Innovation – Brie 138kV Transmission Line Cut-In and Jorden North and South 138kV Transmission Line Extension Project

AEP OHIO TRANSMISSION COMPANY™

An AEP Company

BOUNDLESS ENERGY™

PUCO Case No. 26-0248-EL-BLN

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

Submitted by:
AEP Ohio Transmission Company, Inc.

April 1, 2026

LETTER OF NOTIFICATION

AEP Ohio Transmission Company, Inc.

26-0248-EL-BLN

4906-6-05 Accelerated Application Requirements

AEP Ohio Transmission Company, Inc. (the Company) provides the following information to the Ohio Power Siting Board (OPSB) in accordance with the accelerated application requirements of Ohio Administrative Code Section 4906-6-05.

4906-6-05(B) General Information

B(1) Project Description

Provide the name of the project and applicant's reference number, names and reference number(s) of resulting circuits, a brief description of the project, and why the project meets the requirements for a letter of notification or construction notice application.

The Company is proposing the Innovation-Brie 138kV Transmission Line Cut-In and Jorden North and South 138kV Transmission Line Extension Project (the "Project") located in the City of New Albany, Licking County Ohio. The Project will require cut-in and adjustment of approximately 0.2 miles of the existing Innovation-Brie 138 kV Transmission Line and greenfield construction of approximately 0.4 miles each for the Jorden North and South 138kV Transmission Line Extensions. The Jorden North and South 138kV Transmission Line Extension will provide 138kV looped transmission service to the planned Jorden Substation (approved under Case No. 25-0941-EL-BLN), which will require a 140-foot right-of-way (ROW). The Innovation-Brie 138kV Transmission Line Cut-In will occur within the existing 100-foot ROW. The location of the Project is shown on **Figures 1** and **2** in **Appendix A**.

The Project meets the requirements for a Letter of Notification (LON) as defined by Item 1(d)(ii) of Appendix A to Ohio Administrative Code Section 4906-1-01, *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:*
>
> > *(d) Line(s) primarily needed to attract or meet the requirements of a specific customer or customers, as follows:*
> >
> > > *(ii) Any portion of the line is on property owned by someone other than the specific customer or applicant.*

The Project has been assigned Case No. 26-0248-EL-BLN

B(2) Statement of Need

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

The New Albany area continues to see some of the fastest growing electric demand in the AEP system. The robust economic development activity in New Albany is creating a continued influx of new Customer interconnection requests.

The approximate load in the New Albany area today is 500 MW and the demand is expected to exceed 2,000 MW by the end of 2027 and will continue to grow in future years. A Customer has requested additional service to support an estimated initial load of 54 MW in the New Albany, Ohio area, with plans to expand to an ultimate peak demand of 270 MW in the future. Due to the projected Customer load, existing facilities that serve the area will exceed their thermal capacities under certain scenarios. To meet the Customer's request, the Company will construct the new Jorden 138kV Station (Approved under Case No: 25-0941-EL-BLN) which will require tapping into the existing Innovation-Brie 138kV Transmission Line and served by a new double circuit 138kV transmission line (subject of this filing). The Customer has requested an in-service date of December 2026.

Failure to move forward with the proposed Project will result in the inability to service the Customer's projected 270 MW ultimate peak load and jeopardize the Customer's plans in the New Albany, Ohio area.

The need for the Customer driven supplemental project was presented and reviewed with stakeholders during the June 15, 2022, PJM SRRTEP meeting. The solution was presented and reviewed with stakeholders during the May 9, 2023, PJM TEAC meeting, and subsequently assigned the PJM number of S3442.5. This Project was included in the Company's 2025 Long Term Forecast Report and can be found on pages 74 to 76 (see **Appendix B**).

B(3) Project Location

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 transmission lines and substations is shown on **Figure 1**, in **Appendix A**.

B(4) Alternatives Considered

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

The Project is primarily located on Customer property but will require additional easements from other private property owners. Based on the Customers' proposed development, existing facilities in the area,

and the planned location of the Jorden Substation, the proposed locations of the Innovation – Brie 138kV Transmission Line Cut-in and Jorden North and South 138 kV Transmission Line Extension are the most suitable locations for the Project. Other alternatives would require impacting additional neighboring properties as opposed to maintaining a relatively short transmission line length to connect the Jorden Substation and the Innovation-Brie 138kV Transmission Line. The Project is located on land previously associated with farmland and landscaped areas, which have recently undergone conversion to developed/industrial/commercial use by the Customer. This Project will not require impacts to any delineated wetlands or streams and will not require any tree clearing. The location of the Project minimizes impacts to the community and the environment, while considering the engineering and construction needs of the Customer. The Project also represents the most suitable location and most appropriate solution for meeting the Company's and Customer's needs.

B(5) Public Information Program

Describe its public information program to inform affected property owners and residents 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 Ohio Revised Code ("OAC") Section 4906-6-08(A)(1-6). Further, the Company will mail a letter, via first class mail, to affected landowners, tenants, contiguous owners and any other landowner the Company may approach for an easement necessary for the construction, operation, or maintenance of the Project. The letter will comply with all requirements of OAC Section 4906-6-08(B). The Company maintains a website (http://aeptransmission.com/ohio/) which provides public access to an electronic copy of this LON and the public notice for this LON. An electronic copy of the LON will be served to the public library in each political subdivision for this Project. The Company retains ROW land agents that discuss Project timelines, construction and restoration activities and convey information to affected owners and tenants throughout the Project.

B(6) Construction Schedule

Provide an anticipated construction schedule and proposed in-service date of the project.

Construction of the Project is planned to begin in July 2026 with an anticipated in-service date of December 2026.

B(7) Area Map

Provide a map of at least 1:24,000 scale clearly depicting the facility and proposed limits of disturbance with clearly marked streets, roads, and highways, and an aerial image.

Figure 1, in Appendix A, identifies the location of the Project area on a United States Geological Survey 1:24,000 quadrangle map (Jersey). **Appendix A, Figure 2** displays the Project components on a 2025 aerial photograph.

B(8) Property Agreements

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

A list of properties required for the Project are provided in **Table 1**, below.

Table 1 – Property Agreements

Property Parcel Number	Agreement Type	Easement or Option Obtained (Yes/No)
095-112074-00.000	New Easement	Yes
095-112074-00.010	AEP Owned	N/A
095-112056-00.006	New Easement	Yes
095-112188-00.000	New Easement	Yes
095-112236-00.000	New Easement	No

The easement form exhibit provided in **Appendix C** represents the minimum rights the Company would require in order to construct, operate, and maintain these facilities.

B(9) Technical Features

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.

Jorden North and South Transmission Line Extension is anticipated to include the following:

Voltage: 138kV
Conductors: 1033.5 kcmil 54/7 CURLEW ACSS
Static Wire: (1) 7#8 Alumoweld & (1) 96 ct. OPGW
Insulators: Polymer
ROW Width: 70 feet (for each extension). 140 feet total.
Structure Type: Six (6) Double Circuit (DC) steel two-pole dead ends (DE)
Three (3), DC, single pole steel Suspension Davit arm Structures
One (1), DC, Single Pole DE
One (1), Single Circuit, Single Pole DE

Innovation-Brie 138kV Cut-In is anticipated to include the following:

Voltage: 138kV
Conductors: 1033.5 kcmil 54/7 CURLEW ACSS
Static Wire: (1) 7#8 Alumoweld & (1) 96 ct. OPGW
Insulators: Polymer
ROW Width: 100 feet
Structure Type: (2) DC two pole steel DEs

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 cost estimate for the Project, which is comprised of applicable tangible and capital costs, is approximately $2.4 million for the Innovation – Brie Cut In and approximately 1.9 million and 2.7 million for the North and South Extensions, respectively, using a Class 4 estimate. Pursuant to the PJM OATT, the costs for this Project will be recovered in the AEP Ohio Transmission Company Inc.'s FERC formula rate (Attachment H-20 to the PJM OATT) and allocated to the AEP Zone.

B(10) Social and Ecological Impacts

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

B(10)(a) Land Use

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

The Project location and vicinity have historically been primarily agricultural land with scattered woodlots and single-family residences. While the area remains primarily rural, multiple industrial developments have been constructed in the vicinity in recent years. An aerial photograph of the Project vicinity is provided as **Figure 2**. The Project is mapped within the City of New Albany, in Jersey Township within Licking County. No tree clearing is anticipated for the Project.

B(10)(b) Agricultural Land

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

The Project Area is characterized by old fields formerly used for row crops with several large industrial developments in the vicinity. Large, open agricultural fields are present to the northeast of the Project Area along Clover Valley Road and Jug Street; however, these areas do not appear to have been planted in several years. Large commercial/industrial facilities are present to the south and west of the Project Area. The Project Area is rapidly changing, as evidenced by the development of several industrial facilities and data centers in recent years. The current Project Area is located within these areas of recent development, and no agricultural fields are present.

Based on data received from the Licking County Auditor's office on March 19, 2026, there are no agricultural district parcels within the potential disturbance area of the Project.

B(10)(c) Archaeological and Cultural Resources

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

A series of cultural resource surveys and reports were conducted by the Company's consultant for the Project Area in September 2024, June 2025, October 2025, and November 2025. Correspondence from the State Historic Preservation Office ("SHPO") was received on October 23, 2024, July 26, 2025, December 5, 2025, and December 10, 2025, see **Appendix D**. The SHPO stated that the Project will have no adverse effect on historic properties, and that no further archaeological work is necessary.

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 summary of anticipated permits and authorizations for the Project is provided in the **Table 2**, below. There are no other known local, state, or federal requirements that must be met prior to commencement of the Project.

Table 1– Anticipated Permits

Permit/Authorization/Coordination	Agency	Date
Storm Water Pollution Prevention Plan	City of New Albany Ohio Environmental Protection Agency	Approved November 7, 2025
Temporary Construction Entrance	City of New Albany	Anticipated prior to construction
Road Crossings	City of New Albany	Anticipated prior to construction
Archaeology/Architectural	Ohio Historic Preservation Office	Received October 23, 2024; July 26, 2025; December 5, 2025; and December 10, 2025.
Threatened and Endangered Species	United States Fish and Wildlife Service	Consultation complete December 2024
Threatened and Endangered Species	Ohio Department of Natural Resources	Consultation complete December 2024

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

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

Coordination letters were submitted to the United State Fish and Wildlife Service (USFWS) and the Ohio Department of Natural Resources (ODNR) Ohio Natural Heritage Program (ONHP) and Division of Wildlife (DOW), seeking an environmental review of the Project for potential impacts to state and/or federally protected species. ODNR and USFWS provided responses for the Project on December 30, 2024, and December 13, 2024, respectively. Copies of the agencies' responses are presented in **Appendix E**.

Appendix E contains three Ecological Reports covering the proposed Jorden North and South 138kV Extension Project corridor, an addendum area associated with the Jorden North and South 138kV

Extension Project corridor, and the proposed Innovation Brie 138kV Cut-In corridor. **Table 4**, in the ecological reports identifies the federal and state threatened or endangered species in the Project area.

Based on the nature of the proposed Project activities and habitat characteristics of the surrounding vicinity, construction impacts to threatened, endangered, or protected species are not 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.

The Company's consultant conducted wetland and stream delineation surveys covering the Project study area on September 17, 2024, and June 6, 2025. Three Ecological Survey Reports have been prepared in support of this project and are provided in **Appendix E**. The survey of the Project Area identified three wetlands, two ponds, and no streams. The Project's construction activities are not expected to result in a discharge of fill or dredge in any of the delineated features with complete avoidance to the identified wetlands and ponds.

Based on a review of the Protected Areas Database of the United States as well as the Conservation Easement Database, there are no state or national parks, forests, wildlife areas or mapped conservation easements in the vicinity of the Project.

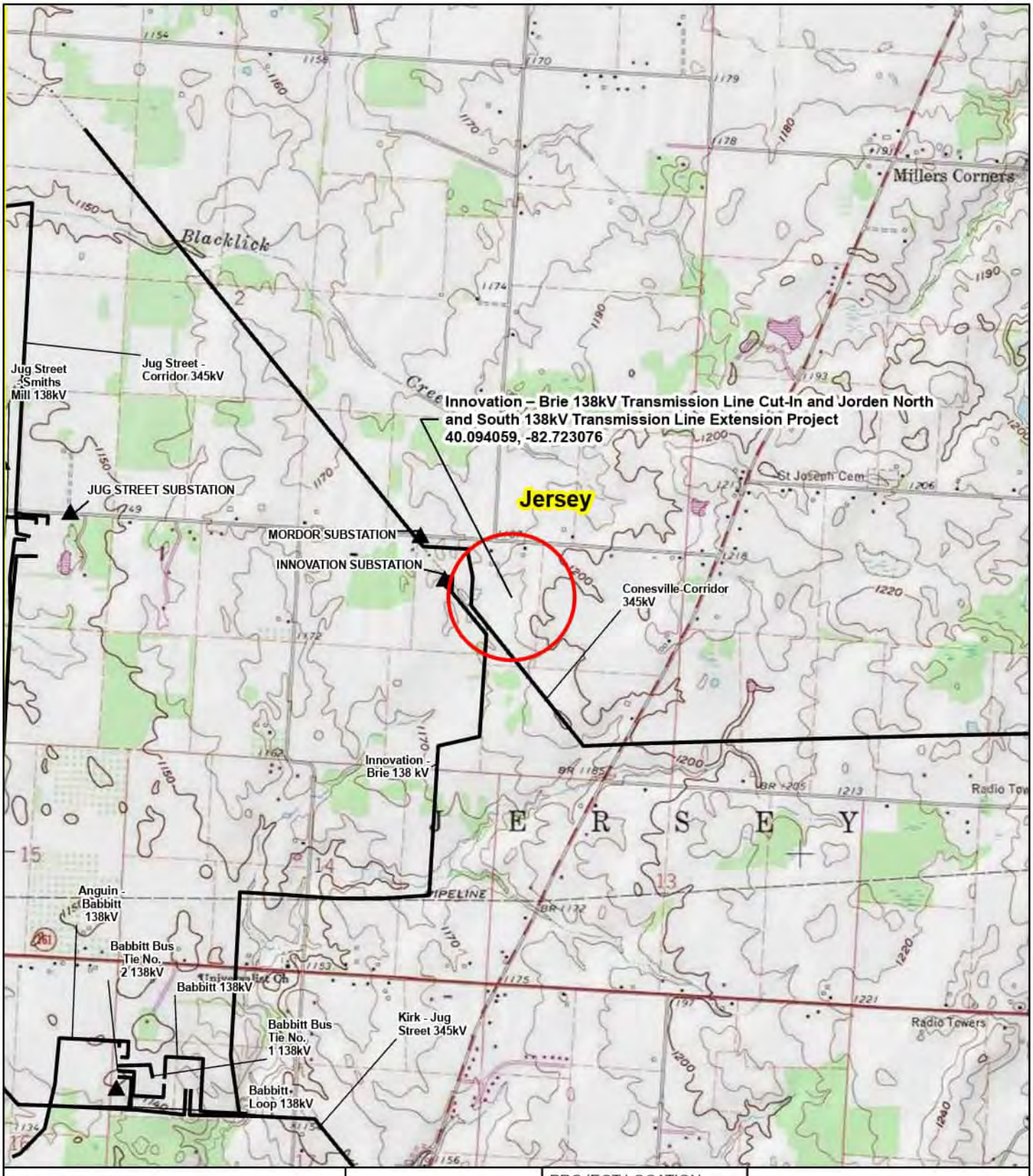
The FEMA Flood Insurance Rate Map ("FIRM") was reviewed to identify any floodplains/flood hazard areas that have been mapped within the Project Area (specifically, map number 39089C0280J). Based on this mapping, no FEMA-designated 100-year floodplains occur in the Project Area.

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



Existing Station

Existing Transmission Line

Project Area

Ohio USGS 7.5' Topographic Quadrangle

Data Sources: AEP (2026), ESRI Topographic Map (2013), USGS 7.5 Topographic Quadrangle (Jersey)

Coordinate System: State Plane Ohio South NAD 83

March 24, 2026

PROJECT LOCATION



LICKING COUNTY, OHIO

FIGURE 1
TOPOGRAPHIC OVERVIEW

AEP OHIO TRANSMISSION COMPANY

Innovation – Brie 138kV Transmission Line Cut-In and Jorden North and South 138kV Transmission Line Extension Project

0 2,000

US Feet



- Proposed Jorden Station (Approved Case No. 25-0941)
- Existing Station
- Innovation 138 kV Transmission Line Cut-In
- Jorden 138 kV North and South Transmission Line
- Existing Transmission Line
- Innovation 138 kV Transmission Line Cut-In 100 ft ROW
- Jorden 138 kV North and South Transmission Line 140 ft ROW
- Project Route Corridor
- Parcel Boundary

Data Sources: AEP (2026), ESRI World Imagery (2025)

Coordinate System: State Plane Ohio South NAD 83

March 26, 2026

PROJECT LOCATION



LICKING COUNTY, OHIO

FIGURE 2
AERIAL MAP
SHEET 1 OF 2

AEP OHIO TRANSMISSION COMPANY

Innovation – Brie 138kV Transmission Line Cut-In and Jorden North and South 138kV Transmission Line Extension Project

0 200

US Feet



- Proposed Jorden Station (Approved Case No. 25-0941)
- Existing Station
- Innovation 138 kV Transmission Line Cut-In
- Jorden 138 kV North and South Transmission Line
- Existing Transmission Line
- Innovation 138 kV Transmission Line Cut-In 100 ft ROW
- Jorden 138 kV North and South Transmission Line 140 ft ROW
- Project Route Corridor
- Parcel Boundary

Data Sources: AEP (2026), ESRI World Imagery (2025)

Coordinate System: State Plane Ohio South NAD 83

March 26, 2026

PROJECT LOCATION



LICKING COUNTY, OHIO

FIGURE 2
AERIAL MAP
SHEET 2 OF 2

AEP OHIO TRANSMISSION COMPANY

Innovation – Brie 138kV Transmission Line Cut-In and Jorden North and South 138kV Transmission Line Extension Project

0 200

US Feet

Appendix B PJM Solution and Long Term Forecast Report

Need Number: AEP-2022-OH046

Process Stage: Need Meeting 6/15/2022

Project Driver:

Customer Service

Specific Assumption Reference:

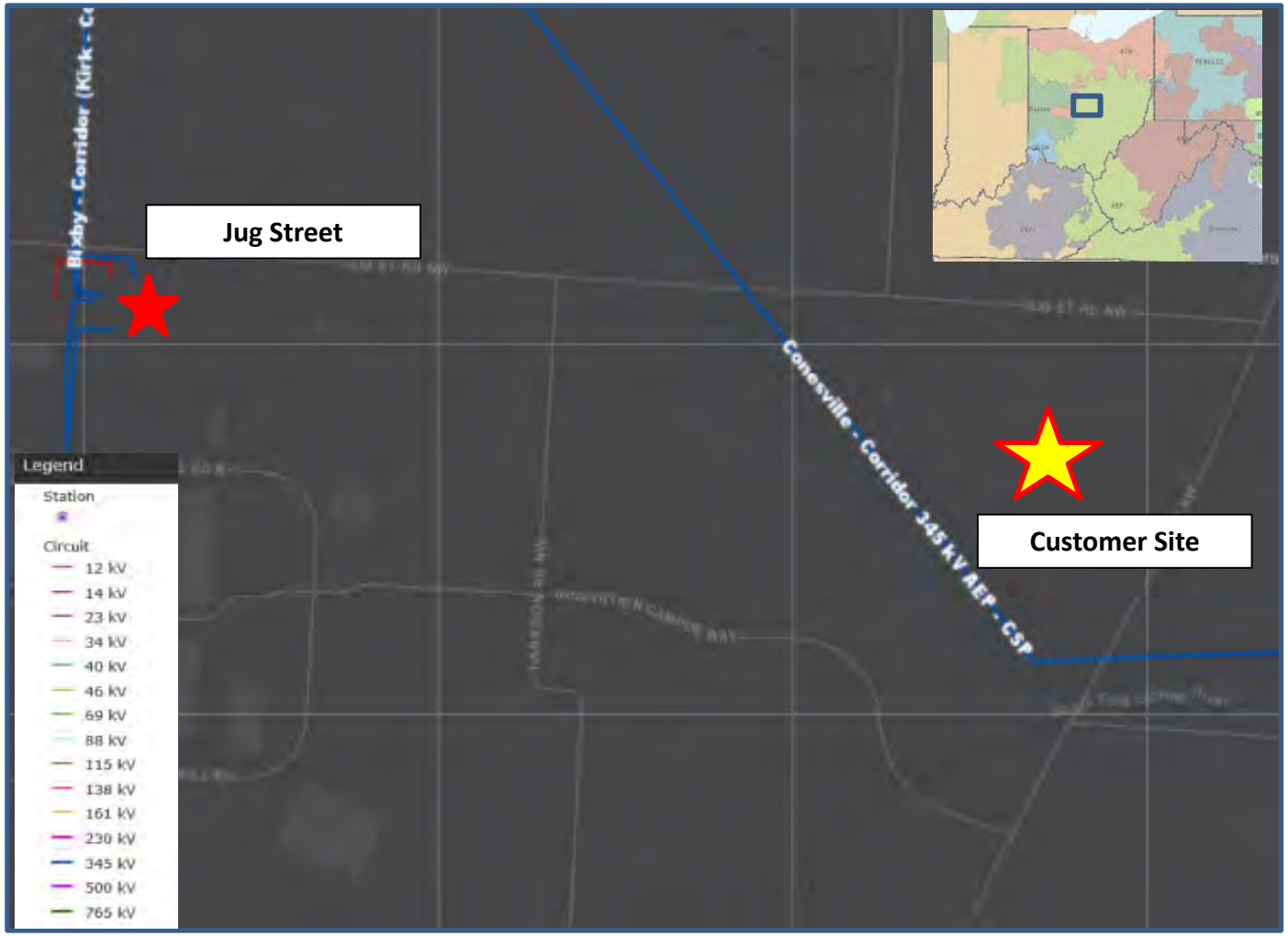
AEP Connection Requirements for the AEP Transmission System (AEP Assumptions Slide 12)

Problem Statement:

Customer Service:

- A customer has requested transmission service at a site East of AEP's existing Jug Street station in New Albany, OH.
- The customer has indicated their initial demand of 50 MW with an ultimate peak demand up to 400 MW in the future.
- The customer has requested an ISD of 6/28/2024

Model: 2026 RTEP



AEP Transmission Zone M-3 Process
Jorden

Need Number: AEP-2022-OH046

Process Stage: Solutions Meeting 5/9/2023

Previously Presented: Need Meeting 6/15/2022

Project Driver: Customer Service

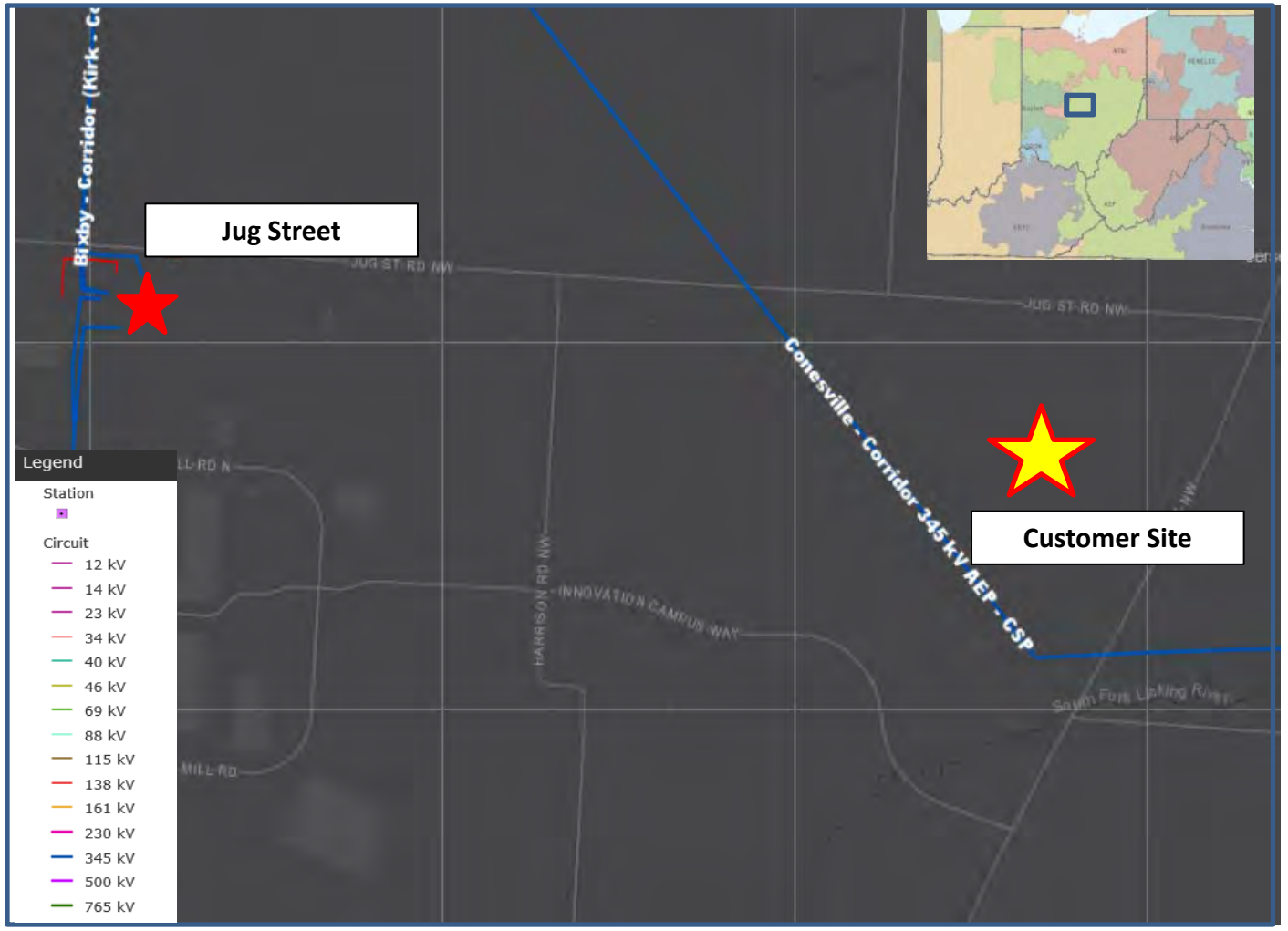
Specific Assumption Reference:

AEP Connection Requirements for the AEP Transmission System (AEP Assumptions Slide 12)

Problem Statement:

Customer Service:

- A customer has requested transmission service at a site East of AEP's existing Jug Street station in New Albany, OH.
- The customer has indicated their initial demand of 50 MW with an ultimate peak demand up to ~~400~~ 270 MW in the future.
- The customer has requested an ISD of 6/28/2024



10	**PARTICIPATION WITH OTHER UTILITIES**	N/A
11	**PURPOSE OF THE PLANNED TRANSMISSION LINE**	Tie new station into Green Capel - Innovation 138 kV line
12	**CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION**	Unable to provide requested service to customer
13	**MISCELLANEOUS:**	
1	**LINE NAME AND NUMBER:**	Jug Street - Corridor 345 kV (s3442.11 TP2022947)
2	**POINTS OF ORIGIN AND TERMINATION**	Jug Street - Corridor 345 kV INTERMEDIATE STATIONS - N/A
3	**RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS**	~6.31 mi / 150 ft / 2 circuits (~0.1 line work)
4	**VOLTAGE: DESIGN / OPERATE**	345 kV / 345 kV
5	**APPLICATION FOR CERTIFICATE:**	2025
6	**CONSTRUCTION:**	2025
7	**CAPITAL INVESTMENT:**	$2.75 M
8	**PLANNED SUBSTATION:**	Fiesta
9	**SUPPORTING STRUCTURES:**	Steel
10	**PARTICIPATION WITH OTHER UTILITIES**	N/A
11	**PURPOSE OF THE PLANNED TRANSMISSION LINE**	Tie new station into Corridor - Green Chapel 138 kV line
12	**CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION**	Unable to provide requested service to customer
13	**MISCELLANEOUS:**	
1	**LINE NAME AND NUMBER:**	Jorden Extension North (s3442.5 TP2022083)
2	**POINTS OF ORIGIN AND TERMINATION**	Innovation - Jorden 138 kV INTERMEDIATE STATIONS - Hazelton 138 kV Station
3	**RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS**	~0.75 mi / 100 ft / 2 circuits (~0.25 mi of line work)
4	**VOLTAGE: DESIGN / OPERATE**	138 kV / 138 kV
5	**APPLICATION FOR CERTIFICATE:**	2025
6	**CONSTRUCTION:**	2024 - 2026

7	**CAPITAL INVESTMENT:**	1.75 M
8	**PLANNED SUBSTATION:**	Jorden
9	**SUPPORTING STRUCTURES:**	Steel
10	**PARTICIPATION WITH OTHER UTILITIES**	N/A
11	**PURPOSE OF THE PLANNED TRANSMISSION LINE**	Tie new station into Innovation - Kirk 138 kV line
12	**CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION**	Unable to provide requested service to customer
13	**MISCELLANEOUS:**	
1	**LINE NAME AND NUMBER:**	Jorden Extension South (s3442.5 TP2022083)
2	**POINTS OF ORIGIN AND TERMINATION**	Jorden - Kirk 138 kV INTERMEDIATE STATIONS - Hazelton 138 kV Station
3	**RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS**	~1.90 mi / 100 ft / 2 circuits (~0.25 mi of line work)
4	**VOLTAGE: DESIGN / OPERATE**	138 kV / 138 kV
5	**APPLICATION FOR CERTIFICATE:**	2025
6	**CONSTRUCTION:**	2025 - 2026
7	**CAPITAL INVESTMENT:**	2.5 M
8	**PLANNED SUBSTATION:**	Jorden
9	**SUPPORTING STRUCTURES:**	Steel
10	**PARTICIPATION WITH OTHER UTILITIES**	N/A
11	**PURPOSE OF THE PLANNED TRANSMISSION LINE**	Tie new station into Innovation - Kirk 138 kV line
12	**CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION**	Unable to provide requested service to customer
13	**MISCELLANEOUS:**	
1	**LINE NAME AND NUMBER:**	Innovation - Brie 138 kV (s3442.5 TP2022083)
2	**POINTS OF ORIGIN AND TERMINATION**	Innovation - Brie 138 kV INTERMEDIATE STATIONS - N/A
3	**RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS**	~1.75 mi / 100 ft / 2 circuits (~0.1 mi of line work)

4	**VOLTAGE: DESIGN / OPERATE**	138 kV / 138 kV
5	**APPLICATION FOR CERTIFICATE:**	2025
6	**CONSTRUCTION:**	2025 - 2026
7	**CAPITAL INVESTMENT:**	2.07 M
8	**PLANNED SUBSTATION:**	Jorden
9	**SUPPORTING STRUCTURES:**	Steel
10	**PARTICIPATION WITH OTHER UTILITIES**	N/A
11	**PURPOSE OF THE PLANNED TRANSMISSION LINE**	Tie new station into Innovation - Kirk 138 kV line
12	**CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION**	Unable to provide requested service to customer
13	**MISCELLANEOUS:**	
1	**LINE NAME AND NUMBER:**	Haviland - Paulding 69 kV (s2984 TP2022110)
2	**POINTS OF ORIGIN AND TERMINATION**	Haviland - Paulding INTERMEDIATE STATIONS - N/A
3	**RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS**	~10.73 mi / 60 ft / 1 circuit
4	**VOLTAGE: DESIGN / OPERATE**	69 kV / 69 kV
5	**APPLICATION FOR CERTIFICATE:**	N/A
6	**CONSTRUCTION:**	2027 - 2028
7	**CAPITAL INVESTMENT:**	$18.74 M
8	**PLANNED SUBSTATION:**	N/A
9	**SUPPORTING STRUCTURES:**	Steel
10	**PARTICIPATION WITH OTHER UTILITIES**	N/A
11	**PURPOSE OF THE PLANNED TRANSMISSION LINE**	Rebuild aging infrastructure; improve system reliability
12	**CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION**	Potential for increased transmission line outages
13	**MISCELLANEOUS:**	
1	**LINE NAME AND NUMBER:**	Haviland - Van Wert 69 kV (TP2022110)

Appendix C Easement Form

Line Name:

Line No.: **Easement No.:**

EASEMENT AND RIGHT OF WAY

On this ___ day of_____, 2025, in consideration of Ten and NO/100 Dollars ($10.00), and other valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and the covenants hereinafter set forth, **LANDOWNER**, whose address is MAILING ADDRESS, ("Grantor"), whether one or more persons, hereby grants, sells, conveys, and warrants to **AEP Ohio Transmission Company, Inc.**, a(n) Ohio corporation, a unit of American Electric Power, whose principal business address is 1 Riverside Plaza, Columbus, Ohio 43215, ("AEP") and its successors, assigns, lessees and tenants a permanent easement and right of way ("Easement"), for electric transmission, distribution, and communication lines and appurtenant equipment and fixtures, being, in, on, over, under, through and across the following described lands of the Grantor, situated in the State of Ohio, County, Township, Quarter section, Section, Township No., Range No., Tax Parcel Number.

Grantor claims title by, OR ___, Page ___, recorded on _____; in the County Recorder's Office.

Auditor/Key/Tax Number:

The Easement Area is more fully described and depicted on Exhibit "A", a copy of which is attached hereto and made a part hereof ("Easement Area").

GRANTOR FURTHER GRANTS AEP THE FOLLOWING RIGHTS:

The right, now or in the future, to construct, reconstruct, operate, maintain, alter, improve, extend, inspect and patrol (by ground or air), protect, repair, remove, replace, upgrade and relocate within the Easement Area, poles, towers, and structures, made of wood, metal, concrete or other materials, and crossarms, guys, anchors, grounding systems, and all other appurtenant equipment and fixtures, and to string conductors, wires and cables; together with the right to add to said facilities from time to time, and the right to do anything necessary, useful or convenient for the enjoyment of the Easement herein granted.

The right, in AEP's discretion, now or in the future, to cut down, trim, remove, and otherwise control, using herbicides or tree growth regulators or other means, any and all trees, overhanging branches, vegetation or brush situated within the Easement Area. AEP shall also have the right to cut down, trim or remove trees situated on lands of Grantor which adjoin the Easement Area when in the opinion of AEP those trees may endanger the safety of, or interfere with the construction, operation or maintenance of AEP's facilities or ingress or egress to, from or along the Easement Area.

The right of unobstructed ingress and egress, at any and all times, over, across and along and upon the Easement Area, and across the adjoining lands of Grantor as may be necessary for access to and from the Easement Area for the above referenced purposes.

THIS GRANT IS SUBJECT TO THE FOLLOWING CONDITIONS:

The Grantor reserves the right to cultivate annual crops, pasture, construct fences (provided gates are installed that adequately provide AEP the access rights conveyed herein) and roads or otherwise use the lands encumbered by this Easement in any way not inconsistent with the rights herein granted. In no event, however, shall Grantor, its heirs, successors, and assigns plant or cultivate any trees or place, construct, install, erect or permit any temporary or permanent building, structure, improvement or obstruction including but not limited to, storage tanks, billboards, signs, sheds, dumpsters, light poles, water impoundments, above ground irrigation systems, swimming pools or wells, or permit any alteration of the ground elevation, over, or within the Easement Area. AEP may, at Grantor's cost, remove any structure or obstruction if placed within the Easement Area, and may re-grade any alterations of the ground elevation within the Easement Area.

AEP agrees to repair or pay the Grantor for actual damages sustained by Grantor to crops, fences, gates, irrigation and drainage systems, drives, or lawns that are permitted herein, when such damages arise out of AEP's exercise of the rights herein granted.

The failure of AEP to exercise any of the rights granted herein, or the removal of any facilities from the Easement, shall not be deemed to constitute an abandonment or waiver of the rights granted herein.

This instrument contains the complete agreement, expressed or implied between the parties herein and shall inure to the benefit of and be binding on their respective successors, assigns, heirs, executors, administrators, lessees, tenants, and licensees.

This Easement may be executed in counterparts, each of which shall be deemed an original, but all of which, taken together, shall constitute one and the same instrument.

Any remaining space on this page left intentionally blank. See next page for signatures.

IN WITNESS WHEREOF, the Grantor has executed this Easement effective the day, month and year first above written.

GRANTOR

_____
LANDOWNER

State of §
§
County of §

The foregoing instrument was acknowledged before me this _____ day of _____, 2025, by LANDOWNER.

_____
Notary Public
Print Name: _____
My Commission Expires:_____

This instrument prepared by Thomas G. St. Pierre, Associate General Counsel - Real Estate, American Electric Power Service Corporation, 1 Riverside Plaza, Columbus, OH 43215 for and on behalf of AEP Ohio Transmission Company, Inc., a unit of American Electric Power.

When recorded return to: American Electric Power - Transmission Right of Way, 8600 Smiths Mill Road, New Albany, OH 43054.

Appendix D State Historic Preservation Act Coordination

In reply, refer to
2024-LIC-62481

October 23, 2024

Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212
rweller@wellercrm.com

RE: Jorden Station Project, Jersey Township, Licking County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on September 27, 2024, and September 30, 2024, regarding the proposed Jorden Station Project located in Jersey Township, Licking 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 (OPSB) rules for siting this project (OAC 4906-4 & 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 Cultural Resource Management Investigations for the 7.5 ha (18.5 ac) Jorden Station Project in Jersey Township, Licking County, Ohio* by Ryan J. Weller and Scott A. McIntosh (Weller & Associates, Inc. 2024). These investigations were conducted in relation to the greenfield installation and construction of the proposed Jorden Station.

A literature review, visual inspection, shovel probes, and shovel test unit excavations were completed as part of the investigations. The project area had not been previously professionally surveyed. Areas of disturbance were noted in the project area. There were no previously documented archaeological sites located within the project area and no new archaeological sites were identified. Our office agrees that no additional archaeological survey is needed for this project area. Architectural resources within the Area of Potential Effect (APE) have either been demolished or previously addressed and found not eligible for the National Register of Historic Places (NRHP; 2022MLT53565).

The following comments pertain to the *Phase I Cultural Resource Management Investigations for the 1 km (.3 mi) Jorden Extension Greenfield Project in Jersey Township, Licking County, Ohio* by Ryan J. Weller and Scott A. McIntosh (Weller & Associates, Inc. 2024). These investigations were conducted for the proposed Jorden Extension project, which will connect the future Jorden Station to an extant transmission line to the southwest.

A literature review, visual inspection, shovel probes, and shovel test unit excavations were completed as part of the investigations. The southwestern part of the project area had been previously investigated through several prior professional surveys. Areas of disturbance were noted in the project area. There were no previously documented archaeological sites located within the project area and no new archaeological sites were identified. Our office agrees that no additional archaeological survey is needed for this project area. Architectural resources within the APE have either been demolished or previously addressed and found not eligible for the NRHP

In reply, refer to
2024-LIC-62481

July 26, 2025

Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212
rweller@wellercrm.com

RE: Jorden Extension Greenfield Project, Jersey Township, Licking County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on June 27, 2025, regarding the proposed Jorden Extension Greenfield Project located in Jersey Township, Licking 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 (OPSB) rules for siting this project (OAC 4906-4 & 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 *An Addendum Cultural Resource Management Review for the 6.4 ha (15.9 ac) Kennel Property that is Associated with the Jordan Extension Greenfield Project in Jersey Township, Licking County, Ohio* by Ryan J. Weller (Weller & Associates, Inc. 2025) This project is intended for transmission lines to connect the Jorden Station to existing transmission easements to the southwest. A literature review, visual inspection, shovel probes, and shovel test unit excavations were completed as part of the investigations. Much of the southern half of the project area had been previously professionally surveyed. Areas of disturbance related to construction activities, including grading and demolition, were noted in the project area. There were no previously documented archaeological sites located within the project area. No new archaeological sites were identified. Our office agrees that no additional archaeological survey is needed for this project area. Architectural resources within the Area of Potential Effect (APE) have either been demolished or previously addressed and found not eligible for the National Register of Historic Places (NRHP; 2022MLT53565).

Based on the information provided, we continue to 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 cultural resources are discovered during the implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me by e-mail at cgullett@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Catherine Gullett, Project Reviews Coordinator - Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial Nos. 1109703

(2022MLT53565).

The following comments pertain to the *Phase I Cultural Resource Management Investigations for the 1 km (.3 mi) Jorden-DBT Tie-in Line #1 Project in Jersey Township, Licking County, Ohio* by Ryan J. Weller and Scott A. McIntosh (Weller & Associates, Inc. 2024). These investigations were conducted for the greenfield installation of the proposed Jorden-DBT Tie-in Line #1.

A literature review, visual inspection, and shovel test unit excavations were completed as part of the investigations. Much of the project area had been investigated through several prior professional surveys. Areas of disturbance were noted in the project area. There were no previously documented archaeological sites located within the project area and no new archaeological sites were identified. Our office agrees that no additional archaeological survey is needed for this project area. Architectural resources within the APE have either been demolished or previously addressed and found not eligible for the NRHP (2022MLT53565).

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 cultural resources are discovered during the implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me by e-mail at cgullett@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Catherine Gullett, Project Reviews Coordinator - Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial Nos. 1105025, 1105026, and 1105047

In reply, refer to
2024-LIC-62481

December 5, 2025

Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212
rweller@wellercrm.com

RE: Jorden Extension Greenfield Project, Jersey Township, Licking County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on October 27, 2025, regarding the proposed Jorden Extension Greenfield Project located in Jersey Township, Licking 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 (OPSB) rules for siting this project (OAC 4906-4 & 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 *Addendum 2: Cultural Resource Management Review for the Jordan Extension Greenfield Project in Jersey Township, Licking County, Ohio* by Ryan J. Weller (Weller & Associates, Inc. 2025) This project is intended for transmission lines to connect the Jorden Station to existing transmission easements to the southwest of the station. A literature review indicated that much of the addendum project area had been previously professionally surveyed, while the remainder had been visibly disturbed by recent development. There were no previously documented archaeological sites located within the addendum project area, and no new archaeological sites were identified. Our office agrees that no additional archaeological survey is needed for this project area.

Based on the information provided, we continue to 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 cultural resources are discovered during the implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me by e-mail at cgullett@ohiohistory.org. Thank you for your cooperation.

Sincerely,



Catherine Gullett, Project Reviews Coordinator - Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No. 1111491

In reply, refer to
2022-LIC-55084

December 10, 2025

Ryan J. Weller
Weller & Associates, Inc.
1395 West Fifth Avenue
Columbus, Ohio 43212
rweller@wellercrm.com

RE: Innovation Extension Project, Jersey Township, Licking County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on November 11, 2025, regarding the proposed Innovation Extension Project located in Jersey Township, Licking 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 (OPSB) rules for siting this project (OAC 4906-4 & 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Addendum: Archaeological Investigations for an Expanded Work Area for the Innovation Extension Project in Jersey Township, Licking County, Ohio* by Weller & Associates, Inc. (Weller 2025). A literature review was conducted to address expanded work limits located outside those previously investigated for this project. A review of SHPO's records indicated that much of the addendum project area had been previously addressed through several professional surveys, while the remainder has been effectively disturbed by development. There were no previously documented archaeological sites located within the addendum project area. Our office agrees that no additional archaeological survey is recommended within the addendum project area.

Based on the information provided, our office continues to agree 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 archaeological resources are discovered during the implementation of this project. In such a situation, this office should be contacted. If you have any questions, please contact me by e-mail at cgullett@ohiohistory.org. Thank you for your cooperation.

Sincerely,

Catherine Gullett, Project Reviews Coordinator - Archaeology
Resource Protection and Review
State Historic Preservation Office

RPR Serial No: 1111663

Appendix E Ecological Survey Reports

JORDEN EXTENSION 138 KV NORTH & SOUTH PROJECT

LICKING COUNTY, OHIO

ECOLOGICAL REPORT

Prepared for:
American Electric Power Ohio Transmission Company
8500 Smiths Mill Road
New Albany, Ohio 43054

Prepared by:

525 Vine Street, Suite 1900
Cincinnati, Ohio 45202

Project #: 60694533

January 2025

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APPENDIX B Desktop Assessment for Winter Bat Habitat
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1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) proposed the construction of a new, approximately 0.54-mile, greenfield 138 kV transmission line between Jorden Bay 1 and Structure 4, and between Jorden Bay 4 and Structure 4a located in the City of New Albany Licking County, Ohio (OH). The Project Survey Area associated with this Ecological Report is located on the Jersey, OH, United States Geological Survey (USGS) 7.5-minute topographical quadrangle as displayed on the Project Overview Map (**Figure 1**).

A portion of the Jorden Extension 138kV North and South Project (herein referred to as "Project") Survey Area overlaps with an area previously surveyed by EMH&T, that is covered under approved Jurisdictional Determinations (JDs) LRH-2022-691-SCR and LRH-2021-907-SCR-Blacklick Creek, and Ohio Environmental Protection Agency (OEPA) Permit Application DSW401227865W. A copy of the JDs and OEPA permit application are included as **Appendix A.** For clarity, this report will refer to the names of previously delineated wetlands by others under JD LRH-2021-907-SCR-Blacklick Creek.

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

2.0 METHODOLOGY

The field survey was completed within the Project Survey Area which consists of two parallel lines approximately 0.2 and 0.3 mile ranging from 300 to 650-foot-wide transmission line study corridor, totaling approximately 17.9 acres. Prior to conducting field surveys, digital United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey data, United States Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI) data, USGS National Hydrography Dataset (NHD), Federal Emergency Management Agency (FEMA) 100-year floodplain data, and USGS 7.5-minute topographic maps were reviewed to identify the occurrence and location of potential wetland areas and/or streams. Kennel Club USA parcel was not able to be accessed or surveyed and was omitted from the Project Survey Area.

