 138 kV transmission lines at West Dover distribution station. The three 138 kV transmission lines to be included in the Project are the West Dover Extension #1, West Dover Extension #2, and West Dover-Sugarcreek. The location of the Project is shown on Figure 1 and Figure 2 in Appendix A.

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

(1) New construction, extension, or relocation of single or multiple circuit electric power transmission line(s), or upgrading existing transmission or distribution line(s) for operation at a higher transmission voltage, as follows:

b. Line(s) greater than 0.2 miles in length but not greater than two miles in length.

The Project has been assigned PUCO Case No. 23-0656-EL-BLN.

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.

The non-jurisdictional stepdown West Dover 138-69kV Substation is being upgraded through PJM supplemental project s2640. In order to upgrade the station, the 138 kV transmission lines connecting to the station must be relocated, to connect to the new station bay. In addition, the West Dover-Sugarcreek 138 kV line is being relocated to the west, to provide better access for field personnel and connect to the new station structure. It also eliminates an overhead crossing with the Company 69 kV transmission line, which eliminates a reliability and safety risk south of the station.

The Project need and solution was presented at the PJM SRRTEP on March 19, 2020 and September 17, 2021 and subsequently assigned a PJM # of S2640. This Project was included in a supplement to the Company's 2022 Long Term Forecast Report, and is located on page 115, 116 and 117 (Table FE-T9, Specifications of Planned Transmission Lines), 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 location of the Project in relation to existing and proposed transmission lines and substation is shown in Figure 1 of Appendix A.

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 Project relocates a portion of existing transmission lines, as a result of necessary upgrades to the existing West Dover distribution station. Based on the existing facilities in the area, the proposed distribution substation upgrades on the existing property and corresponding transmission line relocations are the most suitable location for the Project. Other alternatives would require impacting additional neighboring properties and would add additional transmission length to the Project without any additional benefit. The proposed Project will result in no permanent impacts to wetlands, streams, or known cultural resource areas eligible for the National Register of Historic Places (NRHP). Therefore, this alternative represents the most suitable location and is the most appropriate solution for meeting the Company's needs in the area.

B(5) Public Information Program

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

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

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 September 2023, and the anticipated in-service date will be April 2024.

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 in Appendix A provides the proposed Project area on a map of 1:24,000-scale (1 inch equals 2,000 feet), showing the Project on the United States Geological Survey (USGS) 7.5-minute topographic map of the Strasburg, Ohio quadrangle. Figure 2 in Appendix A shows the Project Area on recent aerial photography, dated 2018, as provided ESRI World Imagery at a scale of 1:1,200 scale (1 inch equals 100 feet).

To visit the Project site from Columbus, Ohio, take I-70 East for approximately 78 miles to Exit 180B for I-77 North. Continue on I-77 N for approximately 39 miles to Exit 83 for OH-39 toward OH-211/Sugarcreek/Dover. Turn Left onto OH-39. After approximately 4.4 miles, Dover distribution substation will be on the left (south), at the approximate address 5115 OH-39, Dover, Ohio 44622 (latitude 40.50878°, longitude -81.56448°.

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 entire West Dover Extensions No. 1 and No. 2 and the northern portion if the West Dover-Sugarcreek realignments of the Project are located on Parcels 10-03254-000, 10-03258-000, and 10-03371-000 which are owned by the Company. Supplemental easements will be required on Parcels 10-00574-000 and 11-00010-001 which are crossed by the West Dover-Sugarcreek line. No other property easements, options, or land use agreements are necessary to construct the Project or operate the station.

A list of properties required for the Project is provided in the table below.

Property Parcel Number	Agreement Type	Easement/Option Obtained (Yes/No)
10-03254-000	Not Applicable (Company Property)	Not Applicable
10-03258-000	Not Applicable (Company Property)	Not Applicable
10-03371-000	Not Applicable (Company Property)	Not Applicable
11-00010-001	Supplemental Easement Agreement	No
10-00574-000	Supplemental Easement Agreement	No

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 equipment and facilities to be installed within the Project Area will include the following:

Line Asset Name:	West Dover Extension No. 1
Voltage:	138 kV
Conductors:	1033.5 KCM 45/7 “ORTOLAN” ACSR
Static Wire:	7#10 Aluminum Clad Steel
Insulators:	Polymer
ROW Width:	Not applicable (Company property)
Structure Type:	(1) single circuit dead end wood pole

Line Asset Name:	West Dover Extension No. 2
Voltage:	138 kV
Conductors:	1033.5 KCM 45/7 "ORTOLAN" ACSR
Static Wire:	7#10 Aluminum Clad Steel
Insulators:	Polymer
ROW Width:	Not applicable (Company property)
Structure Type:	(2) single circuit dead end wood pole

Line Asset Name:	West Dover-Sugarcreek
Voltage:	138 kV
Conductors:	795 KCM 26/7 'DRAKE' ACSR
Static Wire:	7#10 Aluminum Clad Steel
Insulators:	Polymer
ROW Width:	100 feet
Structure Type:	(1) single circuit tangent wood pole (2) single circuit dead-end wood pole

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 $1,250,000 using a Class 4 estimate. Pursuant to the PJM OATT, the costs for this Project will be recovered in Ohio Power Company's FERC formula rate (Attachment H-14 to the PJM OATT) and allocated to the AEP Zone.

B(10) Social and Economic 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 in Appendix A. The Project is located in Dover Township, Tuscarawas County, Ohio. Land use in the Project Area consists of wooded areas and

scattered residences. The Project site is part of an area within Dover Township that is occupied by the existing West Dover distribution substation and multiple associated transmission line rights-of-way, south of SR-39. The closest residence is approximately 450 feet from 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.

No portions of the Project cross agricultural land. The Tuscarawas County Auditor searched parcels crossed by the Project on April 13, 2023. The parcels crossed by the Project were not identified as part of the Agricultural District Land program.

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.

The Company's consultant completed Phase I Archaeological and History/Architecture Investigations of the Project area. Ohio Archaeological Inventory (OAI) #33TU0215 was previously identified within the Project area. It was not reidentified during the current survey. No new archaeological sites were identified. Rinhart Hill Cemetery (OGSID 11738) is mapped directly adjacent to the proposed Project area. The Company's consultant was unable to locate the cemetery during field investigations and further research. The Rinhard Hill Cemetery is believed to be further west than mapped and not located within the Project area. The Company's consultant also identified two extant properties fifty years or older within the Area of Potential Effects. Neither property was recommended as potentially eligible for listing on the NRHP. The Ohio Historic Preservation Office ("SHPO") concurred that the Project should have no adverse effect on historic properties and no further coordination is necessary unless the project changes or additional resources are discovered during implementation of the Project. The SHPO concurrence letter is provided in Appendix C.

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

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

A Notice of Intent will be filed with the Ohio Environmental Protection Agency for authorization of construction storm water discharges under General Permit OHCD000006. The Company will implement and maintain best management practices as outlined in the Project-specific Storm Water Pollution

Prevention Plan ("SWPPP") to minimize erosion control sediment to protect surface water quality during storm events.

One wetland and two streams are located in the Project area (see Appendix D). The wetland and one of the streams are expected to be within the ROW of the relocated West Dover-Sugarcreek 138 kV transmission line. Hand clearing is proposed within the boundary of the wetland and within 25 feet of the stream. No impacts to these features are anticipated. Therefore, the Project will not require a Clean Water Act Section 404 Permit from the U.S. Army Corps of Engineers with Section 401 Water Quality Certification from the Ohio Environmental Protection Agency (OEPA).

The FEMA Flood Insurance Rate Map was reviewed to identify any floodplains/flood hazard areas that have been mapped within the Project Area (specifically, map numbers **39157C0140D and 39157C0145D**). Based on this mapping, no mapped FEMA floodplains are located in the Project Area. Therefore, no floodplain permit will be required for this Project

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.

As part of the ecological study completed for the Project, a coordination letter was submitted to the USFWS Ohio Ecological Services Field Office seeking technical assistance on the Project for potential impacts to threatened or endangered species. The July 26, 2021 response letter from the USFWS (see Appendix C) indicated that the Indiana bat and northern long-eared bat may be found in the Project area. Seasonal tree clearing would be required if bat habitat trees were identified. Seasonal clearing between October 1 and March 31 is recommended for any trees greater than three inches diameter at breast height (dbh). Summer presence/absence surveys are necessary, if seasonal clearing is not possible.

A coordination letter was submitted to the Ohio Department of Natural Resources ("ODNR") Division of Wildlife ("DOW") Ohio Natural Heritage Program ("ONHP") and the ODNR - Office of Real Estate seeking an environmental review of the proposed Project for potential impacts on state-listed and federally-listed threatened or endangered species. Correspondence from ODNR's DOW/OHNP and the ODNR – Office of Real Estate was received on September 1, 2021 (see Appendix C).

According to the ODNR-DOW, the Project 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. The ODNR recommends

cutting between October 1 and March 31. If cutting must occur during summer months, the ODNR recommends a mist net survey or acoustic survey be conducted from June 1 through August 15, prior to cutting, in accordance with the most recent version of the "*Ohio Division of Wildlife Guidance for Bat Surveys and Tree Clearing*." Areas south and west of the existing substation within the Project area are wooded and will require tree clearing. The Company's consultant conducted a summer bat survey based on USFWS and ODNR guidelines. No bats were detected. USFWS and ODNR provided concurrence letters indicating that summer clearing is acceptable through March 31, 2027 (See Appendix C).

ODNR also recommended a desktop habitat assessment, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the Project area. The assessment should be conducted based on the current USFWS "*Rangewide Indiana Bat Survey Guidelines*." Two underground mine points are mapped by ODNR within 0.25 mile of the Project. One point (TS-0GS-001) is approximately 600 feet to the northwest of the Project area. It is listed as a coal mine with a 1919 permit. The area was subsequently surface mined in the 1970s. The second point (TS-281) is a reported air shaft with a mining permit obtained in 1937. It is mapped 400 feet to the west of the Project. The Company's consultant was unable to locate the reported historical air shaft during the field reconnaissance. Neither reported underground mine appears to be a viable bat hibernaculum.

The ODNR-DOW indicated that the Project is within the range of three fish species and five mussel species. Due to no in-water work and habitat, these species are not anticipated to be impacted by the Project.

The eastern spadefoot toad and eastern hellbender, state endangered amphibian species, were identified by ODNR-DOW with the potential to inhabit the Project area. Due to location, type of habitat, and the type of work proposed (no in-water work), ODNR-DOW state that the Project is not likely to impact these species.

ODNR-DOW identified two state endangered bird species with the potential to inhabit the Project area. The lark sparrow favors grassland habitats with scattered shrub layers and disturbed open areas, as well as patches of bare soil. 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. The northern harrier 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. The Project area is primarily wooded with areas of existing transmission line ROW. No suitable habitat for either of these bird species was observed. No impacts to these species are anticipated.

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.

Review of the Protected Areas Database of the U.S. (PADUS) no parks, state or federal forests, wilderness areas, wildlife refuges, designated critical habitat or other areas of ecological concern in the Project vicinity. Similarly, the ODNR-DOW response indicated no areas of ecological concern in or near the Project Area (see Appendix C).

FEMA Flood Insurance Rate Maps were consulted to identify any floodplains/flood hazard areas that have been mapped in the Project Area (specifically, map numbers **39157C0140D and 39157C0145D**). Based on these maps, no mapped FEMA floodplains are located in the Project area.

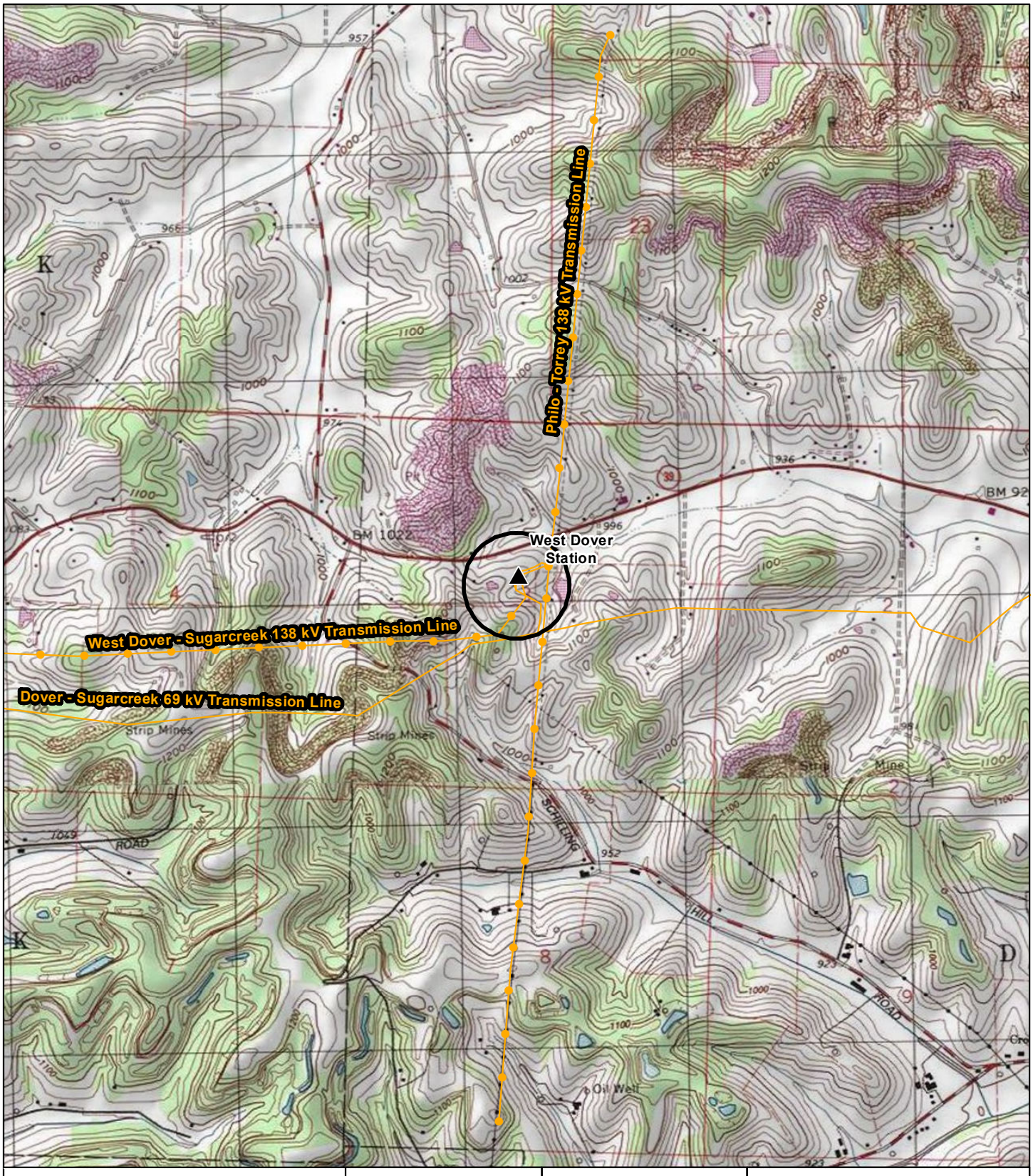
Wetland and stream delineation field surveys were completed within the Project area by the Company's consultant in April 2022. One wetland and two streams are located in the Project area (see Figure 3 in Appendix D). The wetland and one of the streams are expected to be within the ROW of the relocated West Dover-Sugarcreek 138 kV transmission line. Hand clearing is proposed within the boundary of the wetland and within 25 feet of the stream. A temporary access road will be constructed around the wetland and timber matting will be utilized to cross the stream during construction of the transmission line. No permanent impacts to these features are 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 Maps