Field survey activities included recording the physical boundaries of observed water features using sub-meter capable EOS Arrow Global Positioning System (GPS) units in conjunction with the ArcGIS Field Maps application on iPad tablets. The GPS data was imported into ArcMap Geographic Information System (GIS) software, where the data was reviewed, edited for accuracy, and compiled in a format suitable for

transfer and use by AEP Ohio Transco. Water features were delineated and assessed based upon the appropriate procedures detailed below. Land uses observed within the Project Survey Area were assigned a general classification based upon the principal land characteristics and vegetative cover of the location.

2.1 WETLAND DELINEATION

The Project Survey Area was evaluated according to the procedures outlined in the United States Army Corps of Engineers (USACE) *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (USACE, 2010).

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

2.1.1 WETLAND CLASSIFICATION

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

2.1.2 WETLAND ASSESSMENT

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

2.2 STREAM ASSESSMENT

Streams were identified by the presence of a defined bed and bank, and evidence of an ordinary high-water mark (OHWM). The USACE defines the OHWM as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank,

shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (USACE, 2005).

2.2.1 OEPA PRIMARY HEADWATER HABITAT ASSESSMENT

Stream assessments were conducted using the methods described in the OEPA's *Methods for Assessing Habitat in Flowing Waters*: *Using OEPA's Qualitative Habitat Evaluation Index (QHEI)* (Rankin, 2006) and in the OEPA's *Field Methods for Evaluating Primary Headwater Streams in Ohio* (OEPA, 2020). Streams associated with watershed area less than or equal to 1.0 square mile (259 hectares), and a maximum depth of water pools equal to or less than 15.75 inches were evaluated utilizing the Headwater Habitat Evaluation Index (HHEI) methodology and all other streams assessed using the QHEI methodology. Flow regime (ephemeral, intermittent, perennial) was determined by the appropriate stream assessment score per OEPA manuals (OEPA, 2020) and by AECOM's professional opinion.

Streams assessed in the Project Survey Area were reviewed for existing OEPA Aquatic Life Use Designations per OEPA's Water Quality Standards (OAC Chapter 3745-1). Those without an existing use designation were assigned a provisional aquatic life use designation based upon habitat assessment results (Rankin, 1989; OEPA, 2020).

2.2.2 OEPA 401 WATER QUALITY CERTIFICATION FOR NATIONWIDE PERMIT ELIGIBILITY

The OEPA has designated each watershed in the state on based on whether it may be ineligible for coverage under the OEPA's 401 Water Quality Certification (WQC) for Nationwide Permits (OEPA, 2023). Mapping provided by the OEPA illustrates the eligibility of streams in the area to fall under a Nationwide Permit for 401 certification or if an individual state WQC needs to be applied for. Impacts to streams within each watershed would then have eligibility for 401 WQC determined by the watershed category. The three categories are defined as:

Eligible: Streams within the watershed are eligible for coverage under the OEPA's water quality certification for the Nationwide Permits if all other general and regional special terms and conditions are met.

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

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

2.2.3 UPLAND DRAINAGE FEATURES

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

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

In addition, UDF's (including swales, ditches, and other erosional features) are generally not WOTUS except in certain circumstances, such as relocated streams.

2.3 RARE, THREATENED, AND ENDANGERED SPECIES

AECOM conducted a threatened and endangered species review and general field habitat surveys within the Project Survey Area. AECOM submitted requests to the Ohio Department of Natural Resources (ODNR) Office of Real Estate – Environmental Review Section and the USFWS Ohio Ecological Services Field Office soliciting comments on the proposed Project. Agency-identified species of concern and available species-specific information was reviewed to identify the various habitat types that listed species are known to inhabit.

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

AECOM conducted a desktop assessment of the Project Survey Area and a quarter-mile buffer around it to identify potentially occurring winter bat hibernaculum that may be present near the Project which is in **Appendix B**. This assessment was conducted by reviewing data on mining activity and karst geology from the ODNR Division of Mineral Resources and USGS websites.

3.0 RESULTS

On September 17, 2024, AECOM ecologists walked the Project Survey Area to conduct the wetland delineation, stream assessment, and habitat survey. During the delineation, within the Project Survey Area, AECOM delineated two PEM wetlands. The representative wetland data forms as well as photo documentation are provided as **Appendix C.**

3.1 WETLAND DELINEATION

3.1.1 PRELIMINARY SOILS EVALUATION

According to the USDA/NRCS Web Soil Survey, two soil map units are mapped within the Project Survey Area (USDA NRCS, 2023a and 2023b). Of these, one was identified as a hydric soil, and one was identified as containing hydric inclusions. Soils indicated as hydric inclusions are not predominately hydric soils and hydric soils are more likely to be found in topographic settings. **Table 1** below provides a detailed overview of all soil series and soil map units present within the Project Survey Area. Soil map units located in the Project Survey Area and vicinity are shown on **Figure 2**.

TABLE 1 - SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE PROJECT SURVEY AREA

Soil Series	Map Unit Symbol	Map Unit Description	Topographic Setting	Hydric	Hydric Component (%)
Bennington	BeB	Bennington silt loam, 2 to 6 percent slopes	Ground moraines, end moraines	Yes*	Condit 8% Pewamo 8%
Pewamo	Pe	Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes	Drainageways, depressions	Yes	N/A

Yes* = Hydric inclusion present

3.1.2 NATIONAL WETLAND INVENTORY MAP REVIEW

NWI wetlands within the vicinity of the Project Survey Area are depicted on **Figure 2.**

3.1.3 DELINEATED WETLANDS

During the field survey on September 17, 2024, AECOM delineated two PEM wetlands (W-AGS-002 and W-AGS-006) within the Project Survey Area. AECOM also confirmed the filling of EMH&T Wetland E (field verified as UPL-AGS-003) during previous construction approved under OEPA Permit No. DSW401227865W (**Figure 3**). The two PEM wetlands were assigned ORAM Category 1. The AECOM delineation boundaries are provided on **Figures 2 and 3.**

AECOM has given these wetlands within the Project Survey Area a provisional determination of jurisdictional (non-isolated i.e., WOTUS). Final jurisdictional status can only be determined by the USACE, and AECOM assessments are provisional. The locations and approximate extent of the wetlands identified within the Project Survey Area is shown on **Figure 3**. Details for each delineated wetland in the Project Survey Area are provided in **Table 2**. Completed USACE Data Form and photographs of the delineated wetlands are provided in **Appendix C**.

TABLE 2 – SUMMARY OF DELINEATED WETLANDS WITHIN THE PROECT SURVEY AREA

Wetland ID	Location		Isolated?	Habitat Type	Delineated Area (acre)	ORAM		Nearest Structure # (Existing / Proposed)	Existing Structure # in Wetland	Proposed Structure # in Wetland	Structure Installation Method	Proposed Impacts	
	Latitude	Longitude				Score	Category					Temporary Matting Area (acre)	Permanent Impact Area (acre)
W-AGS-002	40.092868	-82.724973	Yes	PEM	0.04	18	1	None	None	None	N/A	0	0
W-AGS-006	40.091351	-82.724385	Yes	PEM	0.05	25.5	1	None	None	None	N/A	0	0
P-AGS-002	40.09399	-82.72227	N/A	N/A	0.15	N/A	N/A	None	None	None	N/A	0	0
				Total:	**0.24**							**0**	**0**

3.2 STREAM DELINEATION

During the field survey, AECOM did not identify any streams within the Project Survey Area (**Figure 3**).

3.2.1 OEPA STREAM ELIGIBILITY

The Project occurs within two watersheds, Headwaters Blacklick Creek (HUC-12 050600011503) and Headwaters South Fork Licking River (HUC-12 050400060402), that have the 401 WQC designation as Possibly Eligible and Eligible, respectively. OEPA stream eligibility mapping for the Project vicinity is provided on **Figure 4**.

3.3 FEMA 100 YEAR FLOODPLAINS

No regulated FEMA 100-year floodplains and/or floodways are located within the Project Survey Area.

3.4 PONDS

During the field survey, AECOM identified one pond within the Project Survey Area. The extent and location of the pond is displayed on **Figures 2 and 3**. Photographs of the delineated pond are provided in **Appendix D.**

3.5 UPLAND DRAINAGE FEATURES PONDS

During the field survey, AECOM identified one upland drainage feature within the Project Survey Area. The extent of the upland drainage feature is displayed on **Figures 2 and 3**. Photographs of the delineated upland drainage feature are provided in **Appendix E.**

3.6 VEGETATIVE COMMUNITIES

AECOM ecologists conducted a general habitat survey in conjunction with the stream and wetland field surveys. As described in **Table 3**, below, the Project area contains landscaped, old field, scrub-shrub, urban and wetlands/streams areas. Habitat descriptions applicable to the Project are provided below. Vegetative communities are depicted visually on aerial photography in **Figure 5**. Representative photographs of the vegetative communities in the Project Survey Area are provided as **Appendix F**.

TABLE 3 - VEGETATIVE COMMUNITIES WITHIN THE PROJECT SURVEY AREA

Vegetative Community	Description	Approximate Acreage Within the Project Survey Area	Approximate Percentage Within the Project Survey Area
Landscaped	Landscaped areas, including residential properties and commercial properties, and are frequently mowed and maintained, comprised of grasses and forbs.	0.01	0.2%
Old Field	Herbaceous cover exists alongside roads, field borders, and abandoned fields within the survey area of the Project in the form of successional old-field communities. These communities are the earliest stages of recolonization by plants following disturbance. This community type is typically short-lived, giving way progressively to shrub and forest communities unless periodically re-disturbed, in which case they remain as old fields. The old-field areas within the study corridors and adjacent areas are infrequently mowed areas of grasses, forbs, and occasional shrubs.	16.4	91.6
Scrub/Shrub	Scrub-shrub habitats represent the successional stage between old-field and second growth forest, and often emerge in recently harvested forests responding to the lightness of the remaining canopy. Dominant species consist of herbaceous communities similar to that of old field habitat with 30% or greater coverage of woody species that are not trees (including sapling trees generally <3" diameter breast height and <20' in height).	0.4	2.2
Urban	Urban areas are areas developed with residential and commercial land uses, including roads, buildings, and parking lots. These areas are generally devoid of significant woody and herbaceous vegetation.	1	5.5
Wetlands/Streams	Wetlands were observed within the survey area for the Project	0.09	0.5%
	Totals:	**17.9**	**100%**

3.7 RARE, THREATENED, AND ENDANGERED SPECIES AGENCY COORDINATION

Protected Species Agency Consultation –

On September 16, 2024, coordination letters were sent to USFWS and the ODNR Ohio Natural Heritage Program (ONHP) and Division of Wildlife (DOW), seeking an environmental review for potential impacts to threatened and endangered species for a project adjacent to the Project Survey Area.

Responses were received from the USFWS on December 16, 2024, and from the ODNR on December 30, 2024. According to a response letter received from the USFWS, two federally endangered bat and one federally proposed bat were identified within range of the Project area. Regarding state threatened and endangered species that may occur within the Project vicinity, seven species were listed by the ODNR. Correspondence letters from the USFWS and ODNR are included as **Appendix G**.

Table 4 provides a list of species of concern identified by the agencies as potentially occurring within the vicinity of the Project. Photographs of the habitat within the Project Survey Area are provided as **Appendix F**.

TABLE 4
ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY AREA

Common Name (Scientific Name)	State Status	Federal Status	Typical Habitat	Habitat Observed	Avoidance Dates	Agency Comments	Potential Impacts
Mammals							
Indiana Bat (*Myotis sodalis*)	Endangered	Endangered	Summer habitat During spring/summer, bat species roost in trees behind loose, exfoliating bark, in crevices and cavities, or in leaves. Hibernaculum(a) During winter, these species hibernate in humid mines, caves, and occasionally man-made structures.	Summer habitat No – Within the Project survey area, the existing land use is composed of habitats that lack the presence of forested areas or suitable bat roosting trees. Hibernaculum(a) No – No Mines openings and/or known caves are located within 0.25 miles of Project area and USFWS did not identify known hibernacula within 5-miles of the Project. Furthermore, field evaluations did not identify any potential hibernaculum(a) within the Project area.	Summer Tree Clearing April 1 – September 30	Summer habitat If suitable habitat occurs within the Project survey Area, the USFWS and ODNR DOW recommends seasonal tree cutting (October 1 and March 31). If summer tree clearing is required, additional coordination with the ODNR/USFWS is warranted. Additionally, the USFWS indicated that there is a known presence of this species within the Project area and summer surveys would not constitute a presence or absence of this species. Hibernaculum(a) In accordance with 2024 Ohio ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing (2024 Joint Guidance)*, a 0.25-mile tree cutting and subsurface disturbance buffer around hibernaculum entrance is recommended.	Summer habitat No impact to listed bat species or their habitat is anticipated due to absence of tree clearing activities. If tree clearing is required, it should be completed between October 1 and March 31. Hibernaculum(a) No impacts to winter hibernacula were identified due to absence of caves, mines, or portals within 0.25-miles of the Project
Little brown bat (*Myotis lucifugus*)	Endangered	None	Summer habitat During spring/summer, bat species roost in trees behind loose, exfoliating bark, in crevices and cavities, or in leaves. Hibernaculum(a) During winter, these species hibernate in humid mines, caves, and occasionally man-made structures.	Summer habitat No – Within the Project survey area, the existing land use is composed of habitats that lack the presence of forested areas or suitable bat roosting trees. Hibernaculum(a) No – No Mines openings and/or known caves are located within 0.25 miles of Project area Furthermore; field evaluations did not identify any potential hibernaculum(a) within the Project area.	Summer Tree Clearing April 1 – September 30	Summer habitat If suitable habitat occurs within the Project survey Area, the USFWS and ODNR DOW recommends seasonal tree cutting (October 1 and March 31). If summer tree clearing is required, additional coordination with the ODNR/USFWS is warranted. Hibernaculum(a) In accordance with 2024 Ohio ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing (2024 Joint Guidance)*, a 0.25-mile tree cutting and subsurface disturbance buffer around hibernaculum entrance is recommended.	Summer habitat No impact to listed bat species or their habitat is anticipated due to absence of tree clearing activities. If tree clearing is required, it should be completed between October 1 and March 31. Hibernaculum(a) No impacts to winter hibernacula were identified due to absence of caves, mines, or portals within 0.25-miles of the Project
Northern Long-eared Bat (*Myotis septentrionalis*)	Endangered	Endangered	Summer habitat During spring/summer, bat species roost in trees behind loose, exfoliating bark, in crevices and cavities, or in leaves. Hibernaculum(a) During winter, these species hibernate in humid mines, caves, and occasionally man-made structures.	Summer habitat No – Within the Project survey area, the existing land use is composed of habitats that lack the presence of forested areas or suitable bat roosting trees. Hibernaculum(a) No – No Mines openings and/or known caves are located within 0.25 miles of Project area Furthermore; field evaluations did not identify any potential hibernaculum(a) within the Project area.	Summer Tree Clearing April 1 – September 30	Summer habitat If suitable habitat occurs within the Project survey Area, the USFWS and ODNR DOW recommends seasonal tree cutting (October 1 and March 31). Additionally, the ODNR and USFWS indicated that there is a known presence of this species within the Project area and summer surveys would not constitute a presence or absence of this species. Hibernaculum(a) In accordance with 2024 Ohio ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing (2024 Joint Guidance)*, a 0.25-mile tree cutting and subsurface disturbance buffer around hibernaculum entrance is recommended.	Summer habitat No impact to listed bat species or their habitat is anticipated due to absence of tree clearing activities. If tree clearing is required, it should be completed between October 1 and March 31. Hibernaculum(a) No impacts to winter hibernacula were identified due to absence of caves, mines, or portals within 0.25-miles of the Project

TABLE 4
ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY AREA

Common Name (Scientific Name)	State Status	Federal Status	Typical Habitat	Habitat Observed	Avoidance Dates	Agency Comments	Potential Impacts
Tricolored bat (*Perimyotis subflavus*)	Endangered	Proposed	Summer habitat During spring/summer, bat species roost in trees behind loose, exfoliating bark, in crevices and cavities, or in leaves. Hibernaculum(a) During winter, these species hibernate in humid mines, caves, and occasionally man-made structures.	Summer habitat No – Within the Project survey area, the existing land use is composed of habitats that lack the presence of forested areas or suitable bat roosting trees. Hibernaculum(a) No – No Mines openings and/or known caves are located within 0.25 miles of Project area Furthermore; field evaluations did not identify any potential hibernaculum(a) within the Project area.	Summer Tree Clearing April 1 – September 30	Summer habitat If suitable habitat occurs within the Project survey Area, the USFWS and ODNR DOW recommends seasonal tree cutting (October 1 and March 31). If summer tree clearing is required, additional coordination with the ODNR/USFWS is warranted. Hibernaculum(a) In accordance with 2024 Ohio ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing (2024 Joint Guidance)*, a 0.25-mile tree cutting and subsurface disturbance buffer around hibernaculum entrance is recommended.	Summer habitat No impact to listed bat species or their habitat is anticipated due to absence of tree clearing activities. If tree clearing is required, it should be completed between October 1 and March 31. Hibernaculum(a) No impacts to winter hibernacula were identified due to absence of caves, mines, or portals within 0.25-miles of the Project
Fish							
Lake chubsucker (*Erimyzon sucetta*)	Threatened	None	This species is found mainly in lakes, ponds, swamps, and streams.	No - No lakes, ponds, swamps, or perennial streams of significant size within the Project survey area.	March 15 – June 30	The DOW recommends no in water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this or other aquatic species.	No
Reptiles							
Eastern massasauga (*Sistrurus catenatus*)	Endangered	Threatened	This species uses a range of habitats including wet prairies, fens, and other wetlands, as well as drier upland habitat.	No - No suitable habitat was observed within the Project Survey Area.	N/A	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.	No
Birds							
Northern harrier (*Circus hudsonius*)	Endangered	None	This species hunts over grasslands and nests can be found in large marshes and grasslands of 2-acres or greater in size.	No – Based on desktop and field reviews, the Project area is situated within dense commercial area and does not provide contiguous habitat.	April 15 - July 31	Habitat should be avoided during the bird's nesting period between April 15 through July 31. If habitat will not be impacted, this Project will not likely impact species.	No

*2024 Joint Guidance – Refers to the 2024 ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing, a copy of the guidance is provided within **Appendix H** of this report.

Protected Species Agency Summary –

Based on general observations during the ecological field survey, no forested areas were identified within the Project Survey Area and tree clearing is not anticipated to be required for this Project. The ODNR and the USFWS recommends implementations of seasonal tree clearing between October 1 and March 31 to avoid adverse effects to Indiana bat, northern long-eared bat, little brown bat, and tricolored bat. If trees must be cut during the summer months, the ODNR recommends that a mist net survey could be completed for the little brown bat, Indiana bat Northern long-eared bat, and the tricolored bat between June 1 and August 15. If summer tree clearing is needed, additional coordination will be completed with the ODNR and the USFWS.

AECOM completed a desktop review for potential hibernaculum in accordance with the 2024 Ohio ODNR DOW and the USFWS Joint Guidance for Bat Surveys and Tree Clearing within 0.25 miles of the Project Survey Area and no caves, mines, and/or karst features were identified. As per ODNR and USFWS guidance, further coordination regarding potential hibernaculum is only necessary if the habitat assessment finds potential habitat within 0.25 miles of the Project Survey Area. Therefore, no further coordination is necessary with either the ODNR and/or the USFWS regarding the listed bat species. Results of the desktop habitat assessment are included in **Appendix B**.

No impacts are anticipated to occur to the fish or reptile species listed in **Table 4**, as no suitable habitat was observed as part of the Project. The ODNR noted that the Project is within the range of the northern harrier; however, AECOM ecologist and approved avian specialist concluded an absence of this species nesting habitat within the Project survey area. According to ODNR, open grasslands and wet meadow marshes, of at least 2-acres, is considered nesting habitat for the northern harrier. Based on field and desktop review, the Project survey area is predominately old field habitat with a singular patch of scrub-shrub and a road intersecting the center of the survey area. Further, the Project is situated within a commercialized area that has experienced a large amount of new development over the recent months, including a new road development (Clover Valley Rd NW), that intersects with the survey area. While >2 acres of suitable landcover (old field habitat) are present, the survey area does not provide contiguous habitat and is situated within a highly active, dense commercial development area. Therefore, suitable nesting habitat within the Project survey area not present and no further coordination regarding this listed species is necessary concerning this Project.

4.0 SUMMARY

The ecological survey of the Project Survey Area identified two PEM wetlands, one pond, one upland drainage feature, and no streams. The representative wetland data forms and photo documentation are provided in **Appendix C**. Pond photo documentation is provided in **Appendix D**, and photographs of the upland drainage features provided in **Appendix E.**

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

Of the seven state and/or federally listed threatened and endangered species within range of the Project Survey Area, no habitat for any of the listed fish, or bird species were identified within the Project Survey Area. Bat habitat is not present within the Survey Area, and tree clearing is not part of this Project. No further coordination is anticipated to be required with the USFWS and/or ODNR.

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

5.0 REFERENCES

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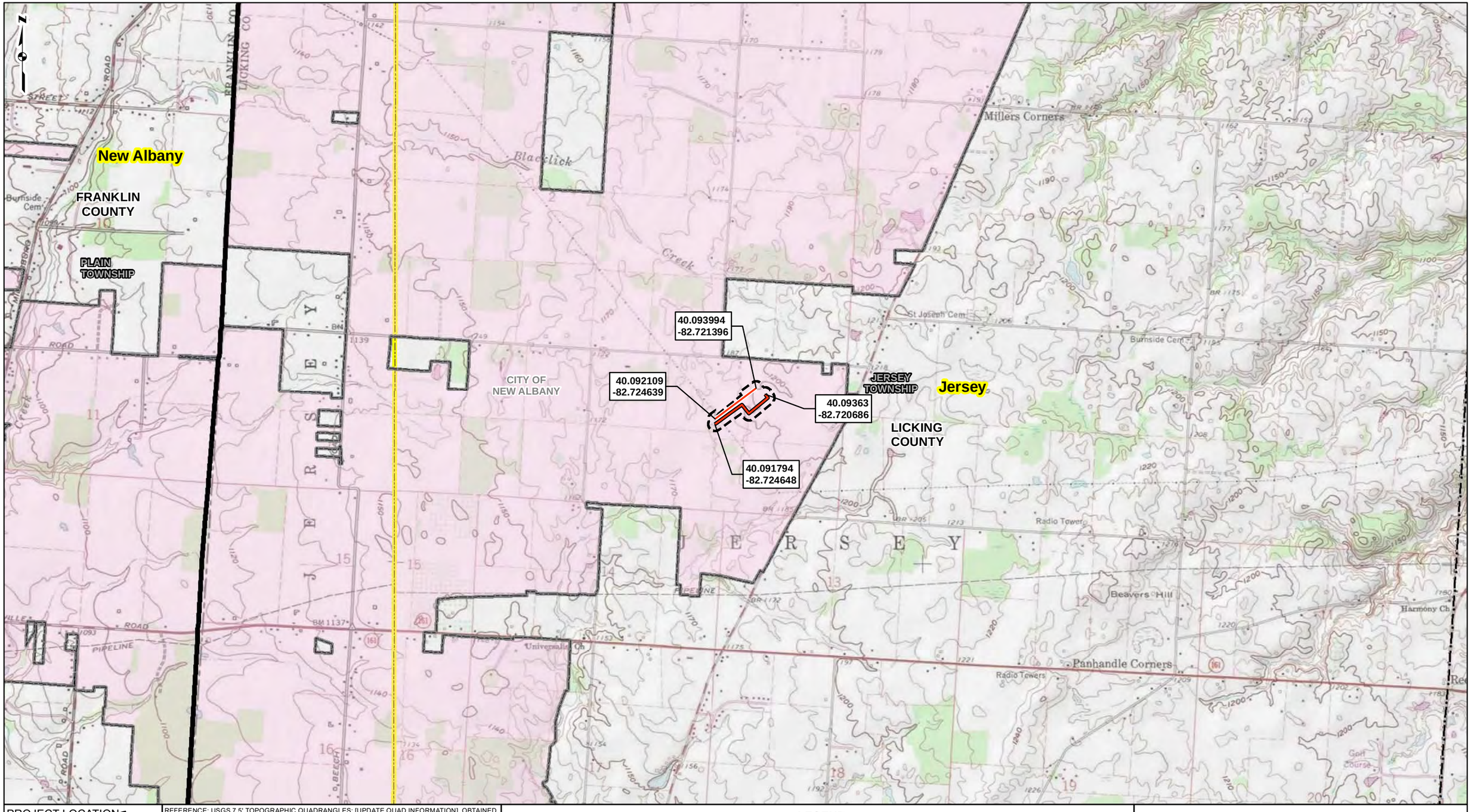
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FIGURES



PROJECT LOCATION



LICKING COUNTY, OHIO

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: [UPDATE QUAD INFORMATION], OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 12/2024.

12/23/2024

LEGEND

- JORDEN EXTENSION 138KV NORTH
- JORDEN EXTENSION 138KV SOUTH
- MUNICIPAL BOUNDARY
- TOWNSHIP BOUNDARY
- COUNTY BOUNDARY
- OHIO USGS 7.5' TOPOGRAPHIC QUADRANGLE

0 2,000 4,000 8,000 Feet

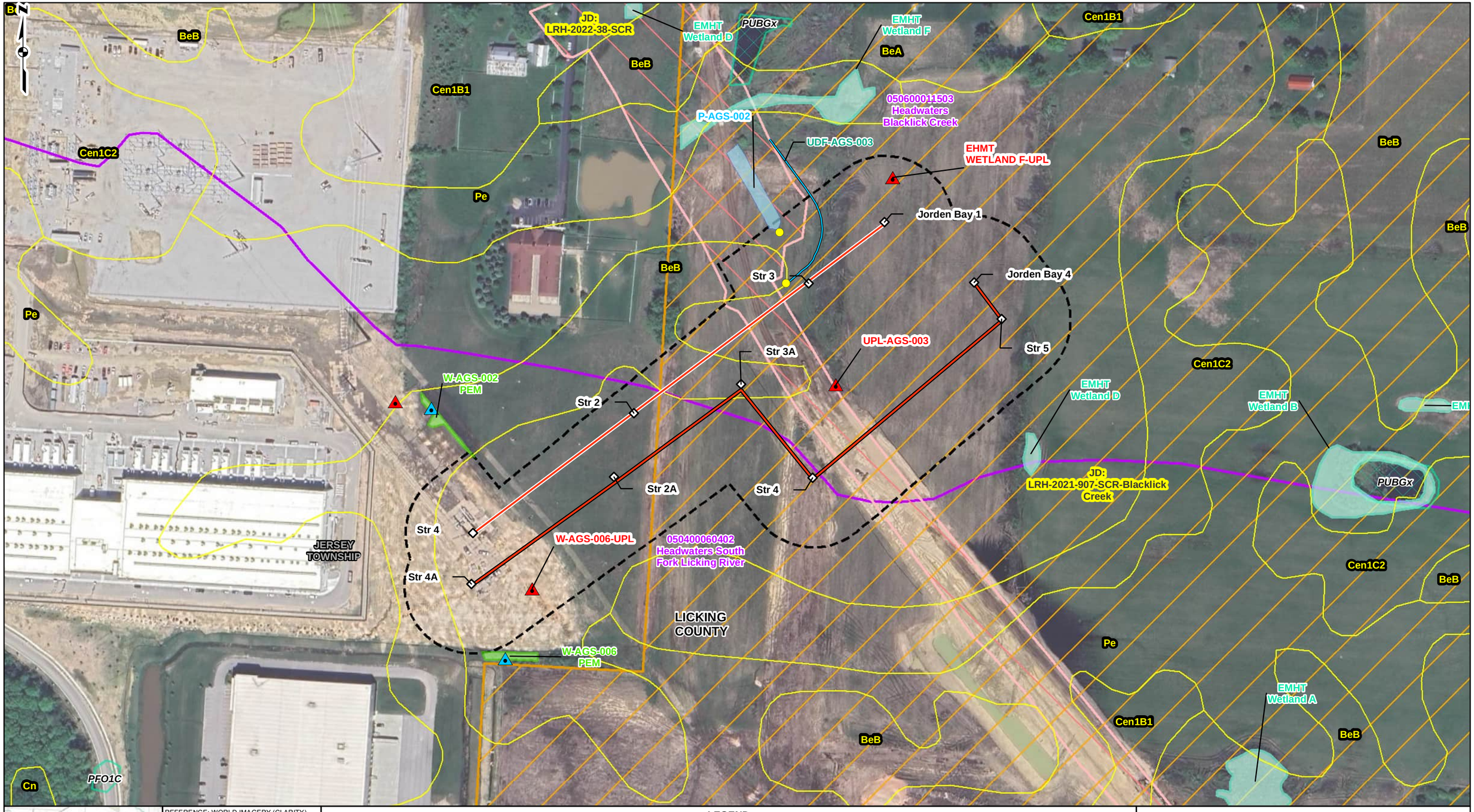
FIGURE 1
PROJECT LOCATION MAP

AECOM

JORDEN EXTENSION 138KV
NORTH AND SOUTH PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: AJH DATE: 12/23/2024
CHECKED: CT APPROVED:

X:\DCS\GIS\ArcMap_GeoDB_Projects\ENV\60694533_AEP_Jorden Extension_ECO\3_MXDs\3_WDR\Jorden Ext. 138kV North and South\JordenExt138NS_WDR_FIG_1.mxd



REFERENCE: WORLD IMAGERY (CLARITY), ESRI, ARCGIS ONLINE, ACCESSED 01/2025. SOIL SURVEY GEOGRAPHIC (SSURGO), USDA/NRCS, 2024. NHD, USGS 2024. NWI, USFWS 2024. HUC 12, USGS 2024.

1/3/2025

LEGEND

- WETLAND DATA POINT
- UPLAND DATA POINT
- CULVERT
- AECOM DELINEATED UPLAND DRAINAGE FEATURE
- JORDEN EXTENSION 138KV NORTH
- JORDEN EXTENSION 138KV SOUTH
- AECOM DELINEATED POND
- AECOM DELINEATED PEM WETLAND
- PROJECT SURVEY AREA
- NWI WETLAND (USFWS)
- EMHT_Delineated_Wetland
- JD BOUNDARY: LRH-2021-907-SCR-Blacklick Creek
- JD BOUNDARY: LRH-2022-38-SCR
- HUC 12 WATERSHED BOUNDARY
- SOIL MAP UNIT

0 100 200 400 Feet

BeB: BENNINGTON SILT LOAM, 2 TO 6 PERCENT SLOPES

Pe: PEWAMO SILTY CLAY LOAM, LOW CARBONATE TILL, 0 TO 2 PERCENT SLOPES

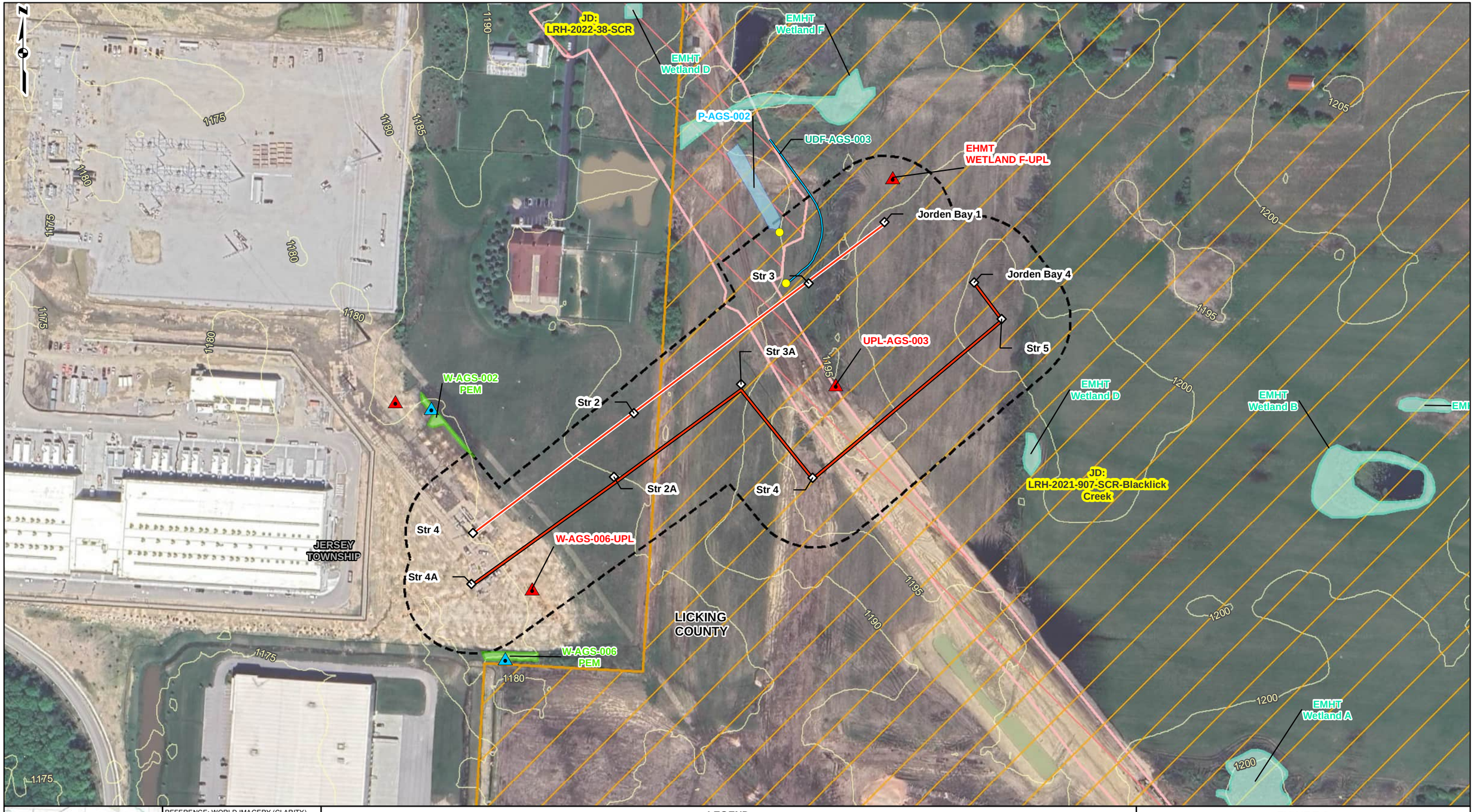
FIGURE 2
SOIL MAP AND
NATIONAL WETLANDS INVENTORY MAP

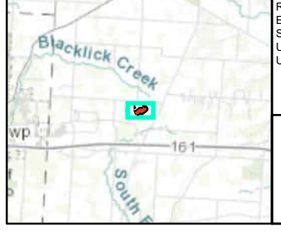
AECOM

JORDEN EXTENSION 138KV
NORTH AND SOUTH PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: AJH DATE: 1/3/2025
CHECKED: CT APPROVED:

X:\DCS\GIS\ArcMap_GeoDB_Projects\ENV\60694533_AEP_Jorden Extension_ECOS_MXDs\3_WDR\Jorden Ext. 138kV North and South\JordenExt138NS_WDR_FIG_2.mxd





REFERENCE: WORLD IMAGERY (CLARITY), ESRI, ARCGIS ONLINE, ACCESSED 12/2024. SOIL SURVEY GEOGRAPHIC (SSURGO), USDA/NRCS, 2024. NHD, USGS 2024. NWI, USFWS 2024. HUC 12, USGS 2024.

12/23/2024

LEGEND

- WETLAND DATA POINT
- UPLAND DATA POINT
- CULVERT
- AECOM DELINEATED UPLAND DRAINAGE FEATURE
- JORDEN EXTENSION 138KV NORTH
- JORDEN EXTENSION 138KV SOUTH
- AECOM DELINEATED POND
- AECOM DELINEATED PEM WETLAND
- PROJECT SURVEY AREA
- EMHT DELINEATED WETLAND
- JD BOUNDARY: LRH-2021-907-SCR-Blacklick Creek
- JD BOUNDARY: LRH-2022-38-SCR
- CONTOUR (5FT)

0 100 200 400 Feet

FIGURE 3
WETLAND DELINEATION AND STREAM ASSESSMENT MAP

AECOM

JORDEN EXTENSION 138KV
NORTH AND SOUTH PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: AJH DATE: 12/23/2024
CHECKED: CT APPROVED:

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OEPA EPA 401
Eligible
Duncan Run
050600011307

Rocky Fork Creek

Schleppi Run

Bevelheimer Ditch

Sugar Run

OEPA EPA 401
Possibly Eligible
Rocky Fork Creek
050600011501

Blacklick Creek

Rose Run

OEPA EPA 401
Possibly Eligible
Headwaters Blacklick Creek
050600011503

OEPA EPA 401
Ineligible
Rocky Fork Creek
050600011501

OEPA EPA 401
Eligible
Duncan Run
050600011307

Kiber Run

Duncan Run

OEPA EPA 401
Eligible
Headwaters Raccoon Creek
050400060301

Raccoon Creek

Cornell Run

40.093994
-82.721396

40.092109
-82.724639

40.09363
-82.720686

40.091794
-82.724648

South Fork Licking River

OEPA EPA 401
Eligible
Headwaters South Fork Licking River
050400060402

OEPA EPA 401
Eligible
Muddy Fork
050400060401

Mile Run

Lobdell Creek

OEPA EPA 401
Eligible
Lobdell Creek
050400060302

Pet Run

OEPA EPA 401
Eligible
Moots Run-Raccoon Creek
050400060303

Simpson Run

Moots Run

PROJECT LOCATION



LICKING COUNTY, OHIO

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: SUNBURY, OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 12/2024. OEPA ELIGIBLE WATERSHEDS, OHIO ENVIRONMENTAL PROTECTION AGENCY, 2024.

12/23/2024

LEGEND

- JORDEN EXTENSION 138KV NORTH
- JORDEN EXTENSION 138KV SOUTH
- NHD STREAM (USGS)

OEPA ELIGIBILITY:

- ELIGIBLE
- INELIGIBLE
- POSSIBLY ELIGIBLE

0 2,000 4,000 8,000 Feet

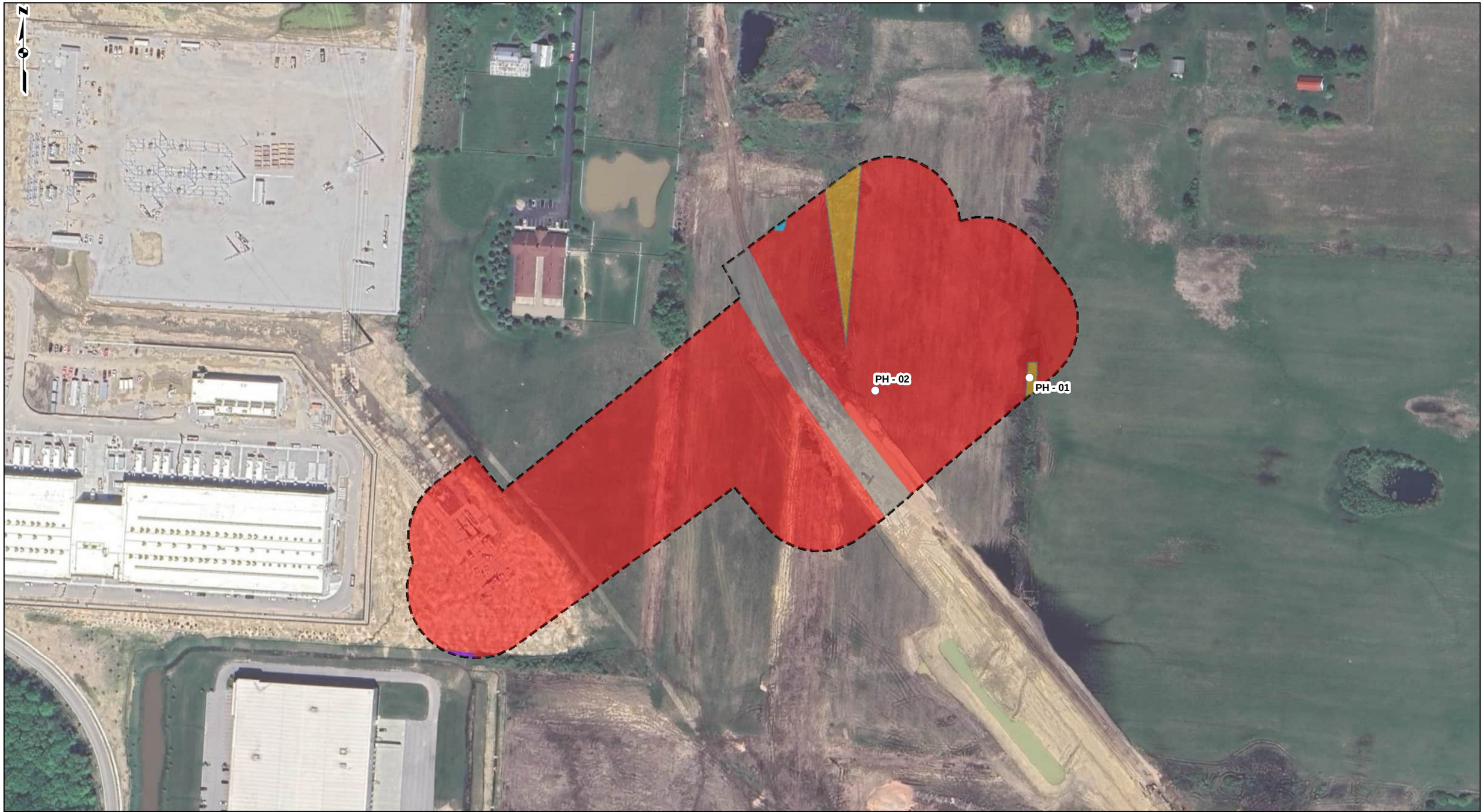
FIGURE 4
STREAM ELIGIBILTY MAP

AECOM

JORDEN EXTENSION 138KV
NORTH AND SOUTH PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: AJH DATE: 12/23/2024
CHECKED: CT APPROVED:

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REFERENCE: WORLD IMAGERY (CLARITY), ESRI, ARCGIS ONLINE, ACCESSED 12/2024.

12/23/2024

LEGEND

- PHOTO LOCATION POINT
- PROJECT SURVEY AREA

VEGETATIVE COMMUNITY TYPE

- LANDSCAPED
- OLD FIELD
- SCRUB/SHRUB
- STREAMS/WETLANDS
- URBAN

0 100 200 400 Feet

FIGURE 5
VEGETATIVE COMMUNITIES
ASSESSMENT MAP

AECOM

JORDEN EXTENSION 138KV
NORTH AND SOUTH PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER

DRAWN BY: AJH
CHECKED: CT

DATE: 12/23/2024
APPROVED:

X:\DCS\GIS\ArcMap_GeoDB_Projects\ENV\60694533_AEP_Jorden Extension_ECO\3_MXDs\3_WDR\Jorden Ext. 138KV North and South\JordenExt138NS_WDR_FIG_5.mxd

APPENDIX A

JURISDICTIONAL DETERMINATIONS (JD) AND OEPA PERMIT APPLICATIONS BY OTHERS

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

REPLY TO
ATTENTION OF

September 26, 2022

Regulatory Division
North Branch
LRH-2022-691-SCR

APPROVED JURISDICTIONAL DETERMINATION

Mr. Ryan Ohly
City of New Albany
99 West Mian Street
New Albany, Ohio 43054

Dear Mr. Ohly:

I refer to the *Investigation of Waters of the United States, City of New Albany, Licking County, Ohio* dated August 19, 2022, and completed by EMH&T. You have requested an approved jurisdictional determination for the non-jurisdictional features on the approximate 16.5-acre site. The JD review area is located east of the intersection of Harrison Road and Jug Street as well as northwest of the intersection between Mink Street and Beaver Road, in Jersey Township, Licking County, Ohio at approximately 40.09590 latitude, -82.72049 longitude. We have assigned the following file number to your PCN: LRH-2022-691-SCR. Please reference this file number on all future correspondence related to this subject proposal.

The United States Army Corps of Engineers' (Corps) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (Section 404) requires a DA permit be obtained prior to discharging dredged and/or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 (Section 10) requires a DA permit be obtained for any work in, on, over or under a navigable water.

Our December 2, 2008 headquarters guidance entitled *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States* was followed in the final verification of Section 404 jurisdiction. Based on a review of the information provided and other information available to us, the approximate 16.5-acre site contains 0.25 acre of six (6) wetlands (Wetlands A-F) and 0.02-acre of one (1) open water feature (Pond 1). Wetlands A-F are surrounded by uplands and do not exhibit a distinct surface water connection to a water of the United States. Wetlands A-F would not support interstate or foreign commerce interests, nor do they contain any rare, threatened, or endangered species. Additionally, the site contains Pond 1. Pond 1 has been constructed entirely in uplands, is not an impoundment of a jurisdictional stream, and has no connection to a water of the United States. Therefore, Wetlands A-F and Pond 1 are not jurisdictional waters of the United States.

However, you should contact the Ohio Environmental Protection Agency, Division of Surface Water, at (614) 664-2001 to determine state permit requirements.

In accordance with the June 5, 2007 Joint Memorandum between the United States Environmental Protection Agency (USEPA) and the Corps and the January 28, 2008 Corps Memorandum regarding coordination on jurisdictional determinations, this isolated water determination was coordinated with the USEPA Region 5 and the Corps Headquarters, with coordination completed on September 12, 2022 and September 16, 2022, respectively.

This jurisdictional verification is valid for a period of five (5) years from the date of this letter unless new information warrants revision of the delineation prior to the expiration date. This letter contains an approved JD for the subject site within the approved JD boundary. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the Great Lakes and Ohio River Division Office at the following address:

Regulatory Administrative Appeals Officer
United States Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10780
Cincinnati, Ohio 45202-3222
Phone: (513) 684-2699
Fax: (513) 684-2460

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

This determination has been conducted to identify the limits of the Corps' Section 404 jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are United States Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

If you have any questions concerning the above, please contact Cecil Cox of the North Branch at 304-399-5274, by mail at the above address, or by email at cecil.m.cox@usace.army.mil.

Sincerely,

Andrew J. Wendt
Regulatory Project Manager
North Branch

Enclosures
cc:
Eric Nagy (EMH&T) via email

October 31, 2022

Re: Clover Valley Rd Extension & Jug St Improvement
Permit - Intermediate
Application and Support
401 Wetlands
Licking County
DSW401228290W

General Isolated Wetland Permit Application (Level One)

Division of Surface Water

(For impacts of ½ acre or less to Category 1 and 2 isolated wetlands)

Section 1: Applicant and Consultant/Agent Information		
	Applicant	**Consultant/Agent**
Company/Agency Name:	The City of New Albany	EMH&T
Address:	99 W. Main Street, New Albany, OH 43054	5500 New Albany Road, Columbus, OH 43054
Contact Name/Title:	Ryan Ohly/City Engineer	Eric Nagy/Senior En. Scientist
Contact Phone:	(614) 855-3913	(614) 775-4518
Alternate Phone:		(614) 403-4326
Contact FAX:	(614) 855-8583	(614) 775-4802
Contact Email:	rohly@newalbanyohio.org	enagy@emht.com
Technical Contact:		
Technical Phone:		
Technical Email:		

Section 2: Project Information

A. Project Name: Clover Valley Rd Extension & Jug St Improvement

B. Has Pre-Application Coordination occurred? ☐ Yes ☒ No

401 Pre-application Reviewer: **Date of 401 Pre-application Meeting:**

C. Brief Project Description: The applicant is proposing to improve a limited portion of Jug Street between Harrison Road and Clover Valley Road, improve the intersection at Clover Valley and Jug Street, and extend Clover Valley Road between Jug Street and Mink Street. This project is being built to provide improved public roadways that can handle permanent traffic increases for the surrounding area. Both the Jug Street Improvements and the Clover Valley Road Extension will be improved to a three (3) lane roadway within an approximately 60 foot wide right-of-way. The roadway will have two (2) through lanes and a center turn lane. A community leisure path will be constructed within the right-of-way. A 24-inch water main is to be constructed adjacent to the right-of-way. A post-construction stormwater basin will be designed and constructed within the proposed roadway corridor in order to detain runoff before releasing to nearby waterways.

As part of the proposed roadway project, portions of four (4) non-jurisdictional (isolated) wetlands (Wetlands A, B, C, and D) will be permanently impacted for roadway grading associated with the project. These impacts are requested by this permit application. Wetlands E and F were authorized to be impacted in their entirety for a Level 2 Isolated Wetland Permit associated with the Innovation East Development (Ohio EPA ID No. 227865W). This previously authorized Level 2 Isolated Wetland Permit is dated June 23, 2022 and can be provided upon request. The authorized wetland impacts for the Innovation East Development, including impacts to Wetlands E and F, were mitigated at the Rocky Fork Pooled Wetlands Mitigation Site located in the City of New Albany, Franklin County, Ohio.

Approximately 0.023 acre of non-jurisdictional pond will also be impacted by the project.

D. Construction Start Date: 03/01/2023 **End Date:** 03/01/2024

E. Is any portion of the activity complete now? ☐ Yes ☒ No

Is this an "After-The-Fact" permit application? ☐ Yes ☒ No

Description of completed activities and its impact on the waters of the state.:

F. Coordinates LATITUDE: 40.095827 **LONGITUDE:** -82.724159

G. Project Address: Clover Valley Road and Jug Street, New Albany, OH 43054

Location Description: The project corridor is located east of the intersection between Harrison Road and Jug Street as well as northwest of the intersection between Mink Street and Beaver Road in the City of New Albany, Licking County, Ohio.

ZIP Code(s): 43054

County(ies):	**Township(s):**
Licking	Jersey

H. 8 or 12 Digit HUC Number:	I. Watershed Name:
050600011503	Headwaters Blacklick Creek
050400060402	Headwaters South Fork Licking River

J. U.S. Army Corps of Engineers District: Huntington

K. Proposed Impacts to Isolated Wetlands:

☐ Beach Nourishment	☐ Blasting	☐ Breakwater	☐ Bulkhead
☐ Bridge/Culvert	☐ Dam	☐ Dredge	☒ Fill
☐ Groin/Jetty	☐ Levees/Berms	☐ Mine Through	☐ Revetment
☐ Bank Stabilization	☐ Stream Channelization	☐ Stream Relocation	☐ Water Body Crossing
☐ Weirs	☐ Other		

L. Other water related permits issued or required include:

☐ Individual 404 Permit

☐ Individual 401 WQC

☐ Nationwide Permit

☐ Section 9 Permit

☐ Section 10 Permit

☒ NPDES Permit **Permit Type:** General **Will be Submitted on:** 12/01/2022

☐ Permit to Install

☐ Regional General Permit

☐ ODNR Permit

☐ Oil & Gas Storm Water General Permit

M. Are there other aquatic resources on the project site?

☐ Perennial Streams ☐ Intermittent Streams ☐ Ephemeral Streams ☐ Non-Isolated Wetlands ☒ Lakes/Ponds

Section 3: Fees

Are you exempt from fees?		☐ Yes ☒ No	(If YES, leave fee section blank)
Is this an After the Fact (ATF) application?		☐ Yes ☒ No	
If YES, double the fees. Maximum fees of $10,000			
Application Fee =			$200.00
Review Fees			
Wetland Acres Impacted	0.21 x $500.00 =		$105.00
	Total Review Fees =		$0.00
	Total Fees ($200 Application Fee + Total Review Fees) =		$305.00
	Due at the time of application submittal =		$305.00

PLEASE MAKE FEE CHECK PAYABLE TO: "TREASURER, STATE OF OHIO"

Section 4: Submitted Documentation

Check all documents/items that have been submitted.

☒ Proposed Project Mapping

Upload File(s): Exhibit 5 - NWI Map.pdf, Exhibit 3B - Soils.pdf, Exhibit 6 - Delineation Map_CV Ext & JS Improve.pdf, Exhibit 4 - FIRM Map.pdf, Exhibit 3A - Soils.pdf, Exhibit 2 - USGS.pdf, Exhibit 1 - Location Map.pdf, Exhibit 7 - Development Plan Exhibit.pdf

☒ Wetland Delineation Report

Upload File(s): Delineation Report_CVR Ext & Jug St Imp.pdf

☒ Wetland categorization (including 10-page ORAM sheets)

Upload File(s): Wetland F ORAM.pdf, Wetland D ORAM.pdf, Wetland E ORAM.pdf, Wetland C ORAM.pdf, Wetland B ORAM.pdf, Wetland A ORAM.pdf

☒ Site Photographs

Upload File(s): 4_Photographs.pdf

☒ US Army Corps of Engineers Jurisdictional Determination

Upload File(s): 2022-691-SCR_Letter.pdf

☒ Proposed Mitigation Plan

Upload File(s): Mitigation Plan.pdf

Section 5: Applicant and Agent Signature

Application is hereby made for an Isolated Wetland Permit. I certify that the information provided on this form and all attachments related to this project are true and accurate to the best of my knowledge.

Applicant Name:	**Title:**
Ryan Ohly	City Engineer
Signature:	**Date:**
Electronically submitted by 79533901	Electronically submitted on 10/31/2022

Application for an Isolated Wetland Permit - Proposed Wetland Impacts and Mitigation

Division of Surface Water

401 Water Quality Certification and Isolated Wetland Permitting Unit

Ohio Environmental Protection Agency

Section 1: Wetlands Onsite and Proposed Impacts

Wetland ID	ORAM Score	Category	Cat. Verified by Ohio EPA?	Ohio EPA Reviewer who Verified	Size (Acres)			Proposed Impacts (Acres)		
					Forest	None	Total	Forest	None	Total
Wetland A	35.0	2	No		0.08	0.00	0.08	0.08	0.00	0.08
Wetland B	15.0	1	No		0.00	0.05	0.05	0.00	0.05	0.05
Wetland C	26.0	1	No		0.00	0.05	0.05	0.00	0.05	0.05
Wetland D	25.0	1	No		0.00	0.03	0.03	0.00	0.03	0.03
Wetland Acreage Totals					0.08	0.13	0.21	0.08	0.13	0.21
Totals: Category 1 Wetlands					0.00	0.13	0.13	0.00	0.13	0.13
Totals: Category 2 Wetlands					0.08	0.00	0.08	0.08	0.00	0.08
Totals: Category 3 Wetlands					0.00	0.00	0.00	0.00	0.00	0.00

Section 2: Proposed Wetland Mitigation (Check All That Apply) Preferred Alternative

☐ **Wetland Mitigation Bank**

Mitigation Bank: **Other Mitigation Bank:**

Number of Forested Credits: **Type of Credits (if applicable):**

Number of Non-Forested Credits: **Type of Credits (if applicable):**

☐ **Proof of Reservation?**

☒ **In-Lieu Fee Program** **ILF Sponsor:** Stream + Wetlands Foundation **Other ILF Sponsor:**

Number of Wetland Credits: 0.5

☒ **Proof of Reservation?**

Upload File(s): Unsigned S+W Foundation Agreement.pdf

☐ **On-Site Permittee-Responsible Mitigation**

☐ **Restoration/Creation** **Type of Wetland:** **Acres:**

☐ **Preservation** **Type of Wetland:** **Acres:**

☐ **Enhancement** **Type of Wetland:** **Acres:**

☐ **Other**

Other Description:

☐ **Off-Site Permittee-Responsible Mitigation**

☐ Restoration/Creation	Type of Wetland:	Acres:
☐ Preservation	Type of Wetland:	Acres:
☐ Enhancement	Type of Wetland:	Acres:
☐ Other		

Other Description:

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

REPLY TO ATTENTION OF

February 4, 2021

Regulatory Division
North Branch
LRH-2021-907-SCR-Blacklick Creek

APPROVED JURISDICTIONAL DETERMINATION

Mr. Dick Roggenkamp
MBJ Holdings
8000 Walton Parkway, Suite 120
New Albany, Ohio 43054

Dear Mr. Roggenkamp:

I refer to the *Delineation of Waters of the United States for the 145-acre Property known as Innovation East Development,* dated November 29, 2021, and submitted on your behalf by EMH&T. You have requested an approved jurisdictional determination (AJD) for the aquatic resources located on the 145-acre parcel. The property is located on the west side of Mink Street and the south side of Jug Street in Jersey Township, Licking County, Ohio (40.091436 latitude, -82.720029 longitude). Your AJD request has been assigned the following file number: LRH-2021-907-SCR-Blacklick Creek. Please reference this file number on all future correspondence related to this JD request.

The United States Army Corps of Engineers' (Corps) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (Section 404) requires a Department of the Army (DA) permit be obtained prior to the discharge of dredged or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 requires a DA permit be obtained for any work in, on, over or under a traditional navigable water.

Our December 2, 2008 headquarters guidance entitled *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States* was followed in the final verification of Section 404 jurisdiction. Based on a review of the information provided, 1.26 acre of six (6) wetlands (Wetlands A-F) and 0.49 acre of two (2) ponds (Ponds 1-2) are present within the AJD area of interest as depicted on the enclosed map titled "Exhibit 6: Delineation Map" (Enclosure 1). These resources are also listed in the enclosed AJD Form (Enclosure 2).

Wetlands A-F and Ponds 1-2 are physically isolated and lack a direct hydrological connection to the tributary system. In addition to being hydrologically isolated, Wetlands A-F do not appear to support interstate or foreign commerce interests, nor do they contain any rare or endangered species. Wetlands A-F and Ponds 1-2 are not considered waters of the United States and are not subject to regulation under Section 404; however, you should contact the Ohio Environmental Protection Agency, Division of Surface Water, at (614) 664-2001 to determine permit requirements.

Printed on Recycled Paper

In accordance with the June 5, 2007 Joint Memorandum between the United States Environmental Protection Agency (USEPA) and the Corps and the January 28, 2008 Corps Memorandum regarding coordination on jurisdictional determinations, this isolated wetland determination was coordinated with the USEPA Region 5 and the Corps Headquarters, with coordination completed on February 1, 2022 and January 11, 2022, respectively.

This jurisdictional verification is valid for a period of five (5) years from the date of this letter unless new information warrants revision of the delineation prior to the expiration date. This letter contains an AJD for the subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form (Enclosure 3). If you request to appeal this determination you must submit a completed RFA form to the Great Lakes and Ohio River Division Office at the following address:

Appeal Review Officer
United States Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10-714
Cincinnati, Ohio 45202-3222
Phone: (513) 684-7261
Fax: (513) 684-2460

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. **It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.**

This determination has been conducted to identify the limits of the Corps' Section 404 jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are United States Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

A copy of this letter will be provided to your consultant, Mr. Bryan Lombard with EMH&T. If you have any questions concerning the above, please contact Ms. Katie Samples of the North Branch at 304-399-6933, by mail at the above address, or by email at katie.e.samples@usace.army.mil.

Sincerely,

Cecil M. Cox
Regulatory Project Manager
North Branch

Enclosures
cc (by email):

Mr. Bryan Lombard (EMH&T)
Mr. Jeff Boyles (Ohio EPA)

March 4, 2022

Re: Innovation East Development
Permit - Intermediate
Application and Support
401 Wetlands
Licking County
DSW401227865W

Isolated Wetland Permit Application (Level Two)

Division of Surface Water

(For impacts greater than ½ acre of Category 1 isolated wetlands and greater than ½ acre but not exceeding 3 acres for Category 2 isolated wetlands)

Section 1: Applicant and Consultant/Agent Information		
	Applicant	**Consultant/Agent**
Company/Agency Name:	MBJ Holdings, LLC	EMH&T
Address:	8000 Walton Parkway, Suite 120, New Albany, OH 43054	5500 New Albany Road, Columbus, OH 43054
Contact Name/Title:	Brent Bradbury/CFO	Michael Krokonko/Sr. Env Scientist
Contact Phone:	(614) 939-8030	(614) 775-4509
Alternate Phone:	(614) 736-2031	(614) 419-7911
Contact FAX:		
Contact Email:	bbradbury@newalbanycompany.com	mkrokonko@emht.com
Technical Contact:	Richard Roggenkamp	
Technical Phone:	(614) 939-8000	
Technical Email:	droggenkamp@newalbanycompany.com	

Section 2: Project Information

A. Project Name: Innovation East Development

B. Has Pre-Application Coordination occurred? ☐ Yes ☒ No

401 Pre-application Reviewer: **Date of 401 Pre-application Meeting:**

C. Brief Project Description: MBJ Holdings, LLC is proposing to develop a commercial warehouse facility capable of supporting approximately 1,575,000 square feet of space in Jersey Township, Licking County, Ohio. The site plan includes grading and construction of six (6) large buildings, associated parking areas, paved storage areas, a site entrance and access drive, stormwater facilities, and related infrastructure. Construction of the project in accordance with the proposed development plan will require impacts to six (6) Category 1 isolated wetlands (1.26 acres) and two (2) non-jurisdictional ponds (0.49 acre).

D. Construction Start Date: 08/01/2022 **End Date:** 08/01/2024

E. Is any portion of the activity complete now? ☐ Yes ☒ No

Is this an "After-The-Fact" permit application? ☐ Yes ☒ No

Description of completed activities and its impact on the waters of the state.:

F. Coordinates LATITUDE: 40.092133 **LONGITUDE:** -82.718897

G. Project Address: South of Jug St. and west of Mink St., New Albany, OH 43054

Location Description: The approximately 145-acre development site is located south of Jug Street and west of Mink Street in Jersey Township, Licking County, Ohio.

ZIP Code(s): 43054

County(ies):	**Township(s):**
Licking	Jersey
H. 8 or 12 Digit HUC Number:	**I. Watershed Name:**
050400060402	Headwaters South Fork Licking River
050600011503	Headwaters Blacklick Creek

J. U.S. Army Corps of Engineers District: Huntington

K. Proposed Impacts to Isolated Wetlands:

☐ Beach Nourishment ☐ Blasting ☐ Breakwater ☐ Bulkhead

☐ Bridge/Culvert ☐ Dam ☐ Dredge ☒ Fill

☐ Groin/Jetty ☐ Levees/Berms ☐ Mine Through ☐ Revetment
☐ Bank Stabilization ☐ Stream Channelization ☐ Stream Relocation ☐ Water Body Crossing
☐ Weirs ☐ Other

L. Other water related permits issued or required include:

☐ Individual 404 Permit

☐ Individual 401 WQC

☐ Nationwide Permit

☐ Section 9 Permit

☐ Section 10 Permit

☒ NPDES Permit **Permit Type:** General **Will be Submitted on:** 08/01/2022

☒ Permit to Install **Will be Submitted on:** 09/01/2022

☐ Regional General Permit

☐ ODNR Permit

☐ Oil & Gas Storm Water General Permit

M. Are there other aquatic resources on the project site?

☐ Perennial Streams ☐ Intermittent Streams ☐ Ephemeral Streams ☐ Non-Isolated Wetlands ☒ Lakes/Ponds

Section 3: Fees

Are you exempt from fees?		☐ Yes ☒ No	(If YES, leave fee section blank)
Is this an After the Fact (ATF) application?		☐ Yes ☒ No	
If YES, double the fees. Maximum fees of $10,000			
Application Fee =			$200.00
Review Fees			
Wetland Acres Impacted	1.26 x $500.00 =		$630.00
	Total Review Fees =		$0.00
	Total Fees ($200 Application Fee + Total Review Fees) =		$830.00
	Due at the time of application submittal =		$830.00

PLEASE MAKE FEE CHECK PAYABLE TO: "TREASURER, STATE OF OHIO"

Section 4: Submitted Documentation

Check all documents/items that have been submitted.

☒ Proposed Project Mapping

Upload File(s): Innovation East Exhibits.pdf

☒ Wetland Delineation Report

Upload File(s): Innovation East Development Area Delineation Report Revised.pdf

☒ Wetland categorization (including 10-page ORAM sheets)

Upload File(s): ORAM Forms.pdf

☒ Site Photographs

Upload File(s): Photo Log.pdf

☒ US Army Corps of Engineers Jurisdictional Determination

Upload File(s): 2021-907-SCR AJD_Compiled.pdf

☒ Proposed Mitigation Plan

Upload File(s): Rocky Fork_Pooled Wetland Mitigation Balance Sheet_REV 03-01-2022.pdf

Additional IWP Level 2 Information

Please provide an analysis of practicable on-site alternatives to the proposed filling of the isolated wetland(s) that would have a less adverse impact on the isolated wetland ecosystem:

See attached Project Mapping and attached Project Report.

Upload File(s): Project Report.pdf

Please provide information indicating whether high quality waters, as defined in rule 3745 -1-05 of the Administrative Code, are to be avoided by the proposed filling of the isolated wetland(s):

See attached Project Report.

Please provide maps and narratives describing buffers provided for any isolated wetland(s) that will be avoided at the site:

All of the isolated wetlands onsite are proposed to be impacted. This no avoided wetland buffers will be established for this project. See attached Project Report.

Upload File(s): Exhibit 7 - Preferred Alternative.pdf

Please demonstrate that the wetland(s) to be filled are not locally or regionally scarce and do not contain rare, threatened or endangered species:

See attached Project Report.

Upload File(s): Innovation East Development - ODNR Env Review Request.pdf, USFWS Species List_ Ohio Ecological Services Field Office.pdf

Please demonstrate that the project impacts would not result in significant degradation to the aquatic e cosystem:

See attached Project Report.

Please provide a comprehensive post-development storm water plan that includes water quality improvement measures:

See attached Project Mapping and attached Project Report.

Section 5: Applicant and Agent Signature

Application is hereby made for an Isolated Wetland Permit. I certify that the information provided on this form and all attachments related to this project are true and accurate to the best of my knowledge.

Applicant Name:	**Title:**
Brent Bradbury	CFO
Signature:	**Date:**
Electronically submitted by NEWALBANYCO	Electronically submitted on 03/04/2022

Application for an Isolated Wetland Permit - Proposed Wetland Impacts and Mitigation

Division of Surface Water

401 Water Quality Certification and Isolated Wetland Permitting Unit

Ohio Environmental Protection Agency

Section 1: Wetlands Onsite and Proposed Impacts

Wetland ID	ORAM Score	Category	Cat. Verified by Ohio EPA?	Ohio EPA Reviewer who Verified	Size (Acres)			Proposed Impacts (Acres)		
					Forest	None	Total	Forest	None	Total
Wetland C	12.0	1	No		0.00	0.07	0.07	0.00	0.07	0.07
Wetland B	24.0	1	No		0.00	0.43	0.43	0.00	0.43	0.43
Wetland D	15.0	1	No		0.00	0.05	0.05	0.00	0.05	0.05
Wetland E	13.0	1	No		0.00	0.06	0.06	0.00	0.06	0.06
Wetland A	12.0	1	No		0.00	0.37	0.37	0.00	0.37	0.37
Wetland F	17.0	1	No		0.00	0.28	0.28	0.00	0.28	0.28
Wetland Acreage Totals					0.00	1.26	1.26	0.00	1.26	1.26
Totals: Category 1 Wetlands					0.00	1.26	1.26	0.00	1.26	1.26
Totals: Category 2 Wetlands					0.00	0.00	0.00	0.00	0.00	0.00
Totals: Category 3 Wetlands					0.00	0.00	0.00	0.00	0.00	0.00

Section 2: Proposed Wetland Mitigation (Check All That Apply) Preferred Alternative

☐ **Wetland Mitigation Bank**

Mitigation Bank: **Other Mitigation Bank:**

Number of Forested Credits: **Type of Credits (if applicable):**

Number of Non-Forested Credits: **Type of Credits (if applicable):**

☐ **Proof of Reservation?**

☐ **In-Lieu Fee Program** **ILF Sponsor:** **Other ILF Sponsor:**

Number of Wetland Credits:

☐ **Proof of Reservation?**

☐ **On-Site Permittee-Responsible Mitigation**

☐ **Restoration/Creation** **Type of Wetland:** **Acres:**

☐ **Preservation** **Type of Wetland:** **Acres:**

☐ **Enhancement** **Type of Wetland:** **Acres:**

☐ **Other**

Other Description:

☒ **Off-Site Permittee-Responsible Mitigation**

☒ **Restoration/Creation**	**Type of Wetland:** Non-Forested	**Acres:** 1.89
☐ **Preservation**	**Type of Wetland:**	**Acres:**
☐ **Enhancement**	**Type of Wetland:**	**Acres:**
☐ **Other**		

Other Description:



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

E M H&T
Engineers • Surveyors • Planners • Scientists
5500 New Albany Road, Columbus, OH 43054
Phone: 614.775.4500 Toll Free: 888.775.3648
emht.com

JERSEY TOWNSHIP, LICKING COUNTY, OHIO

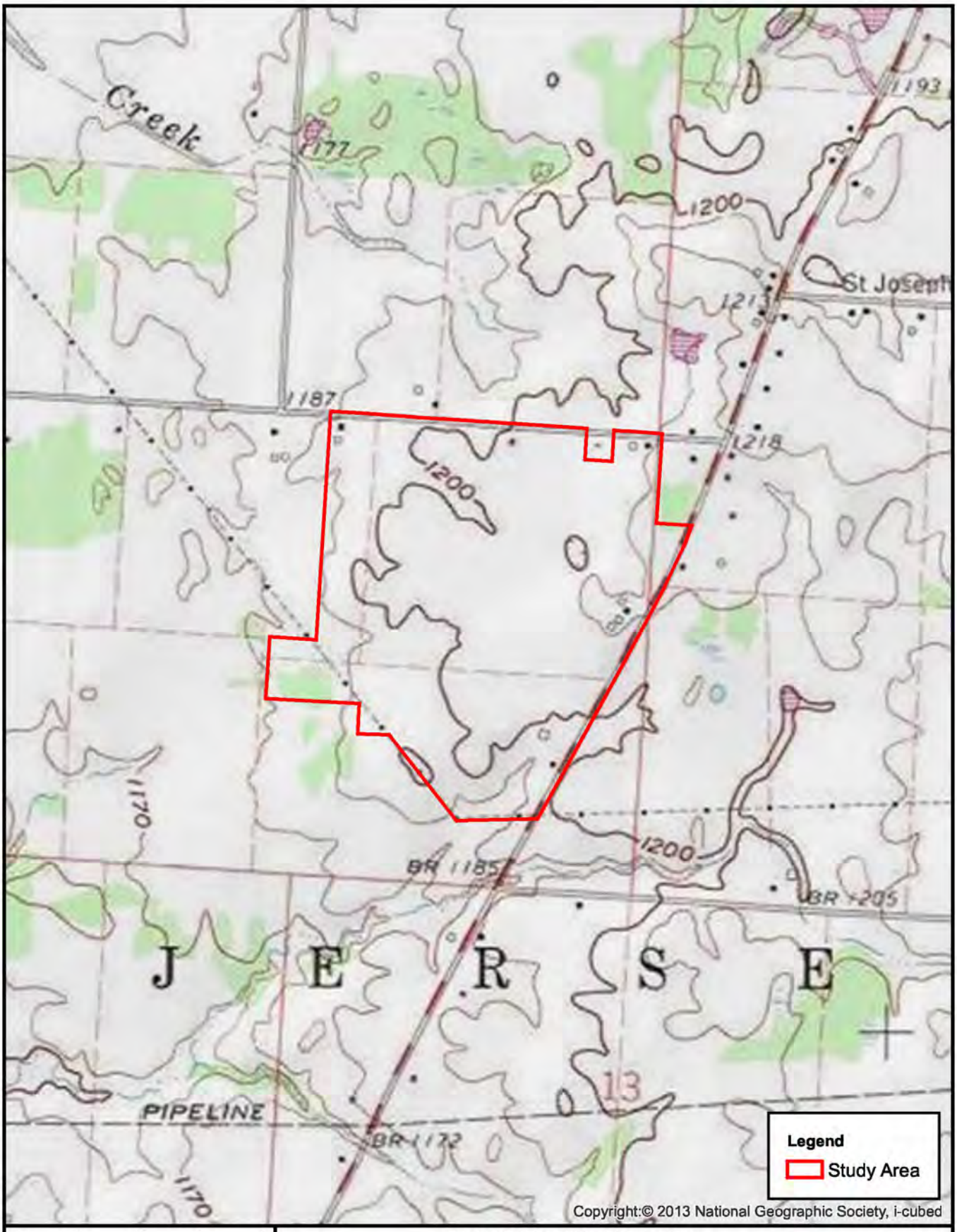
Innovation East Development Area
Location Map
Exhibit 1

SCALE: 1" = 1 mile

0 0.5 1 2 Miles

N

Path: J:\20210556\GIS\Exhibit 1 - Location Map.mxd



Path: J:\20210556\GIS\Exhibit 2 - USGS.mxd

EMH&T
Engineers • Surveyors • Planners • Scientists
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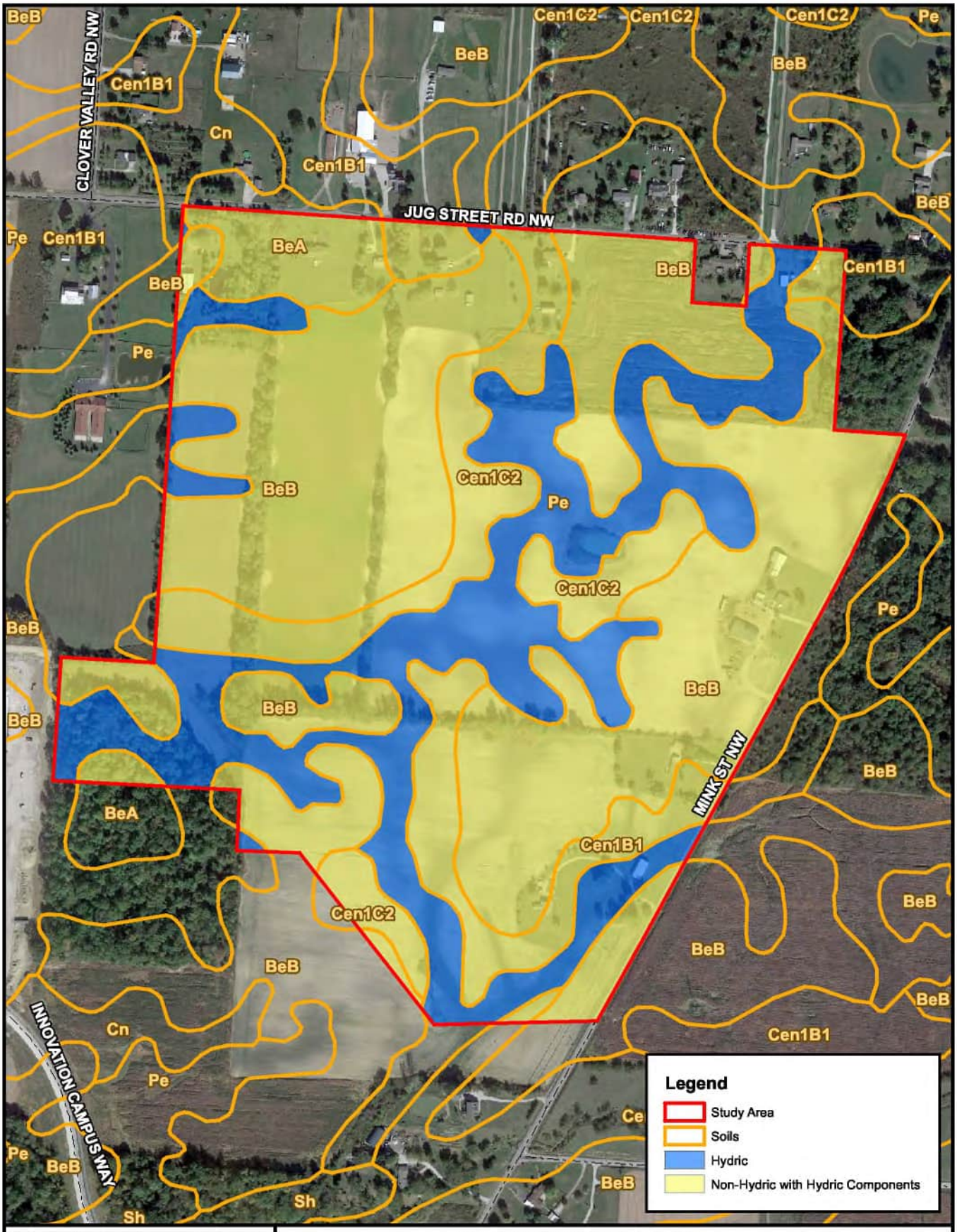
JERSEY TOWNSHIP, LICKING COUNTY, OHIO

Innovation East Development Area
USGS Topographic Map
Exhibit 2

SCALE: 1" = 1000'

0 500 1,000 2,000 Feet

Source: USGS: Jersey, Ohio Quandrangle, 1961 (Rev. 1974)



Path: J:\2021\0556\GIS\Exhibit 3A - Soils Map.mxd

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Innovation East Development Area
Soil Survey Map
Exhibit 3

SCALE: 1" = 1,000'

0 250 500 1,000 Feet

Source: Soils - NRCS, 2019
Aerial - Google Earth, 2019



Path: J:\2021\0556\GIS\Exhibit 4 - FIRM Map.mxd

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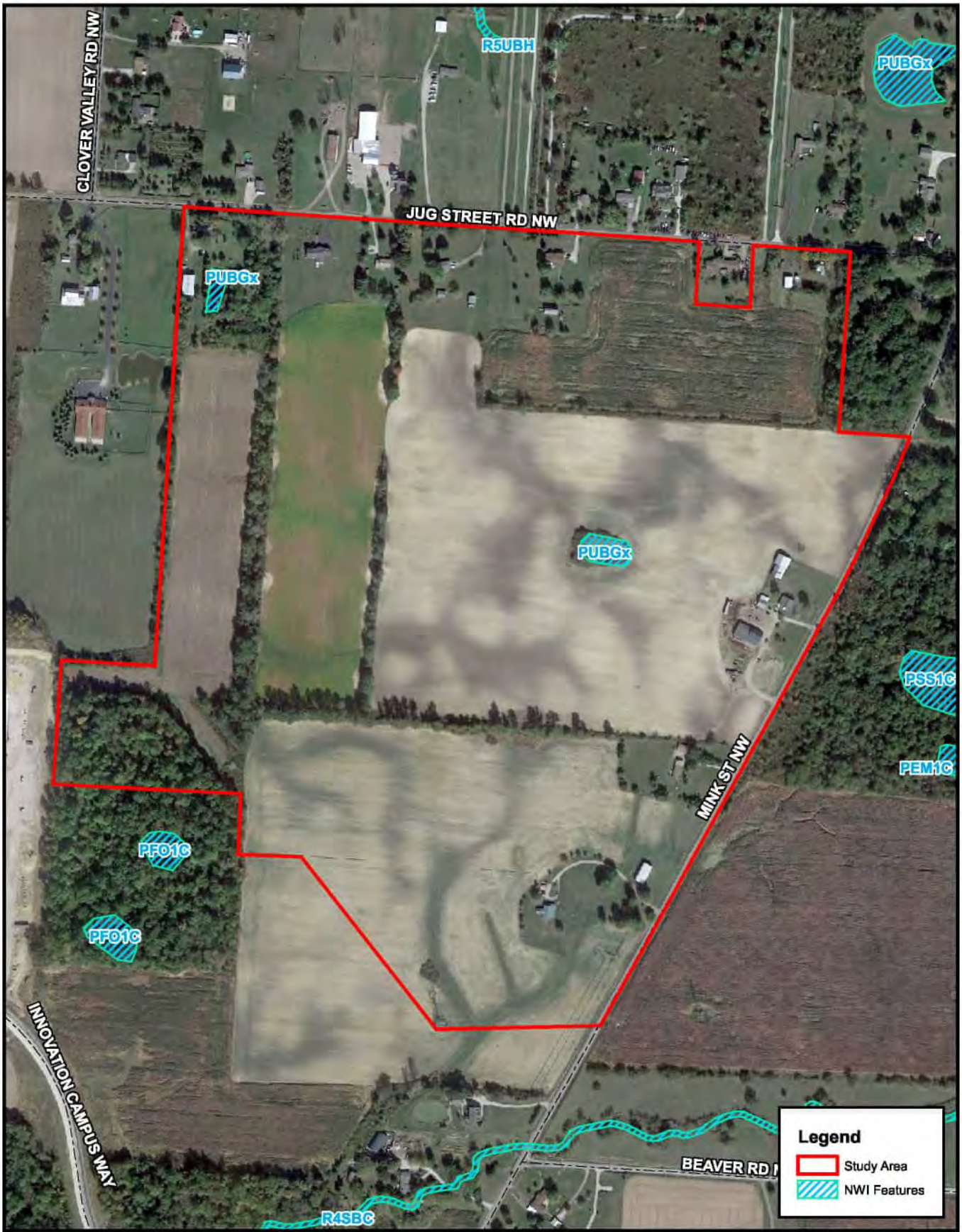
JERSEY TOWNSHIP, LICKING COUNTY, OHIO

Innovation East Development Area
Flood Insurance Rate Map
Exhibit 4

SCALE: 1" = 500'

0 250 500 1,000 Feet

Source: 100 Year Floodplain - FEMA, 2015
Aerial - Google Earth, 2019



Path: J:\2021\0556\GIS\Exhibit 5 - NWI Map.mxd

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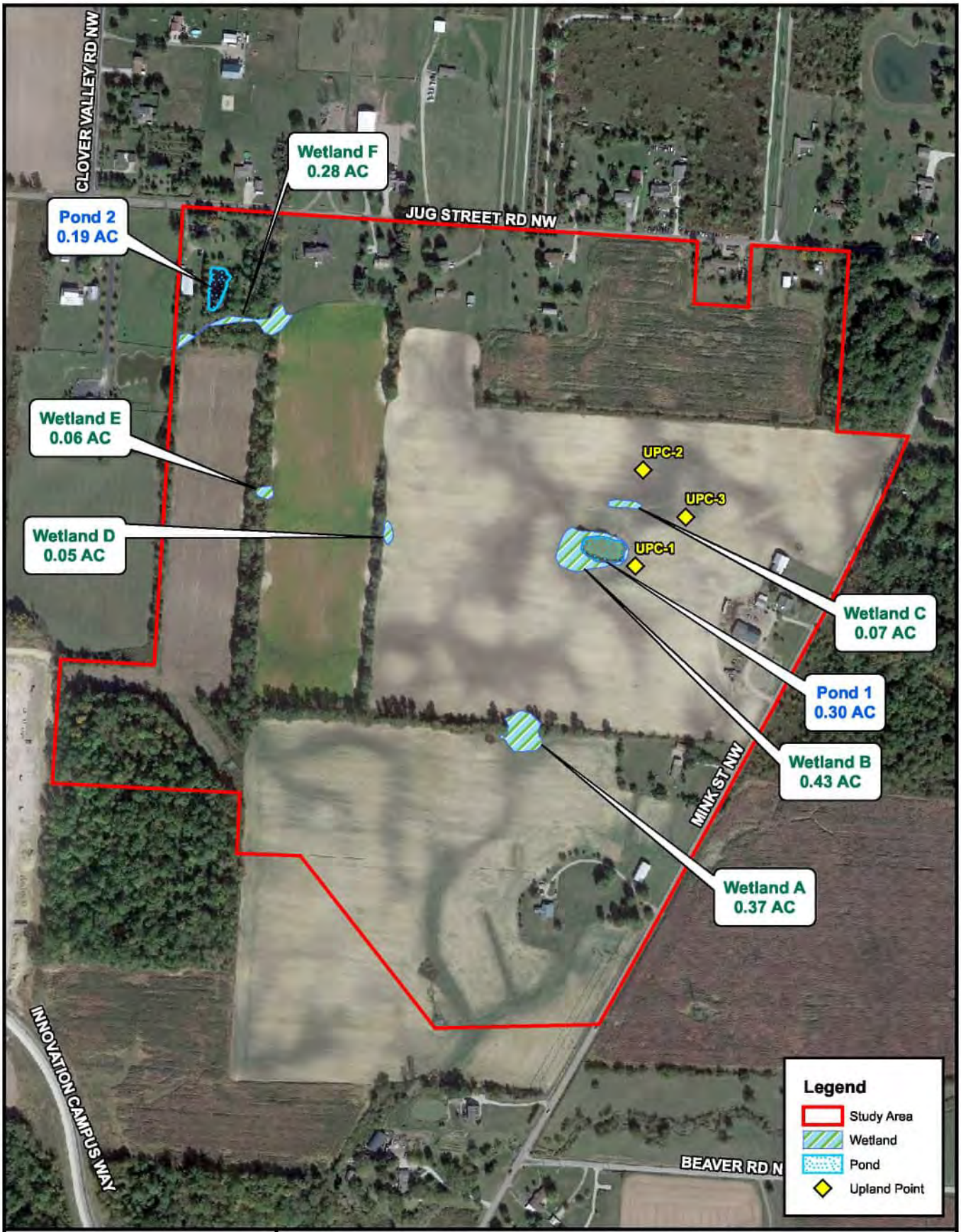
JERSEY TOWNSHIP, LICKING COUNTY, OHIO

Innovation East Development Area
National Wetland Inventory Map
Exhibit 5

SCALE: 1" = 1,000'

0 250 500 1,000 Feet

Source: NWI Features - FWS, 2019
Aerial - Google Earth, 2019



Path: J:\2021\0556\GIS\Exhibit 6 - Delineation Map.mxd

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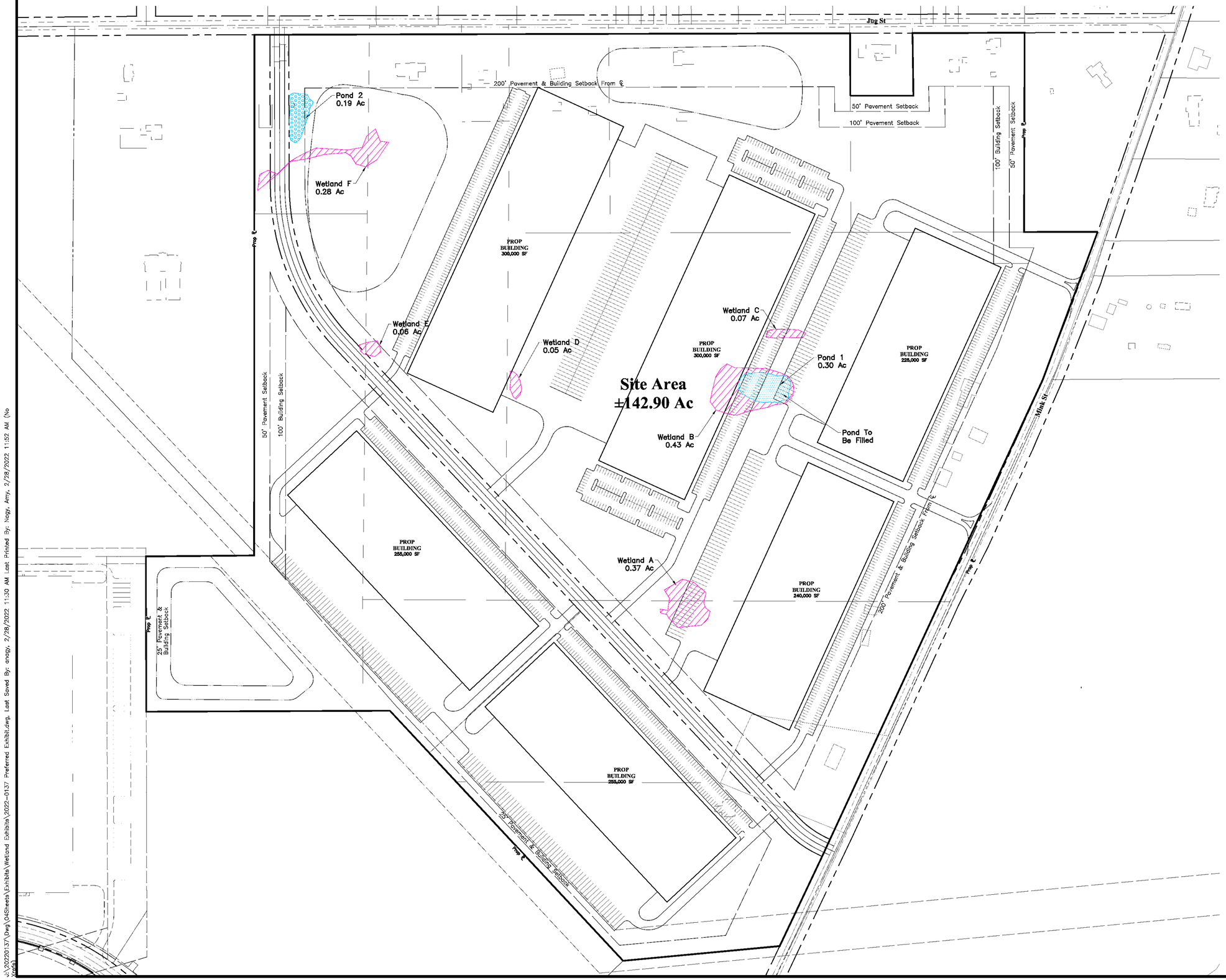
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Innovation East Development Area
Delineation Map
Exhibit 6

SCALE: 1" = 500'

0 250 500 1,000 Feet

Source: Aerial - Google Earth, 2019



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MARK	DATE	DESCRIPTION
		REVISIONS

PREFERRED ALTERNATIVE EXHIBIT 7
FOR
INNOVATION EAST DEVELOPEMENT

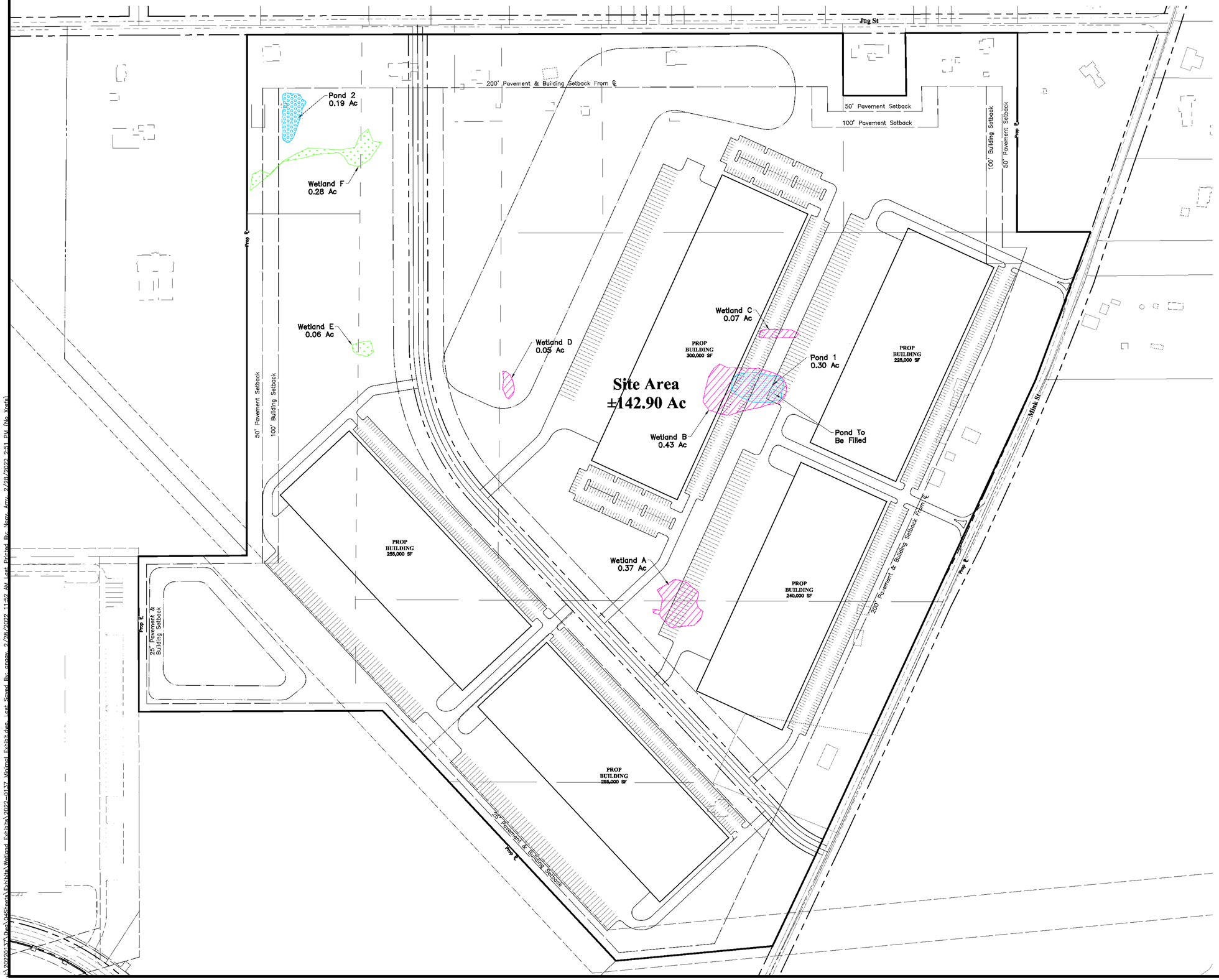
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DATE
February 28, 2022