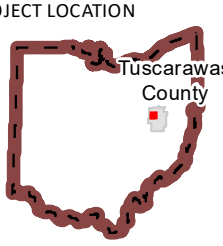
Project Area
Existing Station
Existing 138 kV Transmission Line
Existing 69 kV Transmission Line

Data Sources: AEP, USGS 7.5' Topographic Quadrangles (Strasburg, Ohio and Stone Creek, Ohio)

Ohio State Plane North NAD 1983

October 27, 2022

PROJECT LOCATION



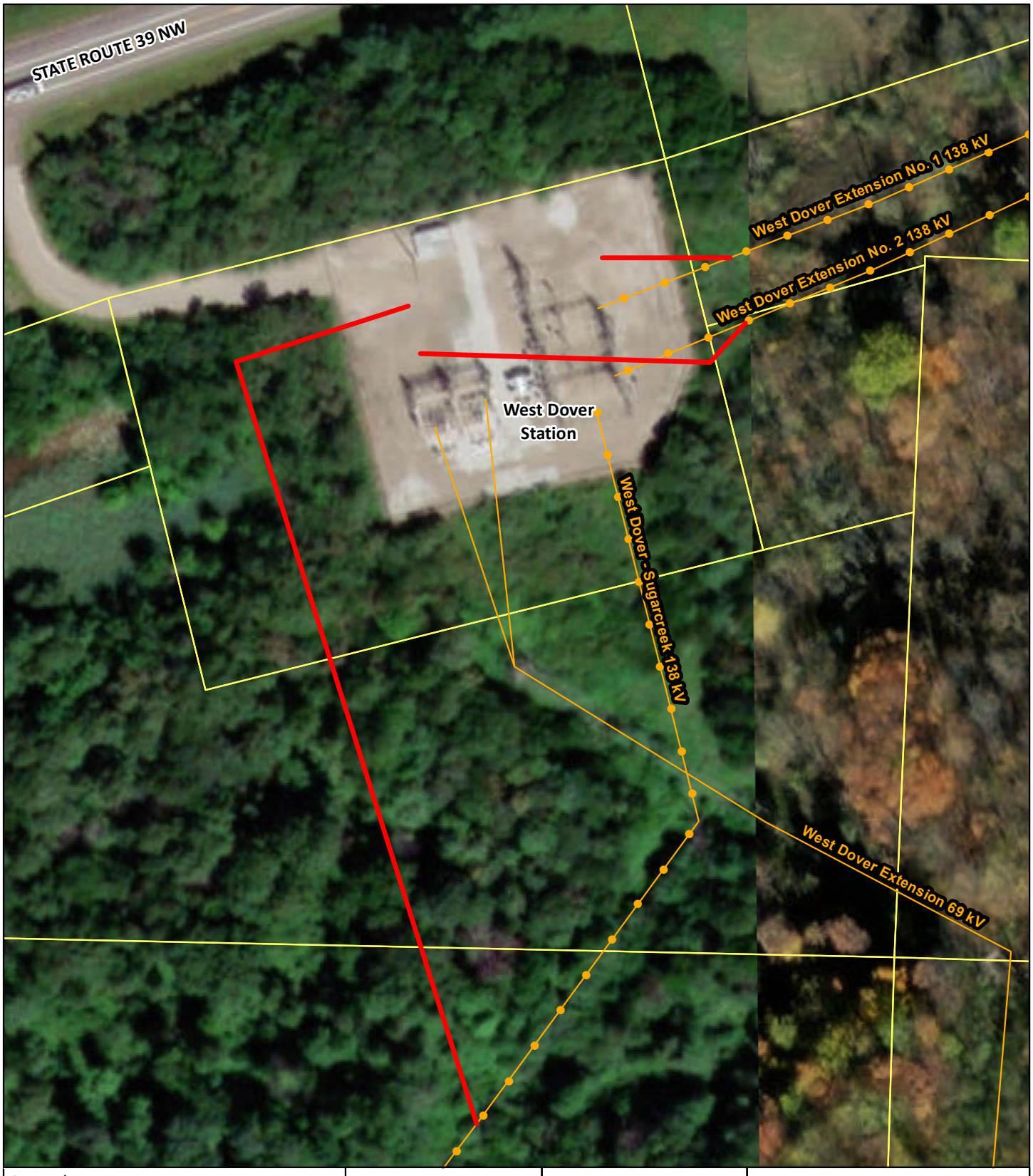
TUSCARAWAS COUNTY, OHIO

FIGURE 1
TOPOGRAPHIC OVERVIEW

AEP OHIO
An AEP Company
BOUNDLESS ENERGY

West Dover 138 kV Transmission Line Relocations Project

0 1,000 2,000 3,000
Feet



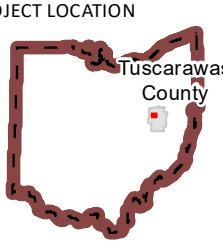
Legend:
- Proposed Centerline
- Existing 138 kV Transmission Line
- Existing 69 kV Transmission Line
- Parcel Boundary

Data Sources: AEP, ESRI World Imagery (2018)

Ohio State Plane North NAD 1983

April 13, 2023

PROJECT LOCATION



TUSCARAWAS COUNTY, OHIO

FIGURE 2
PROJECT AERIAL MAP

AEP OHIO
An AEP Company
BOUNDLESS ENERGY

West Dover 138 kV Transmission Line Relocations Project

0 50 100 150

Feet

Appendix B Long Term Forecast Report and PJM Solution

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

1.	**LINE NAME AND NUMBER:**	North Strasburg - West Dover 138kV (s2640 TP2020210)
2.	**POINTS OF ORIGIN AND TERMINATION**	North Strasburg - West Dover INTERMEDIATE STATIONS - Strasburg
3.	**RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS**	9.9 mi / 100 / 1 circuit (0.1 mi of line work)
4.	**VOLTAGE: DESIGN / OPERATE**	138kV / 138kV
5.	**APPLICATION FOR CERTIFICATE:**	2022
6.	**CONSTRUCTION:**	2022 - 2023
7.	**CAPITAL INVESTMENT:**	$0.25M
8.	**PLANNED SUBSTATION:**	West Dover
9.	**SUPPORTING STRUCTURES:**	Steel
10.	**PARTICIPATION WITH OTHER UTILITIES**	N/A
11.	**PURPOSE OF THE PLANNED TRANSMISSION LINE**	Re-terminate the 138kV lines back into the new ring bus layout at West Dover
12.	**CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION**	Risk for misoperations and over-tripping, due to the three terminal line
13.	**MISCELLANEOUS:**	

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

1.	**LINE NAME AND NUMBER:**	Philo - West Dover 138kV (s2640 TP2020210)
2.	**POINTS OF ORIGIN AND TERMINATION**	Philo - West Dover INTERMEDIATE STATIONS - Norfield Switch & Rustic Switch
3.	**RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS**	58.1 mi / 100 / 1 circuit (0.1 mi of line work)
4.	**VOLTAGE: DESIGN / OPERATE**	138kV / 138kV
5.	**APPLICATION FOR CERTIFICATE:**	2022
6.	**CONSTRUCTION:**	2022 - 2023
7.	**CAPITAL INVESTMENT:**	$0.25M
8.	**PLANNED SUBSTATION:**	West Dover
9.	**SUPPORTING STRUCTURES:**	Steel
10.	**PARTICIPATION WITH OTHER UTILITIES**	N/A
11.	**PURPOSE OF THE PLANNED TRANSMISSION LINE**	Re-terminate the 138kV lines back into the new ring bus layout at West Dover
12.	**CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION**	Risk for misoperations and over-tripping, due to the three terminal line
13.	**MISCELLANEOUS:**	

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

1.	**LINE NAME AND NUMBER:**	Sugarcreek Terminal - West Dover 138kV (s2640 TP2020210)
2.	**POINTS OF ORIGIN AND TERMINATION**	Sugarcreek Terminal - West Dover INTERMEDIATE STATIONS - East Sugarcreek Switch
3.	**RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS**	4.3 mi / 100 / 1 circuit (0.1 mi of line work)
4.	**VOLTAGE: DESIGN / OPERATE**	138kV / 138kV
5.	**APPLICATION FOR CERTIFICATE:**	2022
6.	**CONSTRUCTION:**	2022 - 2023
7.	**CAPITAL INVESTMENT:**	$0.25M
8.	**PLANNED SUBSTATION:**	West Dover
9.	**SUPPORTING STRUCTURES:**	Steel
10.	**PARTICIPATION WITH OTHER UTILITIES**	N/A
11.	**PURPOSE OF THE PLANNED TRANSMISSION LINE**	Re-terminate the 138kV lines back into the new ring bus layout at West Dover
12.	**CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION**	Risk for misoperations and over-tripping, due to the three terminal line
13.	**MISCELLANEOUS:**	

AEP Transmission Zone M-3 Process
Dover, Ohio

Need Number: AEP-2020-OH051

Process Stage: Solution Meeting 9/17/2021

Previously Presented: Need Meeting 3/19/2020

Supplemental Project Driver:

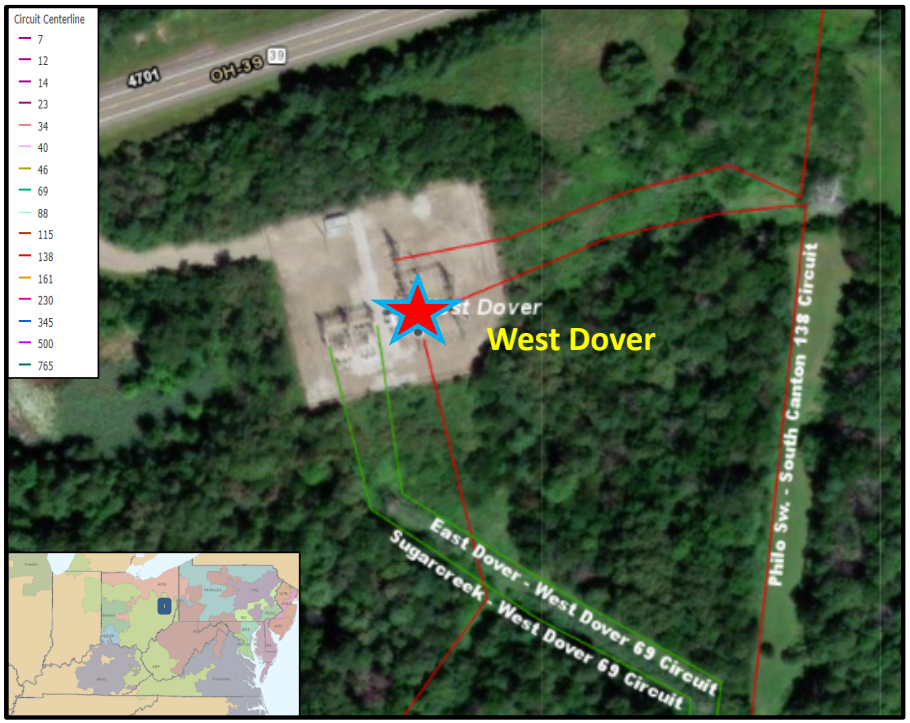
Equipment Material Condition, Performance and Risk; Operational Flexibility & Efficiency

Specific Assumption Reference:

AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions Slide 8)

Problem Statement:

West Dover 138-69kV station creates a 3-terminal point on the line, due to the lack of 138kV line breakers or a 138kV transformer protection device (just a MOAB/ground- switch system today). This complicates the circuit protection scheme and is a risk for misoperations and over-tripping. In addition, due to the lack of breakers at the station, there are 3 dissimilar zones of protection combined: 138kV circuit, 138-69kV XFMR, 69kV bus.



AEP Transmission Zone M-3 Process
West Dover Station Upgrade

Legend	
500 kV	
345 kV	
138 kV	
69 kV	
34.5 kV	
23 kV	
New	

Need Number: AEP-2020-OH051

Process Stage: Solution Meeting 9/17/2021

Proposed Solution:

At West Dover station, install 4- 138kV breakers in a ring bus arrangement. Install 1-69kV breaker on the low-side of the 138-69kV transformer. Remove the existing control building and install a new prefabricated drop-in-control-module (DICM). Upgrade the 69kV circuit protection to Sugarcreek, replacing electromechanical relays with new fiber-based protection. Various improvements to the station site, including new fencing, grading, and station service. **Estimated Cost: $7.03M**

Re-terminate the 3- 138kV transmission lines at West Dover to connect to the new ring bus layout. The Sugarcreek 138kV tap will be re-routed slightly. **Estimated Cost: $0.77M**

Remote-end 69kV protection upgrades at Sugarcreek station, to coordinate with the West Dover upgrades. **Estimated Cost: $0.51M**

Total Estimated Transmission Cost: $8.31M

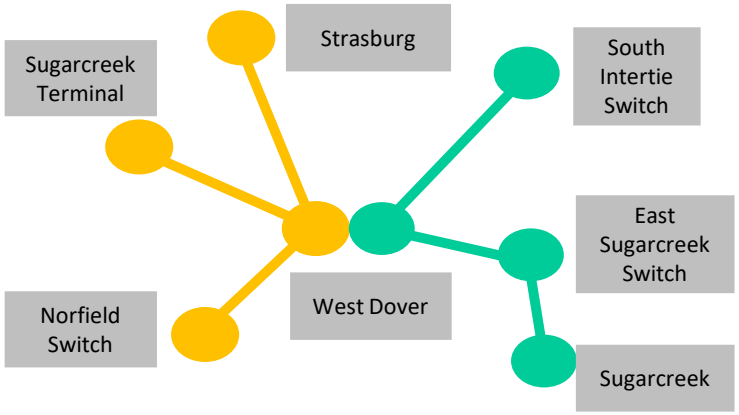
Alternatives Considered:

Complete the proposed West Dover station upgrade, but on the 138kV side, install a 138kV straight bus with 4- 138kV breakers. This is not preferred compared to a ring bus design, since any breaker maintenance would interrupt the 138kV through-path; plus it would require dropping the radial Sugarcreek 138kV station and installing a mobile to pick up the distribution load there. In addition, this option would be more challenging from a construction and outage-scheduling standpoint. Alternative cost: $7.8 Million

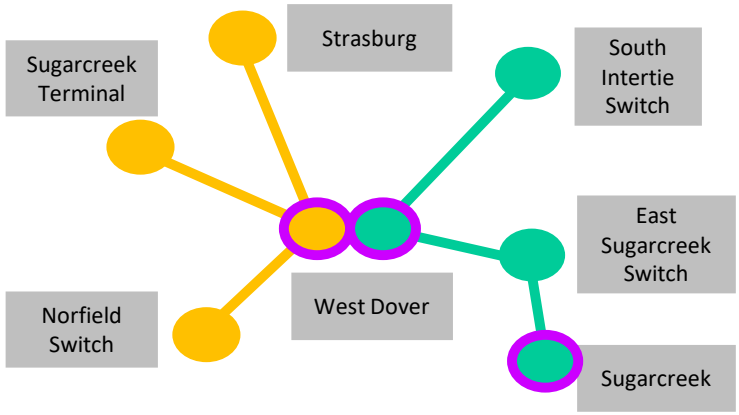
Projected In-Service: 12/1/2023

Project Status: Scoping

Existing:



Proposed:



Appendix C Agency Coordination

In reply, refer to
2022-TUS-55403

August 17, 2022

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

RE: West Dover Station Expansion and Associated Transmission Lines (West Dover Ext. #1, West Dover Ext. #2, and West Dover-Sugarcreek #3), Dover Township, Tuscarawas County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received July 19, 2022, and the additional information provided August 15, 2022, regarding the proposed West Dover Station Expansion and Associated Transmission Lines (West Dover Ext. #1, West Dover Ext. #2, and West Dover-Sugarcreek #3) Dover Township, Tuscarawas County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I Archaeological Investigations for the 4.2 ha (10.4 ac) West Dover Station Expansion and Associated Transmission Lines (West Dover Ext. #1, West Dover Ext. #2, and West Dover-Sugarcreek #3) in Dover Township, Tuscarawas County, Ohio* by Seth T. Cooper (Weller & Associates, Inc. 2022).