SCALE
1" =150'

JOB NO.
2022-0137

SHEET
1/2



LEGEND

- Site Boundary
- Avoided Wetland 0.34 Acres
- Impacted Wetlands 0.92 Acres
- Avoided Pond 0.19 Acres
- Impacted Pond 0.30 Acres
- Existing Stream 0.00 LF
- Impacted Stream 0.00 LF
- Stream/Wetland Buffer

GRAPHIC SCALE

0 75 150 300

1 inch =150 feet

REVISIONS			
MARK	DATE	DESCRIPTION	

MINIMAL ALTERNATIVE EXHIBIT 8
FOR
INNOVATION EAST DEVELOPMENT

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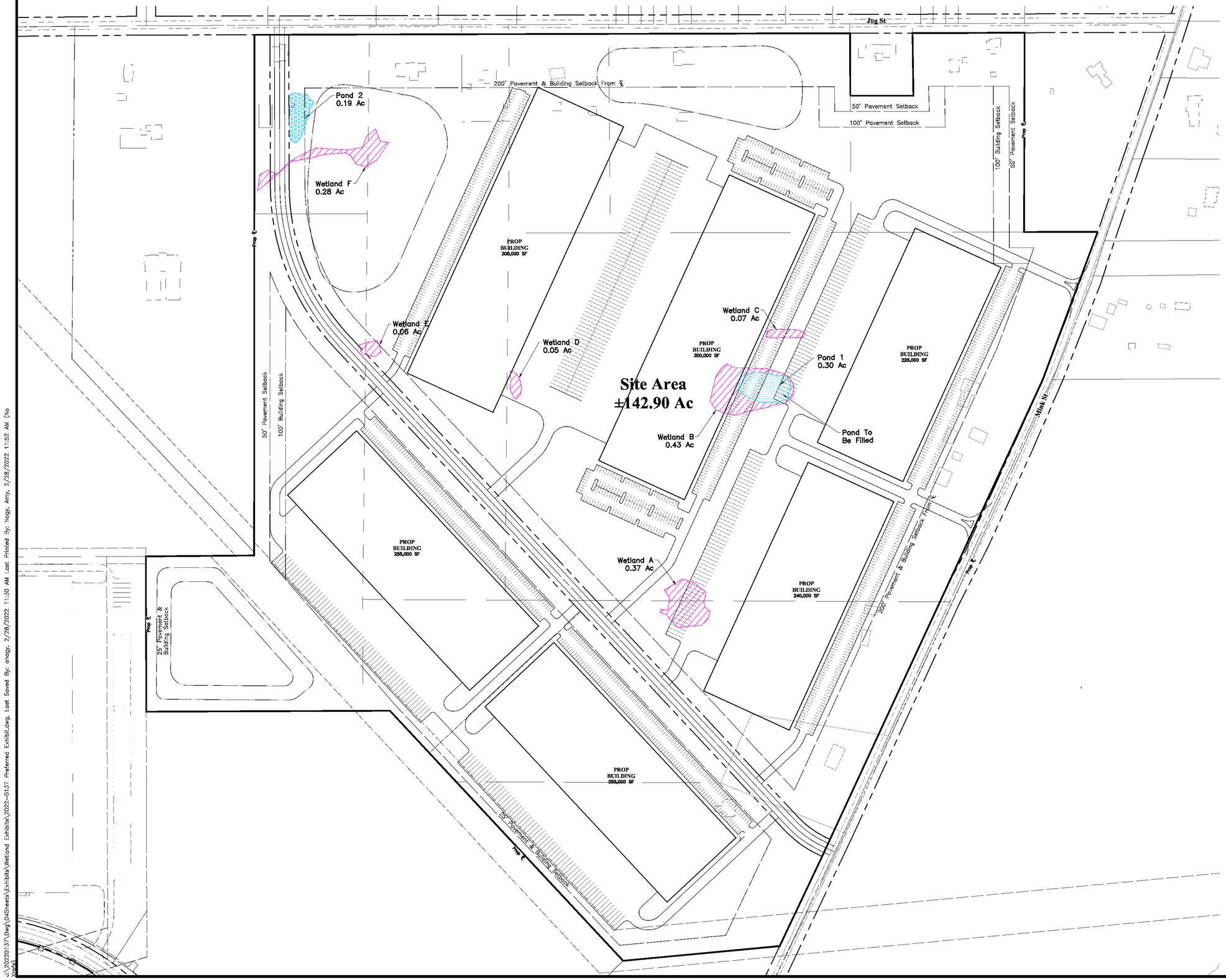
DATE
February 28, 2022

SCALE
1" =150'

JOB NO.
2022-0137

SHEET
2/2

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MARK	DATE	DESCRIPTION
		REVISIONS

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SCALE
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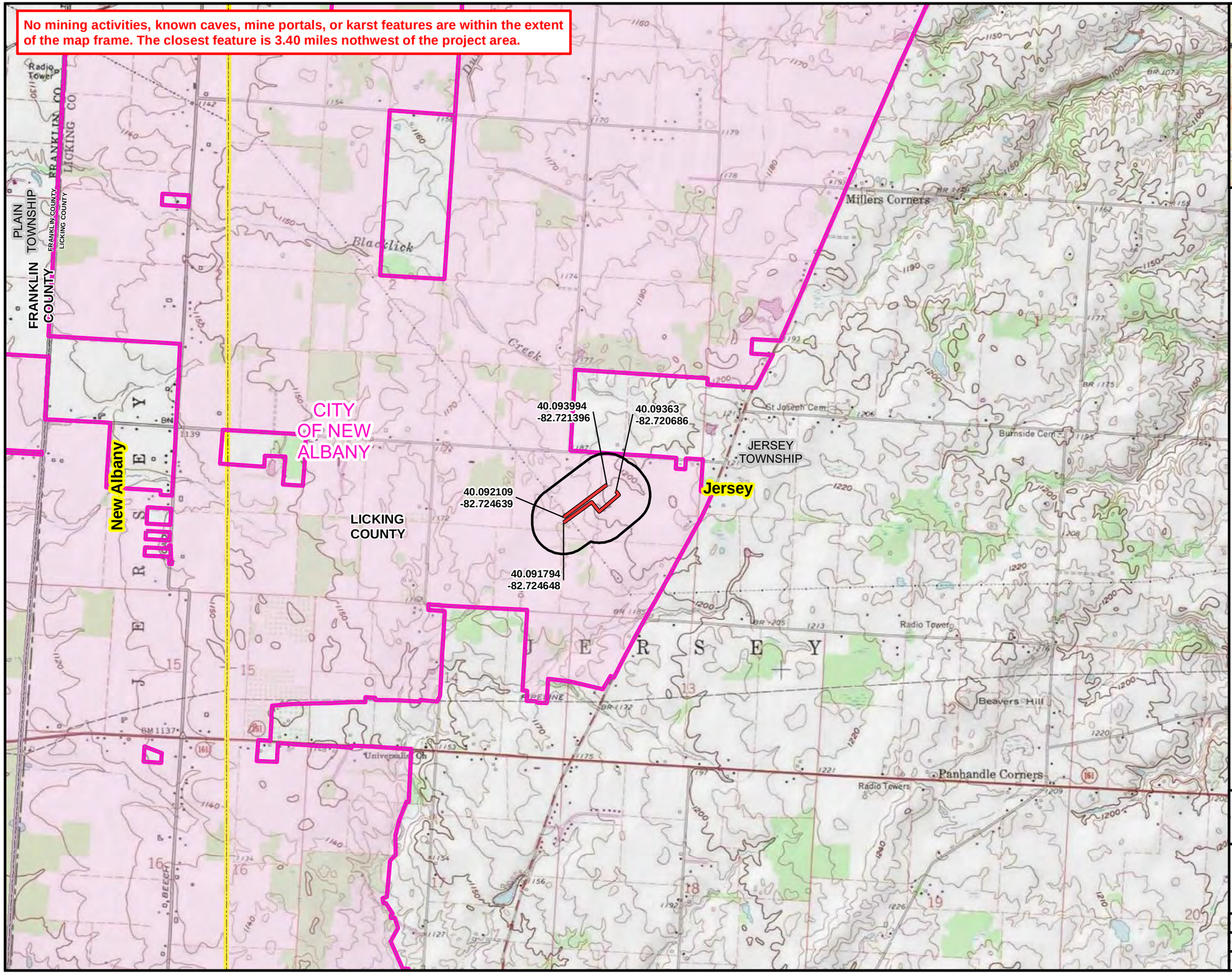
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2022-0137

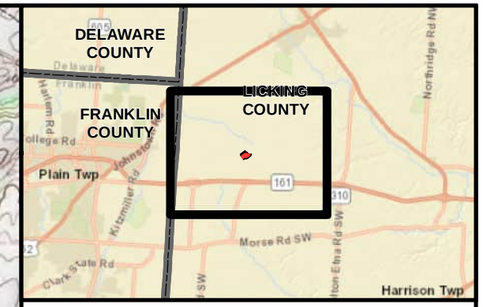
SHEET
1/2

APPENDIX B

DESKTOP ASSESSMENT FOR WINTER BAT HABITAT

No mining activities, known caves, mine portals, or karst features are within the extent of the map frame. The closest feature is 3.40 miles nothwest of the project area.





Legend

- Jorden Ext. 138kV North and South Transmission Line
- County Boundary
- Township Boundary
- City Boundary
- Quarter Mile Review Area
- Ohio USGS 7.5' Topographic Quadrangle

N

0 2,000 4,000

Feet

AMERICAN ELECTRIC POWER

Jorden Ext.138kV North and South Transmission Line Project

APPENDIX B
DESKTOP ASSESSMENT FOR WINTER BAT HABITAT

DATE: 9/9/2024	1 INCH = 2,000 FEET
CREATED BY: ORM	CHECKED BY: NAB | BM
JOB NO.: 60694533	AECOM

Date Saved: 9/9/2024
Document Path: X:\DCS\GIS\ArcMap_GeoDB_Projects\ENV\60694533_AEP_Jorden Extension_ECO\3_MXDs\1_T&E\Jorden Ext. 138kV North and South\Jorden_Ext_138kV_ODNRFigure1_Topo_Overview.mxd

APPENDIX C

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

OEPA WETLAND ORAM FORMS

DELINEATED FEATURES PHOTOGRAPHS (WETLANDS)

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

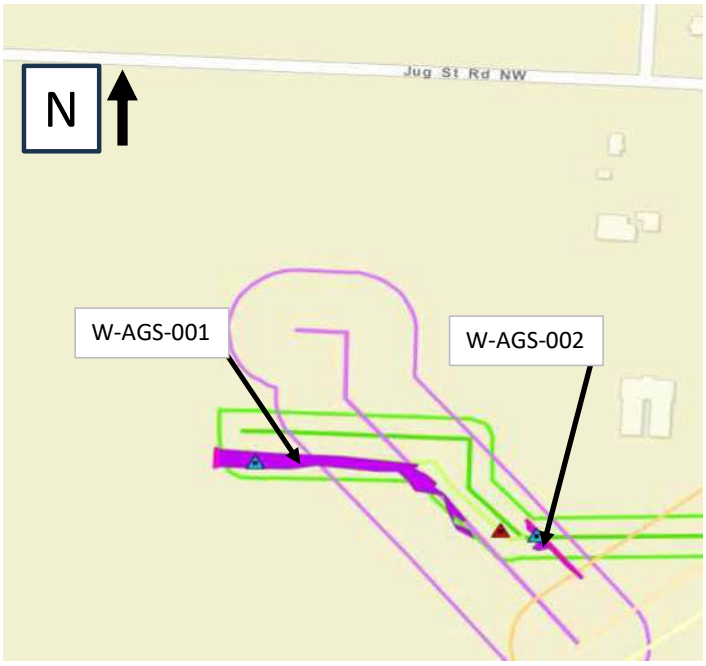
The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

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 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

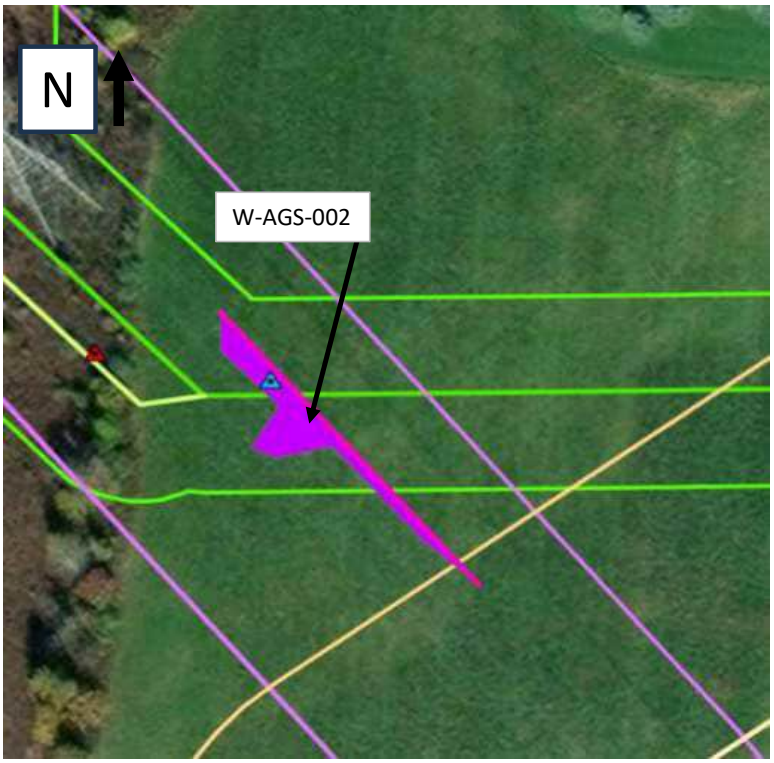
Background Information	
Name:	**AGS, TJK**
Date:	**9/17/2024**
Affiliation:	**AECOM**
Address:	**707 Grant Street, 5th Floor Pittsburgh, PA 15219**
Phone Number:	**412-395-8889**
e-mail address:	austin.sige@aecom.com
Name of Wetland:	**W-AGS-002 PEM**
Vegetation Communit(ies):	**PEM**
HGM Class(es):	**Depressional**
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	



Lat/Long or UTM Coordinate:	**40.092868, -82.724973**
USGS Quad Name:	**Jersey**
County:	**Licking**
Township:	**Jersey**
Section and Subsection:	**Township 2 North, Range 15 West**
Hydrologic Unit Code:	**050400060402**
Site Visit:	**9/17/2024**
National Wetland Inventory Map:	**See Figure 2**
Ohio Wetland Inventory Map:	**See Figure 2**
Soil Survey:	**See Figure 2**
Delineation report/map:	**See Figure 3**

Name of Wetland:	W-AGS-002 PEM		
Wetland Size (delineated acres):	0.04	Wetland Size (Estimated total acres):	0.16

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



Comments, Narrative Discussion, Justification of Category Changes:

W-AGS-002 is a PEM isolated wetland located in a transmission line ROW. The source of hydrology to this area is precipitation. Construction in the area may have created this wetland.

Final score:	18	Category:	1

Wetland ID:	W-AGS-002 PEM

Scoring Boundary Worksheet

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

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

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

Wetland ID:	W-AGS-002 PEM

Narrative Rating

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

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

Wetland ID:	W-AGS-002 PEM

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

Wetland ID:	W-AGS-002 PEM

Table 1. Characteristic plant species.

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

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

Wetland ID:	W-AGS-002 PEM

Site:	Jordan Station Projects	Rater(s):	AGS, TJK	Date:	9/17/2024

Field ID:

W-AGS-002 PEM

Delineated acres:	0.04
Total acres:	0.16

Metric 1. Wetland Area (size).

1.0 / 1.0 (max 6 pts / subtotal)

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

7.0 / 8.0 (max 14 pts. / subtotal)

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

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

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

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

Metric 3. Hydrology.

7.0 / 15.0 (max 30 pts. / subtotal)

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select one.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

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

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

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

- [ ] None or none apparent (12)
- [ ] 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
- [x] Other: Construction

Metric 4. Habitat Alteration and Development.

7.0 / 22.0 (max 20 pts. / subtotal)

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

- [ ] None or none apparent (4)
- [x] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

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

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] 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
- [x] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

22.0 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID:	W-AGS-002 PEM

Site:	Jordan Station Projects	Rater(s):	AGS, TJK	Date:	9/17/2024

Field ID:
W-AGS-002 PEM

22.0 subtotal this page

0.0 max 10 pts. **22.0** subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-4.0 max 20pts. **18.0** subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [x] None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

- [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
- [0] Amphibian breeding pools

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

18.0 **TOTAL (Max 100 pts)**

1 **Category**

Wetland ID:	W-AGS-002 PEM

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	1		
	Metric 2. Buffers and surrounding land use	7		
	Metric 3. Hydrology	7		
	Metric 4. Habitat	7		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	-4		
	TOTAL SCORE	18		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID:	W-AGS-002 PEM

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.

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

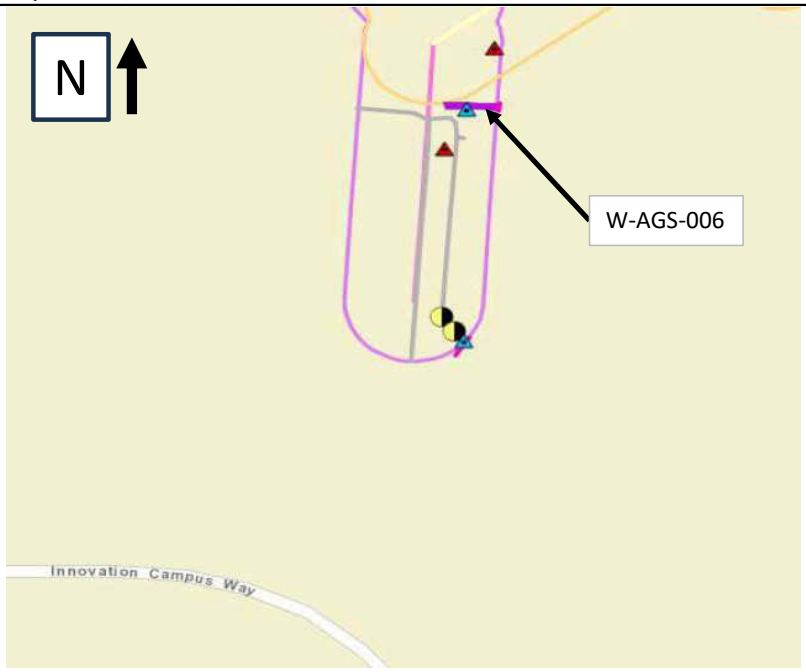
The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

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 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

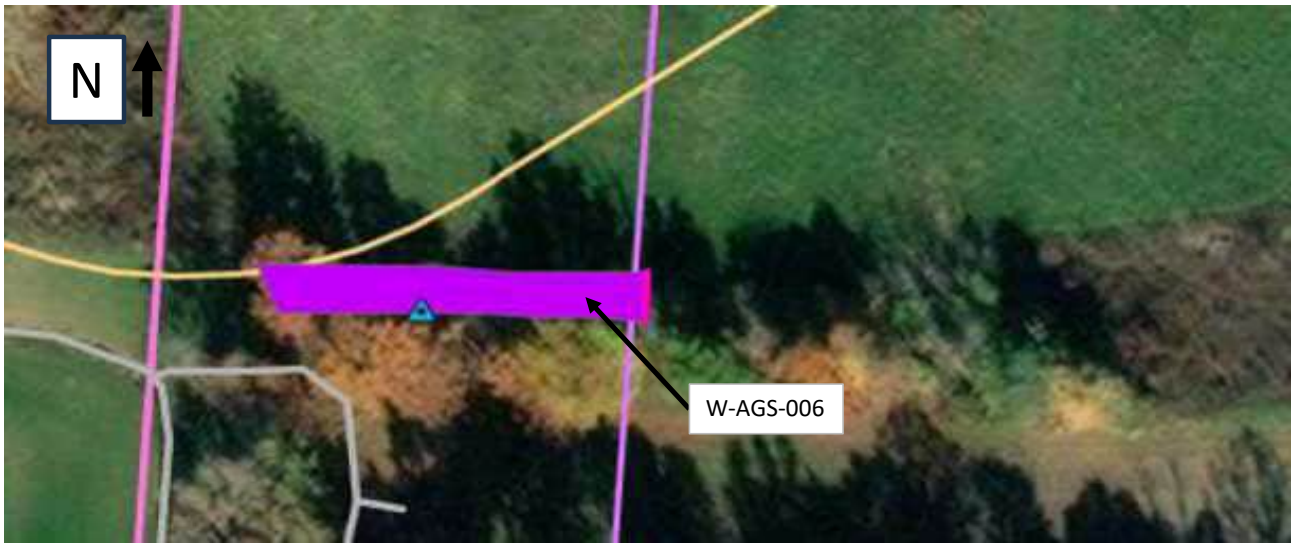
Background Information	
Name:	**AGS, TJK**
Date:	**9/17/2024**
Affiliation:	**AECOM**
Address:	**707 Grant Street, 5th Floor Pittsburgh, PA 15219**
Phone Number:	**412-395-8889**
e-mail address:	austin.sige@aecom.com
Name of Wetland:	**W-AGS-006 PEM**
Vegetation Communit(ies):	**PEM / PSS**
HGM Class(es):	**Depressional**
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	



Lat/Long or UTM Coordinate:	**40.091351, -82.724385**
USGS Quad Name:	**Jersey**
County:	**Licking**
Township:	**Jersey**
Section and Subsection:	**Township 2 North, Range 15 West**
Hydrologic Unit Code:	**050400060402**
Site Visit:	**9/17/2024**
National Wetland Inventory Map:	**See Figure 2**
Ohio Wetland Inventory Map:	**See Figure 2**
Soil Survey:	**See Figure 2**
Delineation report/map:	**See Figure 3**

Name of Wetland:	W-AGS-006 PEM		
Wetland Size (delineated acres):	0.05	Wetland Size (Estimated total acres):	0.11

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



Comments, Narrative Discussion, Justification of Category Changes:

W-AGS-006 is a PEM isolated wetland located in a transmission line ROW. The source of hydrology to this area is precipitation. The soil is disturbed and rocky throughout the profile. A small construction fence can also be observed running through the wetland. There is a row of shrubs along the southern border of the PEM wetland that develops into a possible PSS wetland outside of the study corridor towards the east.

Final score:	25.5	Category:	1

Wetland ID:	W-AGS-006 PEM

Scoring Boundary Worksheet

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

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

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

Wetland ID:	W-AGS-006 PEM

Narrative Rating

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

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

Wetland ID:	W-AGS-006 PEM

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

Wetland ID:	W-AGS-006 PEM

Table 1. Characteristic plant species.

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

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

Wetland ID:	W-AGS-006 PEM

Site:	Jordan Station Projects	Rater(s):	AGS, TJK	Date:	9/17/2024

Field ID:

W-AGS-006 PEM

Delineated acres:	0.05
Total acres:	0.11

Metric 1. Wetland Area (size).

1.0 / 1.0 (max 6 pts / subtotal)

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

7.0 / 8.0 (max 14 pts. / subtotal)

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

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

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

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

Metric 3. Hydrology.

5.0 / 13.0 (max 30 pts. / subtotal)

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select one.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

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

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

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

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

7.5 / 20.5 (max 20 pts. / subtotal)

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

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

Check all disturbances observed

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

20.5 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID:	W-AGS-006 PEM

Site:	Jordan Station Projects	Rater(s):	AGS, TJK	Date:	9/17/2024

Field ID:
W-AGS-006 PEM

20.5 subtotal this page

0.0 max 10 pts. **20.5** subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

5.0 max 20pts. **25.5** subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [2] Emergent
- [1] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [x] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

25.5 **TOTAL (Max 100 pts)**

1 **Category**

Wetland ID:	W-AGS-006 PEM

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	1		
	Metric 2. Buffers and surrounding land use	7		
	Metric 3. Hydrology	5		
	Metric 4. Habitat	7.5		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	5		
	TOTAL SCORE	25.5		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID:	W-AGS-006 PEM

Wetland Categorization Worksheet

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

Final Category

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

End of Ohio Rapid Assessment Method for Wetlands.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

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

Project/Site: Jorden Projects | City/County: Licking County | Sampling Date: 09/17/2024
Applicant/Owner: AEP | State: OH | Sampling Point: W-AGS-002-PEM
Investigator(s): AGS/TJK | Section, Township, Range: Township 2 North, Range 15 West
Landform (hillside, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 1 | Lat: 40.092868 | Long: -82.724973 | Datum: NAD83
Soil Map Unit Name: Pe: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:
W-AGS-002 is a PEM isolated wetland located in a transmission line ROW. The source of hydrology to this area is precipitation. Construction in the area may have created this wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5'r)			
1. *Typha angustifolia*	80	Yes	OBL
2. *Echinochloa crus-galli*	15	No	FACW
3. *Persicaria pensylvanica*	5	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)
Total Number of Dominant Species Across All Strata: ____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicators are present.

SOIL

Sampling Point: W-AGS-002-PEM

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 3/2	90	10YR 6/8	10	C	PL/M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- x Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
Hydrology indicators are present.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

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

Project/Site: Jorden Projects | City/County: Licking County | Sampling Date: 09/17/2024
Applicant/Owner: AEP | State: OH | Sampling Point: W-AGS-001-002-UPL
Investigator(s): AGS/TJK | Section, Township, Range: Township 2 North, Range 15 West
Landform (hillside, terrace, etc.): Plain/Hillslope | Local relief (concave, convex, none): Convex
Slope (%): 1 | Lat: 40.092907 | Long: -82.725256 | Datum: NAD83
Soil Map Unit Name: BeB: Bennington silt loam, 2 to 6 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X
Hydric Soil Present?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:
W-AGS-001-002-UPL is an upland data point located in a transmission line ROW. The soil is disturbed and is compacted and rocky throughout the profile.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5'r)			
1. *Trifolium pratense*	30	Yes	FACU
2. *Ambrosia artemisiifolia*	20	Yes	FACU
3. *Setaria pumila*	20	Yes	FAC
4. *Symphyotrichum lateriflorum*	10	No	FACW
5. *Dipsacus fullonum*	10	No	FACU
6. *Apocynum cannabinum*	10	No	FAC
7. *Solidago canadensis*	5	No	FACU
8.			
9.			
10.			
	105 =Total Cover		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	30	x 3 =	90
FACU species	65	x 4 =	260
UPL species	0	x 5 =	0
Column Totals:	105 (A)		370 (B)

Prevalence Index = B/A = 3.52

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

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicators are not present.

SOIL

Sampling Point: W-AGS-001-002-UPL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 6/3	100					Loamy/Clayey	Rocky throughout profile
6+								Rocky shovel refusal

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

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ 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[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

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

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

N/A

Remarks:

Hydrology indicators are not present.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

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

Project/Site: Jorden Projects | City/County: Licking County | Sampling Date: 09/17/2024
Applicant/Owner: AEP | State: OH | Sampling Point: W-AGS-006-PEM
Investigator(s): AGS/TJK | Section, Township, Range: Township 2 North, Range 15 West
Landform (hillside, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 1 | Lat: 40.091351 | Long: -82.724385 | Datum: NAD83
Soil Map Unit Name: BeB: Bennington silt loam, 2 to 6 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:
W-AGS-006 is a PEM isolated wetland located in a transmission line ROW. The source of hydrology to this area is precipitation. The soil is disturbed and rocky throughout the profile. A small construction fence can also be observed running through the wetland. There is a row of shrubs along the southern border of the PEM wetland that develops into a possible PSS wetland outside of the study corridor towards the east.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1. *Rosa multiflora*	5	Yes	FACU
2. *Quercus palustris*	5	Yes	FACW
3. *Acer rubrum*	5	Yes	FAC
4. *Carya cordiformis*	5	Yes	FACU
5.			
	20 =Total Cover		
Herb Stratum (Plot size: 5'r)			
1. *Carex vulpinoidea*	25	Yes	FACW
2. *Echinochloa crus-galli*	25	Yes	FACW
3. *Cyperus strigosus*	10	No	FACW
4. *Carex scoparia*	10	No	FACW
5. *Symphyotrichum lateriflorum*	10	No	FACW
6.			
7.			
8.			
9.			
10.			
	80 =Total Cover		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

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

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicators are present.

SOIL

Sampling Point: W-AGS-006-PEM

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 4/1	95	10YR 5/6	5	C	PL/M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- x Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
Hydrology indicators are present.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

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

Project/Site: Jorden Projects | City/County: Licking County | Sampling Date: 09/17/2024
Applicant/Owner: AEP | State: OH | Sampling Point: W-AGS-006-UPL
Investigator(s): AGS/TJK | Section, Township, Range: Township 2 North, Range 15 West
Landform (hillside, terrace, etc.): Plain | Local relief (concave, convex, none): Convex
Slope (%): 1 | Lat: 40.091774 | Long: -82.724175 | Datum: NAD83
Soil Map Unit Name: BeB: Bennington silt loam, 2 to 6 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
W-AGS-006-UPL is an upland data point located in a transmission line ROW. The soil is disturbed and is compacted and rocky throughout the profile.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5'r)			
1. *Echinochloa crus-galli*	70	Yes	FACW
2. *Persicaria pensylvanica*	20	Yes	FACW
3. *Daucus carota*	5	No	UPL
4. *Ambrosia artemisiifolia*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)
Total Number of Dominant Species Across All Strata: ____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

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

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation is present due to compacted soils and disturbance in the area.

SOIL

Sampling Point: W-AGS-006-UPL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 5/2	100					Loamy/Clayey	
3+								Rocky shovel refusal

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ 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[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
Hydrology indicators are not present.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

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

Project/Site: Jorden Projects | City/County: Licking County | Sampling Date: 09/17/2024
Applicant/Owner: AEP | State: OH | Sampling Point: EMHT Wetland F-UPL
Investigator(s): AGS/TJK | Section, Township, Range: Township 2 North, Range 15 West
Landform (hillside, terrace, etc.): Plain | Local relief (concave, convex, none): Convex
Slope (%): 1 | Lat: 40.094274 | Long: -82.721336 | Datum: NAD83
Soil Map Unit Name: BeB: Bennington silt loam, 2 to 6 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No X
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X
Hydric Soil Present?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:
EMHT Wetland F-UPL is an upland data point located within an old field habitat. The source of hydrology to the area is precipitation. The soil is disturbed and is compacted and rocky throughout the profile.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5'r)			
1. *Solidago canadensis*	65	Yes	FACU
2. *Juncus tenuis*	20	Yes	FAC
3. *Andropogom virginicus*	10	No	FACU
4. *Epilobium ciliatum*	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	20	x 3 =	60
FACU species	75	x 4 =	300
UPL species	0	x 5 =	0
Column Totals:	100 (A)		370 (B)

Prevalence Index = B/A = 3.70

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

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicators are not present.

SOIL

Sampling Point: EMHT Wetland F-UPL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 5/2	100					Loamy/Clayey	
3+								Rocky shovel refusal

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ 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[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

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

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

Remarks:
Hydrology indicators are not present.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

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

Project/Site: Jorden Projects | City/County: Licking County | Sampling Date: 09/17/2024
Applicant/Owner: AEP | State: OH | Sampling Point: UPL-AGS-003
Investigator(s): AGS/TJK | Section, Township, Range: Township 2 North, Range 15 West
Landform (hillside, terrace, etc.): Hillslope | Local relief (concave, convex, none): Convex
Slope (%): 1 | Lat: 40.093016 | Long: -82.72178 | Datum: NAD83
Soil Map Unit Name: BeB: Bennington silt loam, 2 to 6 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation X, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
UPL-AGS-003 is an upland data point located adjacent to a sidewalk and paved road. The location of the upland point has tire tracks running across it from recent and active construction. The soil is disturbed and is compacted and rocky throughout the profile. The source of hydrology to the area precipitation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5'r)			
1. *Ambrosia artemisiifolia*	20	Yes	FACU
2. *Daucus carota*	10	Yes	UPL
3. *Trifolium pratense*	10	Yes	FACU
4. *Setaria pumila*	10	Yes	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	50 =Total Cover		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	30	x 4 =	120
UPL species	10	x 5 =	50
Column Totals:	50 (A)		200 (B)
Prevalence Index = B/A =			4.00

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicators are not present. The remaining 50% of coverage is bareground/paved sidwalk.

SOIL

Sampling Point: UPL-AGS-003

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 5/2	100					Loamy/Clayey	
3+								Rocky shovel refusal

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ 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[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

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

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

Remarks:
Hydrology indicators are not present.

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

W-AGS-002 **Date:** September 17, 2024 **Description:** PEM Category 1 Facing North	

W-AGS-002 **Date:** September 17, 2024 **Description:** PEM Category 1 Facing East	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

W-AGS-002 **Date:** September 17, 2024 **Description:** PEM Category 1 Facing South	

W-AGS-002 **Date:** September 17, 2024 **Description:** PEM Category 1 Facing West	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

W-AGS-002

Date:

September 17, 2024

Description:

PEM

Category 1

Facing Soils



W-AGS-006

Date:

September 17, 2024

Description:

PEM

Category 1

Facing North



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

W-AGS-006
Date:
September 17, 2024
Description:
PEM
Category 1
Facing East



W-AGS-006
Date:
September 17, 2024
Description:
PEM
Category 1
Facing South



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

W-AGS-006

Date:

September 17, 2024

Description:

PEM

Category 1

Facing West



W-AGS-006

Date:

September 17, 2024

Description:

PEM

Category 1

Facing Soils



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

UPL-AGS-003

Date:

September 17, 2024

Description:

Upland

Facing North



UPL-AGS-003

Date:

September 17, 2024

Description:

Upland

Facing East



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

UPL-AGS-003

Date:

September 17, 2024

Description:

Upland

Facing South



UPL-AGS-003

Date:

September 17, 2024

Description:

Upland

Facing West



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

UPL-AGS-003 **Date:** September 17, 2024 **Description:** Upland Facing Soils	

EMHT-Wetland-F-UPL **Date:** September 17, 2024 **Description:** Upland Facing North	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

EMHT-Wetland-F-UPL **Date:** September 17, 2024 **Description:** Upland Facing East	

EMHT-Wetland-F-UPL **Date:** September 17, 2024 **Description:** Upland Facing South	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

EMHT-Wetland-F-UPL

Date:

September 17, 2024

Description:

Upland

Facing West



EMHT-Wetland-F-UPL

Date:

September 17, 2024

Description:

Upland

Facing Soils



APPENDIX D

POND PHOTOGRAPHIC RECORD

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Ponds Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

P-AGS-002

Date:

September 17, 2024

Description:

Pond

Facing South



APPENDIX E

UPLAND DRAINAGE FEATURES PHOTOGRAPHIC RECORD

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Upland Drainage Feature (UDF) Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

UDF-AGS-003 **Date:** September 17, 2024 **Description:** Upland Drainage Feature Facing Up	

UDF-AGS-003 **Date:** September 17, 2024 **Description:** Upland Drainage Feature Facing Down	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Upland Drainage Feature (UDF) Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

UDF-AGS-003

Date:

September 17, 2024

Description:

Upland Drainage Feature

Facing Substrate



APPENDIX F

HABITAT PHOTOGRAPHIC RECORD

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Habitat Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Ext. 138kV North and South	60694533

PH-01

Date:

September 17, 2024

Description:

Scrub Shrub

Facing East



PH-02

Date:

September 17, 2024

Description:

Old Field

Facing North



APPENDIX G

AGENCY RESPONSE LETTERS

Department of Natural Resources
ohiodnr.gov

Mike DeWine, *Governor*
Jon Husted, *Lt. Governor*
Mary Mertz, *Director*

Office of Real Estate & Land Management
Tara Paciorek - Chief
2045 Morse Road – E-2
Columbus, Ohio 43229-6693

December 30, 2024

Joshua Holmes
AECOM
707 Grant Street, 5th Floor
Pittsburgh, Pennsylvania 15219

Re: 24-1903 - Jorden Extension North & South

Project: The proposed project involves building a new, approximately 0.54-mile(s), greenfield 138kV transmission line between Jorden Bay 1 and Structure 4, and between Jorden Bay 4 and Structure 4a.

Location: The proposed project is located in Jersey Township, Licking 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: A review of the Ohio Natural Heritage Database indicates there are no records of state or federally listed plants or animals within one mile of the specified project area. 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.

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 project is within the vicinity of records for the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species. Because presence of a state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree

cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

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

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "*RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED 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 Eileen Wyza 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 of range the lake chubsucker (*Erimyzon sucetta*) a state threatened fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this or other aquatic species.

The project is within the range of the eastern massasauga (*Sistrurus catenatus*), a state endangered and a federally threatened snake species. The eastern massasauga uses a range of habitats including wet prairies, fens, and other wetlands, as well as drier upland habitat. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus hudsonius*), 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.

If the subject project is in a floodplain regulated by the Federal Emergency Management Agency (FEMA), the local local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals. The FEMA National Flood Hazard Layer (NHFL) Viewer website can be utilized to see if the project is in a FEMA regulated floodplain. If the project is not in a FEMA regulated floodplain, then no further action is required.

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

Expiration: *ODNR Environmental Reviews are typically valid for 2 years from the issuance date. If the scope of work, project area, construction limits, and/or anticipated impacts to natural resources have changed significantly from the original project submittal, then a new Environmental Review request should be submitted.*

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

December 13, 2024

Project Code: 2024-0140500

Dear Mr. Holmes:

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, endangered, and proposed 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 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.

Federally Proposed Species: On September 14, 2022, the Service proposed to list the tricolored bat (*Perimyotis subflavus*) as endangered under the ESA. The bat faces extinction due to the impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent. During spring, summer, and fall, this species roosts primarily among leaf clusters of live or recently dead trees, emerging at dusk to hunt for insects over waterways and forest edges. While white-nose syndrome is by far the most serious threat to the tricolored bat, other threats now have an increased significance due to the dramatic decline in the species' population. These threats include disturbance to bats in roosting, foraging, commuting, and over-wintering habitats. Mortality due to collision with wind turbines, especially during migration, has also been documented across their range. Conservation measures for the Indiana bat and northern long-eared bat will also help to conserve the tricolored bat.

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.

If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats and northern long-eared bats. If Indiana bats and northern long-eared 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, Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.ohio.gov.

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,

Erin Knoll
Field Office Supervisor

cc: Matthew.Stooksbury@dnr.ohio.gov
Eileen.Wyza@dnr.ohio.gov

APPENDIX H

2024 JOINT GUIDANCE FOR BAT SURVEY AND TREE CLEARING

OHIO DIVISION OF WILDLIFE AND U.S. FISH AND WILDLIFE SERVICE (OH-FIELD OFFICE) JOINT GUIDANCE FOR BAT SURVEYS AND TREE CLEARING MAY 2024

This document has been updated with new state guidance for the 2024 field season.

This guidance applies to state recommendations only. Contact the USFWS to determine if federal consultation is also necessary to comply with federal law.

Agency Contacts:

ODNR-DOW Permit Coordinator: Wildlife.Permits@dnr.ohio.gov, (614) 265-6315
ODNR-DOW Bat Survey Coordinator: Eileen Wyza, Eileen.Wyza@dnr.ohio.gov, (614) 265-6764
USFWS OHFO Endangered Species: Angela Boyer, angela_boyer@fws.gov, (614) 416-8993, ext.122

Covid-19 Guidance:

Surveyors should follow all covid protocols put in place by their agency. All surveyors should wear masks when handling bats and anyone exhibiting symptoms of covid-19 should not participate in bat surveys.

Ohio Mist-net Surveys:

This document serves as guidance for bat mist netting activities in Ohio and does not supersede any requirements listed on your permits or facility certificate. All permit conditions must be strictly adhered to for permits to be valid and for renewal of permits beyond the existing year.

Due to the presence of White-nose Syndrome (WNS), mist-netting in Ohio must be conducted between June 1 and August 15 unless stated otherwise in your state permit. The ODNR Division of Wildlife (ODNR-DOW) and U.S. Fish and Wildlife Service (USFWS) Ohio Field Office (OHFO) have determined that delaying netting activities until June 1 will provide additional recovery time for bats affected by WNS. For presence/probable absence surveys, netting will not be accepted outside of the June 1 - August 15 timeframe.

To assess project areas for presence or probable absence of the state and federally listed Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) during summer residency, the USFWS developed the USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines (March 2024). This protocol may also be used for the tricolored bat (*Perimyotis subflavus*) which is state endangered and proposed to be federally endangered. **With minor modifications referenced below**, it can also be used in Ohio for the 2024 field season and includes surveying for the state-listed little brown bat (*Myotis lucifugus*).

According to the updated federal range-wide guidelines, presence/probable absence net surveys for northern long-eared bats or federally-proposed tricolored bats shall incorporate either 10 net nights per square 0.5 kilometer (123

acres) of project area, or four net nights per kilometer for linear projects. Presence/probable absence net surveys for Indiana bats shall incorporate six net nights per square 0.5 kilometer (123 acres) of project area, or two net nights per kilometer for linear projects. If a project area is eligible for a presence/probable absence survey for both Indiana bats and northern long-eared bats or tricolored bat, following the northern long-eared/tricolored bat level of effort will qualify as a presence/ probable absence survey for the three species. However, if a project area is eligible for a presence/absence survey for the three species, following the Indiana bat level of effort will not qualify the survey for a northern long-eared bat or tricolored bat presence/probable absence survey. Please note that the USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines (March 2024) requires that a minimum of two (2) biologists (e.g., one permitted and one technician) must be on-site for every four (4) net-sets being operated. Exceptions to on-site minimum staffing levels may be allowed under extenuating circumstances, provided written justification is included in the proposed survey study plan and subsequently approved by the OHFO and ODNR-DOW.

Due to the reclassification of the northern long-eared bat to federally endangered on March 31, 2023, the northern long-eared bat 4(d) rule has been nullified. There is a new online tool in the USFWS's Information for Planning and Consultation (IPaC) website that allows project proponents to utilize the optional Northern Long-eared Bat Rangewide Determination Key (Dkey). **The Dkey cannot be used to replace consultation with ODNR-DOW.** Project proponents should coordinate directly with the ODNR-DOW for project technical assistance for all federally listed species, including the Indiana bat and northern long-eared bat. **OHFO discourages the use of the Dkey for Ohio projects.** Contacting OHFO directly (ohio@fws.gov) for technical assistance for both the northern long-eared bat and Indiana bat is the more efficient process.

The tricolored bat is listed as endangered by ODNR-DOW and has been officially proposed for federal listing as endangered. The USFWS is scheduled to publish a final rule on the tricolored bat's status by the end of September 2024. Therefore, in addition to coordinating with ODNR-DOW regarding the tricolored bat, we recommend that project proponents also coordinate with the OHFO. The USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines (March 2024) allows presence/absence surveys for the tricolored bat that use the northern long-eared bat level of effort.

Exception for Ohio mist-net surveys: All presence/absence surveys conducted for state listed bat species (Indiana, northern long-eared, little brown, tricolored) should follow the highest minimum net nights set forth in the federal guidance to be considered valid by ODNR-DOW. Any modifications to this position will be communicated at the time of the site authorization approval.

Ohio Acoustic Surveys:

Acoustic bat surveys for presence/absence will be accepted by ODNR-DOW for the 2024 season. Surveys should follow guidelines laid out in the USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines (March 2024) with the following exceptions:

- Ohio survey dates are June 1 – August 15
- After conducting automated analyses using one or more of the currently available 'approved' acoustic bat ID programs[1], qualitative analysis (i.e., manual vetting) of any calls recorded from state-endangered species (*M. sodalis, M. septentrionalis*[2]*, M. lucifugus*[2]*,* and *P. subflavus*[2]) must be completed.
- **All presence/absence acoustic surveys conducted for state listed bat species (Indiana, northern long-eared, little brown, tricolored) should follow the highest minimum acoustic nights set forth in the federal guidance to be considered valid by ODNR-DOW. Any modifications to this position will be communicated at the time of the site authorization approval.**

[1] https://www.fws.gov/media/indiana-bat-summer-survey-guidance

[2] State listing as endangered effective July 1, 2020

At a minimum, for each detector site/night a program considered presence of state-listed bats likely, review all files (including no IDs) from that site/night. If more than one acoustic bat ID program is used, qualitative analysis must also include a comparison of the results of each program by site and night.

Combined Mist-netting and Acoustic Surveys:
ODNR-DOW will accept the USFWS pilot survey option of combining mist-netting and acoustic surveys for traditional survey sites (e.g., 123-acre area) detailed in Appendix I of the USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines (2024). All presence/absence combined mist-net and acoustic surveys conducted for state listed bat species should follow the highest minimum level of effort set forth by the federal guidance to be considered valid by ODNR-DOW. Any modifications to this position will be communicated at the time of the site authorization approval.

Before Field Season:

- Anyone surveying bats using mist-nets in the state of Ohio must obtain a federal permit as well as a state scientific collection permit. The federal permit should include both the Indiana bat and the northern long-eared bat.
- Your ODNR-DOW permit consists of two documents: a Scientific Collector (Wild Animal) Permit and an endangered species letter signed by the Chief of the Division of Wildlife (in addition to your federal permit). Both ODNR-DOW documents must be obtained prior to field work and kept with you and any sub-permittees during field work.

During Field Season:

- Prior to initiation of field work (a minimum of two weeks in advance), permittees must provide proposed mist netting plans to USFWS and ODNR-DOW in the form of an e-mail letter to the USFWS OHFO and copy to the ODNR-DOW Bat Survey Coordinator. Plans must be reviewed and approved by USFWS OHFO and ODNR-DOW before ANY surveys take place. Study plans must specify objectives, location details, dates of proposed work, and all other relevant details. **Study plans must also include a USFWS Project Code. Project Codes can only be obtained by requesting an official species list through the USFWS's Information for Planning and Consultation (IPaC) website: (https://ipac.ecosphere.fws.gov/).** When handling bats, you must strictly adhere to the current WNS Decontamination Protocol (current version can be found at https://www.whitenosesyndrome.org/topics/decontamination). Clothing, boots, gear, and equipment should all be thoroughly decontaminated between nights, as well as between netting sites.
- Request bat bands at least two weeks in advance of needing them. Bat bands can be obtained by e-mailing the ODNR-DOW Bat Survey Coordinator with how many bands are needed, current permit number, sizes, and a mailing address. Bands will not be issued until your permits are valid. We have three sizes of bands—2.4 mm, 2.9 mm, and 4.2 mm. The 2.4 mm split metal bat ring made of aluminum alloy is suitable for banding tricolored bats. 2.9 mm bands are suitable for Indiana, northern long-eared, and little brown bats. The larger 4.2 mm band is suitable for silver-haired (*Lasionycteris noctivagans*), big brown (*Eptesicus fuscus*), and hoary (*Lasiurus cinereus*) bats. You must band all Indiana, northern long-eared, little brown, and tricolored bats with ODNR-DOW bands; therefore, you should not be in the field without the 2.4 mm and 2.9 mm sized bands.
  NOTE: While ODNR-DOW obtains 2.9 mm bands per new 2024 USFWS guidelines, banding of endangered *Myotis* species should not be done until 2.9 mm bands are received. Please watch for updates from the Wildlife Permits email and request 2.9 mm bands when they become available.
- Only individuals who are named on the ODNR-DOW endangered species letter portion of the permit and on the corresponding federal bat permit may conduct and oversee mist-net surveys. Trained assistants may work on permitted bat activities under the direct and on-site supervision of a named permittee. All bat IDs must be verified by a named permittee. If an Indiana bat, northern long-eared bat, and/or tricolored bat is captured, the permittee shall notify the USFWS and the ODNR-DOW Bat Survey Coordinator referenced

above within 48 hours via email. If a little brown bat is captured, notify the ODNR-DOW Bat Survey Coordinator only within 48 hours via email. Reports of listed bat captures should include specific information such as spatial location of capture, band information, radio-transmitter frequency information, sex, reproductive status, and age of individual.

- For presence/absence surveys, ODNR-DOW requires all female and juvenile state endangered and threatened bat species (Indiana, northern long-eared, little brown, and tricolored bat) be radio-tracked if caught, in accordance with methods outlined in Appendix D of USFWS 2024 Range-wide Indiana Bat Summer Survey Guidelines.

If you are taking any biological samples (tissue, fur, blood, etc.), this must be specifically authorized in your state and federal permits and noted in your survey proposal.

After Field Season:

By March 15, you must submit your final ODNR-DOW report(s) from the previous summer. You are not required to fill out the ODNR-DOW Wildlife Diversity Bat Excel Spreadsheet; instead, please forward your USFWS Midwestern US Spreadsheet (found here: https://www.fws.gov/media/bat-reporting-spreadsheets) to the ODNR-DOW Bat Survey Coordinator and ODNR-DOW Permit Coordinator and include your state permit number along with an electronic copy of the project report. Electronic summaries emailed during the field season are NOT considered as full compliance of this reporting requirement.

Ohio Environmental Review Recommendations for projects involving disturbance near potential/known bat hibernacula (cliffs, caves, mines) or tree cutting:

Step 1: Coordinate with Ohio Division of Wildlife regarding existing records for state-listed endangered bat summer and/or winter occurrence information. Potential hibernacula found during a habitat assessment must address possible suitability for Indiana bats, northern long-eared bats, tricolored bats, and little brown bats.

If project site contains a known bat hibernaculum(a) –

- Both the DOW and USFWS should be contacted for guidance on projects occurring:
  - Within 5 miles of known or potential Indiana bat and/or northern long-eared bat hibernacula.
  - Within 3 miles of known or potential tricolored bat hibernacula
- Only ODNR-DOW should be contacted if a project occurs within 5 miles of known or potential little brown bat hibernacula.

If a project site does not contain known bat hibernaculum(a) –

- Conduct a desktop habitat assessment of the project area. Tools such as the ODNR Mines of Ohio Viewer, Karst Interactive Map, topographic maps, aerial photos, historical records, etc. should be used to determine if there are any potential caves, mines, karst features, rock ledges, or other features that may serve as potential hibernacula.
- If no such features are found, proceed to **Step 2**.
- If potential hibernacula are found during the desktop assessment:
  - Assume bats are using these hibernacula and refrain from clearing trees from March 15 - Nov 15

    OR

  - Conduct a field habitat assessment to determine if a potential hibernaculum(a) is present within the action area. We encourage impacts to ledges and rock outcroppings be avoided. If impacts cannot be avoided, features should be evaluated for potential roosting characteristics such as recesses, overhangs, and crevices.

- **NOTE**: The USFWS Range-wide Indiana Bat Guidelines, Appendix H, contains instructions for completing a habitat assessment for Indiana bat, but can be applied to other bat species.

Step 2: Conduct, a presence/absence survey following current ODNR-DOW guidelines, where applicable.

Step 3: <u>If a state-listed endangered bat is captured or recorded during the survey:</u>

- Recommendation of no summer tree cutting, or limited cutting following guidelines detailed below, within 5 miles of an Indiana bat or little brown bat capture or 3 miles of a northern long-eared bat and/or tricolored bat capture if a roost is not located.
- Recommendation of no summer tree cutting, or limited cutting following guidelines detailed below, within a minimum of 2.5 miles of an Indiana bat or little brown bat roost or 1.5 miles of a northern long-eared bat and/or tricolored bat roost tree if located.
- Recommended tree clearing dates within capture record buffers are October 1 – March 31

<u>If no state-listed endangered bat is captured or recorded during the survey:</u>

- Summer tree cutting may proceed for 5 years before a new survey is needed under state guidance.

<u>Limited summer tree cutting guidance for little brown bats:</u> Limited tree cutting in summer may be permitted after consultation with ODNR-DOW, but clearing trees with the following characteristics should be avoided unless they pose a hazard: dead or live trees of any size with loose, shaggy bark; crevices, holes, or cavities; clusters of dead leaves; live trees of any species with DBH ≥ 20".

FREQUENTLY ASKED QUESTIONS

When does the ODNR-DOW Bat Survey protocol have to be used?

This protocol should be used anytime Indiana bat, northern long-eared bat, little brown bat, or tricolored bat summer presence/probable absence surveys are conducted in the state of Ohio.

How many detector nights are required for presence/probable absence acoustic surveys?

As described in the current USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines:

Level of effort for all state-listed endangered bat species: follow highest minimum detector nights as outlined in the federal guidance for northern long-eared bat and tricolored bat.

Northern Long-eared Bat and Tricolored Bat Level of Effort:
Linear projects: a minimum of 4 detector nights per km (0.6 miles) of suitable summer habitat
Non-linear projects: a minimum of 10 detector nights per 123 acres (0.5 km^2) of suitable summer habitat.
At least 2 detector locations per 123 acre "site" shall be sampled until at least 10 detector nights has been completed over the course of at least 2 calendar nights (may be consecutive). For example:

- 5 detectors for 2 nights each (can sample the same location or move within the site)
- 2 detectors for 5 nights each (can sample the same location or move within the site)
- 1 detector for 10 nights (must sample at least 2 locations and move within the site – we recommend evenly distributing LOE among locations)

Indiana Bat Level of Effort:
Linear projects: a minimum of 2 detector nights per km (0.6 miles) of suitable summer habitat
Non-linear projects: a minimum of 6 detector nights per 123 acres (0.5 km^2) of suitable summer habitat.
At least 2 detector locations per 123 acre "site" shall be sampled until at least 6 detector nights has been completed over the course of at least 2 calendar nights (may be consecutive). For example:

- 3 detectors for 2 nights each (can sample the same location or move within the site)
- 2 detectors for 3 nights each (can sample the same location or move within the site)
- 1 detector for 6 nights (must sample at least 2 locations and move within the site – we recommend evenly distributing LOE among locations)

How many net surveys are required for presence/probable absence?

Level of effort for all state-listed endangered bat species including Indiana bat and northern long-eared bats: Follow highest minimum net nights as outlined in the federal guidance for the northern long-eared bat and tricolored bat.

Net surveys for northern long-eared bat presence/probable absence shall incorporate, at a minimum, either 10 net nights per square 0.5 kilometer (123 acres) of project area, or four net nights per kilometer for linear projects. For linear projects, there must be at least one net night of survey on two different nights (minimum of two nights). This does not allow for two net nights on a single night for surveys.

Net surveys for Indiana bat presence/probable absence shall incorporate, at a minimum, either six net nights net nights per square 0.5 kilometer (123 acres) of project area, or two net nights per kilometer for linear projects. For

linear projects, there must be at least one net night of survey on two different nights (minimum of two nights). This does not allow for two net nights on a single night for surveys.

How long are the results of the surveys valid for an assessment of an area?

Mist-net or acoustic surveys documenting probable absence of state-listed endangered bats are valid for five years.

When can acoustic or net surveys occur in Ohio?

In Ohio, acoustic or net surveys may only be conducted from June 1 through August 15 unless indicated otherwise in your state permit. Any surveys outside of the June 1 - August 15 timeframe cannot be used in Ohio to assess the presence/probable absence of state-listed bats.

Can a presence/probable absence survey be conducted within a known bat capture/detection buffer?

Surveys generally cannot be used to document presence/probable absence of state-listed endangered bats where presence of the species has already been confirmed by prior surveys.

What if a project is proposing to clear trees between April 1 and September 30 when bats may be present but no bat records exist in the project area?

Any Ohio project that is not within a known bat record buffer, and tree clearing between April 1 and September 31 is being proposed, may have a presence/probable absence survey conducted between June 1 and August 15 following the range-wide guidance. If a presence/probable absence survey is not performed, presence of listed bats is assumed.

Where do I get bands?

If you need bands, email the ODNR-DOW Bat Survey Coordinator at least two weeks in advance with your current ODNR permit number, how many bands in each size (2.4 mm, 2.9 mm, and 4.2 mm) you will need this season, and a current address to ship the bands.

Do I have to band every bat?
No, currently this is optional. However, you are required as per your state permit to band all Indiana, northern long-eared, little brown, and tricolored bats.
NOTE: While ODNR-DOW obtains 2.9 mm bands per new 2024 USFWS guidelines, banding of endangered *Myotis* species should not be done until 2.9 mm bands are received. Please watch for updates from the Wildlife Permits email and request 2.9 mm bands when they become available.

JORDEN EXTENSION 138 KV NORTH & SOUTH PROJECT

LICKING COUNTY, OHIO

ADDENDUM #1 ECOLOGICAL REPORT

Prepared for:
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Prepared by:

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Project #: 60694533

October 2025

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APPENDICES

Number

APPENDIX A Jurisdictional Determination (JD) by Others
APPENDIX B U.S. Army Corps of Engineers Wetland Determination Data Forms, ORAM Forms, and Delineated Features Photographs (Wetlands & Uplands)
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1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) proposed the construction of a new, approximately 0.54-mile, greenfield 138 kV transmission line between Jorden Bay 1 and Structure 4, and between Jorden Bay 4 and Structure 4a located in the City of New Albany Licking County, Ohio (OH), as part of the Jorden Extension 138 kV North & South Project. This Addendum #1 Ecological Report was completed to capture an additional delineation of a property for a reroute, as part of the Jorden Extension 138 kV North & South Project Addendum #1 (Project).

The Project Survey Area associated with this Addendum #1 Ecological Report is located on the Jersey, OH, United States Geological Survey (USGS) 7.5-minute topographical quadrangle as displayed on the Project Overview Map (**Figure 1**).

A portion of the Jorden Extension 138 kV North & South Project Survey Area overlaps with an area previously surveyed by EMH&T, that is covered under approved Jurisdictional Determinations (JDs) LRH-2022-691-SCR and LRH-2021-907-SCR-Blacklick Creek, and Ohio Environmental Protection Agency (OEPA) Permit Application DSW401227865W. A copy of the JDs and OEPA permit application can be found within the January 2025 – Original Ecological Report.

Since the January 2025 – Original Ecological Report, a new JD, LRH-2025-325-MUS-Unnamed Tributary South Fork Licking River, was approved and overlaps with this Addendum #1 Project Survey Area. A copy of the JD is provided as **Appendix A**. For clarity, this report will refer to the names of previously delineated features by others under JD LRH-2025-325-MUS-Unnamed Tributary South Fork Licking River

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

2.0 METHODOLOGY

A comprehensive methodology of the field surveys and data reviews are included within the January 2025 – Original Ecological Report and a summary of the delineation and agency coordination methodology has been provided below.

The field survey was completed for Addendum #1 Project Survey Area totaling approximately 15.87 acres. Prior to conducting field surveys, digital United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey data, United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) data, USGS National Hydrography Dataset (NHD), FEMA 100-year floodplain data (FEMA), and USGS 7.5-minute topographic maps were reviewed as an exercise to identify the occurrence and location of potential wetland areas.

3.0 RESULTS

On June 6, 2025, AECOM ecologists walked the Project Survey Area to conduct the wetland delineation, stream assessment, and habitat survey. During the delineation, within the Project Survey Area, AECOM delineated one Palustrine Emergent (PEM) wetland and two ponds.

3.1 WETLAND DELINEATION

3.1.1 PRELIMINARY SOILS EVALUATION

According to the USDA/NRCS Web Soil Survey, three soil map units are mapped within the Addendum #1 Project Survey Area (USDA NRCS, 2023a and 2023b). Of these, one was identified as a hydric soil, and two were identified as containing hydric inclusions. Soils indicated as hydric inclusions are not predominately hydric soils and hydric soils are more likely to be found in topographic settings. **Table 1** below provides a detailed overview of all soil series and soil map units present within the Addendum #1 Project Survey Area. Soil map units located in the Addendum #1 Project Survey Area and vicinity are shown on **Figure 2**.

TABLE 1 - SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE ADDENDUM #1 PROJECT SURVEY AREA

Soil Series	Map Unit Symbol	Map Unit Description	Topographic Setting	Hydric	Hydric Component (%)
Bennington	BeB	Bennington silt loam, 2 to 6 percent slopes	Ground moraines, end moraines	Yes*	Condit 8% Pewamo 8%
Centerburg	Cen1B1	Centerburg silt loam, 2 to 6 percent slopes	End moraines, ground moraines	Yes*	Condit 10% Marengo 8%
Pewamo	Pe	Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes	Drainageways, depressions	Yes	N/A

Yes* = Hydric inclusion present

3.1.2 NATIONAL WETLAND INVENTORY MAP REVIEW

No NWI wetlands are mapped within the vicinity of the Addendum #1 Project Survey Area.

3.1.3 DELINEATED WETLANDS

During the field survey on June 6, 2025, AECOM delineated one PEM wetland (W-AGS-002 / WETLAND 1) within the Project Survey Area. The PEM wetland was assigned to ORAM Category 1 and the AECOM delineated boundary is provided on **Figures 2 and 3.**

The one PEM wetland (W-AGS-002 / WETLAND 1) was determined to be non-jurisdictional according to approved JD, LRH-2025-325-MUS-Unnamed Tributary South Fork Licking River (**Appendix A**). The locations and approximate extent of the wetlands identified within the Project Survey Area is shown on **Figure 3**. Details for each delineated wetland in the Project Survey Area are provided in **Table 2**. Completed USACE Data Form and photographs of the delineated wetlands are provided in **Appendix B**.

TABLE 2 – SUMMARY OF DELINEATED WETLANDS WITHIN THE ADDENDUM #1 PROECT SURVEY AREA

Wetland ID	Location		Isolated?	Habitat Type	Delineated Area (acre)	ORAM		Nearest Structure # (Existing / Proposed)	Existing Structure # in Wetland	Proposed Structure # in Wetland	Structure Installation Method	Proposed Impacts	
	Latitude	Longitude				Score	Category					Temporary Matting Area (acre)	Permanent Impact Area (acre)
W-AGS-002 /WETLAND 1	40.092868	-82.724787	Yes*	PEM	0.17	15	1	None	None	None	N/A	0	0
P-MRK-001/Pond 1	40.093162	-82.723716	Yes*	N/A	0.23	N/A	N/A	None	None	None	N/A	0	0
P-AGS-002	40.094489	-82.722628	Yes**	N/A	0.19	N/A	N/A	None	None	None	N/A	0	0
				Total:	**0.59**							**0**	**0**

* Final jurisdictional status determined within approved JD, LRH-2025-325-MUS-Unnamed Tributary South Fork Licking River (**Appendix A**).
** AECOM provisional determination of jurisdiction; final jurisdictional status can only be determined by the USACE.

3.2 STREAM DELINEATION

During the field survey, AECOM did not identify any streams within the Addendum #1 Project Survey Area.

3.2.1 OEPA STREAM ELIGIBILITY

The Project occurs within two watersheds, Headwaters Blacklick Creek (HUC-12 050600011503) and Headwaters South Fork Licking River (HUC-12 050400060402), that have the 401 WQC designation as Possibly Eligible and Eligible, respectively. OEPA stream eligibility mapping for the Project vicinity is provided on **Figure 4**.

3.3 FEMA 100 YEAR FLOODPLAINS

No regulated FEMA 100-year floodplains and/or floodways are located within the Addendum #1 Project Survey Area.

3.4 PONDS

During the field survey, AECOM identified two ponds within the Addendum #1 Project Survey Area. The extent and location of the pond is displayed on **Figures 2 and 3**. Photographs of the delineated ponds are provided in **Appendix C.**

3.5 VEGETATIVE COMMUNITIES

AECOM ecologists conducted a general habitat survey in conjunction with the stream and wetland field surveys. As described in **Table 3**, below, the Project area contains landscaped, scrub/shrub, old field, urban, and wetlands/streams areas. Habitat descriptions applicable to the Project are provided below. Vegetative communities are depicted visually on aerial photography in **Figure 5**. Representative photographs of the vegetative communities in the Project Survey Area are provided as **Appendix D**.

TABLE 3 - VEGETATIVE COMMUNITIES WITHIN THE ADDENDUM #1 PROJECT SURVEY AREA

Vegetative Community	Description	Approximate Acreage Within the Project Survey Area	Approximate Percentage Within the Project Survey Area
Landscaped	Landscaped areas, including residential properties and commercial properties, and are frequently mowed and maintained, comprised of grasses and forbs.	7.69	48.5
Old Field	Herbaceous cover exists alongside roads, field borders, and abandoned fields within the survey area of the Project in the form of successional old-field communities. These communities are the earliest stages of recolonization by plants following disturbance. This community type is typically short-lived, giving way progressively to shrub and forest communities unless periodically re-disturbed, in which case they remain as old fields. The old-field areas within the study corridors and adjacent areas are infrequently mowed areas of grasses, forbs, and occasional shrubs.	6.32	39.8
Urban	Urban areas are areas developed with residential and commercial land uses, including roads, buildings, and parking lots. These areas are generally devoid of significant woody and herbaceous vegetation.	1.24	7.8
Scrub/Shrub	Scrub-shrub habitats represent the successional stage between old-field and second growth forest and often emerge in recently harvested forests responding to the lightness of the remaining canopy. Dominant species consist of herbaceous communities similar to that of old field habitat with 30% or greater coverage of woody species that are not trees (including sapling trees generally <3" dbh and <20' in height).	0.07	0.4
Wetlands/Streams	Wetlands were observed within the survey area for the Project	0.55	3.5
	Totals:	**15.87**	**100%**

3.6 RARE, THREATENED, AND ENDANGERED SPECIES AGENCY COORDINATION

Protected Species Agency Consultation –

A species list and overall assessment of the potential for rare, threatened, and endangered species, is provided within the January 2025 – Original Ecological Report. The Addendum #1 Project Survey Area is located within the previously consulted areas, and of the previously identified seven state and/or federally listed threatened or endangered species identified within range of the Project area, no habitat for any of the listed mammal, fish, bird, or reptile species were identified within the Addendum #1 Project Survey Area. No further coordination is necessary.

4.0 SUMMARY

The ecological survey of the Addendum #1 Project Survey Area identified one PEM wetland and two ponds. The representative wetland data forms and photographic documentation are provided in **Appendix B**. Pond photographic documentation is provided in **Appendix C**.

The reported results of the ecological survey conducted by AECOM on this Project are limited to the areas within the Project Survey Area provided in **Figure 3**. Areas that fall outside of the Addendum #1 Project Survey Area were not evaluated in the field and not included in the reporting of the survey.

Of the seven state and/or federally listed threatened or endangered species identified within range of the Project Area as identified within the January 2025 – Original Ecological Report, no habitat for any of the listed mammal, fish, bird, or reptile species were identified within the Addendum #1 Project Survey Area. Bat habitat is not present within the Project Survey Area, and tree clearing is not part of this Project. No further coordination is anticipated to be required with the USFWS and/or ODNR.

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

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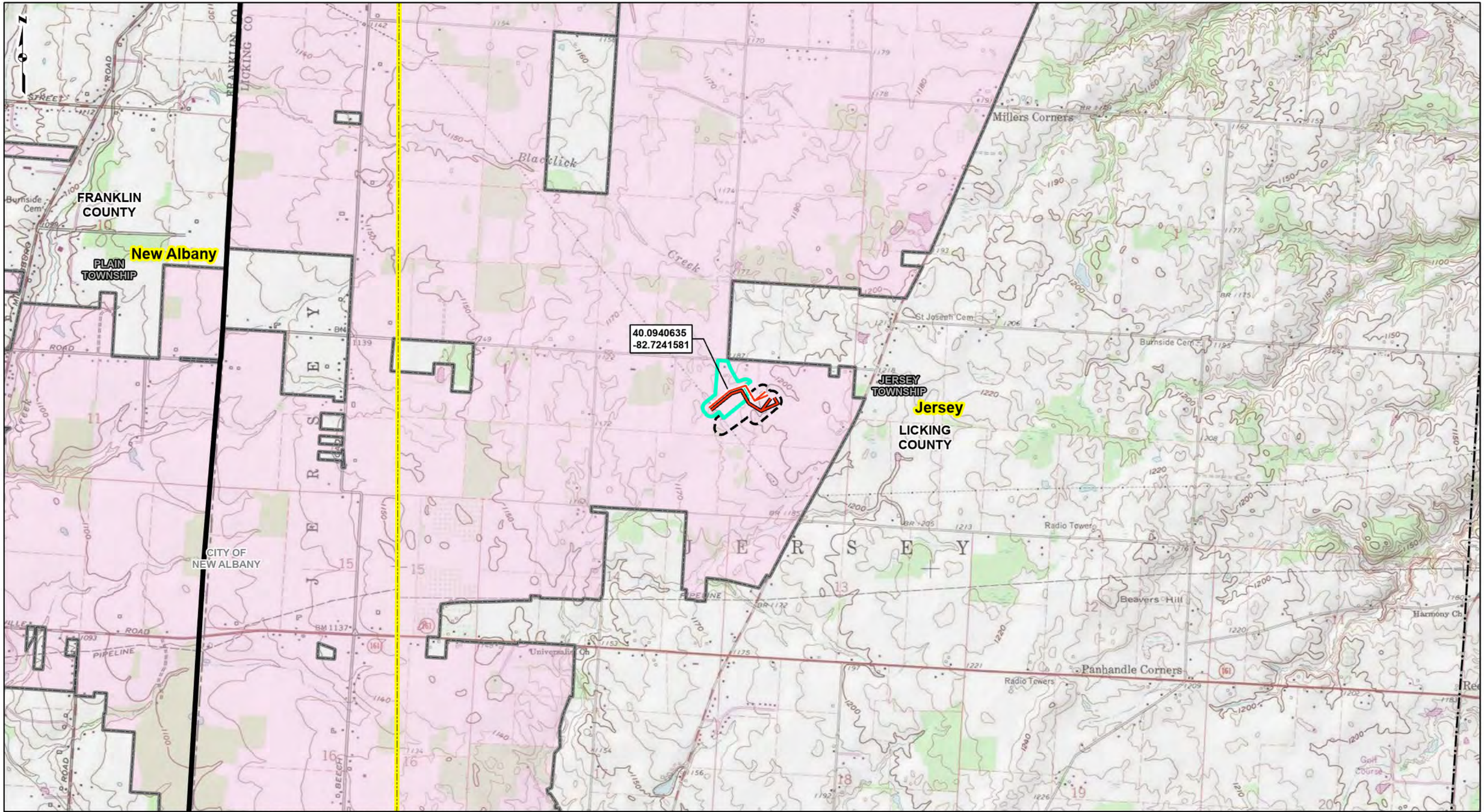
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FIGURES



PROJECT LOCATION



LICKING COUNTY, OHIO

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: JERSEY, OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 10/2025.

10/8/2025

LEGEND

- JORDEN EXTENSION 138KV NORTH
- JORDEN EXTENSION 138KV SOUTH
- ADDENDUM SURVEY AREA
- PROJECT SURVEY AREA
- OHIO USGS 7.5' TOPOGRAPHIC QUADRANGLE
- COUNTY BOUNDARIES
- TOWNSHIP BOUNDARIES
- MUNICIPAL BOUNDARIES

0 1,000 2,000 4,000 Feet

FIGURE 1
PROJECT LOCATION MAP

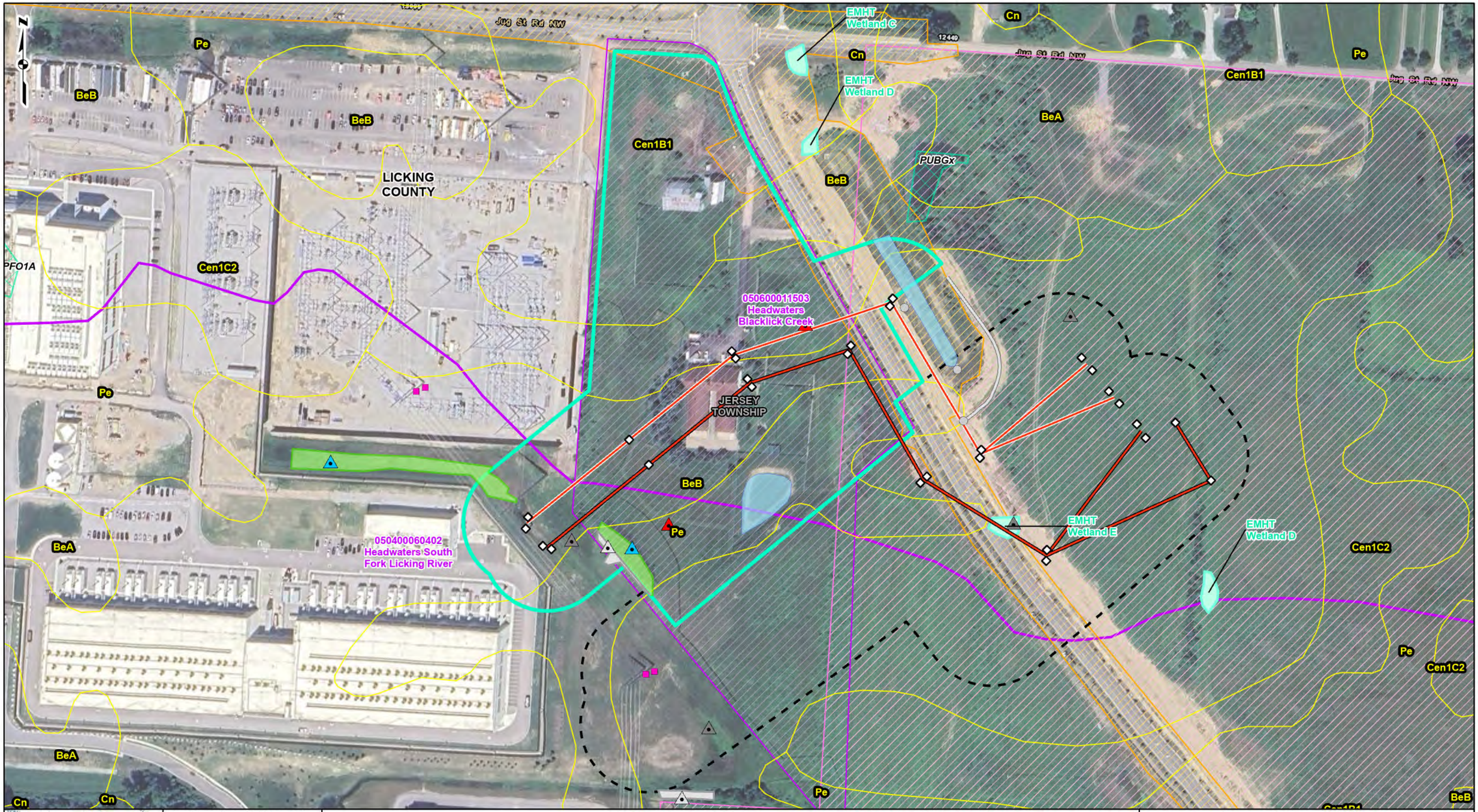
AECOM

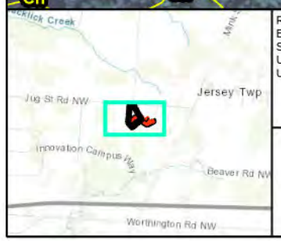
JORDEN EXTENSION 138KV
NORTH AND SOUTH PROJECT
ADDENDUM
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER

DRAWN BY: GIB DATE: 10/8/2025
CHECKED: CJT APPROVED:

Z:\Cincinnati-USCNC02\DCS\GIS\ArcMap_GeoDB_Projects\ENV\60694533_AEP_Jorden Extension_ECO\3_MXDs\3_WDR\Jorden Ext. 138kV North and South\Addendum 1\JordenExt138NS_Addendum_WDR\JordenExt138NS_Addendum_WDR.aprx





REFERENCE: WORLD IMAGERY (CLARITY), ESRI, ARCGIS ONLINE, ACCESSED 10/2025. SOIL SURVEY GEOGRAPHIC (SSURGO), USDA/NRCS, 2024. NHD, USGS 2024. NWI, USFWS 2024. HUC 12, USGS 2024.

10/8/2025

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- ADDENDUM SURVEY AREA
- JORDEN EXTENSION 138KV NORTH
- JORDEN EXTENSION 138KV SOUTH
- UPLAND DATA POINT
- WETLAND DATA POINT
- AECOM DELINEATED PEM WETLAND
- AECOM DELINEATED POND
- PREVIOUSLY DELINEATED PROJECT SURVEY AREA
- PREVIOUSLY DELINEATED UPLAND DATA POINT
- PREVIOUSLY DELINEATED WETLAND DATA POINT
- PREVIOUSLY DELINEATED CULVERT
- PREVIOUSLY DELINEATED UPLAND DRAINAGE FEATURE
- PREVIOUSLY DELINEATED PEM WETLAND
- EMHT DELINEATED WETLAND
- NWI WETLAND (USFWS)
- JD: LRH-2021-907-SCR-Blacklick Creek
- JD: LRH-2022-691-SCR
- LRH-2025-325-MUS-Unnamed Tributary South Fork
- HUC 12 WATERSHED BOUNDARY
- COUNTY BOUNDARIES
- TOWNSHIP BOUNDARIES
- SOIL MAP UNIT

0 100 200 400 Feet

BEB: BENNINGTON SILT LOAM, 2 TO 6 PERCENT SLOPES

CEN1B1: CENTERBURG SILT LOAM, 2 TO 6 PERCENT SLOPES

PE: PEWAMO SILTY CLAY LOAM, LOW CARBONATE TILL, 0 TO 2 PERCENT SLOPES

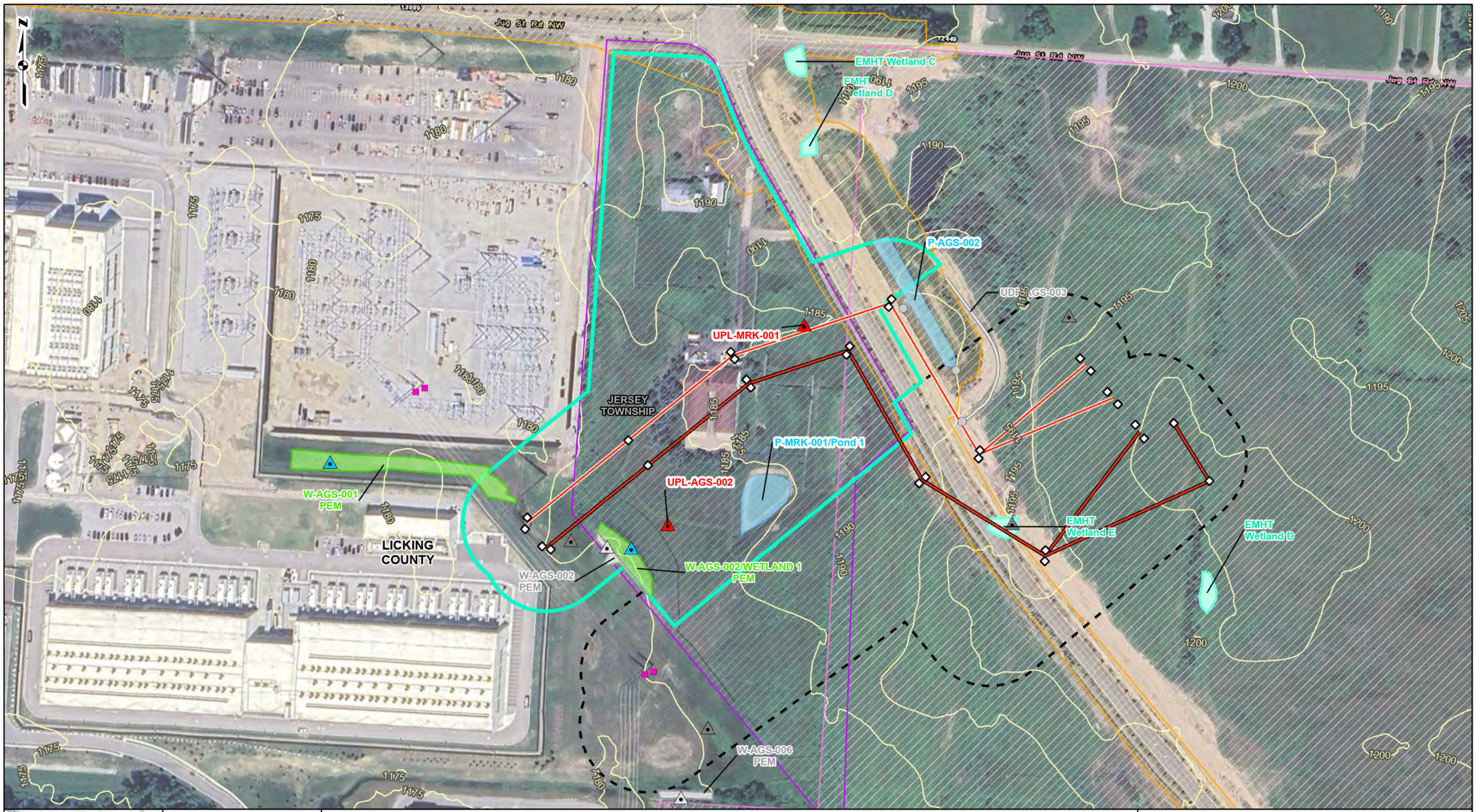
FIGURE 2
SOIL MAP AND NATIONAL WETLANDS INVENTORY MAP

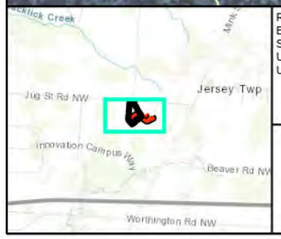
JORDEN EXTENSION 138KV
NORTH AND SOUTH PROJECT
ADDENDUM
AMERICAN ELECTRIC POWER

AECOM

DRAWN BY: GIB DATE: 10/8/2025
CHECKED: CJT APPROVED:

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REFERENCE: WORLD IMAGERY (CLARITY), ESRI, ARCGIS ONLINE, ACCESSED 10/2025. SOIL SURVEY GEOGRAPHIC (SSURGO), USDA/NRCS, 2024. NHD, USGS 2024. NWI, USFWS 2024. HUC 12, USGS 2024.

10/8/2025

LEGEND

- EXISTING STRUCTURE
- PROPOSED STRUCTURE
- UPLAND DATA POINT
- WETLAND DATA POINT
- PREVIOUSLY DELINEATED UPLAND DATA POINT
- PREVIOUSLY DELINEATED. WETLAND DATA POINT
- PREVIOUSLY DELINEATED CULVERT
- PREVIOUSLY DELINEATED UPLAND DRAINAGE FEATURE
- JORDEN EXTENSION 138KV NORTH
- JORDEN EXTENSION 138KV SOUTH
- PREVIOUSLY DELINEATED PEM WETLAND
- AECOM DELINEATED PEM WETLAND
- AECOM DELINEATED POND
- ADDENDUM SURVEY AREA
- PREVIOUSLY DELINEATED PROJECT SURVEY AREA
- EMHT Delineated Wetland
- NHD STREAM (USGS)
- JD: LRH-2021-907-SCR-Blacklick Creek
- JD: LRH-2022-691-SCR
- LRH-2025-325-MUS-Unnamed Tributary South Fork
- COUNTY BOUNDARY
- TOWNSHIP BOUNDARY
- CONTOUR (5FT)

0 100 200 400 Feet

FIGURE 3
WETLAND DELINEATION AND STREAM ASSESSMENT MAP

JORDEN EXTENSION 138KV
NORTH AND SOUTH PROJECT
ADDENDUM
AMERICAN ELECTRIC POWER

AECOM

DRAWN BY: GIB
CHECKED: CJT
DATE: 10/8/2025
APPROVED:

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PROJECT LOCATION



LICKING COUNTY, OHIO

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: JERSEY, OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 10/2025. OEPA ELIGIBLE WATERSHEDS, OHIO ENVIRONMENTAL PROTECTION AGENCY, 2024.

10/8/2025

LEGEND

- ADDENDUM SURVEY AREA
- JORDEN EXTENSION 138KV NORTH
- JORDEN EXTENSION 138KV SOUTH
- PREVIOUSLY DELINEATED PROJECT SURVEY AREA
- NHD STREAM (USGS)

OEPA ELIGIBILITY:

- ELIGIBLE
- POSSIBLY ELIGIBLE

0 1,000 2,000 4,000 Feet

FIGURE 4
STREAM ELIGIBILTY MAP

AECOM

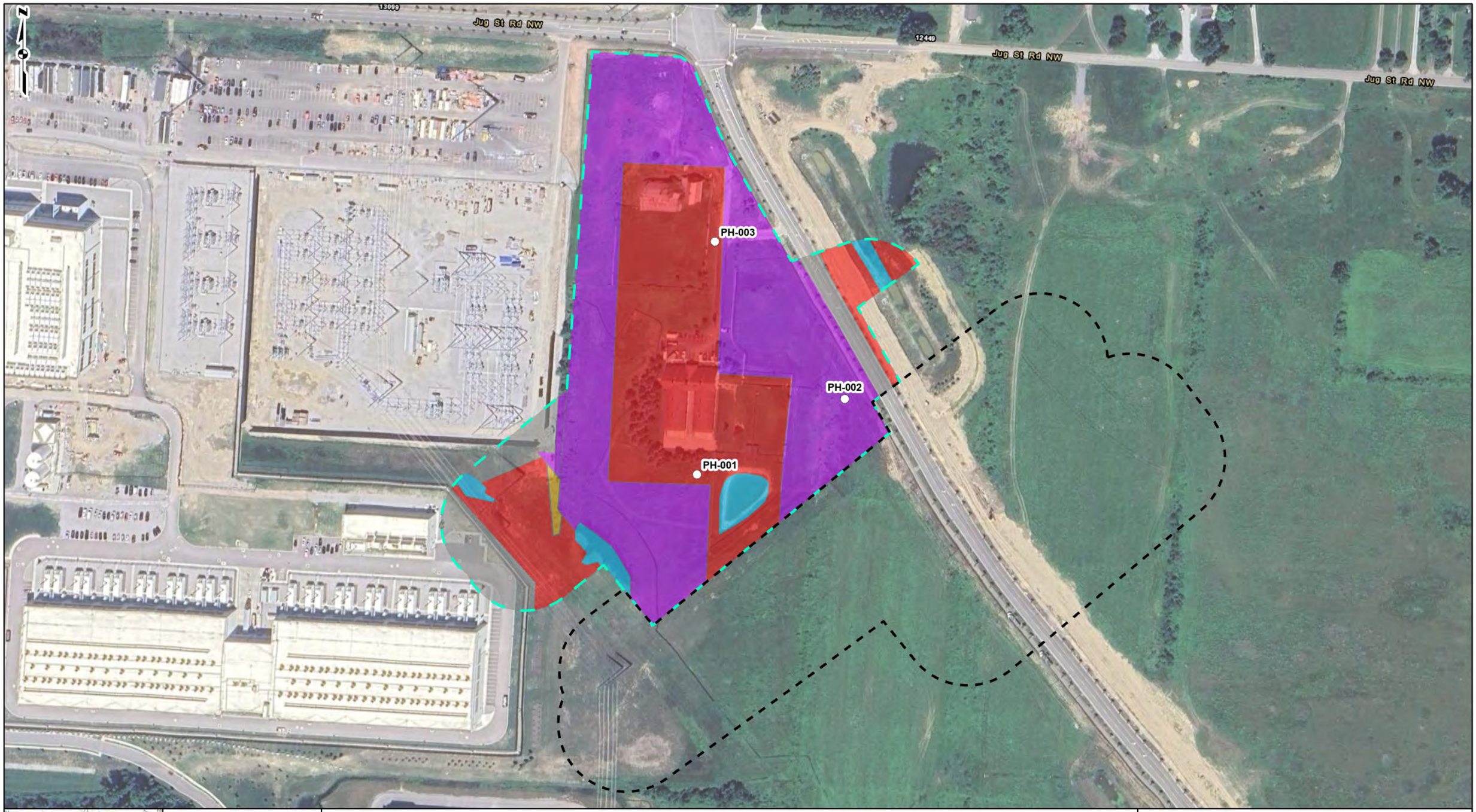
JORDEN EXTENSION 138KV
NORTH AND SOUTH PROJECT
ADDENDUM
AMERICAN ELECTRIC POWER

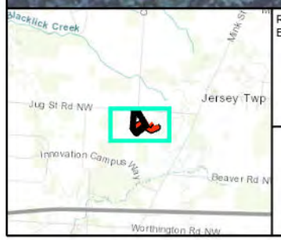
AMERICAN ELECTRIC POWER

DRAWN BY: GIB
CHECKED: CJT

DATE: 10/8/2025
APPROVED:

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REFERENCE: WORLD IMAGERY (CLARITY), ESRI, ARCGIS ONLINE, ACCESSED 10/2025.

10/8/2025

LEGEND

- PHOTO LOCATION POINT
- ADDENDUM SURVEY AREA
- PROJECT SURVEY AREA

VEGETATIVE COMMUNITY TYPE

- LANDSCAPED
- OLD FIELD
- SCRUB/SHRUB
- STREAMS/WETLANDS
- URBAN

0 100 200 400 Feet

FIGURE 5
VEGETATIVE COMMUNITIES ASSESSMENT MAP

JORDEN EXTENSION 138KV
NORTH AND SOUTH PROJECT
ADDENDUM
AMERICAN ELECTRIC POWER

AECOM

DRAWN BY: GIB
CHECKED: CJT

DATE: 10/8/2025
APPROVED:

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APPENDIX A

JURISDICTIONAL DETERMINATIONS (JD) BY OTHERS

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HUNTINGTON DISTRICT
502 8TH STREET
HUNTINGTON, WV 25701

CELRH-RDN 3 June 2025

MEMORANDUM FOR RECORD

SUBJECT: US Army Corps of Engineers (Corps) Pre-2015 Regulatory Regime Approved Jurisdictional Determination in Light of *Sackett v. EPA*, 143 S. Ct. 1322 (2023) ,[1] LRH-2025-325-MUS-Unnamed Tributary South Fork Licking River, MFR 1 of 1[2]

BACKGROUND. An Approved Jurisdictional Determination (AJD) is a Corps document stating the presence or absence of waters of the United States on a parcel or a written statement and map identifying the limits of waters of the United States on a parcel. AJDs are clearly designated appealable actions and will include a basis of JD with the document.[3] AJDs are case-specific and are typically made in response to a request. AJDs are valid for a period of five years unless new information warrants revision of the determination before the expiration date or a District Engineer has identified, after public notice and comment, that specific geographic areas with rapidly changing environmental conditions merit re-verification on a more frequent basis.[4] For the purposes of this AJD, we have relied on section 10 of the Rivers and Harbors Act of 1899 (RHA),[5] the Clean Water Act (CWA) implementing regulations published by the Department of the Army in 1986 and amended in 1993 (references 2.a. and 2.b. respectively), the 2008 *Rapanos-Carabell* guidance (reference 2.c.), and other applicable guidance, relevant case law and longstanding practice, (collectively the pre-2015 regulatory regime), and the *Sackett* decision (reference 2.d.) in evaluating jurisdiction.