A literature review, visual inspection, and shovel test probing was completed as part of the investigations. One (1) previously identified archaeological site is located within the project area, Ohio Archaeological Inventory (OAI) #33TU0215. The site was not reidentified during survey and is not recommended for additional investigation. Our office agrees with this recommendation. No new archaeological sites were identified during survey. One (1) cemetery, the Rinehart Hill Cemetery (OGSID 11738), is mapping directly adjacent to the proposed project area. Intensive visual inspection and research took place in the attempt to identify the location of the cemetery, which currently has a low confidence location. Weller & Associates, Inc. also provided the Works Progress Administration (WPA) Cemetery Plot Map for the cemetery, which can sometimes provide more specific locational information. However, the Rinehart Hill Cemetery is simply shown as 5 miles west of Dover, south of SR 39, and does not provide any more specific locational information. It is Weller's opinion the cemetery is likely further west than is currently mapped. Our office would agree with this and it does not appear the Rinehart Hill Cemetery will be affected by the proposed project.

The following comments pertain to the *History/Architecture Investigations for the 4.2 ha (10.4 ac) West Dover Station Expansion and Associated Transmission Lines (West Dover Ext. #1, West Dover Ext. #2, and West Dover-Sugarcreek #3) in Dover Township, Tuscarawas County, Ohio* by Scott McIntosh (Weller & Associates, Inc. 2022).

A literature review and field survey were completed as part of the investigations. Two (2) extant properties fifty years of age or older was identified within the Area of Potential Effects (APE). It is Weller's recommendation that these properties are not eligible for listing in the National Register of Historic Places (NRHP). Our office agrees with Weller's recommendations regarding eligibility. Therefore, we agree that there will be no effect on historic resources as a result of the project.

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

Sincerely,

Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1094247-1094248

Aaron Geckle

From: Ohio, FW3 <ohio@fws.gov>
Sent: Monday, July 26, 2021 9:46 AM
To: Aaron Geckle
Cc: nathan.reardon@dnr.state.oh.us; Parsons, Kate; ajtoohey@aep.com
Subject: AEP West Dover Transmission Lines Upgrade, Dover Township, Tuscarawas 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# 03E15000-2021-TA-1761

Dear Mr. Geckle,

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.

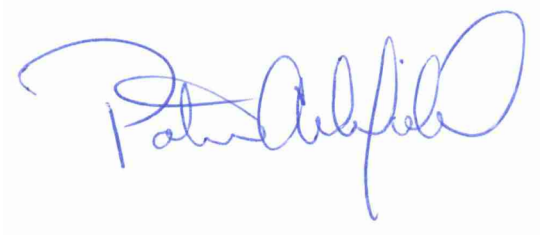
Stream and Wetland Avoidance: Over 90% of the wetlands in Ohio have been drained, filled, or modified by human activities, thus is it important to conserve the functions and values of the remaining wetlands in Ohio (https://epa.ohio.gov/portals/47/facts/ohio_wetlands.pdf). We recommend avoiding and minimizing 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 M. Ashfield
Field Office Supervisor

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

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

September 1, 2021

Aaron Geckle
V3 Companies, Ltd.
312 Walnut Street , Suite 1600
Cincinnati, Ohio 45202

Re: 21-0680; AEP West Dover Transmission Lines Upgrade Project, Tuscarawas County, Ohio

Project: The proposed project involves upgrades to the AEP West Dover transmission lines.

Location: The proposed project is located in Dover, Tuscarawas 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 no records at or within a one-mile radius of the project area.

A review of the Ohio Natural Heritage Database indicates there are no other records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species. In addition, we are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within the project area. The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980.

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.

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 following listed mussel species.
Federally Endangered
clubshell (*Pleurobema clava*)
fanshell (*Cyprogenia stegaria*)
sheepnose (*Plethobasus cyphyus*)

State Endangered
long-solid (*Fusconaia maculata maculata*)
sharp-ridged pocketbook (*Lampsilis ovate*)
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 these species.

The project is within the range of the following listed fish species.
State Endangered
northern madtom (*Noturus stigmosus*)
western banded killifish (Fundulus diaphanus menona)

State Threatened
mountain madtom (*Noturus eleutherus*)
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 spadefoot toad (*Scaphiopus holbrookii*), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the 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 lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. In the Oak Openings area west of Toledo, lark sparrows occupy open grass and shrubby fields along sandy beach ridges. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. 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 habitat will not be impacted, this project is not likely to impact this species.

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

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

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

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

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

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

Mike Pettegrew
Environmental Services Administrator (Acting)

United States Department of the Interior

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

August 19, 2022

22-047, No IPaC Project Code

Dear Ms. Brown:

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).

We have received your summer bat survey report for the subject project. The survey was conducted following current Service guidelines. No Indiana bats (*Myotis sodalis*) were captured/detected, demonstrating probable absence of Indiana bats in the project area. Currently, the Service has no known hibernacula or maternity roost records for northern long-eared bat (*Myotis septentrionalis*) in the vicinity of the project. Therefore, the 4(d) rule for the northern long-eared bat could be applied (see: https://ecos.fws.gov/ecp/species/9045). Tree clearing on the project site at any time of the year is unlikely to result in adverse impacts to Indiana bats and will not result in any unauthorized incidental take of northern long-eared bats. Negative Indiana bat summer surveys are valid for five years. Therefore, no tree clearing should occur on the site after March 31, 2027 without further coordination with this office.

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

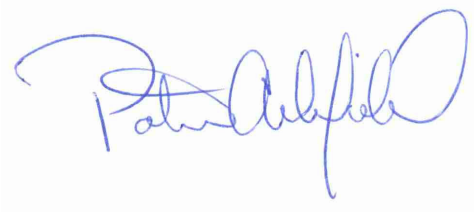
species. In addition, prevention of non-native, invasive plant establishment is critical in maintaining high quality habitats.

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
Eileen Wyza, ODNR-DOW

Amy J Toohey

From: Eileen.Wyza@dnr.ohio.gov
Sent: Tuesday, August 23, 2022 11:09 AM
To: Boyer, Angela; Natasha Brown
Cc: Amy J Toohey; Dale W. Sparks; Nathan.Reardon@dnr.ohio.gov
Subject: RE: [EXTERNAL] Bat Survey AEP West Dover

Hello,

The Ohio Division of Wildlife (DOW) has received the summer bat survey report for the AEP's West Dover Transmission Lines Upgrade and Substation Expansion project, conducted according to current U.S. Fish and Wildlife Service (USFWS) and Ohio Department of Natural Resources, Division of Wildlife guidance. No Indiana (*Myotis sodalis*), northern long-eared (*M. septentrionalis)*, little brown (*M. lucifugus*), or tricolored (*Perimyotis subflavus*) bats were detected, suggesting risk to these state-endangered species is low in the project area and tree cutting during summer maternity season is not likely to result in direct mortality of these species. Please contact DOW immediately should any bats be discovered. Should tree cutting need to occur after March 31, 2027, DOW recommends further consultation to reevaluate risk to these bat species.

This guidance does not constitute a full ODNR environmental review. If required, please contact the ODNR, Office of Real Estate Management to submit a request for agency environmental review coordination.

Thank you,

Eileen Wyza
Wildlife Biologist
Ohio Division of Wildlife
Phone: 614-265-6764
Email: Eileen.Wyza@dnr.ohio.gov

From: Boyer, Angela <angela_boyer@fws.gov>
Sent: Friday, August 19, 2022 11:51 AM

To: Natasha Brown <NBrown@envsi.com>; Wyza, Eileen <Eileen.Wyza@dnr.ohio.gov>
Cc: Amy J Toohey <ajtoohey@aep.com>; Dale W. Sparks <DSparks@envsi.com>; Reardon, Nathan <Nathan.Reardon@dnr.ohio.gov>
Subject: Re: [EXTERNAL] Bat Survey AEP West Dover

Hello,

The USFWS response letter is attached.

Sincerely,
Ange

From: Natasha Brown <NBrown@envsi.com>
Sent: Thursday, August 18, 2022 10:15 AM
To: Boyer, Angela <angela_boyer@fws.gov>; Wyza, Eileen <Eileen.Wyza@dnr.ohio.gov>
Cc: Amy J Toohey <ajtoohey@aep.com>; Dale W. Sparks <DSparks@envsi.com>
Subject: RE: [EXTERNAL] Bat Survey AEP West Dover

Greetings,

On behalf of American Electric Power (AEP), ESI is submitting a report summarizing listed bat studies associated with reference number **22-047** (AEP's West Dover Project in Tuscarawas County, Ohio). Mist netting was completed from 5 through 6 August 2022. In total, one non-reproductive, juvenile, female, eastern red bat (*Lasiurus borealis*) was captured. No protected bats were captured during netting.

Attached is a reduced-sized PDF as the full PDF of the report is too large to send via email. Should you need to review the full-sized report, it can be accessed via ESI' SharePoint site through the below link. Please let me know if you are unable to access the report:
Pesi 1950 West Dover Final Report

I will be happy to address any questions or comments you may have.
Thank you for your time,

Natasha Brown, PhD
Scientist
Environmental Solutions & Innovations, Inc.
4525 Este Ave. | Cincinnati, OH 45232 | USA
office: 513.451.1777 **fax:** 513.451.3321
NBrown@envsi.com | www.envsi.com

From: Boyer, Angela <angela_boyer@fws.gov>
Sent: Thursday, July 21, 2022 11:27 AM
To: Dale W. Sparks <DSparks@envsi.com>; Wyza, Eileen <Eileen.Wyza@dnr.ohio.gov>
Cc: Jo Garofalo <JGarofalo@envsi.com>; Amy J Toohey <ajtoohey@aep.com>
Subject: Re: [EXTERNAL] Bat Survey AEP West Dover

Dale,

This is in response to your July 20, 2022, request for an amendment to Federal Fish and Wildlife Permit Numbers ES02373A-15 (ESI), ES120321-5 (John Timpone), TE56749B-4 (Patrick Moore), TE02167C-0 (James Gore), ES02365A-5 (Lynn Robbins), and ESPER0037601 (Jeremiah Van Deventer) to conduct a summer mist-net survey for AEP's West Dover Project in Tuscarawas County, Ohio. This survey effort has been assigned the reference number **22-047**. Please include this project reference number in all correspondence to the U.S. Fish and Wildlife Service and the Ohio Division of Wildlife.

This email serves as site-specific authorization to proceed in accordance with your Federal permit requirements. Summer mist netting is authorized to occur between June 1 and August 15, 2022. All federal permittees must also have valid Ohio Scientific Collecting Permits and plans must also be reviewed and approved by the Ohio Division of Wildlife before any surveys take place. Please note that a federally permitted person must remain present at the mist net sites while they are being operated. This notification serves as written concurrence that Environmental Solutions and Innovations, John Timpone, Patrick Moore, James Gore, Lynn Robbins, and Jeremiah Van Deventer are authorized to proceed with the proposed bat survey. This survey serve as a presence/absence survey for the Indiana bat and northern long-eared bat.

By January 31, 2023, we request that you submit an annual report of your Ohio survey work to this office using the 2022 Midwestern U.S. Spreadsheet in electronic format. Be sure to include data for all sites even if no bats were detected.

Sincerely,
Angela Boyer
Endangered Species Coordinator for Ohio
U.S. Fish and Wildlife Service
4625 Morse Road, Suite 104
Columbus, Ohio 43230

From: Dale W. Sparks <DSparks@envsi.com>
Sent: Wednesday, July 20, 2022 10:02 AM
To: Boyer, Angela <angela_boyer@fws.gov>; Wyza, Eileen <Eileen.Wyza@dnr.ohio.gov>
Cc: Jo Garofalo <JGarofalo@envsi.com>; Amy J Toohey <ajtoohey@aep.com>
Subject: [EXTERNAL] Bat Survey AEP West Dover

Angie and Eileen:

Attached is a study plan for AEP's West Dover Project. This project contains a mix of linear and aerial elements as the clearing will contain a ROW that connects to a Substation. Given that we are clearing less than 1.5 acres and its all in a strip, the study plan is all based on the technique for linear projects.

Dale W. Sparks, Ph.D.
Principal Scientist
Environmental Solutions & Innovations, Inc.
4525 Este Avenue | Cincinnati, OH 45232 | USA
t: 513.451.1777 **f:** 513.451.3321 **c:** 513.503.2667
dsparks@envsi.com | www.envsi.com

Appendix D Ecological Resources Inventory Report

WEST DOVER STATION AND ASSOCIATED TRANSMISSION LINE ADJUSTMENTS

ECOLOGICAL RESOURCES INVENTORY REPORT

PROJECT SITE:

State Route 39
Dover Township, Tuscarawas County, Ohio

PREPARED FOR:

AEP Ohio Transmission Company, Inc.

8600 Smiths Mill Road

New Albany, Ohio 43054

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY™

PREPARED BY:

V3 Companies, Ltd.
312 Walnut Street
Suite 1600
Cincinnati, Ohio 45202

May 2022

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FIGURES

TABLES

APPENDICES

CHAPTER 1 INTRODUCTION

AEP Ohio Transmission Company, Inc., (AEP) plans to upgrade its existing West Dover distribution station, situated south of State Route 39 in Dover Township, Tuscarawas County, Ohio. As a result of the station upgrades, three approximately 0.05- to 0.12-mile segments of existing 138 kV transmission lines will require modifications. These three 138 kV transmission lines include West Dover Extension #1, West Dover Extension #2, and West Dover-Sugarcreek. The project area (SITE) is approximately 10.40 acres (**Figure 1**).

V3 Companies, Ltd (V3) evaluated the SITE for wetlands, streams, open water, and endangered, threatened, and rare (ETR) species and habitat.

This report has been prepared solely in accordance with an agreement between AEP and V3. The services performed by V3 have been conducted in a manner consistent with the level of quality and skill generally exercised by members of its profession and consulting practices relating to this type of engagement.

This report is solely for the use of AEP. It was prepared based upon an understanding of AEP's specific objective(s) and based upon information obtained by V3 in furtherance of AEP's specific objective(s). Any reliance on this report by third parties shall be at such third party's sole risk as this report may not contain, or be based upon, sufficient information for purposes of other parties, for their objectives, or for other uses. This report shall only be presented in full and may not be used to support any objectives other than those for AEP as set out in the report, except where written approval and consent are expressly provided by AEP and V3.

CHAPTER 2 METHODS

2.1 LAND COVER SURVEY

V3 corresponded with the U.S. Fish and Wildlife Service (USFWS) and Ohio Department of Natural Resources (ODNR) to determine the potential presence of protected areas within the site area. Potential protected areas include unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, nature preserves, parks, state/national forests, wildlife refuges, and others.

V3 also completed a desktop terrestrial habitat analysis using geographic information system (GIS) software and aerial imagery. V3 identified land cover and vegetative community types within the project area and determined the percent share of total area accounted for by each. V3 verified this analysis by completing a pedestrian survey of the project area, noting vegetative species composition and documenting conditions with representative photographs.

2.2 WETLAND DELINEATION

V3 completed a desktop review of project area wetlands using the following: U.S. Geological Survey (USGS) topographic maps; aerial photography; National Wetland Inventory (NWI) maps; U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey maps; and Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) data.

V3 completed an on-site wetland delineation using the Routine Determination Method (RDM) as per the U.S. Army Corps of Engineers (USACE) *Wetlands Delineation Manual* and *Eastern Piedmont Regional Supplement*. This approach recognizes the three parameters of wetland hydrology, hydrophytic vegetation, and hydric soils to identify and delineate wetland boundaries. Wetland surveys were conducted using the most current regulations as regulated by Ohio Administrative Code (OAC) rules 3745-1-50 through 3745-1-54. V3 used a portable global positioning system (GPS) of sub-meter accuracy to delineate all wetlands identified within the project area. Once delineated, V3 classified these wetlands using the Ohio Rapid Assessment Method (ORAM) for wetlands.