This Memorandum for Record (MFR) constitutes the basis of jurisdiction for a Corps AJD as defined in 33 CFR §331.2. The features addressed in this AJD were evaluated consistent with the definition of “waters of the United States” found in the pre-2015 regulatory regime and consistent with the Supreme Court's decision in *Sackett*. This

[1] While the Supreme Court’s decision in *Sackett* had no effect on some categories of waters covered under the CWA, and no effect on any waters covered under RHA, all categories are included in this Memorandum for Record for efficiency.
[2] When documenting aquatic resources within the review area that are jurisdictional under the Clean Water Act (CWA), use an additional MFR and group the aquatic resources on each MFR based on the TNW, interstate water, or territorial seas that they are connected to. Be sure to provide an identifier to indicate when there are multiple MFRs associated with a single AJD request (i.e., number them 1, 2, 3, etc.).
[3] 33 CFR 331.2.
[4] Regulatory Guidance Letter 05-02.
[5] USACE has authority under both Section 9 and Section 10 of the Rivers and Harbors Act of 1899 but for convenience, in this MFR, jurisdiction under RHA will be referred to as Section 10.

AJD did not rely on the 2023 "Revised Definition of 'Waters of the United States,'" as amended on 8 September 2023 (Amended 2023 Rule) because, as of the date of this decision, the Amended 2023 Rule is not applicable Ohio due to litigation.

1. SUMMARY OF CONCLUSIONS.

   a. Provide a list of each individual feature within the review area and the jurisdictional status of each one (i.e., identify whether each feature is/is not a water of the United States and/or a navigable water of the United States).

      i. Wetland 1; non-jurisdictional
      ii. Wetland 3; non-jurisdictional
      iii. Pond 1; non-jurisdictional

   As shown in Attachment A and Table 1 below, approximately 0.71 acre of two (2) wetlands (Wetlands 1 and 3) and 0.23 acre of one (1) pond (Pond 1) are located with the approved JD review area. The applicant has requested a preliminary JD for 0.01 acre of one (1) wetland (Wetland 2) located within the delineation boundary.

Table 1. Aquatic Resources located within the New Albany Phase II Project Approved JD Review Area, LRH-2025-325-SCR-Unnamed Tributary South Fork Licking River

Aquatic Resource	Latitude & Longitude* (°N)	(°W)	Classification	Length and/or Acres within review area
Wetland 1	40.092681	-82.724612	Palustrine, Emergent	0.21 acre
Wetland 3	40.094369	-82.723619	Palustrine, Emergent	0.50 acre
Pond 1	40.093338	-82.723834	Open-water	0.23 acre

2. REFERENCES.

   a. Final Rule for Regulatory Programs of the Corps of Engineers, 51 FR 41206 (November 13, 1986).

   b. Clean Water Act Regulatory Programs, 58 FR 45008 (August 25, 1993).

c. U.S. EPA & U.S. Army Corps of Engineers, Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States* (December 2, 2008)

d. *Sackett v. EPA*, 598 U.S. 651, 143 S. Ct. 1322 (2023)

e. U.S. EPA & U.S. Army Corps of Engineers Joint Legal Memorandum Regarding Solid Waste Agency of Northern Cook County (SWANCC) v. United States, 68 FR 1995 (15 January 2003)

f. Memorandum to the field between the U.S. Department of the Army, U.S Army Corps of Engineers and the U.S. Environmental Protection Agency concerning the proper implementation of "continuous surface connection" under the definition of "Waters of the United States" under the Clean Water Act dated 12 March 2025

3. REVIEW AREA. The 17-acre JD review area is located west of Clover Valley Road and south of Jug Street Road NW in the City of New Albany, Licking County, Ohio (40.094292 latitude, -82.724219 longitude).

4. NEAREST TRADITIONAL NAVIGABLE WATER (TNW), INTERSTATE WATER, OR THE TERRITORIAL SEAS TO WHICH THE AQUATIC RESOURCE IS CONNECTED. Muskingum River and Scioto River. The Huntington District advertised the designation of the Muskingum River as a Section 10 (TNW) from mouth to Mile 112.5 the Scioto River as a Section 10 (TNW) from mouth to Mile 175.0 via Public Notice No. 94-40 dated 27 July 1994.[6]

5. FLOWPATH FROM THE SUBJECT AQUATIC RESOURCES TO A TNW, INTERSTATE WATER, OR THE TERRITORIAL SEAS The JD review area is split between two (2) watersheds. Wetland 3 drains north towards Blacklick Creek (Hydrologic Unit Code [HUC] 12- 050600011503). Wetland 1 and Pond 1 drain south towards an unnamed tributary to the South Fork Licking River (HUC 12-050400060402). There is no surface water connection from Wetland 3 to the Scioto River and there is no surface water connection from Wetland 1 and Pond 1 to the Muskingum River.

[6] This MFR should not be used to complete a new stand-alone TNW determination. A stand-alone TNW determination for a water that is not subject to Section 9 or 10 of the Rivers and Harbors Act of 1899 (RHA) is completed independently of a request for an AJD. A stand-alone TNW determination is conducted for a specific segment of river or stream or other type of waterbody, such as a lake, where upstream or downstream limits or lake borders are established.

6. SECTION 10 JURISDICTIONAL WATERS[7]: Describe aquatic resources or other features within the review area determined to be jurisdictional in accordance with Section 10 of the Rivers and Harbors Act of 1899. Include the size of each aquatic resource or other feature within the review area and how it was determined to be jurisdictional in accordance with Section 10.[8] N/A

7. SECTION 404 JURISDICTIONAL WATERS: Describe the aquatic resources within the review area that were found to meet the definition of waters of the United States in accordance with the pre-2015 regulatory regime and consistent with the Supreme Court's decision in *Sackett*. List each aquatic resource separately, by name, consistent with the naming convention used in section 1, above. Include a rationale for each aquatic resource, supporting that the aquatic resource meets the relevant category of "waters of the United States" in the pre-2015 regulatory regime. The rationale should also include a written description of, or reference to a map in the administrative record that shows, the lateral limits of jurisdiction for each aquatic resource, including how that limit was determined, and incorporate relevant references used. Include the size of each aquatic resource in acres or linear feet and attach and reference related figures as needed.

   a. TNWs (a)(1): N/A

   b. Interstate Waters (a)(2): N/A

   c. Other Waters (a)(3): N/A

   d. Impoundments (a)(4): N/A

   e. Tributaries (a)(5): N/A

   f. The territorial seas (a)(6): N/A

   g. Adjacent wetlands (a)(7): N/A

[7] 33 CFR 329.9(a) A waterbody which was navigable in its natural or improved state, or which was susceptible of reasonable improvement (as discussed in § 329.8(b) of this part) retains its character as "navigable in law" even though it is not presently used for commerce, or is presently incapable of such use because of changed conditions or the presence of obstructions.
[8] This MFR is not to be used to make a report of findings to support a determination that the water is a navigable water of the United States. The district must follow the procedures outlined in 33 CFR part 329.14 to make a determination that water is a navigable water of the United States subject to Section 10 of the RHA.

8. NON-JURISDICTIONAL AQUATIC RESOURCES AND FEATURES

a. Describe aquatic resources and other features within the review area identified as "generally non-jurisdictional" in the preamble to the 1986 regulations (referred to as "preamble waters").[9] Include size of the aquatic resource or feature within the review area and describe how it was determined to be non-jurisdictional under the CWA as a preamble water. N/A

b. Describe aquatic resources and features within the review area identified as "generally not jurisdictional" in the *Rapanos* guidance. Include size of the aquatic resource or feature within the review area and describe how it was determined to be non-jurisdictional under the CWA based on the criteria listed in the guidance. N/A

c. Describe aquatic resources and features identified within the review area as waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA. Include the size of the waste treatment system within the review area and describe how it was determined to be a waste treatment system. N/A

d. Describe aquatic resources and features within the review area determined to be prior converted cropland in accordance with the 1993 regulations (reference 2.b.). Include the size of the aquatic resource or feature within the review area and describe how it was determined to be prior converted cropland. N/A

e. Describe aquatic resources (i.e. lakes and ponds) within the review area, which do not have a nexus to interstate or foreign commerce, and prior to the January 2001 Supreme Court decision in "*SWANCC*," would have been jurisdictional based solely on the "Migratory Bird Rule." Include the size of the aquatic resource or feature, and how it was determined to be an "isolated water" in accordance with *SWANCC*.

Pond 1 (0.23 acre) is an open water feature, is not an impoundment of a tributary, and does not exhibit a continuous surface water connection to a jurisdictional water. Based on a review of the report and the National Hydrography Dataset (NHD), the closest relatively permanent stream is an unnamed tributary to the South Fork Licking River, which is located approximately 2,000 feet to the southwest of Pond 1. In addition to being hydrologically isolated from the surface water tributary system, Pond 1 does not

[9] 51 FR 41217, November 13, 1986.

appear to support interstate commerce interests nor contain any rare or endangered species. Therefore, Pond 1 is not a jurisdictional water of the United States.

f. Describe aquatic resources and features within the review area that were determined to be non-jurisdictional because they do not meet one or more categories of waters of the United States under the pre-2015 regulatory regime consistent with the Supreme Court's decision in *Sackett* (e.g., tributaries that are non-relatively permanent waters; non-tidal wetlands that do not have a continuous surface connection to a jurisdictional water).

Wetland 1 (0.21 acre) is a palustrine emergent wetland located in the central portion of the site along the western JD review area boundary. Wetland 1 is characterized as being dominated by narrowleaf cattail. The soil within the wetland boundary met the hydric soil indicator of depleted matrix. Hydrology indicators in Wetland 1 include surface water, oxidized rhizospheres on living roots, drainage patterns, and the FAC-Neutral Test. The lateral limits of jurisdiction for Wetland 1 were established by the 1987 Corps Delineation Manual and applicable Regional Supplement. Based on a review of the National Hydrography Dataset (NHD), the closest relatively permanent stream is an unnamed tributary to the South Fork Licking River, which is located approximately 1,800 feet southwest of Wetland 1. Wetland 1 does not physically abut or touch a relatively permanent water, and there is no evidence of a natural berm, bank, dune, or similar natural landform between the wetland and a relatively permanent water. Wetland 1 does not exhibit a continuous surface connection to a water identified in paragraph (a)(1) through (a)(6) of the pre-2015 regulations. Therefore, Wetland 1 is not "adjacent" under the pre-2015 regime as implemented consistent with Sackett, and as such, is not subject to Section 404 CWA jurisdiction.

Wetland 3 (0.50 acre) is a palustrine emergent wetland located in the central-eastern portion of the JD review area in a depression that formed from the filling of a pre-existing pond. Wetland 3 is characterized as being dominated by sandbar willow and barnyard grass. The soil within the wetland boundary met the hydric soil indicator of depleted matrix. Hydrology indicators for Wetland 3 include surface water and the Fac-Neutral Test. The lateral limits of jurisdiction for Wetland 3 were established by the 1987 Corps Delineation Manual and applicable Regional Supplement. Based on a review of the submitted report and the NHD, the closest relatively permanent stream is Blacklick Creek, which is located approximately 1,800 feet north of Wetland 3. Wetland 3 does not physically abut or touch a relatively permanent water, and there is no evidence of

a natural berm, bank, dune, or similar natural landform between the wetland and a relatively permanent water. Wetland 3 does not exhibit a continuous surface connection to a water identified in paragraph (a)(1) through (a)(6) of the pre-2015 regulations. Therefore, Wetland 3 is not "adjacent" under the pre-2015 regime as implemented consistent with Sackett, and as such, is not subject to Section 404 CWA jurisdiction.

9. DATA SOURCES. List sources of data/information used in making determination. Include titles and dates of sources used and ensure that information referenced is available in the administrative record.

a. On behalf of the applicant, Kimley-Horn has submitted a *New Albany Phase II Wetlands & Waterways Delineation Report* dated March 2025.

b. USGS NHD: Figure 4- NWI and NHD Map (report, March 2025)

c. USGS Topographic Mapping: Figure 2- USGS Topographic Map, Jersey 2023 (report, March 2025)

d. LiDAR: Figure 3- LiDAR Contours Map (report, March 2025)

e. U.S. Department of Agriculture Natural Resources Conservation Service Soil Survey: Figure 5-Hydric Soils Map (report, March 2025)

f. National wetlands inventory map: Figure 4- NWI and NHD Map (report, March 2025)

g. Federal Emergency Management Agency Flood Insurance Rate Map: Figure 5- FEMA Flood Hazard Map (report, Jan 2025)

h. Watershed Mapping: Figure 7- Watershed Map (report, March 2025)

i. Aerial Photograph: Figure 1- Project Location Map (report, March 2025) and Appendix B- Aerial/Satellite Imagery (report, March 2025)

j. Site Photographs: Appendix D- Site Photos 1-45 dated 6 March 2025 (report, March 2025)

k. Precipitation Data: Appendix A- Antecedent Precipitation Tool Figure (report, March 2025)

I. Public Notice No. 94-40 dated 27 July 1994

10. OTHER SUPPORTING INFORMATION. N/A

11. NOTE: The structure and format of this MFR were developed in coordination with the EPA and Department of the Army. The MFR's structure and format may be subject to future modification or may be rescinded as needed to implement additional guidance from the agencies; however, the approved jurisdictional determination described herein is a final agency action.

APPENDIX B

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

OEPA WETLAND ORAM FORMS

DELINEATED FEATURES PHOTOGRAPHS (WETLANDS & UPLANDS)

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 9/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Jorden Extension 138 kV North & South Project Addendum #1 City/County: Licking Sampling Date: 6-25-25

Applicant/Owner: AEP State: OH Sampling Point: W-AGS-002

Investigator(s): MRK, RAK Section, Township, Range: 2N, 15W

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Concave

Slope (%): 1 Lat: 40.092868 Long: -82.724787 Datum: NAD83

Soil Map Unit Name: Pe: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes NWI classification: NA

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Field ID W-AGS-002/Wetland2 PEM: This PEM wetland is located in a depression that is collecting water from surface runoff. Water drains to the depression and flows to a ditch located outside of the study area. The wetland boundary follows edge of depression.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. *Typha angustifolia*	60	Yes	OBL
2. *Eleocharis palustris*	25	Yes	OBL
3. *Carex vulpinoidea*	10	No	FACW
4. *Leersia oryzoides*	10	No	OBL
5. *Dactylis glomerata*	10	No	FACU
6. *Alisma subcordatum*	10	No	OBL
7. *Juncus tenuis*	10	No	FAC
8.			
9.			
10.			
	135 =Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	105	x 1 =	105
FACW species	10	x 2 =	20
FAC species	10	x 3 =	30
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	135 (A)		195 (B)

Prevalence Index = B/A = 1.44

Hydrophytic Vegetation Indicators:

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Vegetation does meet hydrophytic criteria.

SOIL

Sampling Point: W-AGS-002

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 4/1	80	7.5YR 5/6	20	C	PL/M	Loamy/Clayey	Prominent redox concentrations
								Silty Clay Loam, OR 15%

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

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- x Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Soils sampled within the wetland do meet hydric criteria.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

The source of hydrology is surface runoff as a result of precipitation.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 9/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Jorden Extension 138 kV North & South Project Addendum #1 City/County: Licking Sampling Date: 6-25-25

Applicant/Owner: AEP State: OH Sampling Point: W-AGS-002

Investigator(s): MRK, RAK Section, Township, Range: 2N, 15W

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Flat

Slope (%): 1 Lat: 40.093012 Long: -82.724499 Datum: NAD83

Soil Map Unit Name: Pe: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes NWI classification: NA

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "N X Yes x No ____

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

SUMMARY OF FINDINGS – Attach site map showing sampling po X

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Field ID W-AGS-002/Wetland2 UPL: Upland data point collected to characterize the area within an old field habitat.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. *Dactylis glomerata*	35	Yes	FACU
2. *Poa pratensis*	20	Yes	FAC
3. *Apocynum cannabinum*	15	Yes	FAC
4. *Phleum pratense*	15	Yes	FACU
5. *Cirsium arvense*	10	No	FACU
6. *Asclepias syriaca*	10	No	FACU
7. *Trifolium repens*	10	No	FACU
8. *Carex vulpinoidea*	5	No	FACW
9.			
10.			
	120 =Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	35	x 3 =	105
FACU species	80	x 4 =	320
UPL species	0	x 5 =	0
Column Totals:	120 (A)		435 (B)

Prevalence Index = B/A = 3.63

Hydrophytic Vegetation Indicators:

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Vegetation does not meet hydrophytic criteria.

SOIL

Sampling Point: W-AGS-002

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	7.5YR 4/1	100					Loamy/Clayey	Silt loam, 30% mixed rock

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

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ 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[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Shovel refusal at 12 inches due to rock. Soil does not meet hydric criteria.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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? (includes capillary fringe)	Yes ____	No x	Depth (inches): ____

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

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

Remarks:

No source of hydrology was observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 9/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Jorden Extension 138 kV North & South Project Addendum #1 City/County: Licking Sampling Date: 6-25-25

Applicant/Owner: AEP State: OH Sampling Point: UPL-MRK-001

Investigator(s): MRK, RAK Section, Township, Range: 2N, 15W

Landform (hillside, terrace, etc.): Flat Local relief (concave, convex, none): Flat

Slope (%): 1 Lat: 40.094222 Long: -82.723427 Datum: NAD83

Soil Map Unit Name: Pe: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes NWI classification: NA

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

Are Vegetation ____, Soil x, or Hydrology ____ significantly disturbed? Are "N X Yes ____ No x

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

SUMMARY OF FINDINGS – Attach site map showing sampling po X

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?**	**Yes** ____	**No** X
Hydric Soil Present?	Yes ____	No X			
Wetland Hydrology Present?	Yes ____	No X			

Remarks:
Field ID UPL-MRK-001: Upland data point collected to characterize the area within an old field habitat. Area has been recently disturbed and regraded during construction.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15' radius)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. *Trifolium pratense*	70	Yes	FACU
2. *Symphyotrichum pilosum*	40	Yes	FACU
3. *Erigeron annuus*	25	No	FACU
4. *Medicago lupulina*	15	No	FACU
5. *Cirsium arvense*	10	No	FACU
6. *Trifolium repens*	5	No	FACU
7. *Rumex crispus*	5	No	FAC
8.			
9.			
10.			
	170 =Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 2 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	165	x 4 =	660
UPL species	0	x 5 =	0
Column Totals:	170 (A)		675 (B)
Prevalence Index = B/A =			3.97

Hydrophytic Vegetation Indicators:

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Vegetation does not meet hydrophytic criteria.

SOIL

Sampling Point: UPL-MRK-001

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 5/3	100					Loamy/Clayey	Silt loam, 30% mixed rock

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

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ 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[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Shovel refusal at 8 inches due to rock. Soil does not meet hydric criteria and the area has been recently regraded during construction activities.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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): _____

(includes capillary fringe)

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

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

Remarks:

No source of hydrology was observed.

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 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:	**MRK, RAK**
Date:	**6/25/2025**
Affiliation:	**AECOM**
Address:	**436 Seventh Ave, Suite 1200, Pittsburgh, PA 15219**
Phone Number:	**814-516-1130**
e-mail address:	matthew.kline@aecom.com
Name of Wetland:	**W-AGS-002 / Wetland1 PEM**
Vegetation Communit(ies):	**PEM**
HGM Class(es):	**Depressional**

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



Lat/Long or UTM Coordinate:	**40.092868, -82.724787**
USGS Quad Name:	**Jersey**
County:	**Licking**
Township:	**2N**
Section and Subsection:	**15W**
Hydrologic Unit Code:	**HUC12: 050400060402 - Headwaters South Fork Licking River**
Site Visit:	**6/25/2025**
National Wetland Inventory Map:	**See Figure 2**
Ohio Wetland Inventory Map:	**See Figure 2**
Soil Survey:	**See Figure 2**
Delineation report/map:	**See Figure 3**

Name of Wetland:	W-AGS-002 / Wetland1 PEM		
Wetland Size (delineated acres):	0.55	Wetland Size (Estimated total acres):	0.55

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



Comments, Narrative Discussion, Justification of Category Changes:

This PEM wetland is located in a depression that is collecting water from surface runoff. Water drains to the depression and flows to a ditch located outside of the study area. The wetland boundary follows edge of depression.

Final score:	15	Category:	1

Wetland ID:	W-AGS-002 / Wetland1 PEM

Scoring Boundary Worksheet

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

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

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

Wetland ID:	W-AGS-002 / Wetland1 PEM

Narrative Rating

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

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

Wetland ID:	W-AGS-002 / Wetland1 PEM

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

Wetland ID:	W-AGS-002 / Wetland1 PEM

Table 1. Characteristic plant species.

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

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

Wetland ID:	W-AGS-002 / Wetland1 PEM

Site:	Jorden Extension 138 kV North & Sout	Rater(s):	MRK, RAK	Date:	6/25/2025

Field ID:

W-AGS-002 / Wetland1 PEM

Delineated acres:	0.55
Total acres:	0.55

Metric 1. Wetland Area (size).

2.0 | 2.0 (max 6 pts | subtotal)

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

1.0 | 3.0 (max 14 pts. | subtotal)

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

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

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

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

Metric 3. Hydrology.

7.0 | 10.0 (max 30 pts. | subtotal)

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select one.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

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

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

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

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

6.0 | 16.0 (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)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] Poor (1)

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

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

Check all disturbances observed

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

16.0 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID:	W-AGS-002 / Wetland1 PEM

Site:	Jorden Extension 138 kV North & South Pr	Rater(s):	MRK, RAK	Date:	6/25/2025

Field ID:
W-AGS-002 / Wetland1 PEM

16.0 subtotal this page

0.0 max 10 pts. | **16.0** subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-1.0 max 20pts. | **15.0** 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
0	Forest
0	Mudflats
0	Open water
0	Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

	High (5)
	Moderately high(4)
	Moderate (3)
	Moderately low (2)
	Low (1)
x	None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

15.0	**TOTAL (Max 100 pts)**
1	**Category**

Wetland ID:	W-AGS-002 / Wetland1 PEM

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	1		
	Metric 3. Hydrology	7		
	Metric 4. Habitat	6		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	-1		
	TOTAL SCORE	15		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID:	W-AGS-002 / Wetland1 PEM

Wetland Categorization Worksheet

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

Final Category

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

End of Ohio Rapid Assessment Method for Wetlands.

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD

Wetland & Upland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Extension 138 kV North & South Project Addendum #1	60694533

W-AGS-002/ WETLAND 1	
Date: June 06, 2025	
Description: PEM Category 1 Facing North	

W-AGS-002/ WETLAND 1	
Date: June 06, 2025	
Description: PEM Category 1 Facing East	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Wetland & Upland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Extension 138 kV North & South Project Addendum #1	60694533

W-AGS-002/ WETLAND 1 **Date:** June 06, 2025 **Description:** PEM Category 1 Facing South	

W-AGS-002/ WETLAND 1 **Date:** June 06, 2025 **Description:** PEM Category 1 Facing West	

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PHOTOGRAPHIC RECORD

Wetland & Upland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Extension 138 kV North & South Project Addendum #1	60694533

W-AGS-002/ WETLAND 1 **Date:** June 06, 2025 **Description:** PEM Category 1 Facing Soils	

UPL-MRK-001 **Date:** June 06, 2025 **Description:** Upland Facing North	

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PHOTOGRAPHIC RECORD

Wetland & Upland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Extension 138 kV North & South Project Addendum #1	60694533

UPL-MRK-001

Date:

June 06, 2025

Description:

Upland

Facing East



UPL-MRK-001

Date:

June 06, 2025

Description:

Upland

Facing South



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PHOTOGRAPHIC RECORD

Wetland & Upland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Extension 138 kV North & South Project Addendum #1	60694533

UPL-MRK-001
Date: June 06, 2025
Description: Upland Facing West



UPL-MRK-001
Date: June 06, 2025
Description: Upland Facing Soils



APPENDIX C

POND PHOTOGRAPHIC RECORD

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PHOTOGRAPHIC RECORD
Pond Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Extension 138 kV North & South Project Addendum #1	60694533

P-MRK-001/POND1

Date:
June 06, 2025

Description:

Pond

Facing East



P-AGS-002

Date:
June 06, 2025

Description:

Pond

Facing South



APPENDIX D

HABITAT PHOTOGRAPHIC RECORD

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PHOTOGRAPHIC RECORD
Habitat Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Extension 138 kV North & South Project Addendum #1	60694533

PH-01

Date:

June 06, 2025

Description:

Landscaped

Facing East



PH-02

Date:

June 06, 2025

Description:

Old Field

Facing West



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PHOTOGRAPHIC RECORD
Habitat Photograph Record

Client Name:	Site Location:	Project No.
AEP	Jorden Extension 138 kV North & South Project Addendum #1	60694533

PH-03

Date:

June 06, 2025

Description:

Landscaped

Facing North



INNOVATION BRIE CUT IN NORTH & SOUTH PROJECT

LICKING COUNTY, OHIO

ECOLOGICAL REPORT

Prepared for:
American Electric Power Ohio Transmission Company
8500 Smiths Mill Road
New Albany, Ohio 43054

Prepared by:

525 Vine Street, Suite 1900
Cincinnati, Ohio 45202

Project #: 60694533

January 2025

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APPENDIX H 2024 Joint Guidance for Bat Surveys and Tree Clearing

1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) is proposing the construction of a new, approximately 0.3-mile, greenfield 138 kV transmission line from Structure 4 to Innovation Station and Structure 4a to Structure 5, as part of the Innovation Brie Cut In North & South Project, herein known as "Project". The Project Survey Area associated with this Ecological Report is located in Licking County, Ohio (OH) and located on the Jersey, OH, United States Geological Survey (USGS) 7.5-minute topographical quadrangle as displayed on the Project Overview Map (**Figure 1**).

A portion of the Project Survey Area overlaps with an approved Jurisdictional Determination (JD): LRH-2021-907-SCR-Blacklick Creek. No wetlands, stream, ponds, or upland drainage features within the JD boundary overlap with the Project Survey Area. The EMH&T JD is attached as **Appendix A** and the boundary is displayed on **Figures 2** and **3.**

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

2.0 METHODOLOGY

The field survey was completed within the Project Survey Area along a 0.3-mile by 300 ft wide corridor totaling approximately 13.7 acres. Prior to conducting field surveys, digital United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey data, United States Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI) data, USGS National Hydrography Dataset (NHD), Federal Emergency Management Agency (FEMA) 100-year floodplain data, and USGS 7.5-minute topographic maps were reviewed to identify the occurrence and location of potential wetland areas and/or streams.

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

2.1 WETLAND DELINEATION

The Project Survey Area was evaluated according to the procedures outlined in the United States Army Corps of Engineers (USACE) *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)* (USACE, 2010).

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

2.1.1 WETLAND CLASSIFICATION

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

2.1.2 WETLAND ASSESSMENT

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

2.2 STREAM ASSESSMENT

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

2.2.1 OEPA PRIMARY HEADWATER HABITAT ASSESSMENT

Stream assessments were conducted using the methods described in the OEPA's *Methods for Assessing Habitat in Flowing Waters*: *Using OEPA's Qualitative Habitat Evaluation Index (QHEI)* (Rankin, 2006) and in the OEPA's *Field Methods for Evaluating Primary Headwater Streams in Ohio* (OEPA, 2020). Streams associated with watershed area less than or equal to 1.0 square mile (259 hectares), and a maximum depth of water pools equal to or less than 15.75 inches were evaluated utilizing the Headwater Habitat Evaluation Index (HHEI) methodology and all other streams assessed using the QHEI methodology. Flow regime (ephemeral, intermittent, perennial) was determined by the appropriate stream assessment score per OEPA manuals (OEPA, 2020) and by AECOM's professional opinion.

Streams assessed in the Project Survey Area were reviewed for existing OEPA Aquatic Life Use Designations per OEPA's Water Quality Standards (OAC Chapter 3745-1). Those without an existing use designation were assigned a provisional aquatic life use designation based upon habitat assessment results (Rankin, 1989; OEPA, 2020).

2.2.2 OEPA 401 WATER QUALITY CERTIFICATION FOR NATIONWIDE PERMIT ELIGIBILITY

The OEPA has designated each watershed in the state on based on whether it may be ineligible for coverage under the OEPA's 401 Water Quality Certification (WQC) for Nationwide Permits (OEPA, 2023). Mapping provided by the OEPA illustrates the eligibility of streams in the area to fall under a Nationwide Permit for 401 certification or if an individual state WQC needs to be applied for. Impacts to streams within each watershed would then have eligibility for 401 WQC determined by the watershed category. The three categories are defined as:

Eligible: Streams within the watershed are eligible for coverage under the OEPA's water quality certification for the Nationwide Permits if all other general and regional special terms and conditions are met.

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

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

2.2.3 UPLAND DRAINAGE FEATURES

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

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

In addition, UDF’s (including swales, ditches, and other erosional features) are generally not WOTUS except in certain circumstances, such as relocated streams.

2.3 RARE, THREATENED, AND ENDANGERED SPECIES

AECOM conducted a threatened and endangered species review and general field habitat surveys within the Project Survey Area. AECOM submitted requests to the Ohio Department of Natural Resources (ODNR) Office of Real Estate – Environmental Review Section and the USFWS Ohio Ecological Services Field Office soliciting comments on the proposed Project. Agency-identified species of concern and available species-specific information was reviewed to identify the various habitat types that listed species are known to inhabit.

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

AECOM conducted a desktop assessment of the Project Survey Area and a quarter-mile buffer around it to identify potentially occurring winter bat hibernaculum that may be present near the Project which is in **Appendix B**. This assessment was conducted by reviewing data on mining activity and karst geology from the ODNR Division of Mineral Resources and USGS websites.

3.0 RESULTS

On September 17, 2024, AECOM ecologists walked the Project Survey Area to conduct the wetland delineation, stream assessment, and habitat survey. During the delineation, within the Project Survey Area, AECOM delineated three PEM wetlands and one pond. The representative wetland data forms as well as photo documentation are provided as **Appendix C.**

3.1 WETLAND DELINEATION

3.1.1 PRELIMINARY SOILS EVALUATION

According to the USDA/NRCS Web Soil Survey, five soil map units are mapped within the Project Survey Area (USDA NRCS, 2024a and 2024b). Of these, one was identified as a hydric soil and four were identified as containing hydric inclusions. Soils indicated as hydric inclusions are not predominately hydric soils and hydric soils are more likely to be found in topographic settings. **Table 1** below provides a detailed overview of all soil series and soil map units present within the Project Survey Area. Soil map units located in the Project Survey Area and vicinity are shown on **Figure 2**.

TABLE 1 - SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE PROJECT SURVEY AREA

Soil Series	Map Unit Symbol	Map Unit Description	Topographic Setting	Hydric	Hydric Component (%)
Bennington	BeA	Bennington silt loam, 0 to 2 percent slopes	Ground moraines, end moraines	Yes*	Condit 10% Pewamo 8%
	BeB	Bennington silt loam, 2 to 6 percent slopes	Ground moraines, end moraines	Yes*	Condit 8% Pewamo 8%
Centerburg	Cen1B1	Centerburg silt loam, 2 to 6 percent slopes	Ground moraines, end moraines	Yes*	Condit 10% Marengo 8%
	Cen1C2	Centerburg silt loam, 6 to 12 percent slopes, eroded	Ground moraines, end moraines	Yes*	Condit 7%
Pewamo	Pe	Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes	Drainageways, depressions	Yes	N/A

Yes* = Hydric inclusion present

3.1.2 NATIONAL WETLAND INVENTORY MAP REVIEW

According to NWI data covering the Project location, no mapped NWI features were identified within the Project Survey Area.

3.1.3 DELINEATED WETLANDS

During the field survey on September 17, 2024, AECOM delineated three PEM wetlands (W-AGS-001, W-AGS-002, and W-AGS-006) within the Project Survey Area. The three PEM wetlands were assigned ORAM Category 1. The AECOM delineation boundaries are provided on **Figures 2** and **3**.

AECOM has given these wetlands within the Project Survey Area a provisional determination of jurisdictional (non-isolated i.e., WOTUS). Final jurisdictional status can only be determined by the USACE, and AECOM assessments are provisional. The locations and approximate extent of the wetlands identified within the Project Survey Area is shown on **Figures** and **3**. Details for each delineated wetland in the Project Survey Area are provided in **Table 2**. Completed USACE Data Forms and photographs of the delineated wetlands are provided in **Appendix C**.

TABLE 2 – SUMMARY OF DELINEATED WETLANDS WITHIN THE PROECT SURVEY AREA

Wetland ID	Location		Isolated?	Habitat Type	Delineated Area (acre)	ORAM		Nearest Structure # (Existing / Proposed)	Existing Structure # in Wetland	Proposed Structure # in Wetland	Structure Installation Method	Proposed Impacts	
	Latitude	Longitude				Score	Category					Temporary Matting Area (acre)	Permanent Impact Area (acre)
W-AGS-001	40.093376	-82.727157	Yes	PEM	0.39	10	1	TBD	None	TBD	TBD	TBD	TBD
W-AGS-002	40.092868	-82.724973	Yes	PEM	0.04	18	1	TBD	None	TBD	TBD	TBD	TBD
W-AGS-006	40.091351	-82.724385	Yes	PEM	0.05	25.5	1	TBD	None	TBD	TBD	TBD	TBD
				Total:	**0.48**							**TBD**	**TBD**

3.2 STREAM DELINEATION

During the field survey, AECOM did not identify any streams within the Project Survey Area (**Figures 2** and **3**).

3.2.1 OEPA STREAM ELIGIBILITY

The Project occurs within two watersheds, Headwaters Blacklick Creek (HUC-12 050600011503) and Headwaters South Fork Licking River (HUC-12 050400060402), that have the 401 WQC Designations of Possibly Eligible and Eligible, respectively. OEPA stream eligibility mapping for the Project vicinity is provided on **Figure 4**.

3.3 FEMA 100 YEAR FLOODPLAINS

No regulated FEMA 100-year floodplains and/or floodways are located within the Project Survey Area (FEMA, 2024) (**Figures 2** and **3**).

3.4 PONDS

During the field survey, AECOM identified one pond within the Project Survey Area. The extent of the pond's delineated boundary is displayed on **Figures 2** and **3**. Photographs of the delineated pond is provided in **Appendix D.**

3.5 UPLAND DRAINAGE FEATURES

During the field survey, AECOM identified three upland drainage features within the Project Survey Area. The extent of the upland drainage features is displayed on **Figures 2** and **3**. Photographs of all delineated upland drainage features are provided in **Appendix E.**

3.6 VEGETATIVE COMMUNITIES

AECOM ecologists conducted a general habitat survey in conjunction with the stream and wetland field surveys. As described in **Table 3**, below, the Project area contains landscaped, old field, scrub-shrub, urban, and wetlands/streams areas. Habitat descriptions applicable to the Project are provided below. Vegetative communities are depicted visually on aerial photography in **Figure 5**. Representative photographs of the vegetative communities in the Project Survey Area are provided as **Appendix F**.

TABLE 3 - VEGETATIVE COMMUNITIES WITHIN THE PROJECT SURVEY AREA

Vegetative Community	Description	Approximate Acreage Within the Project Survey Area	Approximate Percentage Within the Project Survey Area
Landscaped	Landscaped areas, including residential properties and commercial properties, and are frequently mowed and maintained, comprised of grasses and forbs.	1.89	13.8%
Old Field	Herbaceous cover exists alongside roads, field borders, and abandoned fields within the survey area of the Project in the form of successional old-field communities. These communities are the earliest stages of recolonization by plants following disturbance. This community type is typically short-lived, giving way progressively to shrub and forest communities unless periodically re-disturbed, in which case they remain as old fields. The old-field areas within the study corridors and adjacent areas are infrequently mowed areas of grasses, forbs, and occasional shrubs.	4.86	35.5%
Scrub/Shrub	Scrub-shrub habitats represent the successional stage between old-field and second growth forest, and often emerge in recently harvested forests responding to the lightness of the remaining canopy. Dominant species consist of herbaceous communities similar to that of old field habitat with 30% or greater coverage of woody species that are not trees (including sapling trees generally <3" diameter breast height and <20' in height).	0.08	0.6%
Urban	Urban areas are areas developed with residential and commercial land uses, including roads, buildings, and parking lots. These areas are generally devoid of significant woody and herbaceous vegetation.	6.58	48.0%
Wetlands/Streams	Wetlands were observed within the survey area for the Project	0.29	2.1%
	Totals:	**13.70**	**100%**

3.7 RARE, THREATENED AND ENDANGERED SPECIES AGENCY COORDINATION

Protected Species Agency Consultation –

On September 9, 2024, coordination letters were sent to USFWS and the ODNR Ohio Natural Heritage Program (ONHP) and Division of Wildlife (DOW), seeking an environmental review for potential impacts to threatened and endangered species for a project adjacent to the Project Survey Area.

Responses were received from the USFWS on December 13, 2024, and from the ODNR on December 30. 2024. According to a response letter received from the USFWS, two federally endangered bat and one federally proposed bat were identified within range of the Project area. Regarding state threatened and

endangered species that may occur within the Project vicinity, seven species were listed by the ODNR. Correspondence letters from the USFWS and ODNR are included as **Appendix G**.

Table 4 provides a list of species of concern identified by the agencies as potentially occurring within the vicinity of the Project. Photographs of the habitat within the Project Survey Area are provided as **Appendix F**.

TABLE 4
ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY AREA

Common Name (Scientific Name)	State Status	Federal Status	Typical Habitat	Habitat Observed	Avoidance Dates	Agency Comments	Potential Impacts
Mammals							
Indiana Bat (*Myotis sodalis*)	Endangered	Endangered	Summer habitat During spring/summer, bat species roost in trees behind loose, exfoliating bark, in crevices and cavities, or in leaves. Hibernaculum(a) During winter, these species hibernate in humid mines, caves, and occasionally man-made structures.	Summer habitat Within the Project survey area, the existing land use lacks the presence of forested areas or suitable bat roosting trees. Hibernaculum(a) No Mines openings and/or known caves are located within 0.25 miles of Project area and USFWS did not identify known hibernacula within 5-miles of the Project. Furthermore, field evaluations did not identify any potential hibernaculum(a) within the Project area.	Summer Tree Clearing April 1 – September 30	Summer habitat If suitable habitat occurs within the Project survey Area, the USFWS and ODNR DOW recommends seasonal tree cutting (October 1 and March 31). If summer tree clearing is required, additional coordination with the ODNR/USFWS is warranted. Hibernaculum(a) In accordance with 2024 Ohio ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing (2024 Joint Guidance)*, a 0.25-mile tree cutting and subsurface disturbance buffer around hibernaculum entrance is recommended.	Summer habitat No impact to listed bat species or their habitat is anticipated due to absence of tree clearing activities. If tree clearing is required, it should be completed between October 1 and March 31. Hibernaculum(a) No impacts to winter hibernacula were identified due to absence of caves, mines, or portals within 0.25-miles of the Project
Little brown bat (*Myotis lucifugus*)	Endangered	NA	Summer habitat During spring/summer, bat species roost in trees behind loose, exfoliating bark, in crevices and cavities, or in leaves. Hibernaculum(a) During winter, these species hibernate in humid mines, caves, and occasionally man-made structures.	Summer habitat Within the Project survey area, the existing land use lacks the presence of forested areas or suitable bat roosting trees. Hibernaculum(a) No Mines openings and/or known caves are located within 0.25 miles of Project area and USFWS did not identify known hibernacula within 5-miles of the Project. Furthermore, field evaluations did not identify any potential hibernaculum(a) within the Project area.	Summer Tree Clearing April 1 – September 30	Summer habitat If suitable habitat occurs within the Project survey Area, the USFWS and ODNR DOW recommends seasonal tree cutting (October 1 and March 31). If summer tree clearing is required, additional coordination with the ODNR/USFWS is warranted. Hibernaculum(a) In accordance with 2024 Ohio ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing (2024 Joint Guidance)*, a 0.25-mile tree cutting and subsurface disturbance buffer around hibernaculum entrance is recommended.	Summer habitat No impact to listed bat species or their habitat is anticipated due to absence of tree clearing activities. If tree clearing is required, it should be completed between October 1 and March 31. Hibernaculum(a) No impacts to winter hibernacula were identified due to absence of caves, mines, or portals within 0.25-miles of the Project
Northern Long-eared Bat (*Myotis septentrionalis*)	Endangered	Endangered	Summer habitat During spring/summer, bat species roost in trees behind loose, exfoliating bark, in crevices and cavities, or in leaves. Hibernaculum(a) During winter, these species hibernate in humid mines, caves, and occasionally man-made structures.	Summer habitat Within the Project survey area, the existing land use lacks the presence of forested areas or suitable bat roosting trees. Hibernaculum(a) No Mines openings and/or known caves are located within 0.25 miles of Project area and USFWS did not identify known hibernacula within 5-miles of the Project. Furthermore, field evaluations did not identify any potential hibernaculum(a) within the Project area.	Summer Tree Clearing April 1 – September 30	Summer habitat If suitable habitat occurs within the Project survey Area, the USFWS and ODNR DOW recommends seasonal tree cutting (October 1 and March 31). Additionally, the ODNR indicated that there is a known presence of this species within the Project area and summer surveys would not constitute a presence or absence of this species. Hibernaculum(a) In accordance with 2024 Ohio ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing (2024 Joint Guidance)*, a 0.25-mile tree cutting and subsurface disturbance buffer around hibernaculum entrance is recommended.	Summer habitat No impact to listed bat species or their habitat is anticipated due to absence of tree clearing activities. If tree clearing is required, it should be completed between October 1 and March 31. Hibernaculum(a) No impacts to winter hibernacula were identified due to absence of caves, mines, or portals within 0.25-miles of the Project

TABLE 4
ODNR AND USFWS LISTED SPECIES WITHIN THE PROJECT SURVEY AREA

Common Name (Scientific Name)	State Status	Federal Status	Typical Habitat	Habitat Observed	Avoidance Dates	Agency Comments	Potential Impacts
Tricolored bat (*Perimyotis subflavus*)	Endangered	Proposed	Summer habitat During spring/summer, bat species roost in trees behind loose, exfoliating bark, in crevices and cavities, or in leaves. Hibernaculum(a) During winter, these species hibernate in humid mines, caves, and occasionally man-made structures.	Summer habitat Within the Project survey area, the existing land use lacks the presence of forested areas or suitable bat roosting trees. Hibernaculum(a) No Mines openings and/or known caves are located within 0.25 miles of Project area and USFWS did not identify known hibernacula within 5-miles of the Project. Furthermore, field evaluations did not identify any potential hibernaculum(a) within the Project area.	Summer Tree Clearing April 1 – September 30	Summer habitat If suitable habitat occurs within the Project survey Area, the USFWS and ODNR DOW recommends seasonal tree cutting (October 1 and March 31). If summer tree clearing is required, additional coordination with the ODNR/USFWS is warranted. Hibernaculum(a) In accordance with 2024 Ohio ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing (2024 Joint Guidance)*, a 0.25-mile tree cutting and subsurface disturbance buffer around hibernaculum entrance is recommended.	Summer habitat No impact to listed bat species or their habitat is anticipated due to absence of tree clearing activities. If tree clearing is required, it should be completed between October 1 and March 31. Hibernaculum(a) No impacts to winter hibernacula were identified due to absence of caves, mines, or portals within 0.25-miles of the Project
Fish							
Lake chubsucker (*Erimyzon sucetta*)	Threatened	None	This species is found mainly in lakes, ponds, swamps, and streams.	No lakes, ponds, swamps or perennial streams of significant size within the Project survey area.	March 15 – June 30	Due to the location, and there is no in-water work proposed in a perennial stream, this Project is not likely to impact this species.	No
Reptile							
Eastern massasauga (*Sistrurus catenatus)*	Endangered	None	The species is found mainly in wet prairies, fens, and other wetlands	None	N/A	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.	No
Birds							
Northern harrier (*Circus hudsonius*)	Endangered	None	This species hunts over grasslands and nests can be found in large marshes and grasslands of 2-acres or greater in size.	Based on desktop and field reviews, the Project area is situated within dense commercial area and does not provide contiguous habitat.	April 15 - July 31	Habitat should be avoided during the bird's nesting period between April 15 through July 31. If habitat will not be impacted, this Project will not likely impact species.	No

*2024 Joint Guidance – Refers to the 2024 ODNR DOW and USFWS Joint Guidance for Bat Surveys and Tree Clearing, a copy of the guidance is provided within **Appendix H** of this report.

Protected Species Agency Summary –

No tree clearing is proposed as part of the Project. If tree clearing were to become part of the Project scope of work, the ODNR and the USFWS recommends implementations of seasonal tree clearing between October 1 and March 31 to avoid adverse effects to Indiana bat, northern long-eared bat, little brown bat, and tricolored bat. Additionally, the ODNR indicated that there is a known presence of the northern long-eared bat within the Project area and summer surveys would not constitute a presence or absence of this species If summer tree clearing is needed, additional coordination will be completed with the ODNR and the USFWS.

AECOM completed a desktop review for potential hibernaculum in accordance with the 2024 Ohio ODNR DOW and the USFWS Joint Guidance for Bat Surveys and Tree Clearing within 0.25 miles of the Project Survey Area and no caves, mines, and/or karst features were identified. As per ODNR and USFWS guidance, further coordination regarding potential hibernaculum is only necessary if the habitat assessment finds potential habitat within 0.25 miles of the Project Survey Area. Therefore, no further coordination is necessary with either the ODNR and/or the USFWS regarding the listed bat species. Results of the desktop habitat assessment are included in **Appendix B**.

No impacts are anticipated to occur to the fish species listed in **Table 4**, as no in-water work is proposed as part of the Project.

No impacts are anticipated to occur to the reptile species listed in **Table 4**, as no suitable habitat is present within the Project Survey Area.

The ODNR noted that the Project is within the range of the northern harrier; however, AECOM ecologist and approved avian specialist concluded an absence of this species nesting habitat within the Project survey area. According to ODNR, open grasslands and wet meadow marshes, of at least 2-acres, is considered nesting habitat for the northern harrier. Based on field and desktop review, the Project survey area is predominately urban land with old field habitat situated along the borders of commercial buildings. Further, the Project is situated within a commercialized area that has experienced a large amount of new development over the recent months. While >2 acres of suitable landcover (old field habitat) are present, the survey area does not provide contiguous habitat and is situated within a highly active, dense commercial development area. Therefore, suitable nesting habitat within the Project survey area not present and no further coordination regarding this listed species is necessary concerning this Project.

4.0 SUMMARY

The ecological survey of the Project Survey Area identified three PEM wetlands, one pond, three upland drainage features, and no streams. The wetland data forms, and photo documentation are provided in **Appendix C**. Pond photos are provided in **Appendix D**, and photographs of upland drainage features are provided in **Appendix E.**

The reported results of the ecological survey conducted by AECOM on this Project are limited to the areas within the Project Survey Area provided in **Figures 2** and **3**. Areas that fall outside of the Project Survey Area were not evaluated in the field and not included in the reporting of the survey.

Of the seven state and/or federally listed threatened and endangered species within range of the Project Survey Area, no habitat for any of the listed fish, reptile, or bird species were identified within the Project Survey Area. If tree clearing activities are required, the USFWS and ODNR recommend a seasonal tree clearing be completed between October 1 and March 31. If summer tree clearing is required, further coordination is anticipated to be required with the USFWS and/or ODNR.

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

5.0 REFERENCES

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

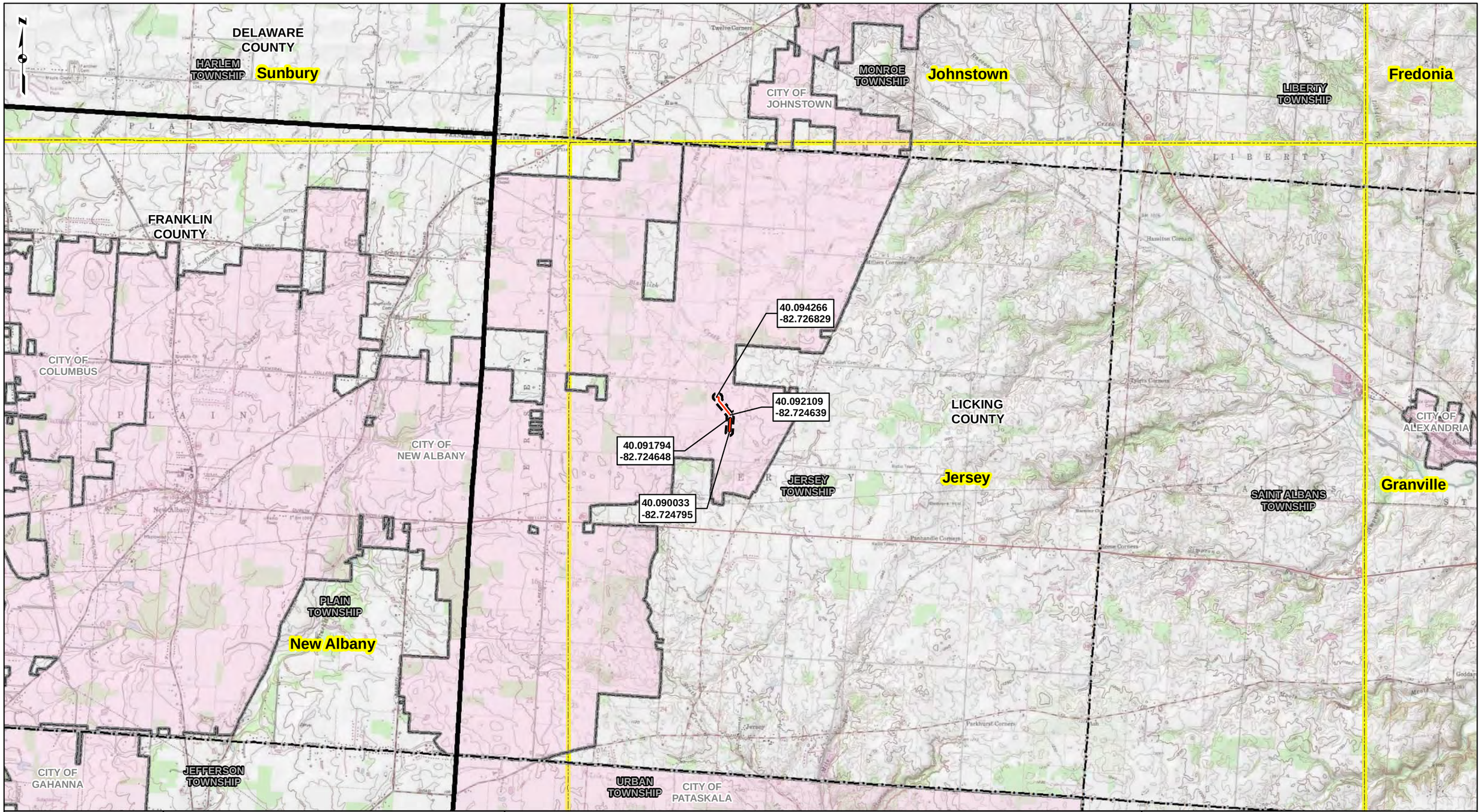
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FIGURES



PROJECT LOCATION



LICKING COUNTY, OHIO

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: [UPDATE QUAD INFORMATION], OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 12/2024.

12/24/2024

LEGEND

- INNOVATION BRIE - CUT IN NORTH
- INNOVATION BRIE - CUT IN SOUTH
- PROJECT SURVEY AREA
- MUNICIPAL BOUNDARY
- TOWNSHIP BOUNDARY
- COUNTY BOUNDARY
- OHIO USGS 7.5' TOPOGRAPHIC QUADRANGLE

0 2,000 4,000 8,000 Feet

FIGURE 1
PROJECT LOCATION MAP

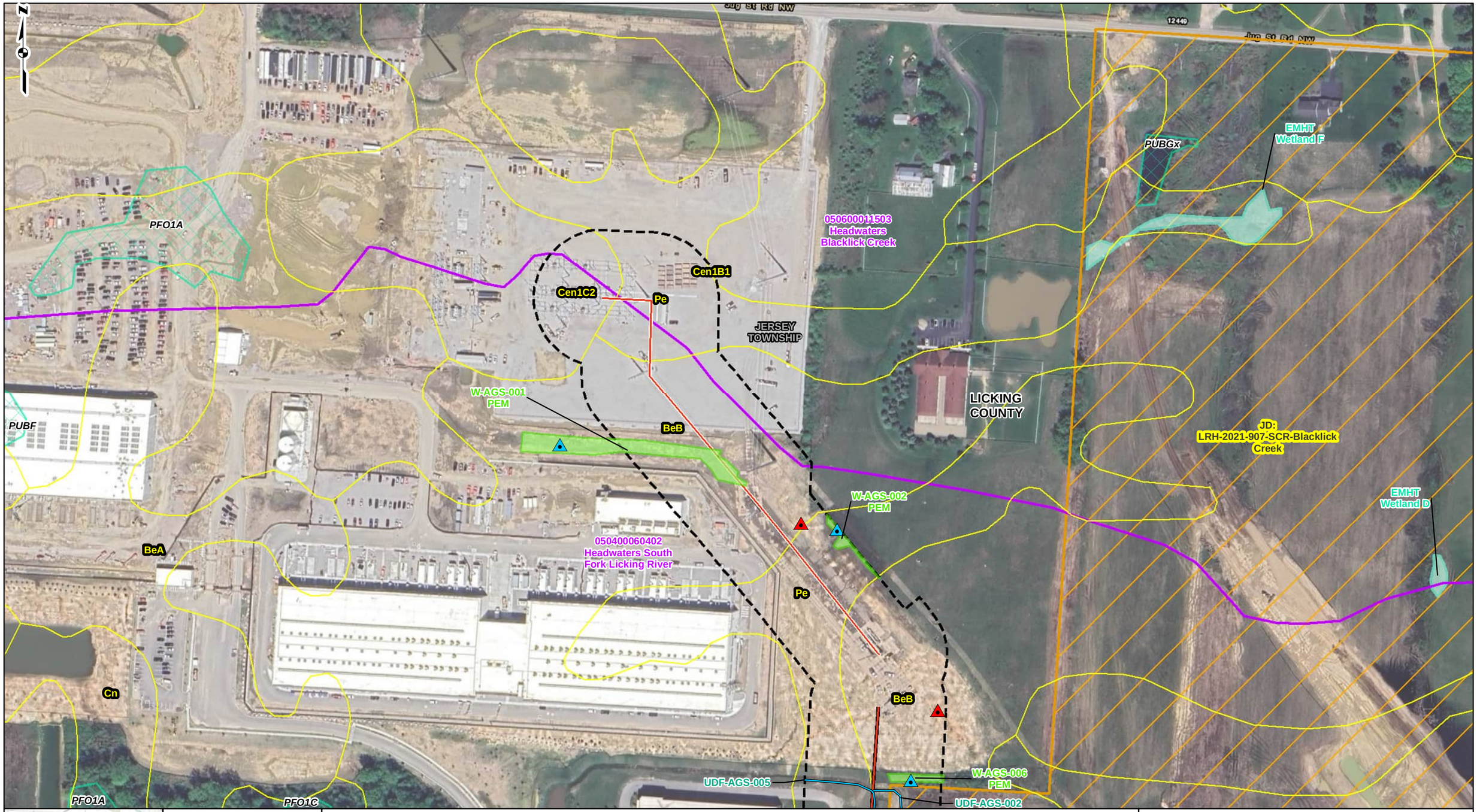
AECOM

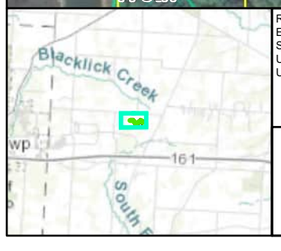
INNOVATION BRIE CUT-IN - NORTH & SOUTH PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER

DRAWN BY: AJH
CHECKED: CT
DATE: 12/24/2024
APPROVED:

X:\DCS\GIS\ArcMap_GeoDB_Projects\ENV\60694533_AEP_Jorden Extension_ECO\3_MXDs\3_WDR\Innovation Brie – Cut In\InnoBrieCut_WDR_FIG_1.mxd





REFERENCE: WORLD IMAGERY (CLARITY), ESRI, ARCGIS ONLINE, ACCESSED 01/2025. SOIL SURVEY GEOGRAPHIC (SSURGO), USDA/NRCS, 2024. NHD, USGS 2024. NWI, USFWS 2024. HUC 12, USGS 2024.

1/6/2025

LEGEND

- WETLAND DATA POINT
- UPLAND DATA POINT
- AECOM DELINEATED UPLAND DRAINAGE FEATURE
- INNOVATION BRIE - CUT IN NORTH
- INNOVATION BRIE - CUT IN SOUTH
- AECOM DELINEATED PEM WETLAND
- PROJECT SURVEY AREA
- NWI WETLAND (USFWS)
- HUC 12 WATERSHED BOUNDARY
- EMHT DELINEATED WETLAND
- JD BOUNDARY: LRH-2021-907-SCR-Blacklick Creek
- SOIL MAP UNIT

SOIL MAP UNIT DESCRIPTION

BeB: BENNINGTON SILT LOAM, 2 TO 6 PERCENT SLOPES

Cen1B1: CENTERBURG SILT LOAM, 2 TO 6 PERCENT SLOPES

Cen1C2: CENTERBURG SILT LOAM, 6 TO 12 PERCENT SLOPES, ERODED

Pe: PEWAMO SILTY CLAY LOAM, LOW CARBONATE TILL, 0 TO 2 PERCENT SLOPES

0 100 200 400 Feet

FIGURE 2
SOIL MAP AND NATIONAL WETLANDS INVENTORY MAP SHEET 1 OF 2

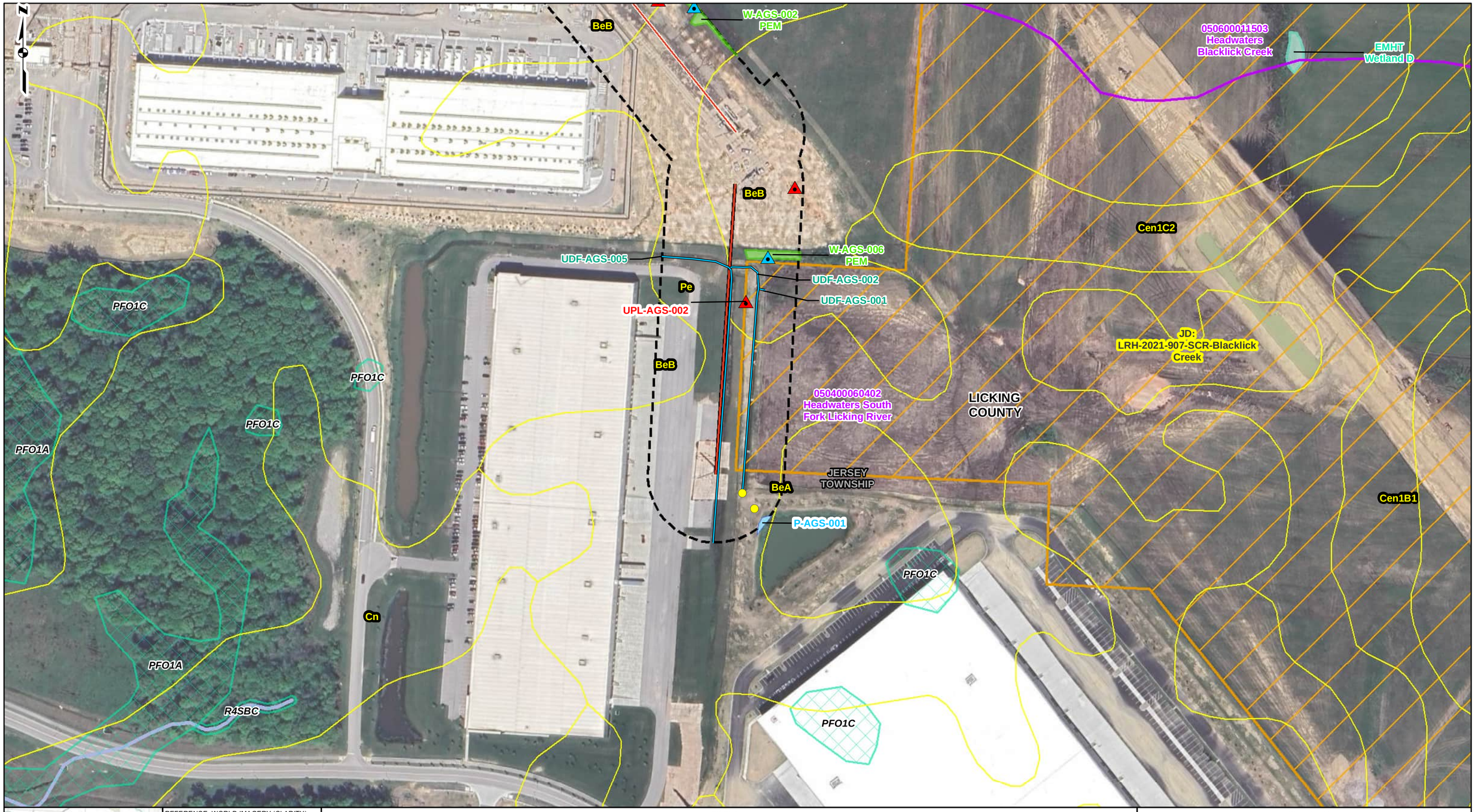
AECOM

INNOVATION BRIE CUT-IN - NORTH & SOUTH PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: AJH
CHECKED: CT

DATE: 1/6/2025
APPROVED:

X:\DCS\GIS\ArcMap_GeoDB_Projects\ENV\60694533_AEP_Jorden Extension_ECO3_MXDs\3_WDR\Innovation Brie – Cut In\InnoBrieCut_WDR_FIG_2.mxd





REFERENCE: WORLD IMAGERY (CLARITY), ESRI, ARCGIS ONLINE, ACCESSED 01/2025. SOIL SURVEY GEOGRAPHIC (SSURGO), USDA/NRCS, 2024. NHD, USGS 2024. NWI, USFWS 2024. HUC 12, USGS 2024.

1/6/2025

WETLAND DATA POINT
UPLAND DATA POINT
CULVERT
AECOM DELINEATED UPLAND DRAINAGE FEATURE
NHD STREAM (USGS)

INNOVATION BRIE - CUT IN NORTH
INNOVATION BRIE - CUT IN SOUTH
AECOM DELINEATED PEM WETLAND
AECOM DELINEATED POND
PROJECT SURVEY AREA
NWI WETLAND (USFWS)

LEGEND

HUC 12 WATERSHED BOUNDARY
EMHT DELINEATED WETLAND
JD BOUNDARY: LRH-2021-907-SCR-Blacklick Creek
SOIL MAP UNIT

SOIL MAP UNIT DESCRIPTION

BeA: BENNINGTON SILT LOAM, 0 TO 2 PERCENT SLOPES

BeB: BENNINGTON SILT LOAM, 2 TO 6 PERCENT SLOPES

Pe: PEWAMO SILTY CLAY LOAM, LOW CARBONATE TILL, 0 TO 2 PERCENT SLOPES

0 100 200 400 Feet

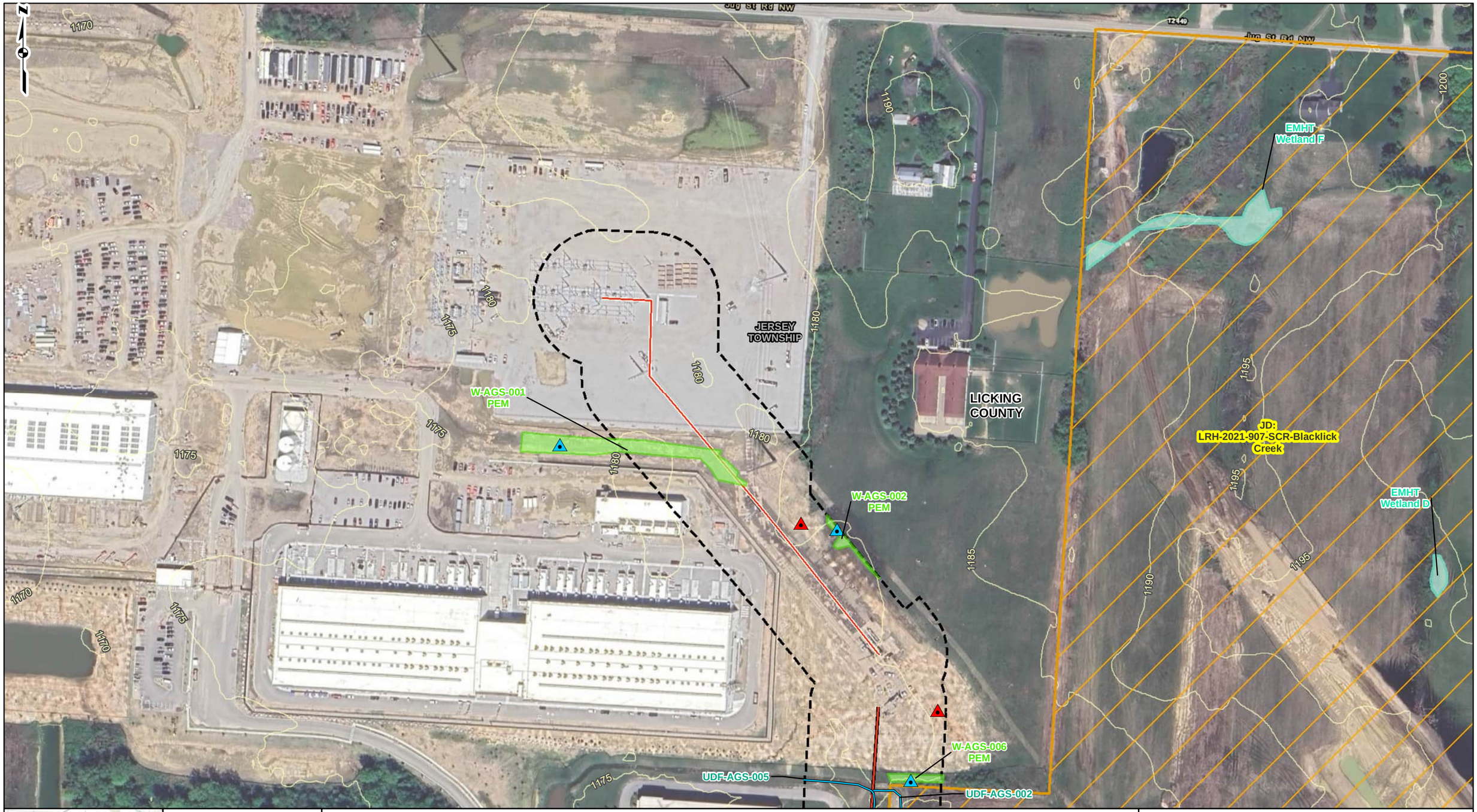
FIGURE 2
SOIL MAP AND NATIONAL WETLANDS INVENTORY MAP SHEET 2 OF 2

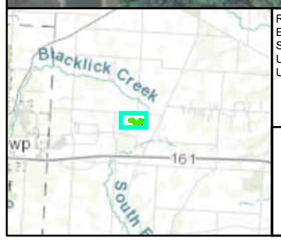
AECOM

INNOVATION BRIE CUT-IN - NORTH & SOUTH PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: AJH
CHECKED: CT
DATE: 1/6/2025
APPROVED:

X:\DCS\GIS\ArcMap_GeoDB_Projects\ENV\60694533_AEP_Jorden Extension_ECO\3_MXDs\3_WDR\Innovation Brie – Cut In\InnoBrieCut_WDR_FIG_2.mxd





REFERENCE: WORLD IMAGERY (CLARITY), ESRI, ARCGIS ONLINE, ACCESSED 01/2025. SOIL SURVEY GEOGRAPHIC (SSURGO), USDA/NRCS, 2024. NHD, USGS 2024. NWI, USFWS 2024. HUC 12, USGS 2024.

1/6/2025

LEGEND

- WETLAND DATA POINT
- UPLAND DATA POINT
- AECOM DELINEATED UPLAND DRAINAGE FEATURE
- INNOVATION BRIE - CUT IN NORTH
- INNOVATION BRIE - CUT IN SOUTH
- AECOM DELINEATED PEM WETLAND
- PROJECT SURVEY AREA
- EMHT DELINEATED WETLAND
- JD BOUNDARY: LRH-2021-907-SCR-Blacklick Creek
- CONTOUR (5FT)

0 100 200 400 Feet

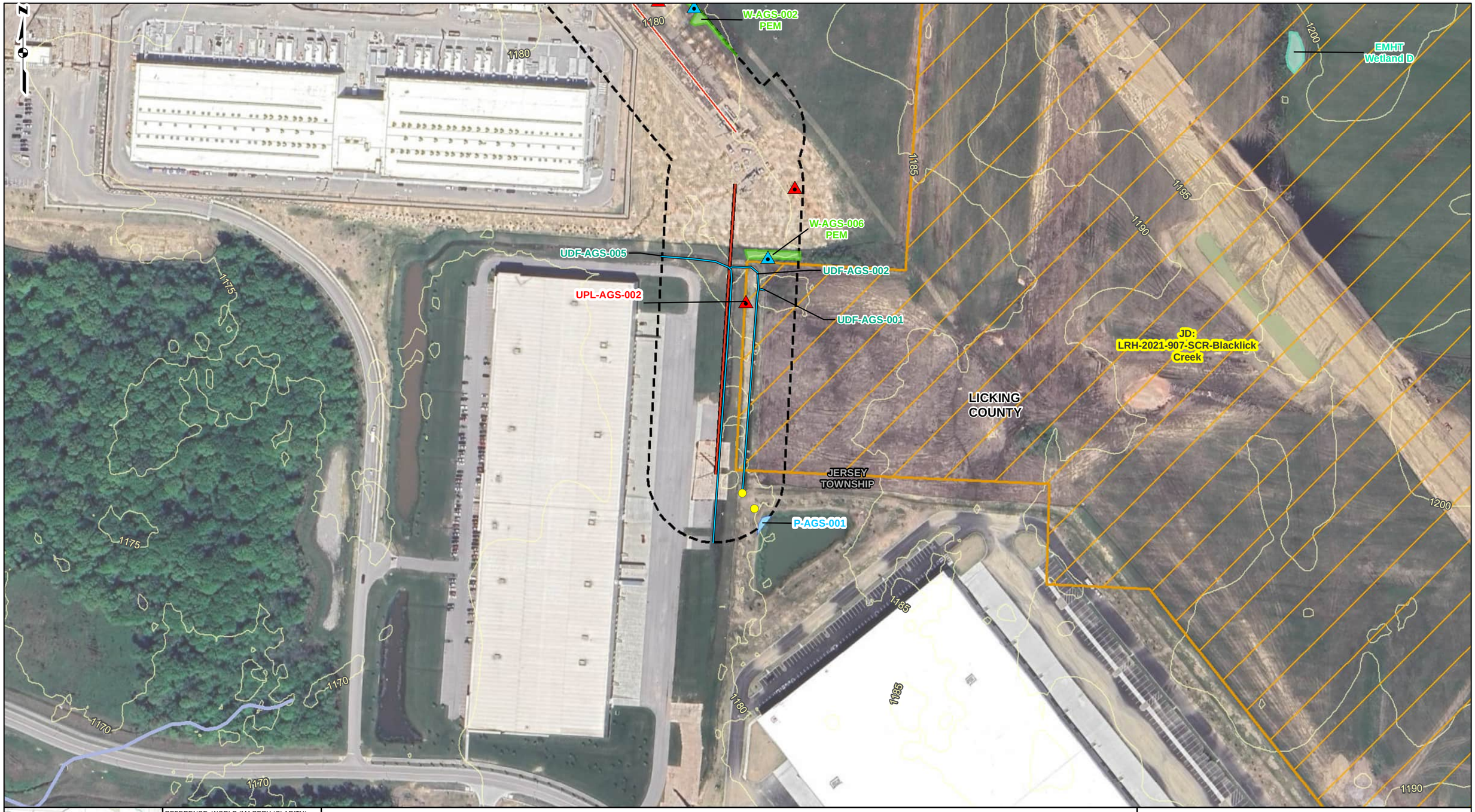
FIGURE 3
WETLAND DELINEATION AND STREAM ASSESSMENT MAP
SHEET 1 OF 2

AECOM

INNOVATION BRIE CUT-IN - NORTH & SOUTH PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: AJH DATE: 1/6/2025
CHECKED: CT APPROVED:

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REFERENCE: WORLD IMAGERY (CLARITY), ESRI, ARCGIS ONLINE, ACCESSED 01/2025. SOIL SURVEY GEOGRAPHIC (SSURGO), USDA/NRCS, 2024. NHD, USGS 2024. NWI, USFWS 2024. HUC 12, USGS 2024.

1/6/2025

LEGEND

- WETLAND DATA POINT
- UPLAND DATA POINT
- CULVERT
- AECOM DELINEATED UPLAND DRAINAGE FEATURE
- NHD STREAM (USGS)
- INNOVATION BRIE - CUT IN NORTH
- INNOVATION BRIE - CUT IN SOUTH
- AECOM DELINEATED PEM WETLAND
- AECOM DELINEATED POND
- PROJECT SURVEY AREA
- EMHT DELINEATED WETLAND
- JD BOUNDARY: LRH-2021-907-SCR-Blacklick Creek
- CONTOUR (5FT)

0 100 200 400 Feet

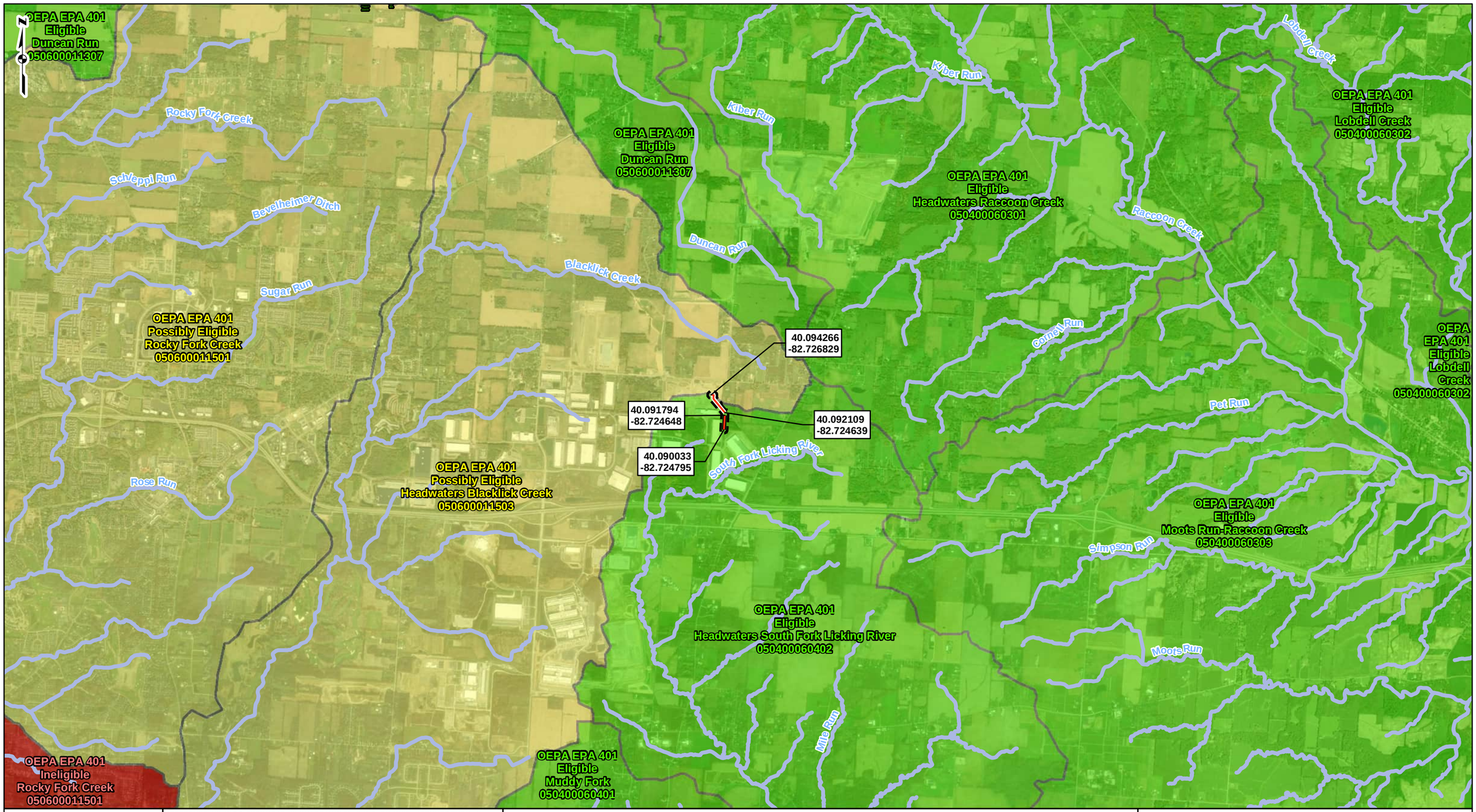
FIGURE 3
WETLAND DELINEATION AND STREAM ASSESSMENT MAP
SHEET 2 OF 2

AECOM

INNOVATION BRIE CUT-IN - NORTH & SOUTH PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: AJH DATE: 1/6/2025
CHECKED: CT APPROVED:

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PROJECT LOCATION



LICKING COUNTY, OHIO

REFERENCE: USGS 7.5' TOPOGRAPHIC QUADRANGLES: SUNBURY, OHIO, OBTAINED THROUGH ESRI USA TOPO MAPS, NATIONAL GEOGRAPHIC TOPO AND USGS, ACCESSED 12/2024. OEPA ELIGIBLE WATERSHEDS, OHIO ENVIRONMENTAL PROTECTION AGENCY, 2024.

12/26/2024

LEGEND

- INNOVATION BRIE - CUT IN NORTH
- INNOVATION BRIE - CUT IN SOUTH
- NHD STREAM (USGS)

OEPA ELIGIBILITY:

- ELIGIBLE
- INELIGIBLE
- POSSIBLY ELIGIBLE

0 2,000 4,000 8,000 Feet

FIGURE 4
STREAM ELIGIBILTY MAP

INNOVATION BRIE CUT-IN - NORTH & SOUTH PROJECT
AMERICAN ELECTRIC POWER

AECOM

DRAWN BY: AJH DATE: 12/26/2024
CHECKED: CT APPROVED:

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N

SHEET 2

SHEET 3

JERSEY TOWNSHIP

LICKING COUNTY

PH - 1

PH - 3

PH - 2



REFERENCE: WORLD IMAGERY (CLARITY), ESRI, ARCGIS ONLINE, ACCESSED 01/2025.

1/6/2025

LEGEND

- PHOTO LOCATION POINT
- PROJECT SURVEY AREA

VEGETATIVE COMMUNITY TYPE

- LANDSCAPED
- OLD FIELD
- SCRUB/SHRUB
- STREAMS/WETLANDS
- URBAN

0 100 200 400 Feet

FIGURE 5
VEGETATIVE COMMUNITIES
ASSESSMENT MAP
SHEET 1 OF 2

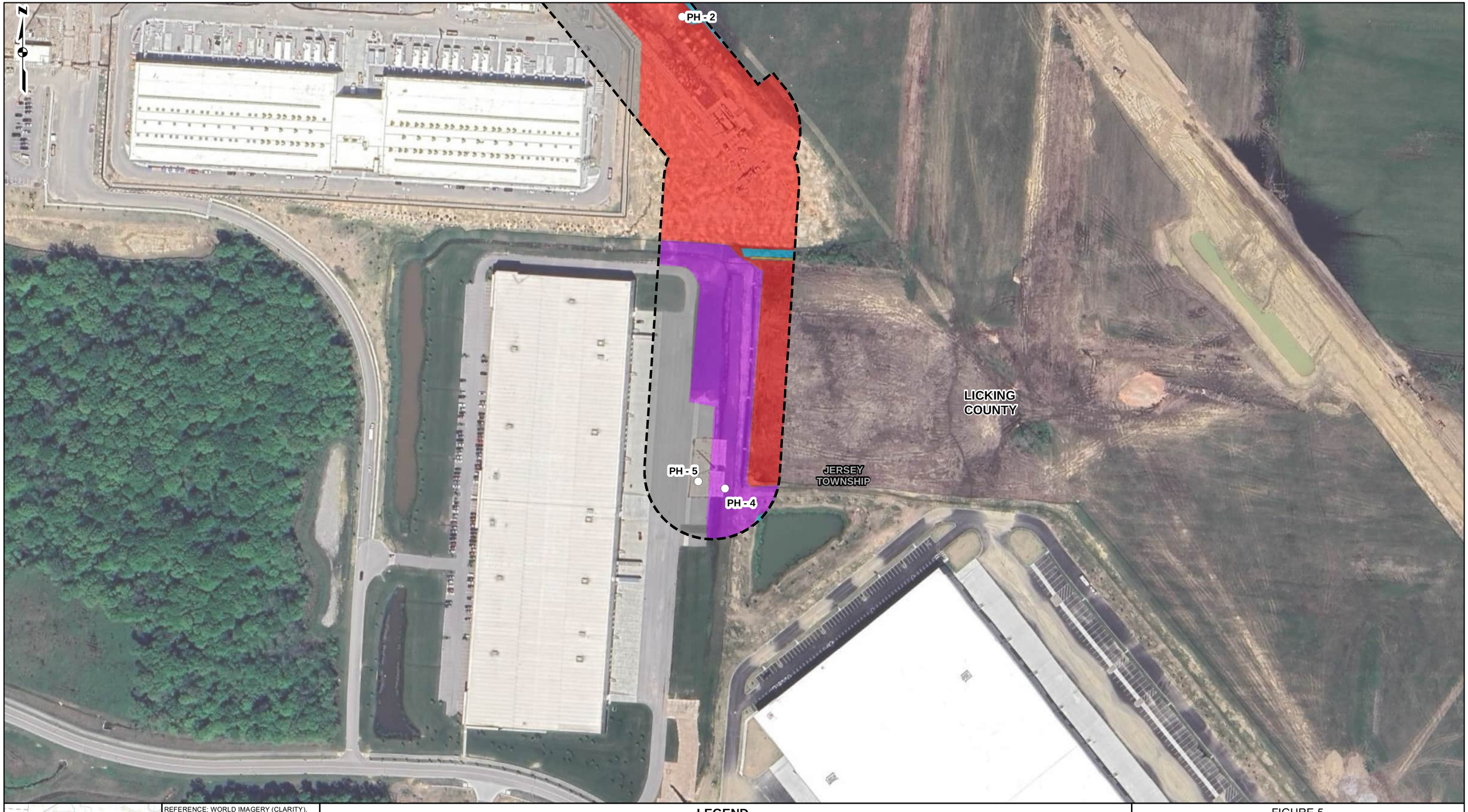
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INNOVATION BRIE CUT-IN - NORTH
& SOUTH PROJECT
AMERICAN ELECTRIC POWER

AMERICAN ELECTRIC POWER

DRAWN BY: AJH DATE: 1/6/2025
CHECKED: CT APPROVED:

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REFERENCE: WORLD IMAGERY (CLARITY), ESRI, ARCGIS ONLINE, ACCESSED 01/2025.

1/6/2025

LEGEND

- PHOTO LOCATION POINT
- PROJECT SURVEY AREA

VEGETATIVE COMMUNITY TYPE

- LANDSCAPED
- OLD FIELD
- SCRUB/SHRUB
- STREAMS/WETLANDS
- URBAN

0 100 200 400 Feet

FIGURE 5
VEGETATIVE COMMUNITIES
ASSESSMENT MAP
SHEET 2 OF 2

AECOM

INNOVATION BRIE CUT-IN - NORTH
& SOUTH PROJECT
AMERICAN ELECTRIC POWER

DRAWN BY: AJH DATE: 1/6/2025
CHECKED: CT APPROVED:

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APPENDIX A

JURISDICTIONAL DETERMINATION BY OTHERS

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

REPLY TO ATTENTION OF

February 4, 2021

Regulatory Division
North Branch
LRH-2021-907-SCR-Blacklick Creek

APPROVED JURISDICTIONAL DETERMINATION

Mr. Dick Roggenkamp
MBJ Holdings
8000 Walton Parkway, Suite 120
New Albany, Ohio 43054

Dear Mr. Roggenkamp:

I refer to the *Delineation of Waters of the United States for the 145-acre Property known as Innovation East Development,* dated November 29, 2021, and submitted on your behalf by EMH&T. You have requested an approved jurisdictional determination (AJD) for the aquatic resources located on the 145-acre parcel. The property is located on the west side of Mink Street and the south side of Jug Street in Jersey Township, Licking County, Ohio (40.091436 latitude, -82.720029 longitude). Your AJD request has been assigned the following file number: LRH-2021-907-SCR-Blacklick Creek. Please reference this file number on all future correspondence related to this JD request.

The United States Army Corps of Engineers' (Corps) authority to regulate waters of the United States is based on the definitions and limits of jurisdiction contained in 33 CFR 328 and 33 CFR 329. Section 404 of the Clean Water Act (Section 404) requires a Department of the Army (DA) permit be obtained prior to the discharge of dredged or fill material into waters of the United States, including wetlands. Section 10 of the Rivers and Harbors Act of 1899 requires a DA permit be obtained for any work in, on, over or under a traditional navigable water.

Our December 2, 2008 headquarters guidance entitled *Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in Rapanos v. United States & Carabell v. United States* was followed in the final verification of Section 404 jurisdiction. Based on a review of the information provided, 1.26 acre of six (6) wetlands (Wetlands A-F) and 0.49 acre of two (2) ponds (Ponds 1-2) are present within the AJD area of interest as depicted on the enclosed map titled "Exhibit 6: Delineation Map" (Enclosure 1). These resources are also listed in the enclosed AJD Form (Enclosure 2).

Wetlands A-F and Ponds 1-2 are physically isolated and lack a direct hydrological connection to the tributary system. In addition to being hydrologically isolated, Wetlands A-F do not appear to support interstate or foreign commerce interests, nor do they contain any rare or endangered species. Wetlands A-F and Ponds 1-2 are not considered waters of the United States and are not subject to regulation under Section 404; however, you should contact the Ohio Environmental Protection Agency, Division of Surface Water, at (614) 664-2001 to determine permit requirements.

Printed on Recycled Paper

In accordance with the June 5, 2007 Joint Memorandum between the United States Environmental Protection Agency (USEPA) and the Corps and the January 28, 2008 Corps Memorandum regarding coordination on jurisdictional determinations, this isolated wetland determination was coordinated with the USEPA Region 5 and the Corps Headquarters, with coordination completed on February 1, 2022 and January 11, 2022, respectively.

This jurisdictional verification is valid for a period of five (5) years from the date of this letter unless new information warrants revision of the delineation prior to the expiration date. This letter contains an AJD for the subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form (Enclosure 3). If you request to appeal this determination you must submit a completed RFA form to the Great Lakes and Ohio River Division Office at the following address:

Appeal Review Officer
United States Army Corps of Engineers
Great Lakes and Ohio River Division
550 Main Street, Room 10-714
Cincinnati, Ohio 45202-3222
Phone: (513) 684-7261
Fax: (513) 684-2460

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. **It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.**

This determination has been conducted to identify the limits of the Corps' Section 404 jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are United States Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

A copy of this letter will be provided to your consultant, Mr. Bryan Lombard with EMH&T. If you have any questions concerning the above, please contact Ms. Katie Samples of the North Branch at 304-399-6933, by mail at the above address, or by email at katie.e.samples@usace.army.mil.

Sincerely,

Cecil M. Cox
Regulatory Project Manager
North Branch

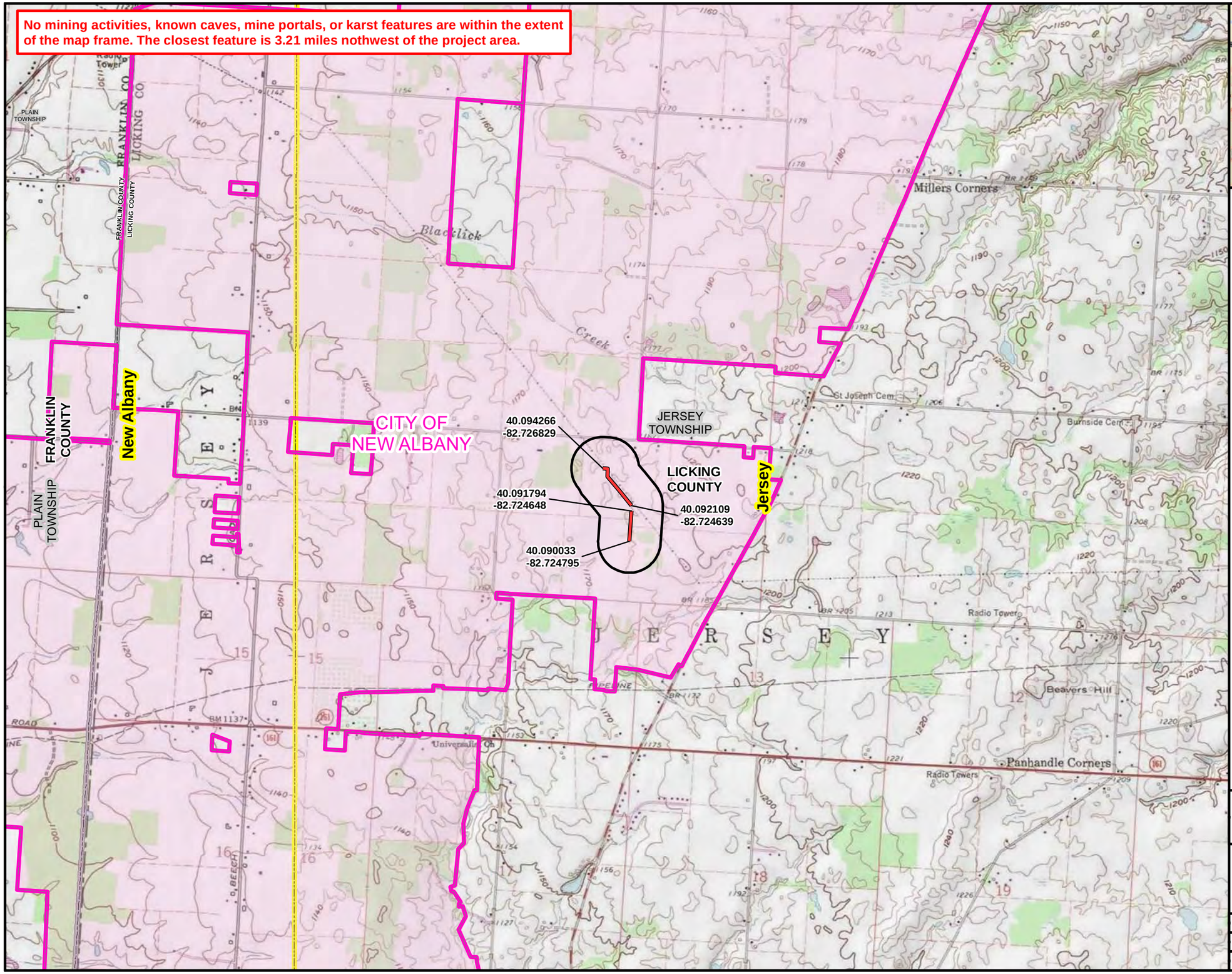
Enclosures
cc (by email):

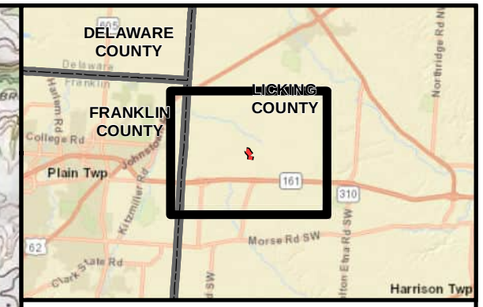
Mr. Bryan Lombard (EMH&T)
Mr. Jeff Boyles (Ohio EPA)

APPENDIX B

DESKTOP ASSESSMENT FOR WINTER BAT

No mining activities, known caves, mine portals, or karst features are within the extent of the map frame. The closest feature is 3.21 miles nothwest of the project area.