2.3 STREAM DELINEATION

A desktop review of the available USGS topographic mapping, aerial photography, and FEMA National Flood Hazard Layer (NFHL) data was conducted for the Project area. A desktop review of the Ohio Environmental Protection Agency (OEPA) Stream Water Quality Certification Eligibility Web Map and Aquatic Life Use Designations (OAC 3745-1). V3 identified drainage features within the project area. If the feature exhibited an ordinary high water mark[1] (OHWM), V3 determined its jurisdictional status using the pre-2015 regulatory definition[2] of "Waters of the U.S." If the feature qualified as a "Water of the U.S.," V3 classified it as an ephemeral, intermittent, or perennial stream.[3] As regulated by OAC Chapter 3745-1-24, V3 performed a functional habitat assessment using the Headwater Habitat Evaluation Index (HHEI) or the Qualitative Habitat Evaluation Index (QHEI). V3 recorded stream centerlines using a hand-held GPS of sub-meter accuracy.

V3 also used a hand-held GPS to record the placement of upland drainage features lacking an OHWM but did not complete an HHEI or QHEI for these features.

[1] 33 Code of Federal Regulations (CFR) §328.3(c)(7)
[2] 40 CFR §230.3(s)a
[3] 3 CFR §32.3(c)(3,5,8)

2.4 OPEN WATER SURVEY

V3 completed an on-SITE survey for open water features (such as ponds) within the site area. V3 recorded the placement of these features using a hand-held GPS unit of sub-meter accuracy.

2.5 ENDANGERED, THREATENED, AND RARE SPECIES

V3 coordinated with the USFWS and the ODNR regarding the potential presence of any rare, threatened, or endangered species within the project area in July 2021. Responses from ODNR and USFWS were received on 1 September 2021 and 26 July 2021, respectively. V3 also completed an on-site pedestrian habitat survey, noting and recording instances of rare, threatened, or endangered species habitat observed. If applicable, V3 documented rare, threatened, or endangered habitat using a hand-held GPS. Areas of karst topography and underground mine openings were also reviewed for potential for winter hibernacula for bat species.

CHAPTER 3 RESULTS

V3 completed on-site project area fieldwork on 26 April 2022. This included a land cover survey, wetland delineation, stream delineation, open water survey, and habitat survey.

3.1 LAND COVER

Agency correspondence indicated no protected areas within the project area limits. V3's land cover survey identified four land cover and vegetative community types within the project area (Table 1 and Figure 2).

Table 1: Land Cover Survey Results

Type	Anthropogenic Disturbance	Unique, Rare, or High Quality?	Project Area Acreage (approximate)
Mid-successional woodland	Semi-mature wooded area	Some summer roosting bat habitat observed	5.50
Gravel pad or driveway	Fully disturbed developed area	N/A	1.40
Maintained Electric Transmission ROW	Maintained electric transmission line ROW with consistent vegetation clearing	N/A	2.80
Mowed Turf	Actively mowed, high level of anthropogenic disturbance	N/A	0.20
Stream/Wetland	Delineated aquatic feature	N/A	0.50

Figure 2 shows the approximate placement of these land cover types. Copies of agency correspondence can be referenced in Appendix A. Representative photographs of the habitat types in the Project area are included in Appendix B.

3.2 WETLANDS

V3 identified one wetland within the project area, Wetland A (Table 2). Figure 3 shows the placement of this wetland. Table 3 compares the results of V3's on-site wetland delineation with NWI features mapped within the project area. Data sheets, ORAM forms, and photography can be referenced in Appendix C.

(continued on next page)

Table 2: Wetland Delineation Results

Wetland	Placement		Regulatory Status	Class	Size (acres)	ORAM		Nearest Structures		Impacts		
	Lat	Long				Score	Category	Existing	Proposed	Structure Proposed in Wetland?	Temporary Matting (acres)	Permanent Impacts (acres)
Wetland A	40.508006°	-81.564035°	USACE/OEPA	PFO	0.53	29	1	N/A	To be determined	To be determined		

Table 3: NWI Disposition within Project Area

NWI Code	Size (acres)	Related Field Data	Comments
PEM1C	0.3	Wetland A	Wetland A extends outside the Project area to a mapped PEM NWI area.

3.3 STREAMS

V3 identified two streams and four upland drainage features situated at least partially within the project area. Upland drainage features 1 and 2 were erosional features that have developed due to stormwater runoff from the station. Upland drainage features 3 and 4 are grass swales that manage runoff from the access road and discharge into the stormwater management system for OH 39. **Figure 3** shows the placement of these features and **Table 4** shows a summary description with the length in linear feet (LF). Completed QHEI/HHEI forms and representative photography can be referenced in **Appendix D**.

(continued on next page)

Table 4: Streams in Project Area

Stream	Placement		Type*	Length in Project Area (LF)	Bankfull Width (LF)	OHWM Width (LF)	Habitat Assessment			OEPA 401 Eligibility	Stream Crossing	Proposed Impacts	
	Lat	Long					Method	Score	Result			Type	Length (LF)
Stream 1	40.50758°	-81.56308°	INT	435	3	2	HHEI	26	Cat. 1	Eligible	To be determined		
Stream 2	40.50805°	-81.56209°	INT	52	3	2	HHEI	28	Cat. 1	Eligible	To be determined		
Upland Drainage Feature 1	40.50869°	-81.56232°	N/A	400	1	N/A	N/A	N/A	N/A	N/A	To be determined		
Upland Drainage Feature 2	40.50881°	-81.56216°	N/A	22	1	N/A	N/A	N/A	N/A	N/A	To be determined		
Upland Drainage Feature 3	40.50841°	-81.56438°	N/A	177	1	N/A	N/A	N/A	N/A	N/A	To be determined		
Upland Drainage Feature 4	40.50869°	-81.56437°	N/A	59	1	N/A	N/A	N/A	N/A	N/A	To be determined		

* INT = Intermittent Stream

3.4 OPEN WATERS

V3 identified no open water features situated at least partially within the project area.

3.5 ENDANGERED, THREATENED, AND RARE SPECIES

Agency correspondence indicated that the project area is situated within the range of sixteen T&E species, for which V3 identified one instance of potential habitat (Table 5, Figure 4).

(continued on next page)

Table 5: Habitat Survey Results

Scientific Name	Common Name	Federal Status	State Status	Habitat	ODNR Comments	USFWS Comments	Habitat Observed	Potential Impacts & Avoidance
Bats								
Myotis sodalis	Indiana bat	E	E	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. Primarily use caves for hibernacula, although are also known to hibernate in abandoned underground mines.	ODNR DOW recommends that habitat be conserved wherever possible. If suitable habitat occurs within the Project area and trees need to be cut, the ODNR DOW recommends cutting occur between October 1 and March 31. ODNR also recommends a desktop habitat assessment, followed by a field assessment if needed, to determine if a potential hibernaculum is present within 0.25 mile of the Project area.	Seasonal clearing between October 1 and March 31 for any trees >3" dbh recommended. Summer presence/absence survey if seasonal clearing is not possible.	Two underground mine points are mapped by ODNR within 0.25 mile. One point (TS-0GS-001) is approximately 600 feet to the northwest. It is listed as a coal mine with a 1919 permit. The area was subsequently surface mined in the 1970s. The second point (TS-281) is a reported air shaft with a mining permit obtained in 1937. It is mapped 400 feet to the west. V3 was unable to locate the reported historical air shaft during the site reconnaissance. Neither reported underground mine appears to be a viable bat hibernaculum. Potential summer roost trees were observed on-SITE.	Seasonal tree cutting between October 1 and March 31 or summer presence/ absence surveys.
Myotis septentrionalis	Northern long-eared bat	T	E					
Myotis lucifugus	Little brown bat	N/A	E			None		
Perimyotis subflavus	Tricolored bat	N/A	E			None		

Scientific Name	Common Name	Federal Status	State Status	Habitat	ODNR Comments	USFWS Comments	Habitat Observed	Potential Impacts & Avoidance
Mussels								
Pleurobema clava	Clubshell	E	E	Perennial streams of sufficient size.	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 these species.	None	None	No perennial streams were observed within the Project area. No in-water is proposed. No impacts to mussel species are anticipated.
Cyprogenia stegaria	Fanshell	E	E					
Plethobasus cyphyus	Sheepnose	E	E					
Fusconaia maculata maculata	Long-solid	N/A	E					
Lampsilis ovate	Sharp-ridged pocketbook	N/A	E					
Fishes								
Noturus stigmosus	Northern madtom	N/A	E	Perennial streams of sufficient size.	ODNR 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.	None	None	No perennial streams were observed within the Project area. No in-water is proposed. No impacts to fish species are anticipated.
Fundulus diaphanus menona	Western banded killifish	N/A	E					
Noturus eleutherus	Mountain madtom	N/A	T					

Scientific Name	Common Name	Federal Status	State Status	Habitat	ODNR Comments	USFWS Comments	Habitat Observed	Potential Impacts & Avoidance
Amphibians								
Scaphiopus holbrookii	Eastern spadefoot toad	N/A	E	Sandy soils that are associated with river valleys. Breeding habitats include flooded agricultural fields or other water holding depressions.	Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.	None	None	None
Cryptobranchus alleganiensis alleganiensis	Eastern hellbender	SC	E	Perennial streams with large flat rocks	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.	None	None	None
Birds								
Chondestes grammacus	Lark sparrow	N/A	E	Grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil.	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 habitat will not be impacted, this project is not likely to impact this species.	None	None	None

Scientific Name	Common Name	Federal Status	State Status	Habitat	ODNR Comments	USFWS Comments	Habitat Observed	Potential Impacts & Avoidance
Circus hudsonis	Northern Harrier	N/A	E	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.	None	None	None

CHAPTER 4 CONCLUSION

On 26 April 2022, V3 completed a wetland delineation, stream delineation, open water survey, and habitat survey for the project area of the proposed West Dover Station and associated transmission line adjustments. V3 identified one wetland, two intermittent streams, four upland drainage features, no open water features, and potential summer roosting bat habitat within the project area.

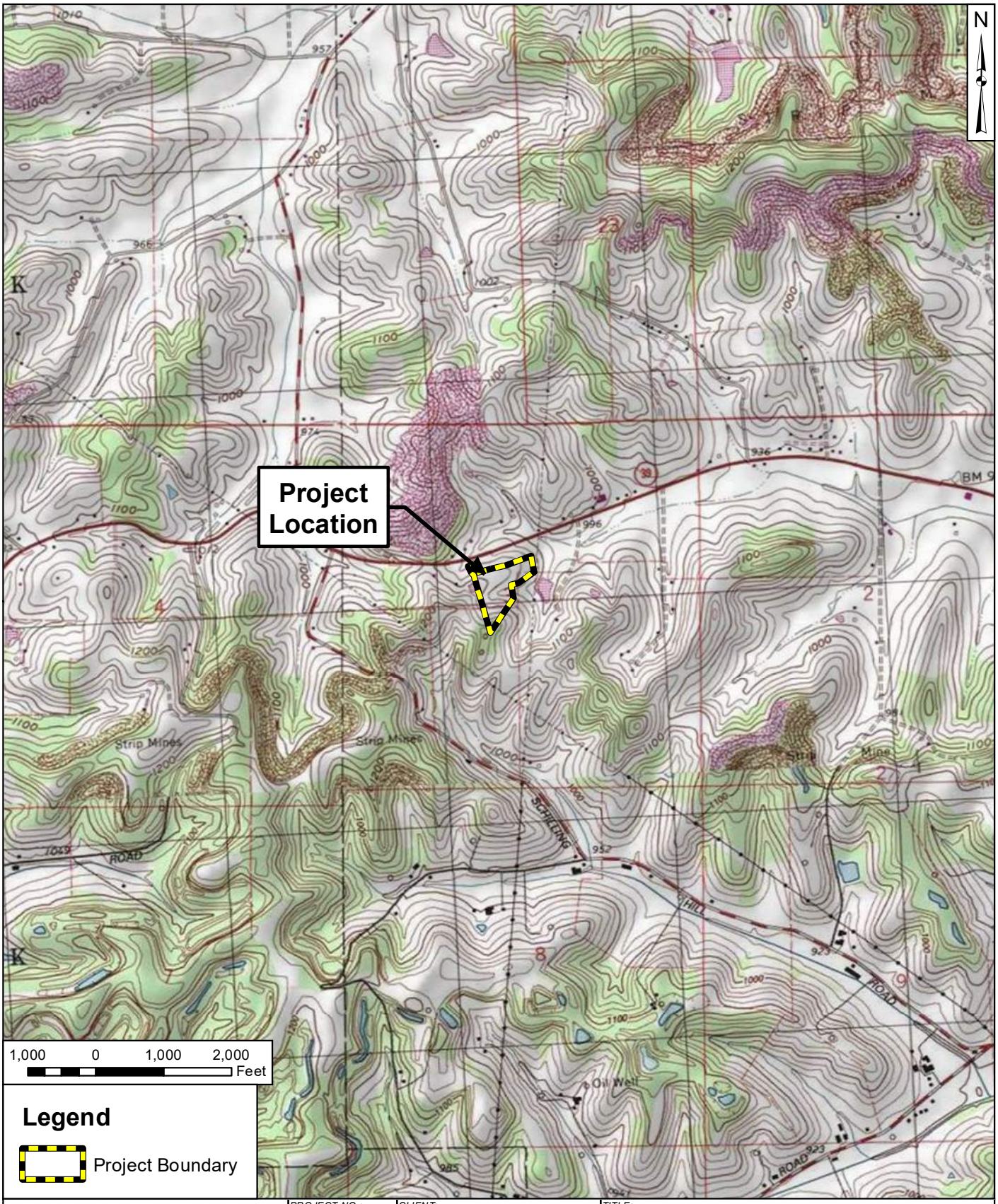
One Category 1 PFO wetland was delineated west of the existing substation fence. The total area of Wetland A is approximately 0.53 acre within the surveyed area. This wetland extends off-SITE to the west and appeared to become an open water (POW) or emergent (PEM) wetland rather than the PFO portion of the wetland observed on-SITE.

Two Class 1 intermittent streams were delineated on site to the south of the existing substation. These streams flow to the east off-SITE.

Four upland drainage features were identified during the site visit. Upland drainage features 1 and 2 were erosional features that have developed due to stormwater runoff from the station. Upland drainage features 3 and 4 are grass swales that manage runoff from the access road and discharge into the stormwater management system for OH 39.

Coordination with USFWS and ODNR identified Indiana, northern long-eared, little brown, and tricolored bat species listed as endangered or threatened at the federal or state level. Two underground mine points are mapped by ODNR within 0.25 mile of the SITE. One point (TS-0GS-001) is approximately 600 feet to the northwest of the SITE. It is listed as a coal mine with a 1919 permit. The area was subsequently surface mined in the 1970s. The second point (TS-281) is a reported air shaft with a mining permit obtained in 1937. It is mapped 400 feet to the west of the SITE. V3 was unable to locate the reported historical air shaft during SITE reconnaissance. Neither reported underground mine appears to be a viable bat hibernaculum. Approximately 5.50 acres of wooded area is present on-SITE. Potential summer roost trees consisting primarily of snags and other tree cavities were observed throughout much of the wooded area. Seasonal tree cutting between October 1 and March 31 or summer presence/absence surveys are expected to be required.

ODNR identified two state endangered bird species with the potential to inhabit the project area. The lark sparrow favors grassland habitats with scattered shrub layers and disturbed open areas, as well as patches of bare soil. 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. The northern harrier 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. The SITE is primarily wooded with areas of existing transmission line ROW. No suitable habitat for either of these bird species was observed. No impacts to these species are anticipated.



619 N. Pennsylvania Street
Indianapolis, IN 46204
317.423.0690 phone
www.v3co.com

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PROJECT NO.:	210180.010
CREATED BY:	ARG
DATE:	05/09/2022
SCALE:	See Scale Bar

CLIENT:
American Electric Power
8500 Smiths Mill Road
New Albany, Ohio 43054

BASE LAYER:
USGS Topographic Quadrangle Maps: Strasburg, OH and Stone Creek, OH

TITLE:
PROJECT LOCATION MAP

SITE:
West Dover Station and Interconnections
Dover, Tuscarawas County, Ohio

FIGURE:
1

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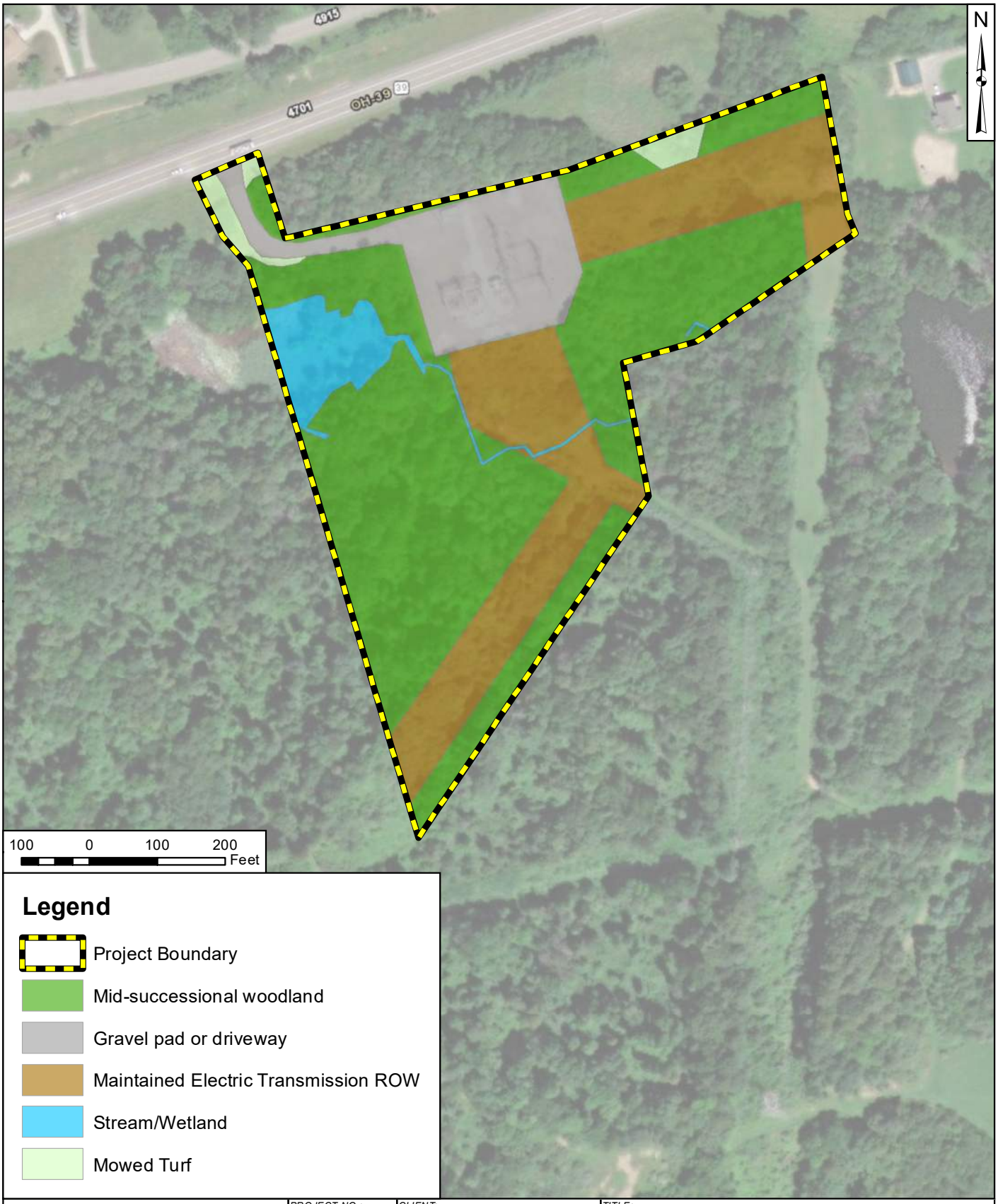

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PROJECT NO.:	210180.010
CREATED BY:	ARG
DATE:	05/09/2022
SCALE:	See Scale Bar

CLIENT:
American Electric Power
8500 Smiths Mill Road
New Albany, Ohio 43054

BASE LAYER:
Aerial Imagery
(2018)

TITLE:
HABITAT ASSESSMENT MAP

SITE:
West Dover Station and Interconnections
Dover, Tuscarawas County, Ohio

FIGURE:
2

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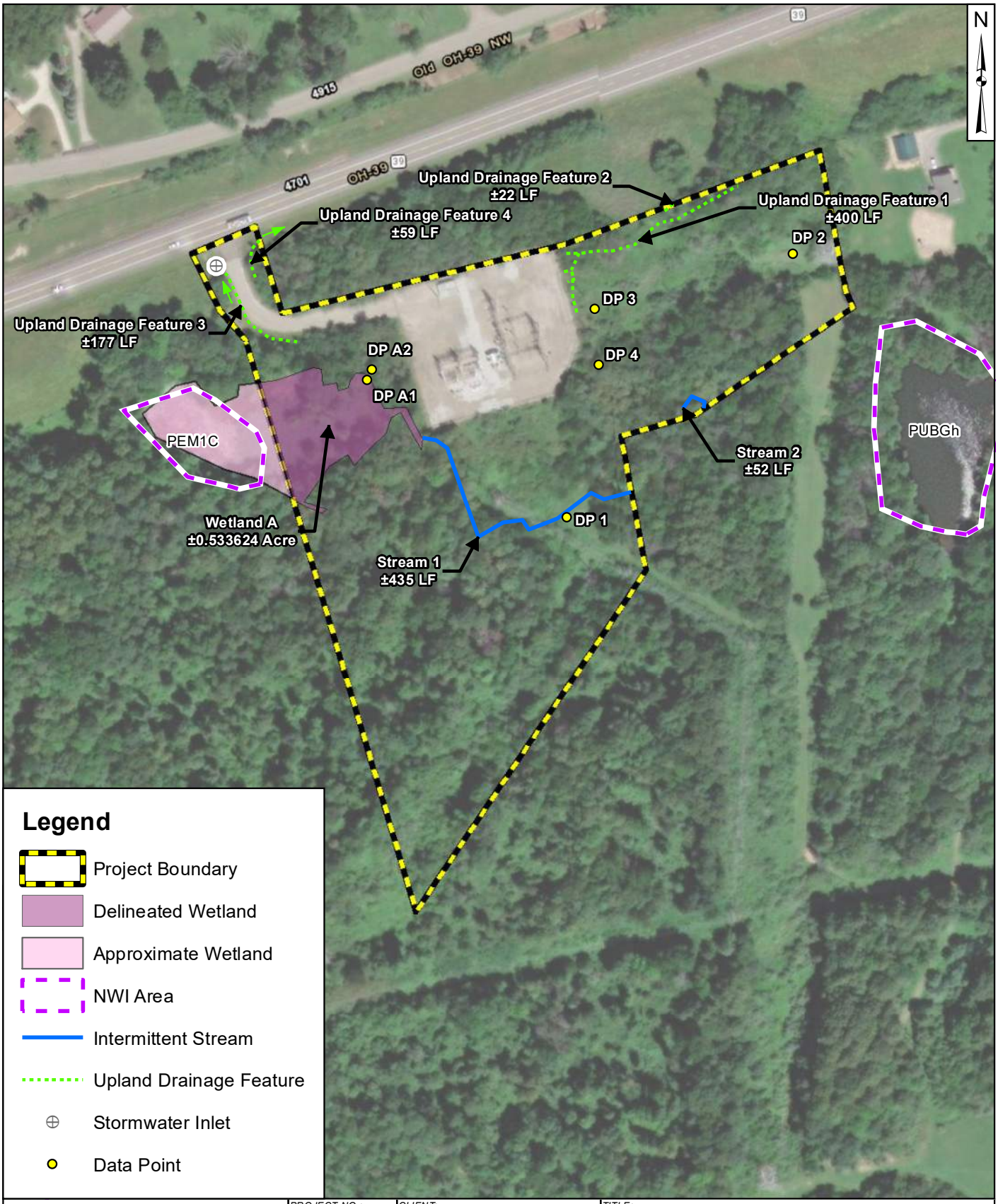

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PROJECT NO.:	210180.010
CREATED BY:	ARG
DATE:	05/13/2022
SCALE:	See Scale Bar

CLIENT:
American Electric Power
8500 Smiths Mill Road
New Albany, Ohio 43054

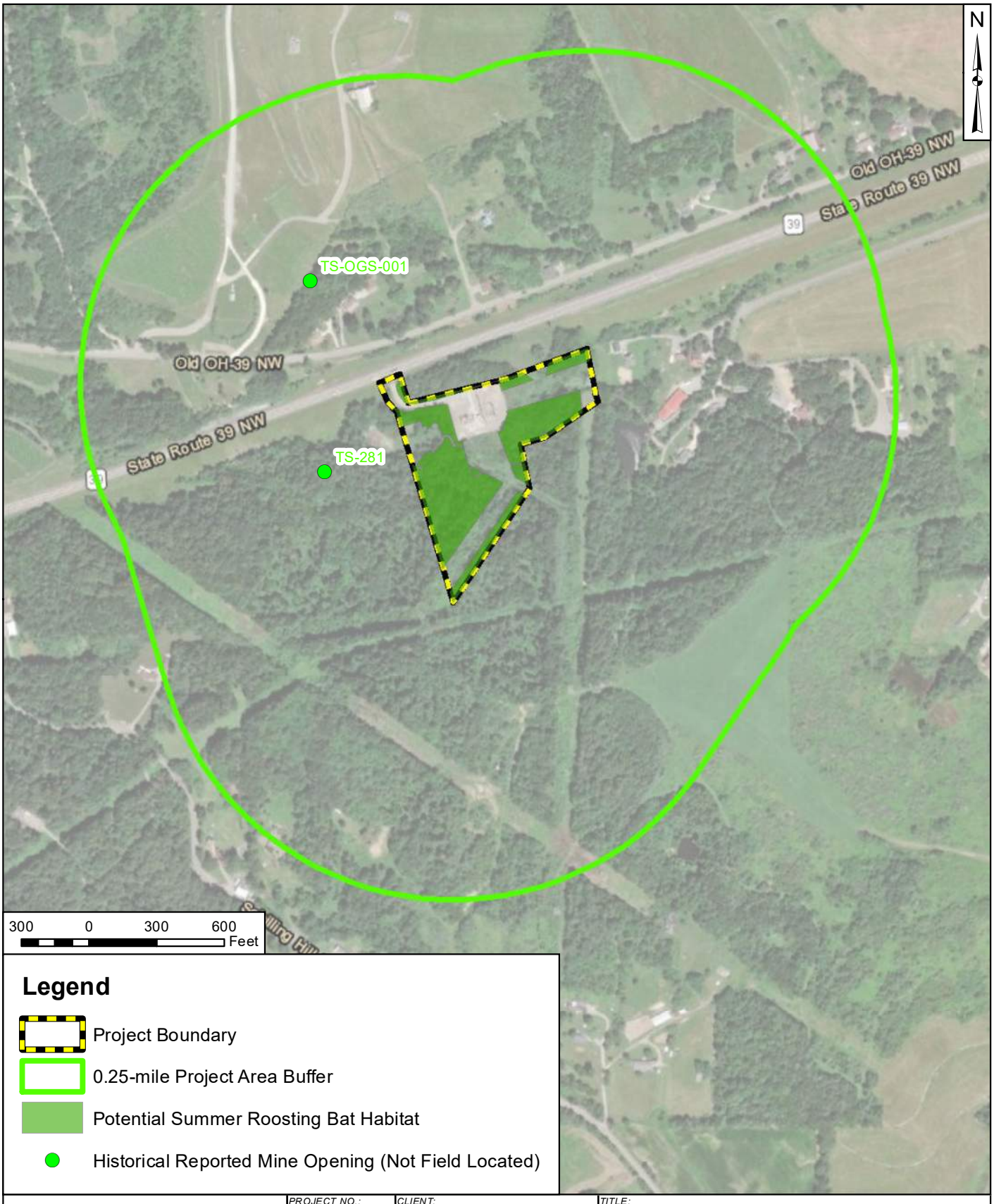
BASE LAYER:
Aerial Imagery
(2018)

WETLAND AND STREAM DELINEATION MAP

SITE:
West Dover Station and Interconnections
Dover, Tuscarawas County, Ohio

FIGURE:
3

N:\2021\210180\210180.010 West Dover Station NRA\Drawings\ArcGIS\FIG3delin210180010-013.mxd



Legend

- Project Boundary
- 0.25-mile Project Area Buffer
- Potential Summer Roosting Bat Habitat
- Historical Reported Mine Opening (Not Field Located)

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PROJECT NO.:	210180.010
CREATED BY:	ARG
DATE:	05/09/2022
SCALE:	See Scale Bar
CLIENT:	American Electric Power 8500 Smiths Mill Road New Albany, Ohio 43054
BASE LAYER:	Aerial Imagery (2018)
TITLE:	**T&E SPECIES HABITAT MAP**
SITE:	West Dover Station and Interconnections Dover, Tuscarawas County, Ohio
FIGURE:	4

N:\2021\210180\210180.010 West Dover Station NRA\Drawings\ArcGIS\FIG4T&E_210180010-013.mxd

Appendix A

ODNR and USFWS Correspondence

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

September 1, 2021

Aaron Geckle
V3 Companies, Ltd.
312 Walnut Street , Suite 1600
Cincinnati, Ohio 45202

Re: 21-0680; AEP West Dover Transmission Lines Upgrade Project, Tuscarawas County, Ohio

Project: The proposed project involves upgrades to the AEP West Dover transmission lines.

Location: The proposed project is located in Dover, Tuscarawas 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 no records at or within a one-mile radius of the project area.

A review of the Ohio Natural Heritage Database indicates there are no other records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species. In addition, we are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within the project area. The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980.

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.

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 following listed mussel species.
Federally Endangered
clubshell (*Pleurobema clava*)
fanshell (*Cyprogenia stegaria*)
sheepnose (*Plethobasus cyphyus*)

State Endangered
long-solid (*Fusconaia maculata maculata*)
sharp-ridged pocketbook (*Lampsilis ovate*)
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 these species.

The project is within the range of the following listed fish species.
State Endangered
northern madtom (*Noturus stigmosus*)
western banded killifish (Fundulus diaphanus menona)

State Threatened
mountain madtom (*Noturus eleutherus*)
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 spadefoot toad (*Scaphiopus holbrookii*), a state endangered species. This species is found in areas of sandy soils that are associated with river valleys. Breeding habitats may include flooded agricultural fields or other water holding depressions. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the 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 lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. In the Oak Openings area west of Toledo, lark sparrows occupy open grass and shrubby fields along sandy beach ridges. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. 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 habitat will not be impacted, this project is not likely to impact this species.

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

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

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

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

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

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

Mike Pettegrew
Environmental Services Administrator (Acting)

Aaron Geckle

From: Ohio, FW3 <ohio@fws.gov>
Sent: Monday, July 26, 2021 9:46 AM
To: Aaron Geckle
Cc: nathan.reardon@dnr.state.oh.us; Parsons, Kate; ajtoohey@aep.com
Subject: AEP West Dover Transmission Lines Upgrade, Dover Township, Tuscarawas 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# 03E15000-2021-TA-1761

Dear Mr. Geckle,

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 M. Ashfield
Field Office Supervisor

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

Appendix B

Representative Habitat Photography

Photo: 1 Representative Habitat DP 1 **Direction of View:** Northwest **Date:** 26 April 2022	
Photo: 2 Representative bat roosting habitat tree **Direction of View:** East **Date:** 26 April 2022	
Photo: 3 Typical fringe habitat around substation **Direction of View:** West **Date:** 26 April 2022	

Photo: 4 Typical wooded habitat **Direction of View:** North **Date:** 26 April 2022	
Photo: 5 Existing ROW **Direction of View:** East **Date:** 26 April 2022	

Appendix C

Wetland Delineation Materials

WETLAND DETERMINATION FORM-EASTERN MOUNTAINS AND PIEDMONT

Site: West Dover Station Expansion | City/County: Tuscawaras County | Date: 4.26.22 | Data Point: A1
Client: American Electric Power Transmission | State: OH | Section, Township, Range: S3 T8N R3W
Investigator(s): L. Vine, J. Moody | Landform: Ridges, Hillslopes | Local Relief: Linear, concave
Slope (%): 15 - 25 | Lat. 40.508076° | Long. -81.564547° | Datum: NAD 83 | NWI Class: PFO
Soil Map Unit Name: Coshocton-Guernsey silt loams, 15 to 25 percent slopes
Climatic/hydrologic conditions typical for time of year? Y/N: Y
Vegetation ____, Soil ____ or Hydrology ____ significantly disturbed
Vegetation ____, Soil ____ or Hydrology ____ naturally problematic
Are Normal Circumstances Present? Yes: X No: ____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes: x No: ____
Hydric Soil Present? Yes: x No: ____
Wetland Hydrology Present? Yes: x No: ____
Is the DP within a Wetland? Yes x No
Remarks:

VEGETATION

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species	Indicator Status	
1. *Acer rubrum*	25	Y	FAC	3
2. *Taxodium distichum*	7	Y	OBL	1
3. *Betula nigra*	2		FACW	2
4.				
5.				
	34	Total Cover		
Shrub Stratum (Plot size: ____)				
1. *Betula nigra*	7	Y	FACW	2
2.				
3.				
4.				
5.				
	7	Total Cover		
Herb Stratum (Plot size: ____)				
1. *Phalaris arundinacea*	25	Y	FACW	2
2. *Phragmites australis*	25	Y	FACW	2
3. *Juncus effusus*	5		FACW	2
4.				
5.				
6.				
7.				
8.				
	55	Total Cover		
Woody Vine Stratum (Plot size: ____)				
1.				
2.				
	0	Total Cover		

Remarks:

Dominance Test Worksheet
Number of dominant species that are OBL, FACW, or FAC: 5
Total number of dominant species across all strata: 5
Percent of dominant species that are OBL, FACW, or FAC: 100.00

Prevalence Index Worksheet
Total % cover of:

OBL species	7	x 1	7
FACW species	64	x 2	128
FAC species	25	x 3	75
FACU species	0	x 4	0
UPL species	0	x 5	0
Total	96		210
		Prevalence Index:	2.19

Hydrophytic Vegetation Indicators:
____ Rapid Test for Hydrophytic Veg.
x Dominance Test is >50%
x Prevalence Index is <3.0*
____ Morphological Adaptations*
____ Problematic Hydrophytic Vegetation*
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes x No

SOIL

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

Depth (inches)	Matrix Color	Matrix %	Redox Features Color	%	Type*	Loc**	Texture	Remarks
0 - 4	10YR 4/2	100					SiCL	
4 - 18	10YR 5/1	90	10YR 4/6	10	C	M	SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

____ Histosol (A1)	____ Sandy Mucky Mineral (S1)	____ Redox Dark Surface (F6)
____ Histic Epipedon (A2)	____ 5cm Mucky Peat or Peat	____ Depleted Dark Surface (F7)
____ Black Histic (A3)	____ Sandy Gleyed Matrix (S4)	____ Redox Depressions (F8)
____ Hydrogen Sulfide (A4)	____ Sandy Redox (S5)	**Indicators for Problematic Hydric Soils**
____ Stratified Layers (A5)	____ Stripped Matrix (S6)	____ Coast Prairie Redox (A16)
____ 2 cm Muck (A10)	____ Loamy Mucky Mineral (F1)	____ Iron-Manganese Masses (F12)
____ Depleted Below Dark Surface (A11)	____ Loamy Gleyed Matrix (F2)	____ Very Shallow Dark Surface (F12)
____ Thick Dark Surface (A12)	x Depleted Matrix (F3)	____ Other

Restrictive Layer (if observed): Type: ____ Depth (Inches): ____ **Hydric Soil Present? Yes x No**
Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)		Secondary Indicators
____ Surface Water (A1)	____ Water Stained Leaves (B9)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Aquatic Fauna (B13)	____ Drainage Patterns (B10)
____ Saturation (A3)	____ True Aquatic Plants (B14)	____ Dry-Season Water Table (C2)
____ Water Marks (B1)	x Hydrogen Sulfide Odor (C1)	____ Crayfish Burrows (C8)
____ Sediment Deposits (B2)	x Oxidized Rhizospheres on Living Roots	____ Saturation Visible on Aerial Imagery (C9)
____ Drift Deposits (B3)	____ Presence of Reduced Iron (C4)	____ Stunted or Stressed Plants (D1)
____ Algal Mat or Crust (B4)	____ Recent Iron Reduction in Tilled Soil (C6)	x Geomorphic Position (D2)
x Iron Deposits (B5)	____ Thin Muck Surface (C7)	x FAC-Neutral Test (D5)
____ Inundation Visible on Aerial Imagery (B7)	____ Guage or Well Data (D9)	
____ Sparsely Vegetated Concave Surface	____ Other	

Field Observations: Surface Water Present? Yes: x No: ____ Depth (inches) 2"
Water Table Present? Yes: ____ No: ____ Depth (inches): ____
Saturation Present? Yes: x No: ____ Depth (inches) 2"

Hydrology Indicators Present? Yes x No

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

Version 5.0	**Ohio Rapid Assessment Method for Wetlands** **10 Page Form for Wetland Categorization**	
	Background Information **Scoring Boundary Worksheet** **Narrative Rating** **Field Form Quantitative Rating** **ORAM Summary Worksheet** **Wetland Categorization Worksheet**	Ohio EPA, Division of Surface Water Final: February 1, 2001

Instructions

The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

The Narrative Rating is designed to categorize a wetland or to provide alerts to the Rater based on the presence or possible presence of threatened or endangered species. The presence or proximity of such species is often an indicator of the quality and lack of disturbance of the wetland being evaluated. In addition, it is designed to categorize certain wetlands as very low quality (Category 1) or very high quality (Category 3) regardless of the wetland's score on the Quantitative Rating. In addition, the Narrative Rating also alerts the investigator that a particular wetland *may* be a Category 3 wetland, again, regardless of the wetland's score on the Quantitative Rating.

It is *VERY IMPORTANT* to properly and thoroughly answer each of the questions in the ORAM in order to properly categorize a wetland. To *properly* answer all the questions, the boundaries of the wetland being assessed must be correctly identified. Refer to Scoring Boundary worksheet and the User's Manual for a discussion of how to determine the "scoring boundaries." In some instances, the scoring boundaries may differ from the "jurisdictional boundaries."

Refer to the most recent ORAM Score Calibration Report for the scoring breakpoints between wetland categories. The most recent version of this document is posted on Ohio EPA's Division of Surface Water web page at: http://www.epa.ohio.gov/dsw/wetlands/WetlandEcologySection.aspx

Background Information

Name: Landon Vine	
Date: 26 April 2022	
Affiliation: V3 Companies, Ltd.	
Address: 619 North Pennsylvania Street, Indianapolis, Indiana 46204	
Phone Number: 317.423.0690	
e-mail address: Lvine@v3co.com	
Name of Wetland: Wetland A	
Vegetation Communit(ies): Emergent and forested	
HGM Class(es): Depressional	
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc. See attached documentation.	
Lat/Long or UTM Coordinate	40.508006°, -81.564035°
USGS Quad Name	Strasburg
County	Tuscarawas
Township	Dover
Section and Subsection	Section 3, Township 8 North, Range 3 West
Hydrologic Unit Code	05040001
Site Visit	04.26.2022
National Wetland Inventory Map	See attached documentation.
Ohio Wetland Inventory Map	See attached documentation.
Soil Survey	See attached documentation.
Delineation report/map	See attached documentation.

Name of Wetland: Wetland A	
Wetland Size (acres, hectares): 0.53	acres

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

See attached documentation for map of Wetland A.

Comments, Narrative Discussion, Justification of Category Changes:

Wetland A is dominated by common reed (Phragmites australis) with scattered young trees of various species.

Final score : 29 **Category:**	1

Scoring Boundary Worksheet

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

#	Steps in properly establishing scoring boundaries	done?	not applicable
Step 1	Identify the wetland area of interest. This may be the site of a proposed impact, a reference site, conservation site, etc.	Yes	
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.	Yes	
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.	Yes	
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.	Yes	
Step 5	In all instances, the Rater may enlarge the minimum scoring boundaries discussed here to score together wetlands that could be scored separately.		N/A
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.		N/A

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

Narrative Rating

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

#	Question	Circle one	
1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	NO Go to Question 2
2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	NO Go to Question 3
3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	NO Go to Question 4
4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	NO Go to Question 5
5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *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

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

Table 1. Characteristic plant species.

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

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

Site: West Dover Station Expansion	**Rater(s):** L. Vine, V3 Companies, Ltd.	**Date:** 04.26.22

Metric 1. Wetland Area (size).

2	2
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.

9	11
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)
- [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)
- [x] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

10	21
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)
- [ ] Between stream/lake and other human use (1)
- [ ] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

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

- [ ] >0.7 (27.6in) (3)
- [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.

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [x] 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.

8	29
max 20 pts.	subtotal

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

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [x] 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

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

29
subtotal this page

last revised 1 February 2001 jjm

Site: West Dover Station Expansion	**Rater(s):** L. Vine, V3 Companies, Ltd.	**Date:** 04.26.2022

29
subtotal first page

0 (max 10 pts.) | 29 (subtotal)

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

0 (max 20 pts.) | 29 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.
Score all present using 0 to 3 scale.

- [0] Aquatic bed
- [1] Emergent
- [0] Shrub
- [1] Forest
- [0] Mudflats
- [1] Open water
- [0] 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 to Table 1 ORAM long form for list. Add or deduct points for coverage

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

6d. Microtopography.
Score all present using 0 to 3 scale.

- [0] 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 vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

29

End of Quantitative Rating. Complete Categorization Worksheets.

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES 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	9	
	Metric 3. Hydrology	10	
	Metric 4. Habitat	8	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	0	
	TOTAL SCORE	29	Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

Choices	Circle one		Evaluation of Categorization Result of ORAM
Did you answer "Yes" to any of the following questions: Narrative Rating Nos. 2, 3, 4, 6, 7, 8a, 9d, 10	YES Wetland is categorized as a Category 3 wetland	NO	Is quantitative rating score *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.

Photo: 1 Wetland A **Direction of View:** North **Date:** 26 April 2022	
Photo: 2 Wetland A **Direction of View:** East **Date:** 26 April 2022	
Photo: 3 Wetland A **Direction of View:** South **Date:** 26 April 2022	

Photo: 4 Wetland A **Direction of View:** West **Date:** 26 April 2022	

WETLAND DETERMINATION FORM-EASTERN MOUNTAINS AND PIEDMONT

Site: West Dover Station Expansion | City/County: Tuscawaras County | Date: 4.26.22 | Data Point: A2
Client: American Electric Power Transmission | State: OH | Section, Township, Range: S3 T8N R3W
Investigator(s): L. Vine, J. Moody | Landform: Ridges, Hillslopes | Local Relief: Linear, concave
Slope (%): 15 - 25 | Lat. 40.508114° | Long. -81.564518° | Datum: NAD 83 | NWI Class: N/A
Soil Map Unit Name: Coshocton-Guernsey silt loams, 15 to 25 percent slopes
Climatic/hydrologic conditions typical for time of year? Y/N: Y
Vegetation ____, Soil ____ or Hydrology ____ significantly disturbed
Vegetation ____, Soil ____ or Hydrology ____ naturally problematic
Are Normal Circumstances Present? Yes: x No:

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes: No: x
Hydric Soil Present? Yes: No: x
Wetland Hydrology Present? Yes: x No:
Is the DP within a Wetland? Yes: No: x
Remarks:

VEGETATION

	Absolute % Cover	Dominant Species	Indicator Status	
Tree Stratum Plot size:				
1. *Celtis occidentalis*	10	Y	FACU	4
2. *Populus deltoides*	10	Y	FAC	3
3.				
4.				
5.				
	20	Total Cover		
Shrub Stratum Plot size:				
1. *Rosa multiflora*	20	Y	FACU	4
2. *Lonicera maackii*	10	Y	UPL	5
3. *Elaeagnus angustifolia*	7	N	FACU	4
4.				
5.				
	37	Total Cover		
Herb Stratum Plot size:				
1. *Galium concinnum*	20	Y	UPL	5
2. *Phalaris arundinacea*	20	Y	FACW	2
3. *Geum canadense*	15	Y	FACU	4
4. *Viola sororia*	5	N	FAC	3
5. *Symphyotrichum lanceolatum*	3	N	FACW	2
6.				
7.				
8.				
	63	Total Cover		
Woody Vine Stratum Plot size:				
1.				
2.				
	0	Total Cover		

Remarks:

Dominance Test Worksheet
Number of dominant species that are OBL, FACW, or FAC: 2
Total number of dominant species across all strata: 7
Percent of dominant species that are OBL, FACW, or FAC: 28.57

Prevalence Index Worksheet
Total % cover of:

OBL species	0	x 1	0
FACW species	23	x 2	46
FAC species	15	x 3	45
FACU species	52	x 4	208
UPL species	30	x 5	150
Total	120		449
		Prevalence Index:	3.74

Hydrophytic Vegetation Indicators:
___ Rapid Test for Hydrophytic Veg.
___ Dominance Test is >50%
___ Prevalence Index is <3.0*
___ Morphological Adaptations*
___ Problematic Hydrophytic Vegetation*
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes: No: x

SOIL

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

Depth	Matrix		Redox Features					
(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0 - 18	10YR 3/2	100					SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5)
___ 2 cm Muck (A10)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ 5cm Mucky Peat or Peat
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils
___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Very Shallow Dark Surface (F12)
___ Other

Restrictive Layer (if observed): Type:
Depth (Inches):
Hydric Soil Present? Yes: No: x
Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)

___ Surface Water (A1)
___ 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
___ Water Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ True Aquatic Plants (B14)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soil (C6)
___ Thin Muck Surface (C7)
___ Guage or Well Data (D9)
___ Other

Secondary Indicators
___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes: No: Depth (inches):
Water Table Present? Yes: No: Depth (inches):
Saturation Present? Yes: x No: Depth (inches) 5"

Hydrology Indicators Present? Yes: x No:

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

WETLAND DETERMINATION FORM-EASTERN MOUNTAINS AND PIEDMONT

Site: West Dover Station Expansion | City/County: Tuscawaras County | Date: 4.26.22 | Data Point: 1
Client: American Electric Power Transmission | State: OH | Section, Township, Range: S3 T8N R3W
Investigator(s): L. Vine, J. Moody | Landform: Ridges, Hillslopes | Local Relief: Linear, concave
Slope (%): 15 - 25 | Lat. 40.507482° | Long. -81.563527° | Datum: NAD 83 | NWI Class: N/A
Soil Map Unit Name: Coshocton-Guernsey silt loams, 15 to 25 percent slopes
Climatic/hydrologic conditions typical for time of year? Y/N: Y
Vegetation ____, Soil ____ or Hydrology ____ significantly disturbed
Vegetation ____, Soil ____ or Hydrology ____ naturally problematic
Are Normal Circumstances Present? Yes X No

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes x No
Hydric Soil Present? Yes No x
Wetland Hydrology Present? Yes x No
Is the DP within a Wetland? Yes No x

Remarks:

VEGETATION

Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	Total Cover	
Shrub Stratum (Plot size:)			
1.			
2.			
3.			
4.			
5.			
	0	Total Cover	
Herb Stratum (Plot size:)			
1. *Phalaris arundinacea*	80	Y	FACW 2
2. *Galium concinnum*	10	N	UPL 5
3. *Impatiens capensis*	5	N	FACW 2
4.			
5.			
6.			
7.			
8.			
	95	Total Cover	
Woody Vine Stratum (Plot size:)			
1.			
2.			
	0	Total Cover	

Remarks:

Dominance Test Worksheet
Number of dominant species that are OBL, FACW, or FAC: 1
Total number of dominant species across all strata: 1
Percent of dominant species that are OBL, FACW, or FAC: 100.00

Prevalence Index Worksheet
Total % cover of:

OBL species	0	x 1	0
FACW species	85	x 2	170
FAC species	0	x 3	0
FACU species	0	x 4	0
UPL species	10	x 5	50
Total	95		220
		Prevalence Index:	2.32

Hydrophytic Vegetation Indicators:
- ____ Rapid Test for Hydrophytic Veg.
- x Dominance Test is >50%
- x Prevalence Index is <3.0*
- ____ Morphological Adaptations*
- ____ Problematic Hydrophytic Vegetation*

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

Hydrophytic Vegetation Present? Yes x No

SOIL

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

Depth	Matrix		Redox Features					
(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0 - 12	10YR 4/2	100					SiCL	
12 - 18	10YR 4/3	100					SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

____ Histosol (A1)	____ Sandy Mucky Mineral (S1)	____ Redox Dark Surface (F6)
____ Histic Epipedon (A2)	____ 5cm Mucky Peat or Peat	____ Depleted Dark Surface (F7)
____ Black Histic (A3)	____ Sandy Gleyed Matrix (S4)	____ Redox Depressions (F8)
____ Hydrogen Sulfide (A4)	____ Sandy Redox (S5)	**Indicators for Problematic Hydric Soils**
____ Stratified Layers (A5)	____ Stripped Matrix (S6)	____ Coast Prairie Redox (A16)
____ 2 cm Muck (A10)	____ Loamy Mucky Mineral (F1)	____ Iron-Manganese Masses (F12)
____ Depleted Below Dark Surface (A11)	____ Loamy Gleyed Matrix (F2)	____ Very Shallow Dark Surface (F12)
____ Thick Dark Surface (A12)	____ Depleted Matrix (F3)	____ Other

Restrictive Layer (if observed): Type:
Depth (Inches):
Hydric Soil Present? Yes No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)		Secondary Indicators
____ Surface Water (A1)	____ Water Stained Leaves (B9)	____ Surface Soil Cracks (B6)
____ High Water Table (A2)	____ Aquatic Fauna (B13)	____ Drainage Patterns (B10)
x Saturation (A3)	____ True Aquatic Plants (B14)	____ Dry-Season Water Table (C2)
____ Water Marks (B1)	____ Hydrogen Sulfide Odor (C1)	____ Crayfish Burrows (C8)
____ Sediment Deposits (B2)	____ Oxidized Rhizospheres on Living Roots	____ Saturation Visible on Aerial Imagery (C9)
____ Drift Deposits (B3)	____ Presence of Reduced Iron (C4)	____ Stunted or Stressed Plants (D1)
____ Algal Mat or Crust (B4)	____ Recent Iron Reduction in Tilled Soil (C6)	____ Geomorphic Position (D2)
____ Iron Deposits (B5)	____ Thin Muck Surface (C7)	____ FAC-Neutral Test (D5)
____ Inundation Visible on Aerial Imagery (B7)	____ Guage or Well Data (D9)	
____ Sparsely Vegetated Concave Surface	____ Other	

Field Observations:
Surface Water Present? Yes No Depth (inches)
Water Table Present? Yes No Depth (inches)
Saturation Present? Yes x No Depth (inches) 7"

Hydrology Indicators Present? Yes x No

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

WETLAND DETERMINATION FORM-EASTERN MOUNTAINS AND PIEDMONT

Site: West Dover Station Expansion City/County: Tuscawaras County Date: 4.26.22 Data Point: 2
Client: American Electric Power Transmission State: OH Section, Township, Range: S3 T8N R3W
Investigator(s): L. Vine, J. Moody Landform Ridges, Hillslopes Local Relief Linear, concave
Slope (%): 15 - 25 Lat. 40.508504° Long. -81.562266° Datum NAD 83 NWI Class: N/A
Soil Map Unit Name: Coshocton-Guernsey silt loams, 15 to 25 percent slopes
Climatic/hydrologic conditions typical for time of year? Y/N Y
Vegetation _____, Soil _____ or Hydrology _____ significantly disturbed
Vegetation _____, Soil _____ or Hydrology _____ naturally problematic
Are Normal Circumstances Present? Yes X No _____

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes _____ No x
Hydric Soil Present? Yes _____ No x
Wetland Hydrology Present? Yes _____ No x
Is the DP within a Wetland? Yes No x
Remarks:

VEGETATION

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species	Indicator Status	
1.				
2.				
3.				
4.				
5.				
	0	Total Cover		
Shrub Stratum (Plot size: _____)				
1. *Lonicera maacki*	10	Y	UPL	5
2. *Rosa multiflora*	5	Y	FACU	4
3.				
4.				
5.				
	15	Total Cover		
Herb Stratum (Plot size:)				
1. *Schedonorus arundinaceus*	80	Y	FACU	4
2. *Cirsium arvense*	5		FACU	4
3.				
4.				
5.				
6.				
7.				
8.				
	85	Total Cover		
Woody Vine Stratum (Plot size: _____)				
1.				
2.				
	0	Total Cover		

Remarks:

Dominance Test Worksheet
Number of dominant species that are OBL, FACW, or FAC: 0
Total number of dominant species across all strata: 3
Percent of dominant species that are OBL, FACW, or FAC: 0.00

Prevalence Index Worksheet
Total % cover of:

OBL species	0	x 1	0
FACW species	0	x 2	0
FAC species	0	x 3	0
FACU species	90	x 4	360
UPL species	10	x 5	50
Total	100		410
		Prevalence Index:	4.10

Hydrophytic Vegetation Indicators:
_____ Rapid Test for Hydrophytic Veg.
_____ Dominance Test is >50%
_____ Prevalence Index is <3.0*
_____ Morphological Adaptations*
_____ Problematic Hydrophytic Vegetation*
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes No x

SOIL

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

Depth	Matrix		Redox Features					
(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0 - 18	10YR 4/3	100					SiL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

_____ Histosol (A1)	_____ Sandy Mucky Mineral (S1)	_____ Redox Dark Surface (F6)
_____ Histic Epipedon (A2)	_____ 5cm Mucky Peat or Peat	_____ Depleted Dark Surface (F7)
_____ Black Histic (A3)	_____ Sandy Gleyed Matrix (S4)	_____ Redox Depressions (F8)
_____ Hydrogen Sulfide (A4)	_____ Sandy Redox (S5)	**Indicators for Problematic Hydric Soils**
_____ Stratified Layers (A5)	_____ Stripped Matrix (S6)	_____ Coast Prairie Redox (A16)
_____ 2 cm Muck (A10)	_____ Loamy Mucky Mineral (F1)	_____ Iron-Manganese Masses (F12)
_____ Depleted Below Dark Surface (A11)	_____ Loamy Gleyed Matrix (F2)	_____ Very Shallow Dark Surface (F12)
_____ Thick Dark Surface (A12)	_____ Depleted Matrix (F3)	_____ Other

Restrictive Layer (if observed): Type:
Depth (Inches):
Hydric Soil Present? Yes No x

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (check all that apply)		**Secondary Indicators**
_____ Surface Water (A1)	_____ Water Stained Leaves (B9)	_____ Surface Soil Cracks (B6)
_____ High Water Table (A2)	_____ Aquatic Fauna (B13)	_____ Drainage Patterns (B10)
_____ Saturation (A3)	_____ True Aquatic Plants (B14)	_____ Dry-Season Water Table (C2)
_____ Water Marks (B1)	_____ Hydrogen Sulfide Odor (C1)	_____ Crayfish Burrows (C8)
_____ Sediment Deposits (B2)	_____ Oxidized Rhizospheres on Living Roots	_____ Saturation Visible on Aerial Imagery (C9)
_____ Drift Deposits (B3)	_____ Presence of Reduced Iron (C4)	_____ Stunted or Stressed Plants (D1)
_____ Algal Mat or Crust (B4)	_____ Recent Iron Reduction in Tilled Soil (C6)	_____ Geomorphic Position (D2)
_____ Iron Deposits (B5)	_____ Thin Muck Surface (C7)	_____ FAC-Neutral Test (D5)
_____ Inundation Visible on Aerial Imagery (B7)	_____ Guage or Well Data (D9)	
_____ Sparsely Vegetated Concave Surface	Other	

Field Observations: Surface Water Present? Yes No x Depth (inches)
Water Table Present? Yes No x Depth (inches)
Saturation Present? Yes No x Depth (inches)
Hydrology Indicators Present? Yes No x

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

WETLAND DETERMINATION FORM-EASTERN MOUNTAINS AND PIEDMONT

Site: West Dover Station Expansion | City/County: Tuscawaras County | Date: 4.26.22 | Data Point: 3
Client: American Electric Power Transmission | State: OH | Section, Township, Range: S3 T8N R3W
Investigator(s): L. Vine, J. Moody | Landform: Ridges, Hillslopes | Local Relief: Linear, concave
Slope (%): 15 - 25 | Lat. 40.508319° | Long. -81.563329° | Datum: NAD 83 | NWI Class: N/A
Soil Map Unit Name: Coshocton-Guernsey silt loams, 15 to 25 percent slopes
Climatic/hydrologic conditions typical for time of year? Y/N: Y
Vegetation ____, Soil ____ or Hydrology ____ significantly disturbed
Vegetation ____, Soil ____ or Hydrology ____ naturally problematic
Are Normal Circumstances Present? Yes: X No:

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes: No: x
Hydric Soil Present? Yes: No: x
Wetland Hydrology Present? Yes: No: x
Is the DP within a Wetland? Yes: No: x
Remarks:

VEGETATION

	Absolute % Cover	Dominant Species	Indicator Status	
Tree Stratum Plot size:				
1.				
2.				
3.				
4.				
5.				
	0	Total Cover		
Shrub Stratum Plot size:				
1. *Rubus allegheniensis*	7	Y	FACU	4
2. *Juglans nigra*	2	Y	FACU	4
3.				
4.				
5.				
	9	Total Cover		
Herb Stratum Plot size:				
1. *Phalaris arundinacea*	95	Y	FACW	2
2.				
3.				
4.				
5.				
6.				
7.				
8.				
	95	Total Cover		
Woody Vine Stratum Plot size:				
1.				
2.				
	0	Total Cover		

Remarks:

Dominance Test Worksheet
Number of dominant species that are OBL, FACW, or FAC: 1
Total number of dominant species across all strata: 3
Percent of dominant species that are OBL, FACW, or FAC: 33.33

Prevalence Index Worksheet
Total % cover of:

OBL species	0	x 1	0
FACW species	95	x 2	190
FAC species	0	x 3	0
FACU species	9	x 4	36
UPL species	0	x 5	0
Total	104		226
		Prevalence Index:	2.17

Hydrophytic Vegetation Indicators:
____ Rapid Test for Hydrophytic Veg.
____ Dominance Test is >50%
x Prevalence Index is <3.0*
____ Morphological Adaptations*
____ Problematic Hydrophytic Vegetation*
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes x No

SOIL

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

Depth	Matrix		Redox Features					
(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0 - 12	10YR 4/1	100					CL	
12 - 18	10YR 3/1	100					CL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

____ Histosol (A1)
____ Histic Epipedon (A2)
____ Black Histic (A3)
____ Hydrogen Sulfide (A4)
____ Stratified Layers (A5)
____ 2 cm Muck (A10)
____ Depleted Below Dark Surface (A11)
____ Thick Dark Surface (A12)
____ Sandy Mucky Mineral (S1)
____ 5cm Mucky Peat or Peat
____ Sandy Gleyed Matrix (S4)
____ Sandy Redox (S5)
____ Stripped Matrix (S6)
____ Loamy Mucky Mineral (F1)
____ Loamy Gleyed Matrix (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils
____ Coast Prairie Redox (A16)
____ Iron-Manganese Masses (F12)
____ Very Shallow Dark Surface (F12)
____ Other

Restrictive Layer (if observed): Type:
Depth (Inches):
Hydric Soil Present? Yes No x
Remarks: Fill material, unconsolidated. Not native soil.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (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
____ Water Stained Leaves (B9)
____ Aquatic Fauna (B13)
____ True Aquatic Plants (B14)
____ Hydrogen Sulfide Odor (C1)
____ Oxidized Rhizospheres on Living Roots
____ Presence of Reduced Iron (C4)
____ Recent Iron Reduction in Tilled Soil (C6)
____ Thin Muck Surface (C7)
____ Guage or Well Data (D9)
____ Other

Secondary Indicators

____ Surface Soil Cracks (B6)
____ Drainage Patterns (B10)
____ Dry-Season Water Table (C2)
____ Crayfish Burrows (C8)
____ Saturation Visible on Aerial Imagery (C9)
____ Stunted or Stressed Plants (D1)
____ Geomorphic Position (D2)
____ FAC-Neutral Test (D5)

Field Observations:
Surface Water Present? Yes No x Depth (inches)
Water Table Present? Yes No x Depth (inches)
Saturation Present? Yes No x Depth (inches)

Hydrology Indicators Present? Yes No x

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

WETLAND DETERMINATION FORM-EASTERN MOUNTAINS AND PIEDMONT

Site: West Dover Station Expansion | City/County: Tuscawaras County | Date: 4.26.22 | Data Point: 4
Client: American Electric Power Transmission | State: OH | Section, Township, Range: S3 T8N R3W
Investigator(s): L. Vine, J. Moody | Landform: Ridges, Hillslopes | Local Relief: Linear, concave
Slope (%): 15 - 25 | Lat. 40.508091° | Long. -81.563319° | Datum: NAD 83 | NWI Class: N/A
Soil Map Unit Name: Coshocton-Guernsey silt loams, 15 to 25 percent slopes
Climatic/hydrologic conditions typical for time of year? Y/N: Y
Vegetation ____, Soil ____ or Hydrology ____ significantly disturbed
Vegetation ____, Soil ____ or Hydrology ____ naturally problematic
Are Normal Circumstances Present? Yes: X No:

SUMMARY OF FINDINGS

Hydrophytic Vegetation Present? Yes: No: x
Hydric Soil Present? Yes: No: x
Wetland Hydrology Present? Yes: No: x
Is the DP within a Wetland? Yes: No: x
Remarks:

VEGETATION

	Absolute % Cover	Dominant Species	Indicator Status	
Tree Stratum Plot size:				
1. *Robinia pseudoacacia*	20	Y	FACU	4
2. *Juglans nigra*	15	Y	FACU	4
3. *Ulmus americana*	15	Y	FACW	2
4.				
5.				
	50	Total Cover		
Shrub Stratum Plot size:				
1. *Rosa multiflora*	12	Y	FACU	4
2. *Juglans nigra*	10	Y	FACU	4
3. *Elaeagnus angustifolia*	7	Y	FACU	4
4. *Betula populifolia*	5	N	FAC	3
5.				
	34	Total Cover		
Herb Stratum Plot size:				
1. *Schedonorus arundinaceus*	5	N	FACU	4
2.				
3.				
4.				
5.				
6.				
7.				
8.				
	5	Total Cover		
Woody Vine Stratum Plot size:				
1.				
2.				
	0	Total Cover		

Remarks:

Dominance Test Worksheet
Number of dominant species that are OBL, FACW, or FAC: 1
Total number of dominant species across all strata: 6
Percent of dominant species that are OBL, FACW, or FAC: 16.67

Prevalence Index Worksheet
Total % cover of:

OBL species	0	x 1	0
FACW species	15	x 2	30
FAC species	5	x 3	15
FACU species	69	x 4	276
UPL species	0	x 5	0
Total	89		321
		Prevalence Index:	3.61

Hydrophytic Vegetation Indicators:
____ Rapid Test for Hydrophytic Veg.
____ Dominance Test is >50%
____ Prevalence Index is <3.0*
____ Morphological Adaptations*
____ Problematic Hydrophytic Vegetation*
*Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic

Hydrophytic Vegetation Present? Yes: No: x

SOIL

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

Depth	Matrix		Redox Features					
(inches)	Color	%	Color	%	Type*	Loc**	Texture	Remarks
0 - 6	10YR 4/2	100					SiCL	
6 - 18	10YR 5/3	100					SiCL	

*Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Coated Sand grains **Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators:

____ Histosol (A1)
____ Histic Epipedon (A2)
____ Black Histic (A3)
____ Hydrogen Sulfide (A4)
____ Stratified Layers (A5)
____ 2 cm Muck (A10)
____ Depleted Below Dark Surface (A11)
____ Thick Dark Surface (A12)
____ Sandy Mucky Mineral (S1)
____ 5cm Mucky Peat or Peat
____ Sandy Gleyed Matrix (S4)
____ Sandy Redox (S5)
____ Stripped Matrix (S6)
____ Loamy Mucky Mineral (F1)
____ Loamy Gleyed Matrix (F2)
____ Depleted Matrix (F3)
____ Redox Dark Surface (F6)
____ Depleted Dark Surface (F7)
____ Redox Depressions (F8)

Indicators for Problematic Hydric Soils
____ Coast Prairie Redox (A16)
____ Iron-Manganese Masses (F12)
____ Very Shallow Dark Surface (F12)
____ Other

Restrictive Layer (if observed): Type:
Depth (Inches):
Hydric Soil Present? Yes: No: x
Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (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
____ Water Stained Leaves (B9)
____ Aquatic Fauna (B13)
____ True Aquatic Plants (B14)
____ Hydrogen Sulfide Odor (C1)
____ Oxidized Rhizospheres on Living Roots
____ Presence of Reduced Iron (C4)
____ Recent Iron Reduction in Tilled Soil (C6)
____ Thin Muck Surface (C7)
____ Guage or Well Data (D9)
____ Other

Secondary Indicators

____ Surface Soil Cracks (B6)
____ Drainage Patterns (B10)
____ Dry-Season Water Table (C2)
____ Crayfish Burrows (C8)
____ Saturation Visible on Aerial Imagery (C9)
____ Stunted or Stressed Plants (D1)
____ Geomorphic Position (D2)
____ FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes: No: x Depth (inches):
Water Table Present? Yes: No: x Depth (inches):
Saturation Present? Yes: No: x Depth (inches):

Hydrology Indicators Present? Yes: No: x

Describe Recorded Data (stream guage, monitoring well, aerial photos, previous inspections), if available:
Remarks: Rain the night before data collection was completed

Appendix D

Stream Delineation Materials

Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : **26**

SITE NAME/LOCATION: **Stream 1/West Dover Station Expansion, Dover Township, Tuscarawas County, Ohio**

SITE NUMBER: | RIVER BASIN: **Sugar Creek** | DRAINAGE AREA (mi²): **0.10**

LENGTH OF STREAM REACH (ft): **400** | LAT.: **40.50758** | LONG.: **-81.56308** | RIVER CODE: | RIVER MILE:

DATE: **04/26/22** | SCORER: **L. Vine** | COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☑ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	0%	☑	SILT [3 pt]	55%
☐	BOULDER (>256 mm) [16 pts]	0%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	10%
☐	BEDROCK [16 pt]	0%	☐	FINE DETRITUS [3 pts]	0%
☐	COBBLE (65-256 mm) [12 pts]	5%	☐	CLAY or HARDPAN [0 pt]	0%
☑	GRAVEL (2-64 mm) [9 pts]	30%	☐	MUCK [0 pts]	0%
☐	SAND (<2 mm) [6 pts]	0%	☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: **5.00%** (A) | Substrate Percentage Check: 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **12** **TOTAL NUMBER OF SUBSTRATE TYPES:** **4**

HHEI Metric Points

Substrate Max = 40

16

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐	> 30 centimeters [20 pts]	☐	> 5 cm - 10 cm [15 pts]
☐	> 22.5 - 30 cm [30 pts]	☑	< 5 cm [5 pts]
☐	> 10 - 22.5 cm [25 pts]	☐	NO WATER OR MOIST CHANNEL [0 pts]

Pool Depth Max = 30

5

COMMENTS: | **MAXIMUM POOL DEPTH (centimeters):** **4**

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) **(Check *ONLY* one box):**

☐	> 4.0 meters (> 13') [30 pts]	☐	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐	> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	☑	≤ 1.0 m (<=3' 3") [5 pts]
☐	> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		

Bankfull Width Max=30

5

COMMENTS: | **AVERAGE BANKFULL WIDTH (meters):** **0.50**

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☐	☐	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☑	☑	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☑	☑	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS:

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

☑ Stream Flowing
☐ Subsurface flow with isolated pools (Interstitial)
☐ Moist Channel, isolated pools, no flow (Intermittent)
☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐	None	☑	1.0	☐	2.0	☐	3.0
☐	0.5	☐	1.5	☐	2.5	☐	>3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☑ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: **Strasburg** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Tuscarawas** Township / City: **Dover Township**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **04/25/22** Quantity: **0.20**

Photograph Information: _____

Elevated Turbidity? (Y/N): **N** Canopy (% open): **25%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **N** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

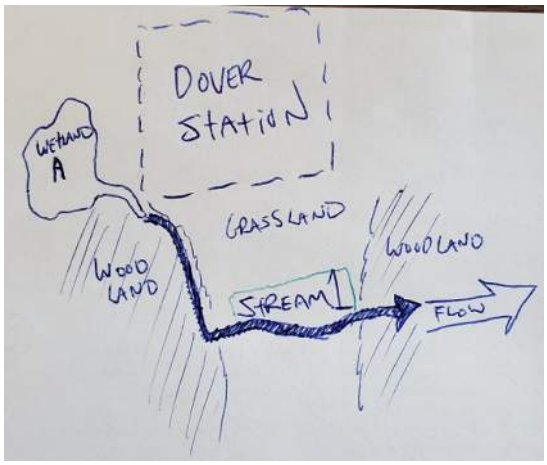
Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

FLOW ➔



Save as pdf Reset Form

Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : **28**

SITE NAME/LOCATION: **Stream 2/West Dover Station Expansion, Dover Township, Tuscarawas County, Ohio**

SITE NUMBER: | RIVER BASIN: **Sugar Creek** | DRAINAGE AREA (mi²): **0.01**

LENGTH OF STREAM REACH (ft): **50** | LAT.: **40.50805** | LONG.: **-81.56207** | RIVER CODE: | RIVER MILE:

DATE: **04/26/22** | SCORER: **L. Vine** | COMMENTS:

NOTE: Complete All Items On This Form - Refer to "Field Evaluation Manual for Ohio's PHWH Streams" for Instructions

STREAM CHANNEL MODIFICATIONS: ☐ NONE / NATURAL CHANNEL ☐ RECOVERED ☑ RECOVERING ☐ RECENT OR NO RECOVERY

1. SUBSTRATE (Estimate percent of every type of substrate present. Check *ONLY* two predominant substrate *TYPE* boxes (Max of 32). Add total number of significant substrate types found (Max of 8). Final metric score is sum of boxes A & B.

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	0%	☑	SILT [3 pt]	45%
☐	BOULDER (>256 mm) [16 pts]	5%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐	BEDROCK [16 pt]	0%	☐	FINE DETRITUS [3 pts]	0%
☐	COBBLE (65-256 mm) [12 pts]	10%	☐	CLAY or HARDPAN [0 pt]	0%
☑	GRAVEL (2-64 mm) [9 pts]	20%	☐	MUCK [0 pts]	0%
☐	SAND (<2 mm) [6 pts]	5%	☐	ARTIFICIAL [3 pts]	0%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: **15.00%** (A) | Substrate Percentage Check: 100% (B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **12** **TOTAL NUMBER OF SUBSTRATE TYPES:** **6**

HHEI Metric Points

Substrate Max = 40

18

A + B

2. Maximum Pool Depth ***(Measure the maximum pool depth within the 61 meter (200 ft)*** evaluation reach at the time of evaluation. Avoid plunge pools from road culverts or storm water pipes) (Check *ONLY* one box):

☐	> 30 centimeters [20 pts]	☐	> 5 cm - 10 cm [15 pts]
☐	> 22.5 - 30 cm [30 pts]	☑	< 5 cm [5 pts]
☐	> 10 - 22.5 cm [25 pts]	☐	NO WATER OR MOIST CHANNEL [0 pts]

Pool Depth Max = 30

5

COMMENTS: | **MAXIMUM POOL DEPTH (centimeters):** **4**

3. BANK FULL WIDTH (Measured as the average of 3-4 measurements) **(Check *ONLY* one box):**

☐	> 4.0 meters (> 13') [30 pts]	☐	> 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
☐	> 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	☑	≤ 1.0 m (<=3' 3") [5 pts]
☐	> 1.5 m - 3.0 m (> 9' 7" - 4' 8") [20 pts]		

Bankfull Width Max=30

5

COMMENTS: | **AVERAGE BANKFULL WIDTH (meters):** **0.50**

This information must also be completed

RIPARIAN ZONE AND FLOODPLAIN QUALITY ☆NOTE: River Left (L) and Right (R) as looking downstream☆

RIPARIAN WIDTH (Per Bank) L	R	FLOODPLAIN QUALITY (Most Predominant per Bank) L	R		L	R	
☐	☐	Wide >10m	☐	☐	Mature Forest, Wetland	☐	☐	Conservation Tillage
☐	☐	Moderate 5-10m	☑	☑	Immature Forest, Shrub or Old Field	☐	☐	Urban or Industrial
☐	☐	Narrow <5m	☐	☐	Residential, Park, New Field	☐	☐	Open Pasture, Row Crop
☑	☑	None	☐	☐	Fenced Pasture	☐	☐	Mining or Construction

COMMENTS:

FLOW REGIME *(At Time of Evaluation)* (Check *ONLY* one box):

☑ Stream Flowing
☐ Subsurface flow with isolated pools (Interstitial)
☐ Moist Channel, isolated pools, no flow (Intermittent)
☐ Dry channel, no water (Ephemeral)

COMMENTS:

SINUOSITY (Number of bends per 61 m (200 ft) of channel) (Check *ONLY* one box):

☐ None	☐ 1.0	☐ 2.0	☐ 3.0
☑ 0.5	☐ 1.5	☐ 2.5	☐ >3

STREAM GRADIENT ESTIMATE

☐ Flat (0.5 ft/100 ft) ☐ Flat to Moderate ☐ Moderate (2 ft/100 ft) ☑ Moderate to Severe ☐ Severe (10 ft/100 ft)

ADDITIONAL STREAM INFORMATION (This Information Must Also be Completed):

QHEI PERFORMED? - ☐ Yes ☑ No QHEI Score _____ (If Yes, Attach Completed QHEI Form)

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: _____ Distance from Evaluated Stream _____

☐ CWH Name: _____ Distance from Evaluated Stream _____

☐ EWH Name: _____ Distance from Evaluated Stream _____

MAPPING: ATTACH COPIES OF MAPS, INCLUDING THE ENTIRE WATERSHED AREA. CLEARLY MARK THE SITE LOCATION

USGS Quadrangle Name: **Strasburg** NRCS Soil Map Page: _____ NRCS Soil Map Stream Order _____

County: **Tuscarawas** Township / City: **Dover Township**

MISCELLANEOUS

Base Flow Conditions? (Y/N): **Y** Date of last precipitation: **04/25/22** Quantity: **0.20**

Photograph Information: _____

Elevated Turbidity? (Y/N): **N** Canopy (% open): **25%**

Were samples collected for water chemistry? (Y/N): **N** (Note lab sample no. or id. and attach results) Lab Number: _____

Field Measures: Temp (°C) _____ Dissolved Oxygen (mg/l) _____ pH (S.U.) _____ Conductivity (µmhos/cm) _____

Is the sampling reach representative of the stream (Y/N) **Y** If not, please explain: _____

Additional comments/description of pollution impacts: _____

BIOTIC EVALUATION

Performed? (Y/N): **N** (If Yes, Record all observations. Voucher collections optional. NOTE: all voucher samples must be labeled with the site ID number. Include appropriate field data sheets from the Primary Headwater Habitat Assessment Manual)

Fish Observed? (Y/N) **N** Voucher? (Y/N) **N** Salamanders Observed? (Y/N) **N** Voucher? (Y/N) **N**

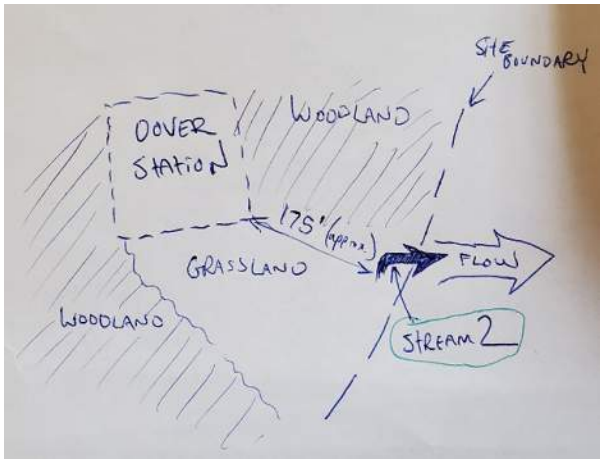
Frogs or Tadpoles Observed? (Y/N) **N** Voucher? (Y/N) **N** Aquatic Macroinvertebrates Observed? (Y/N) **N** Voucher? (Y/N) **N**

Comments Regarding Biology: _____

DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

Include important landmarks and other features of interest for site evaluation and a narrative description of the stream's location

FLOW ➔



Save as pdf Reset Form

Photo: 1 Stream 1 **Direction of View:** East (Downstream) **Date:** 26 April 2022	
Photo: 2 Stream 1 **Direction of View:** Northwest (Upstream) **Date:** 26 April 2022	
Photo: 3 Stream 2 **Direction of View:** East (Downstream) **Date:** 26 April 2022	

Photo: 4 Stream 2 **Direction of View:** West (Upstream) **Date:** 26 April 2022	
Photo: 5 Upland Drainage Feature 1 **Direction of View:** North **Date:** 26 April 2022	
Photo: 6 Upland Drainage Feature 2 **Direction of View:** East **Date:** 26 April 2022	

Photo: 7 Upland Drainage Feature 3 **Direction of View:** North **Date:** 26 April 2022	
Photo: 8 Upland Drainage Feature 4 **Direction of View:** North **Date:** 26 April 2022	

Summary: Letter of Notification Transmission Line Relocation electronically filed by Hector Garcia-Santana on behalf of Ohio Power Company.