Legend

- Innovation Brie - Cut In Transmission Line
- County Boundary
- Township Boundary
- City Boundary
- Quarter Mile Review Area
- Ohio USGS 7.5' Topographic Quadrangle

N

0 2,000 4,000

Feet

Inovation Brie - Cut In Project

APPENDIX B
BAT HABITAT MAP

DATE: 9/9/2024	1 INCH = 2,000 FEET
CREATED BY: ORM	CHECKED BY: NAB | BM
JOB NO.: 60694533	AECOM

Date Saved: 9/9/2024
Document Path: X:\DCS\GIS\ArcMap_GeoDB_Projects\ENV\60694533_AEP_Jorden Extension_ECO3_MXDs\1_T&E\Innovation Brie – Cut In\Innovation_Brie_ODNRFigure1_Topo_Overview.mxd

APPENDIX C

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

OEPA WETLAND ORAM FORMS

DELINEATED FEATURES PHOTOGRAPHS (WETLANDS AND UPLANDS)

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 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:	**AGS, TJK**
Date:	**9/17/2024**
Affiliation:	**AECOM**
Address:	**707 Grant Street, 5th Floor Pittsburgh, PA 15219**
Phone Number:	**412-395-8889**
e-mail address:	austin.sige@aecom.com
Name of Wetland:	**W-AGS-001 PEM**
Vegetation Communit(ies):	**PEM**
HGM Class(es):	**Depressional**

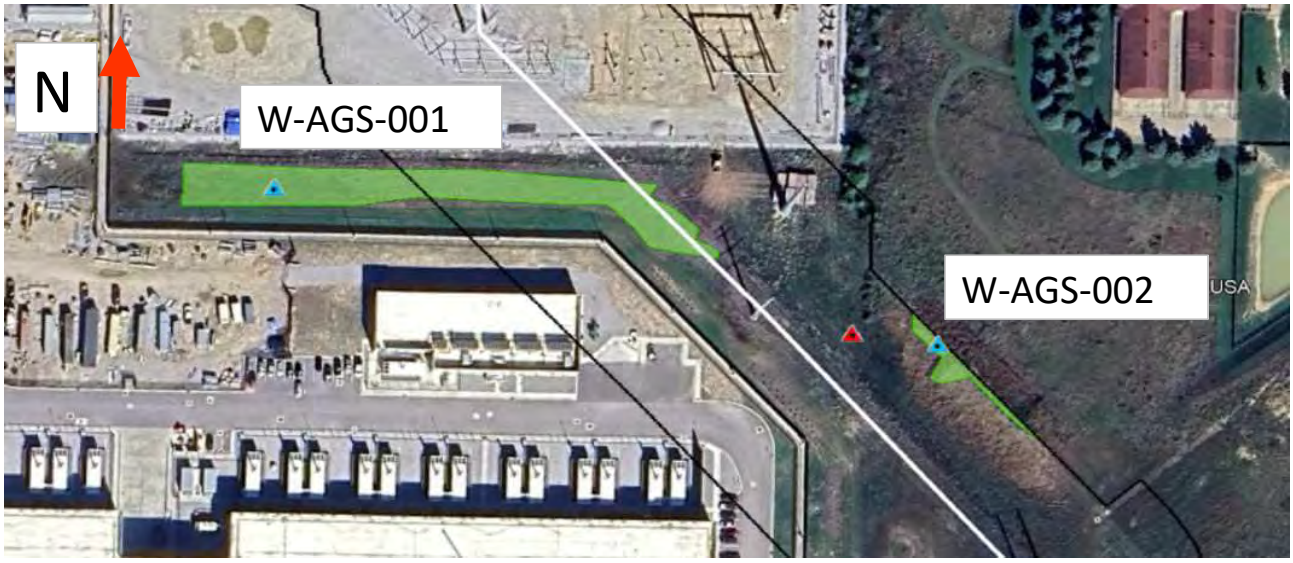
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



Lat/Long or UTM Coordinate:	**40.093376, -82.727157**
USGS Quad Name:	**Jersey**
County:	**Licking**
Township:	**Jersey**
Section and Subsection:	**Township 2 North, Range 15 West**
Hydrologic Unit Code:	**050400060402**
Site Visit:	**9/17/2024**
National Wetland Inventory Map:	**See Figure 2**
Ohio Wetland Inventory Map:	**See Figure 2**
Soil Survey:	**See Figure 2**
Delineation report/map:	**See Figure 3**

Name of Wetland:	W-AGS-001 PEM		
Wetland Size (delineated acres):	0.39	Wetland Size (Estimated total acres):	0.45

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



Comments, Narrative Discussion, Justification of Category Changes:

W-AGS-001 is a PEM isolated wetland located in a transmission line ROW and adjacent to a substation. The source of hydrology to this area is precipitation. The soil is disturbed from nearby construction and is rocky througohut the profile.

Final score:	10	Category:	1

Wetland ID:	W-AGS-001 PEM

Scoring Boundary Worksheet

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

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

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

Wetland ID:	W-AGS-001 PEM

Narrative Rating

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

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

Wetland ID:	W-AGS-001 PEM

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

Wetland ID:	W-AGS-001 PEM

Table 1. Characteristic plant species.

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

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

Wetland ID:	W-AGS-001 PEM

Site:	Jordan Station Projects	Rater(s):	AGS, TJK	Date:	9/17/2024

Field ID:

W-AGS-001 PEM

Delineated acres:	0.39
Total acres:	0.45

Metric 1. Wetland Area (size).

2.0 (max 6 pts) | 2.0 (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.

1.0 (max 14 pts.) | 3.0 (subtotal)

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

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

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

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

Metric 3. Hydrology.

5.0 (max 30 pts.) | 8.0 (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)
- [x] Part of wetland/upland (e.g. forest), complex (1)
- [ ] Part of riparian or upland corridor (1)

3c. Maximum water depth. Select one.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

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

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

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

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [x] 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
- [x] Other: Construction

Metric 4. Habitat Alteration and Development.

4.0 (max 20 pts.) | 12.0 (subtotal)

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

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [ ] Recovering (2)
- [x] Recent or no recovery (1)

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

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [x] Poor to fair (2)
- [ ] Poor (1)

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

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

Check all disturbances observed

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

12.0 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID:	W-AGS-001 PEM

Site:	Jordan Station Projects	Rater(s):	AGS, TJK	Date:	9/17/2024

Field ID:

W-AGS-001 PEM

12.0 subtotal this page

0.0 max 10 pts. **12.0** subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-2.0 max 20pts. **10.0** subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [x] None (0)

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

10.0 **TOTAL (Max 100 pts)**

1 **Category**

Wetland ID:	W-AGS-001 PEM

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	1		
	Metric 3. Hydrology	5		
	Metric 4. Habitat	4		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	-2		
	TOTAL SCORE	10		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID:	W-AGS-001 PEM

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.

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 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:	**AGS, TJK**
Date:	**9/17/2024**
Affiliation:	**AECOM**
Address:	**707 Grant Street, 5th Floor Pittsburgh, PA 15219**
Phone Number:	**412-395-8889**
e-mail address:	austin.sige@aecom.com
Name of Wetland:	**W-AGS-002 PEM**
Vegetation Communit(ies):	**PEM**
HGM Class(es):	**Depressional**

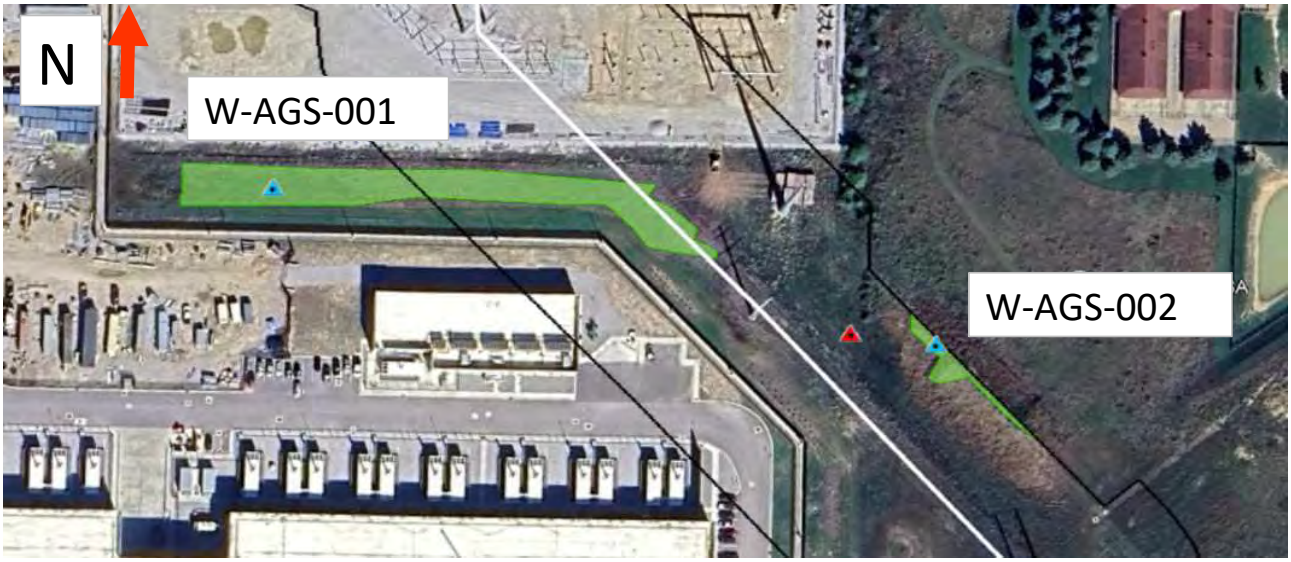
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.



Lat/Long or UTM Coordinate:	**40.092868, -82.724973**
USGS Quad Name:	**Jersey**
County:	**Licking**
Township:	**Jersey**
Section and Subsection:	**Township 2 North, Range 15 West**
Hydrologic Unit Code:	**050400060402**
Site Visit:	**9/17/2024**
National Wetland Inventory Map:	**See Figure 2**
Ohio Wetland Inventory Map:	**See Figure 2**
Soil Survey:	**See Figure 2**
Delineation report/map:	**See Figure 3**

Name of Wetland:	W-AGS-002 PEM		
Wetland Size (delineated acres):	0.04	Wetland Size (Estimated total acres):	0.16

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



Comments, Narrative Discussion, Justification of Category Changes:

W-AGS-002 is a PEM isolated wetland located in a transmission line ROW. The source of hydrology to this area is precipitation. Construction in the area may have created this wetland.

Final score:	18	Category:	1

Wetland ID:	W-AGS-002 PEM

Scoring Boundary Worksheet

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

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

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

Wetland ID:	W-AGS-002 PEM

Narrative Rating

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

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

Wetland ID:	W-AGS-002 PEM

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

Wetland ID:	W-AGS-002 PEM

Table 1. Characteristic plant species.

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

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

Wetland ID:	W-AGS-002 PEM

Site:	Jordan Station Projects	Rater(s):	AGS, TJK	Date:	9/17/2024

Field ID:

W-AGS-002 PEM

Delineated acres:	0.04
Total acres:	0.16

Metric 1. Wetland Area (size).

1.0 / 1.0 (max 6 pts / subtotal)

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

7.0 / 8.0 (max 14 pts. / subtotal)

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

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

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

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

Metric 3. Hydrology.

7.0 / 15.0 (max 30 pts. / subtotal)

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select one.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

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

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

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

- [ ] None or none apparent (12)
- [ ] 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
- [x] Other: Construction

Metric 4. Habitat Alteration and Development.

7.0 / 22.0 (max 20 pts. / subtotal)

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

- [ ] None or none apparent (4)
- [x] Recovered (3)
- [ ] Recovering (2)
- [ ] Recent or no recovery (1)

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

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [x] 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
- [x] clearcutting
- [ ] selective cutting
- [ ] woody debris removal
- [ ] toxic pollutants
- [ ] shrub/sapling removal
- [ ] herbaceous/aquatic bed removal
- [ ] sedimentation
- [ ] dredging
- [ ] farming
- [ ] nutrient enrichment

22.0 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID:	W-AGS-002 PEM

Site:	Jordan Station Projects	Rater(s):	AGS, TJK	Date:	9/17/2024

Field ID:

W-AGS-002 PEM

22.0 subtotal this page

0.0 max 10 pts. | **22.0** subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-4.0 max 20pts. | **18.0** subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [1] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [ ] Low (1)
- [x] None (0)

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

- [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
- [0] Amphibian breeding pools

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

18.0 TOTAL (Max 100 pts)

1 Category

Wetland ID:	W-AGS-002 PEM

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	1		
	Metric 2. Buffers and surrounding land use	7		
	Metric 3. Hydrology	7		
	Metric 4. Habitat	7		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	-4		
	TOTAL SCORE	18		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID:	W-AGS-002 PEM

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.

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

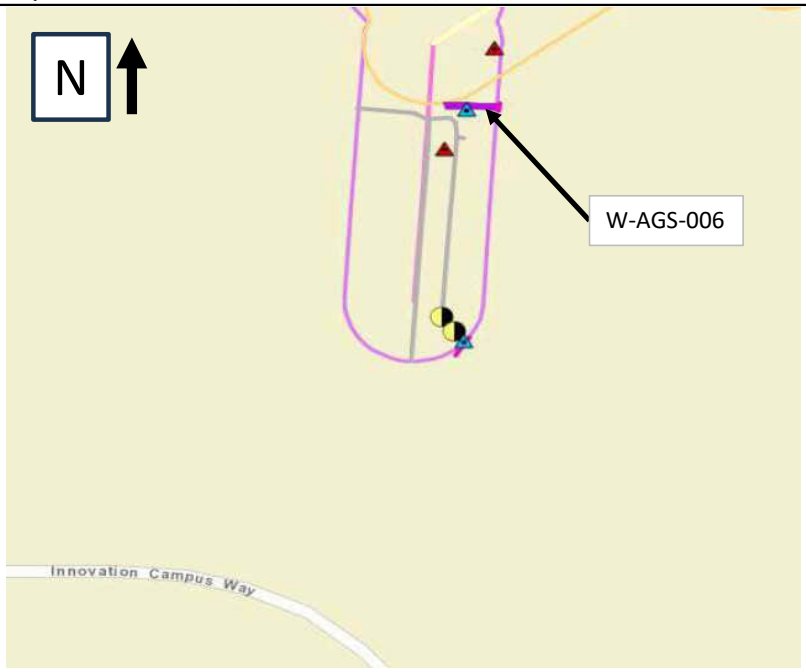
The investigator is *STRONGLY URGED* to read the Manual for Using the Ohio Rapid Assessment Method for Wetlands for further elaboration and discussion of the questions below prior to using the rating forms.

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 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

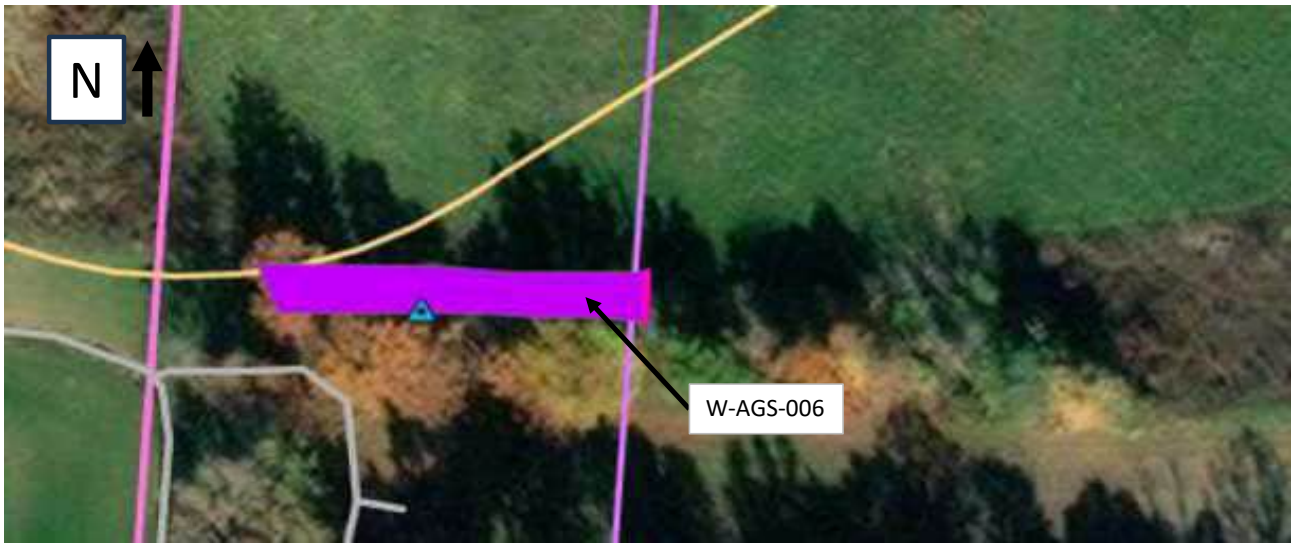
Background Information	
Name:	**AGS, TJK**
Date:	**9/17/2024**
Affiliation:	**AECOM**
Address:	**707 Grant Street, 5th Floor Pittsburgh, PA 15219**
Phone Number:	**412-395-8889**
e-mail address:	austin.sige@aecom.com
Name of Wetland:	**W-AGS-006 PEM**
Vegetation Communit(ies):	**PEM / PSS**
HGM Class(es):	**Depressional**
Location of Wetland: include map, address, north arrow, landmarks, distances, roads, etc.	



Lat/Long or UTM Coordinate:	**40.091351, -82.724385**
USGS Quad Name:	**Jersey**
County:	**Licking**
Township:	**Jersey**
Section and Subsection:	**Township 2 North, Range 15 West**
Hydrologic Unit Code:	**050400060402**
Site Visit:	**9/17/2024**
National Wetland Inventory Map:	**See Figure 2**
Ohio Wetland Inventory Map:	**See Figure 2**
Soil Survey:	**See Figure 2**
Delineation report/map:	**See Figure 3**

Name of Wetland:	W-AGS-006 PEM		
Wetland Size (delineated acres):	0.05	Wetland Size (Estimated total acres):	0.11

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



Comments, Narrative Discussion, Justification of Category Changes:

W-AGS-006 is a PEM isolated wetland located in a transmission line ROW. The source of hydrology to this area is precipitation. The soil is disturbed and rocky throughout the profile. A small construction fence can also be observed running through the wetland. There is a row of shrubs along the southern border of the PEM wetland that develops into a PSS wetland outside of the study corridor towards the east.

Final score:	25.5	Category:	1

Wetland ID:	W-AGS-006 PEM

Scoring Boundary Worksheet

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

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

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

Wetland ID:	W-AGS-006 PEM

Narrative Rating

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

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

Wetland ID:	W-AGS-006 PEM

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

Wetland ID:	W-AGS-006 PEM

Table 1. Characteristic plant species.

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

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

Wetland ID:	W-AGS-006 PEM

Site:	Jordan Station Projects	Rater(s):	AGS, TJK	Date:	9/17/2024

Field ID:

W-AGS-006 PEM

Delineated acres:	0.05
Total acres:	0.11

Metric 1. Wetland Area (size).

1.0 / 1.0 (max 6 pts / subtotal)

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

7.0 / 8.0 (max 14 pts. / subtotal)

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

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

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

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

Metric 3. Hydrology.

5.0 / 13.0 (max 30 pts. / subtotal)

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select one.

- [ ] >0.7 (27.6in) (3)
- [ ] 0.4 to 0.7m (15.7 to 27.6in) (2)
- [x] <0.4m (<15.7in) (1)

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

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

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

- [ ] None or none apparent (12)
- [ ] Recovered (7)
- [ ] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

7.5 / 20.5 (max 20 pts. / subtotal)

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

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

Check all disturbances observed

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

20.5 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID:	W-AGS-006 PEM

Site:	Jordan Station Projects	Rater(s):	AGS, TJK	Date:	9/17/2024

Field ID:
W-AGS-006 PEM

20.5 subtotal this page

0.0 max 10 pts. **20.5** subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

5.0 max 20pts. **25.5** subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

- [ ] Aquatic bed
- [2] Emergent
- [1] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

- [ ] High (5)
- [ ] Moderately high(4)
- [ ] Moderate (3)
- [ ] Moderately low (2)
- [x] Low (1)
- [ ] None (0)

6c. Coverage of invasive plants. Refer

Table 1 ORAM long form for list. Add or deduct points for coverage

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

25.5 **TOTAL (Max 100 pts)**

1 **Category**

Wetland ID:	W-AGS-006 PEM

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	1		
	Metric 2. Buffers and surrounding land use	7		
	Metric 3. Hydrology	5		
	Metric 4. Habitat	7.5		
	Metric 5. Special Wetland Communities	0		
	Metric 6. Plant communities, interspersion, microtopography	5		
	TOTAL SCORE	25.5		Category based on score breakpoints

Complete Wetland Categorization Worksheet.

Wetland ID:	W-AGS-006 PEM

Wetland Categorization Worksheet

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

Final Category

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

End of Ohio Rapid Assessment Method for Wetlands.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

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

Project/Site: Jorden Projects | City/County: Licking County | Sampling Date: 09/17/2024
Applicant/Owner: AEP | State: OH | Sampling Point: W-AGS-001-PEM
Investigator(s): AGS/TJK | Section, Township, Range: Township 2 North, Range 15 West
Landform (hillside, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 1 | Lat: 40.093376 | Long: -82.727157 | Datum: NAD83
Soil Map Unit Name: BeB: Bennington silt loam, 2 to 6 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:
W-AGS-001 is a PEM isolated wetland located in a transmission line ROW and adjacent to a substation. The source of hydrology to this area is precipitation. The soil is disturbed from nearby construction and is rocky througohut the profile.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5'r)			
1. *Echinochloa crus-galli*	40	Yes	FACW
2. *Typha angustifolia*	30	Yes	OBL
3. *Schoenoplectus tabernaemontani*	10	No	OBL
4. *Rumex crispus*	10	No	FAC
5. *Carex lurida*	5	No	OBL
6. *Eleocharis obtusa*	5	No	OBL
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)
Total Number of Dominant Species Across All Strata: ____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicators are present.

SOIL

Sampling Point: W-AGS-001-PEM

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	2.5Y 5/2	90	7.5YR 4/4	5	C	M	Loamy/Clayey	Prominent redox concentrations
			10YR 5/4	5	C	PL/M		Distinct redox concentrations

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- x Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
Hydrology indicators are present.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

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

Project/Site: Jorden Projects | City/County: Licking County | Sampling Date: 09/17/2024
Applicant/Owner: AEP | State: OH | Sampling Point: W-AGS-002-PEM
Investigator(s): AGS/TJK | Section, Township, Range: Township 2 North, Range 15 West
Landform (hillside, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 1 | Lat: 40.092868 | Long: -82.724973 | Datum: NAD83
Soil Map Unit Name: Pe: Pewamo silty clay loam, low carbonate till, 0 to 2 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:
W-AGS-002 is a PEM isolated wetland located in a transmission line ROW. The source of hydrology to this area is precipitation. Construction in the area may have created this wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5'r)			
1. *Typha angustifolia*	80	Yes	OBL
2. *Echinochloa crus-galli*	15	No	FACW
3. *Persicaria pensylvanica*	5	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)
Total Number of Dominant Species Across All Strata: ____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicators are present.

SOIL

Sampling Point: W-AGS-002-PEM

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 3/2	90	10YR 6/8	10	C	PL/M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- x Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
Hydrology indicators are present.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

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

Project/Site: Jorden Projects | City/County: Licking County | Sampling Date: 09/17/2024
Applicant/Owner: AEP | State: OH | Sampling Point: W-AGS-001-002-UPL
Investigator(s): AGS/TJK | Section, Township, Range: Township 2 North, Range 15 West
Landform (hillside, terrace, etc.): Plain/Hillslope | Local relief (concave, convex, none): Convex
Slope (%): 1 | Lat: 40.092907 | Long: -82.725256 | Datum: NAD83
Soil Map Unit Name: BeB: Bennington silt loam, 2 to 6 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X
Hydric Soil Present?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:
W-AGS-001-002-UPL is an upland data point located in a transmission line ROW. The soil is disturbed and is compacted and rocky throughout the profile.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5'r)			
1. *Trifolium pratense*	30	Yes	FACU
2. *Ambrosia artemisiifolia*	20	Yes	FACU
3. *Setaria pumila*	20	Yes	FAC
4. *Symphyotrichum lateriflorum*	10	No	FACW
5. *Dipsacus fullonum*	10	No	FACU
6. *Apocynum cannabinum*	10	No	FAC
7. *Solidago canadensis*	5	No	FACU
8.			
9.			
10.			
	105 =Total Cover		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	30	x 3 =	90
FACU species	65	x 4 =	260
UPL species	0	x 5 =	0
Column Totals:	105 (A)		370 (B)

Prevalence Index = B/A = 3.52

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

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicators are not present.

SOIL

Sampling Point: W-AGS-001-002-UPL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 6/3	100					Loamy/Clayey	Rocky throughout profile
6+								Rocky shovel refusal

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

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ 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[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

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

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

N/A

Remarks:

Hydrology indicators are not present.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

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

Project/Site: Jorden Projects | City/County: Licking County | Sampling Date: 09/17/2024
Applicant/Owner: AEP | State: OH | Sampling Point: W-AGS-006-PEM
Investigator(s): AGS/TJK | Section, Township, Range: Township 2 North, Range 15 West
Landform (hillside, terrace, etc.): Depression | Local relief (concave, convex, none): Concave
Slope (%): 1 | Lat: 40.091351 | Long: -82.724385 | Datum: NAD83
Soil Map Unit Name: BeB: Bennington silt loam, 2 to 6 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:
W-AGS-006 is a PEM isolated wetland located in a transmission line ROW. The source of hydrology to this area is precipitation. The soil is disturbed and rocky throughout the profile. A small construction fence can also be observed running through the wetland. There is a row of shrubs along the southern border of the PEM wetland that develops into a PSS wetland outside of the study corridor towards the east.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1. *Rosa multiflora*	5	Yes	FACU
2. *Quercus palustris*	5	Yes	FACW
3. *Acer rubrum*	5	Yes	FAC
4. *Carya cordiformis*	5	Yes	FACU
5.			
	20 =Total Cover		
Herb Stratum (Plot size: 5'r)			
1. *Carex vulpinoidea*	25	Yes	FACW
2. *Echinochloa crus-galli*	25	Yes	FACW
3. *Cyperus strigosus*	10	No	FACW
4. *Carex scoparia*	10	No	FACW
5. *Symphyotrichum lateriflorum*	10	No	FACW
6.			
7.			
8.			
9.			
10.			
	80 =Total Cover		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 6 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

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

Hydrophytic Vegetation Indicators:
____ 1 - Rapid Test for Hydrophytic Vegetation
X 2 - Dominance Test is >50%
____ 3 - Prevalence Index is ≤3.0[1]
____ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicators are present.

SOIL

Sampling Point: W-AGS-006-PEM

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 4/1	95	10YR 5/6	5	C	PL/M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Hydric soil indicators are present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- x Geomorphic Position (D2)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

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

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

Remarks:
Hydrology indicators are present.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

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

Project/Site: Jorden Projects | City/County: Licking County | Sampling Date: 09/17/2024
Applicant/Owner: AEP | State: OH | Sampling Point: W-AGS-006-UPL
Investigator(s): AGS/TJK | Section, Township, Range: Township 2 North, Range 15 West
Landform (hillside, terrace, etc.): Plain | Local relief (concave, convex, none): Convex
Slope (%): 1 | Lat: 40.091774 | Long: -82.724175 | Datum: NAD83
Soil Map Unit Name: BeB: Bennington silt loam, 2 to 6 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation ____, Soil X, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
W-AGS-006-UPL is an upland data point located in a transmission line ROW. The soil is disturbed and is compacted and rocky throughout the profile.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5'r)			
1. *Echinochloa crus-galli*	70	Yes	FACW
2. *Persicaria pensylvanica*	20	Yes	FACW
3. *Daucus carota*	5	No	UPL
4. *Ambrosia artemisiifolia*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: ____ (A)
Total Number of Dominant Species Across All Strata: ____ (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: ____ (A/B)

Prevalence Index worksheet:

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

Hydrophytic Vegetation Indicators:
X 1 - Rapid Test for Hydrophytic Vegetation
___ 2 - Dominance Test is >50%
___ 3 - Prevalence Index is ≤3.0[1]
___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation is present due to compacted soils and disturbance in the area.

SOIL

Sampling Point: W-AGS-006-UPL

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 5/2	100					Loamy/Clayey	
3+								Rocky shovel refusal

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ 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[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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)
- X FAC-Neutral Test (D5)

Field Observations:

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

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

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

Remarks:
Hydrology indicators are not present.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Midwest Region
See ERDC/EL TR-10-16; the proponent agency is CECW-CO-R

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

Project/Site: Jorden Projects | City/County: Licking County | Sampling Date: 09/17/2024
Applicant/Owner: AEP | State: OH | Sampling Point: UPL-AGS-002
Investigator(s): AGS/TJK | Section, Township, Range: Township 2 North, Range 15 West
Landform (hillside, terrace, etc.): Hillslope | Local relief (concave, convex, none): Convex
Slope (%): 1 | Lat: 40.091081 | Long: -82.724559 | Datum: NAD83
Soil Map Unit Name: BeB: Bennington silt loam, 2 to 6 percent slopes | NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)
Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____
Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ____	No X
Hydric Soil Present?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:
UPL-AGS-002 is an upland data point located on a constructed berm between two constructed storm water features (UDF-AGS-005 and UDF-AGS-002). The source of hydrology to this area is precipitation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30'r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15'r)			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5'r)			
1. *Daucus carota*	40	Yes	UPL
2. *Solidago canadensis*	20	Yes	FACU
3. *Setaria viridis*	20	Yes	UPL
4. *Symphyotrichum lateriflorum*	10	No	FACW
5. *Setaria pumila*	10	No	FAC
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30'r)			
1.			
2.			
	=Total Cover		

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	10	x 3 =	30
FACU species	20	x 4 =	80
UPL species	60	x 5 =	300
Column Totals:	100 (A)		430 (B)

Prevalence Index = B/A = 4.30

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

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

Hydrophytic Vegetation Present? Yes ____ No X

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicators are not present.

SOIL

Sampling Point: UPL-AGS-002

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

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

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

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ 2 cm Muck (A10)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ 5 cm Mucky Peat or Peat (S3)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ 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[3]:

- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Hydric soil indicators are not present.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ 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? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

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

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

N/A

Remarks:

Hydrology indicators are not present.

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD

Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

W-AGS-001

Date:

September 17, 2024

Description:

PEM

Category 1

Facing North



W-AGS-001

Date:

September 17, 2024

Description:

PEM

Category 1

Facing East



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD

Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

W-AGS-001 **Date:** September 17, 2024 **Description:** PEM Category 1 Facing South	

W-AGS-001 **Date:** September 17, 2024 **Description:** PEM Category 1 Facing West	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD

Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

W-AGS-001

Date:

September 17, 2024

Description:

PEM

Category 1

Facing Soils



W-AGS-002

Date:

September 17, 2024

Description:

PEM

Category 1

Facing North



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD

Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

W-AGS-002

Date:

September 17, 2024

Description:

PEM

Category 1

Facing East



W-AGS-002

Date:

September 17, 2024

Description:

PEM

Category 1

Facing South



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD

Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

W-AGS-002

Date:

September 17, 2024

Description:

PEM

Category 1

Facing West



W-AGS-002

Date:

September 17, 2024

Description:

PEM

Category 1

Facing Soils



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD

Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

W-AGS-006

Date:

September 17, 2024

Description:

PEM

Category 1

Facing North



W-AGS-006

Date:

September 17, 2024

Description:

PEM

Category 1

Facing East



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD

Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

W-AGS-006
Date:
September 17, 2024
Description:
PEM
Category 1
Facing South



W-AGS-006
Date:
September 17, 2024
Description:
PEM
Category 1
Facing West



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD

Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

W-AGS-006

Date:

September 17, 2024

Description:

PEM

Category 1

Facing Soils



UPL-AGS-002

Date:

September 17, 2024

Description:

Upland Data Point

Facing North



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD

Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

UPL-AGS-002

Date:

September 17, 2024

Description:

Upland Data Point

Facing East



UPL-AGS-002

Date:

September 17, 2024

Description:

Upland Data Point

Facing South



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD

Wetland Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

UPL-AGS-002 **Date:** September 17, 2024 **Description:** Upland Data Point Facing West	

UPL-AGS-002 **Date:** September 17, 2024 **Description:** Upland Data Point Facing Soils	

APPENDIX D

POND PHOTOGRAPHIC RECORD

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Pond Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

P-AGS-001
Date: September 17, 2024
Description: Pond Facing East



P-AGS-001
Date: September 17, 2024
Description: Pond Facing West



APPENDIX E

UPLAND DRAINAGE FEATURE PHOTOGRAPHIC RECORD

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Upland Drainage Feature (UDF) Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In	60694533

UDF-AGS-001 **Date:** September 17, 2024 **Description:** Upland Drainage Feature Facing Up	

UDF-AGS-001 **Date:** September 17, 2024 **Description:** Upland Drainage Feature Facing Down	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Upland Drainage Feature (UDF) Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In	60694533

UDF-AGS-001 **Date:** September 17, 2024 **Description:** Upland Drainage Feature Facing Substrate	

UDF-AGS-002 **Date:** September 17, 2024 **Description:** Upland Drainage Feature Facing Up	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Upland Drainage Feature (UDF) Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In	60694533

UDF-AGS-002 **Date:** September 17, 2024 **Description:** Upland Drainage Feature Facing Down	

UDF-AGS-002 **Date:** September 17, 2024 **Description:** Upland Drainage Feature Facing Substrate	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Upland Drainage Feature (UDF) Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In	60694533

UDF-AGS-005
Date: September 17, 2024
Description: Upland Drainage Feature Facing Up



UDF-AGS-005
Date: September 17, 2024
Description: Upland Drainage Feature Facing Down



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Upland Drainage Feature (UDF) Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In	60694533

UDF-AGS-005	
Date: September 17, 2024	
Description: Upland Drainage Feature Facing Substrate	

APPENDIX F

HABITAT PHOTOGRAPHIC RECORD

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD

Habitat Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

PH-1

Date:

September 17, 2024

Description:

Urban

Facing North



PH-2

Date:

September 17, 2024

Description:

Old Field

Facing East



AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD

Habitat Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

PH-3	
Date: September 17, 2024	
Description: Scrub Shrub Facing South	

PH-4	
Date: September 17, 2024	
Description: Landscaped Facing North	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
Habitat Photograph Record

Client Name:	Site Location:	Project No.
AEP	Innovation Brie – Cut In North & South	60694533

PH-5

Date:

September 17, 2024

Description:

Urban

Facing West



APPENDIX G

AGENCY CORRESPONDENCE

Department of Natural Resources
ohiodnr.gov

Mike DeWine, *Governor*
Jon Husted, *Lt. Governor*
Mary Mertz, *Director*

Office of Real Estate & Land Management
Tara Paciorek - Chief
2045 Morse Road – E-2
Columbus, Ohio 43229-6693

December 30, 2024

Joshua Holmes
AECOM
707 Grant Street, 5th Floor
Pittsburgh, Pennsylvania 15219

Re: 24-1904 - Innovation Brie Cut In

Project: The proposed project involves building a new, approximately 0.3-mile 138kV transmission line tie in between Structure 4 and Innovation Station, and between Structure 4a to Structure 5.

Location: The proposed project is located in Jersey Township, Licking 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: A review of the Ohio Natural Heritage Database indicates there are no records of state or federally listed plants or animals within one mile of the specified project area. 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.

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 project is within the vicinity of records for the northern long-eared bat (*Myotis septentrionalis*), a state endangered and federally endangered species. Because presence of a state endangered bat species has been established in the area, summer tree cutting is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree

cutting inside this buffer may be acceptable after further consultation with DOW (contact Eileen Wyza at Eileen.Wyza@dnr.ohio.gov).

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

The DOW also recommends that a desktop habitat assessment is conducted, followed by a field assessment if needed, to determine if a potential hibernaculum is present within the project area. Direction on how to conduct habitat assessments can be found in the current USFWS "*RANGE-WIDE INDIANA BAT & NORTHERN LONG-EARED 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 Eileen Wyza 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 of range the lake chubsucker (*Erimyzon sucetta*) a state threatened fish. The DOW recommends no in-water work in perennial streams from March 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this or other aquatic species.

The project is within the range of the eastern massasauga (*Sistrurus catenatus*), a state endangered and a federally threatened snake species. The eastern massasauga uses a range of habitats including wet prairies, fens, and other wetlands, as well as drier upland habitat. Due to the location, the type of habitat within the project area, and the type of work proposed, this project is not likely to impact this species.

The project is within the range of the northern harrier (*Circus hudsonius*), 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.

If the subject project is in a floodplain regulated by the Federal Emergency Management Agency (FEMA), the local local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals. The FEMA National Flood Hazard Layer (NHFL) Viewer website can be utilized to see if the project is in a FEMA regulated floodplain. If the project is not in a FEMA regulated floodplain, then no further action is required.

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

Expiration: *ODNR Environmental Reviews are typically valid for 2 years from the issuance date. If the scope of work, project area, construction limits, and/or anticipated impacts to natural resources have changed significantly from the original project submittal, then a new Environmental Review request should be submitted.*

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

December 13, 2024

Project Code: 2025-0140499

Dear Joshua Holmes:

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, endangered, and proposed 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 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.

Federally Proposed Species: On September 14, 2022, the Service proposed to list the tricolored bat (*Perimyotis subflavus*) as endangered under the ESA. The bat faces extinction due to the impacts of white-nose syndrome, a deadly disease affecting cave-dwelling bats across the continent. During spring, summer, and fall, this species roosts primarily among leaf clusters of live or recently dead trees, emerging at dusk to hunt for insects over waterways and forest edges. While white-nose syndrome is by far the most serious threat to the tricolored bat, other threats now have an increased significance due to the dramatic decline in the species' population. These threats include disturbance to bats in roosting, foraging, commuting, and over-wintering habitats. Mortality due to collision with wind turbines, especially during migration, has also been documented across their range. Conservation measures for the Indiana bat and northern long-eared bat will also help to conserve the tricolored bat.

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.

If implementation of this seasonal tree cutting recommendation is not possible, a summer presence/absence survey may be conducted for Indiana bats and northern long-eared bats. If Indiana bats and northern long-eared 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, Environmental Services Administrator, at (614) 265-6387 or at mike.pettegrew@dnr.ohio.gov.

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,

Erin Knoll
Field Office Supervisor

cc: Matthew.Stooksbury@dnr.ohio.gov
Eileen.Wyza@dnr.ohio.gov

APPENDIX H

2024 JOINT GUIDANCE FOR BAT SURVEYS AND TREE CLEARINGG

OHIO DIVISION OF WILDLIFE AND U.S. FISH AND WILDLIFE SERVICE (OH-FIELD OFFICE) JOINT GUIDANCE FOR BAT SURVEYS AND TREE CLEARING MAY 2024

This document has been updated with new state guidance for the 2024 field season.

This guidance applies to state recommendations only. Contact the USFWS to determine if federal consultation is also necessary to comply with federal law.

Agency Contacts:

ODNR-DOW Permit Coordinator: Wildlife.Permits@dnr.ohio.gov, (614) 265-6315
ODNR-DOW Bat Survey Coordinator: Eileen Wyza, Eileen.Wyza@dnr.ohio.gov, (614) 265-6764
USFWS OHFO Endangered Species: Angela Boyer, angela_boyer@fws.gov, (614) 416-8993, ext.122

Covid-19 Guidance:

Surveyors should follow all covid protocols put in place by their agency. All surveyors should wear masks when handling bats and anyone exhibiting symptoms of covid-19 should not participate in bat surveys.

Ohio Mist-net Surveys:

This document serves as guidance for bat mist netting activities in Ohio and does not supersede any requirements listed on your permits or facility certificate. All permit conditions must be strictly adhered to for permits to be valid and for renewal of permits beyond the existing year.

Due to the presence of White-nose Syndrome (WNS), mist-netting in Ohio must be conducted between June 1 and August 15 unless stated otherwise in your state permit. The ODNR Division of Wildlife (ODNR-DOW) and U.S. Fish and Wildlife Service (USFWS) Ohio Field Office (OHFO) have determined that delaying netting activities until June 1 will provide additional recovery time for bats affected by WNS. For presence/probable absence surveys, netting will not be accepted outside of the June 1 - August 15 timeframe.

To assess project areas for presence or probable absence of the state and federally listed Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) during summer residency, the USFWS developed the USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines (March 2024). This protocol may also be used for the tricolored bat (*Perimyotis subflavus*) which is state endangered and proposed to be federally endangered. **With minor modifications referenced below**, it can also be used in Ohio for the 2024 field season and includes surveying for the state-listed little brown bat (*Myotis lucifugus*).

According to the updated federal range-wide guidelines, presence/probable absence net surveys for northern long-eared bats or federally-proposed tricolored bats shall incorporate either 10 net nights per square 0.5 kilometer (123

acres) of project area, or four net nights per kilometer for linear projects. Presence/probable absence net surveys for Indiana bats shall incorporate six net nights per square 0.5 kilometer (123 acres) of project area, or two net nights per kilometer for linear projects. If a project area is eligible for a presence/probable absence survey for both Indiana bats and northern long-eared bats or tricolored bat, following the northern long-eared/tricolored bat level of effort will qualify as a presence/ probable absence survey for the three species. However, if a project area is eligible for a presence/absence survey for the three species, following the Indiana bat level of effort will not qualify the survey for a northern long-eared bat or tricolored bat presence/probable absence survey. Please note that the USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines (March 2024) requires that a minimum of two (2) biologists (e.g., one permitted and one technician) must be on-site for every four (4) net-sets being operated. Exceptions to on-site minimum staffing levels may be allowed under extenuating circumstances, provided written justification is included in the proposed survey study plan and subsequently approved by the OHFO and ODNR-DOW.

Due to the reclassification of the northern long-eared bat to federally endangered on March 31, 2023, the northern long-eared bat 4(d) rule has been nullified. There is a new online tool in the USFWS's Information for Planning and Consultation (IPaC) website that allows project proponents to utilize the optional Northern Long-eared Bat Rangewide Determination Key (Dkey). **The Dkey cannot be used to replace consultation with ODNR-DOW.** Project proponents should coordinate directly with the ODNR-DOW for project technical assistance for all federally listed species, including the Indiana bat and northern long-eared bat. **OHFO discourages the use of the Dkey for Ohio projects.** Contacting OHFO directly (ohio@fws.gov) for technical assistance for both the northern long-eared bat and Indiana bat is the more efficient process.

The tricolored bat is listed as endangered by ODNR-DOW and has been officially proposed for federal listing as endangered. The USFWS is scheduled to publish a final rule on the tricolored bat's status by the end of September 2024. Therefore, in addition to coordinating with ODNR-DOW regarding the tricolored bat, we recommend that project proponents also coordinate with the OHFO. The USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines (March 2024) allows presence/absence surveys for the tricolored bat that use the northern long-eared bat level of effort.

Exception for Ohio mist-net surveys: All presence/absence surveys conducted for state listed bat species (Indiana, northern long-eared, little brown, tricolored) should follow the highest minimum net nights set forth in the federal guidance to be considered valid by ODNR-DOW. Any modifications to this position will be communicated at the time of the site authorization approval.

Ohio Acoustic Surveys:

Acoustic bat surveys for presence/absence will be accepted by ODNR-DOW for the 2024 season. Surveys should follow guidelines laid out in the USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines (March 2024) with the following exceptions:

- Ohio survey dates are June 1 – August 15
- After conducting automated analyses using one or more of the currently available 'approved' acoustic bat ID programs[1], qualitative analysis (i.e., manual vetting) of any calls recorded from state-endangered species (*M. sodalis, M. septentrionalis*[2]*, M. lucifugus*[2]*,* and *P. subflavus*[2]) must be completed.
- **All presence/absence acoustic surveys conducted for state listed bat species (Indiana, northern long-eared, little brown, tricolored) should follow the highest minimum acoustic nights set forth in the federal guidance to be considered valid by ODNR-DOW. Any modifications to this position will be communicated at the time of the site authorization approval.**

[1] https://www.fws.gov/media/indiana-bat-summer-survey-guidance

[2] State listing as endangered effective July 1, 2020

At a minimum, for each detector site/night a program considered presence of state-listed bats likely, review all files (including no IDs) from that site/night. If more than one acoustic bat ID program is used, qualitative analysis must also include a comparison of the results of each program by site and night.

Combined Mist-netting and Acoustic Surveys:
ODNR-DOW will accept the USFWS pilot survey option of combining mist-netting and acoustic surveys for traditional survey sites (e.g., 123-acre area) detailed in Appendix I of the USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines (2024). All presence/absence combined mist-net and acoustic surveys conducted for state listed bat species should follow the highest minimum level of effort set forth by the federal guidance to be considered valid by ODNR-DOW. Any modifications to this position will be communicated at the time of the site authorization approval.

Before Field Season:

- Anyone surveying bats using mist-nets in the state of Ohio must obtain a federal permit as well as a state scientific collection permit. The federal permit should include both the Indiana bat and the northern long-eared bat.
- Your ODNR-DOW permit consists of two documents: a Scientific Collector (Wild Animal) Permit and an endangered species letter signed by the Chief of the Division of Wildlife (in addition to your federal permit). Both ODNR-DOW documents must be obtained prior to field work and kept with you and any sub-permittees during field work.

During Field Season:

- Prior to initiation of field work (a minimum of two weeks in advance), permittees must provide proposed mist netting plans to USFWS and ODNR-DOW in the form of an e-mail letter to the USFWS OHFO and copy to the ODNR-DOW Bat Survey Coordinator. Plans must be reviewed and approved by USFWS OHFO and ODNR-DOW before ANY surveys take place. Study plans must specify objectives, location details, dates of proposed work, and all other relevant details. **Study plans must also include a USFWS Project Code. Project Codes can only be obtained by requesting an official species list through the USFWS's Information for Planning and Consultation (IPaC) website: (https://ipac.ecosphere.fws.gov/).** When handling bats, you must strictly adhere to the current WNS Decontamination Protocol (current version can be found at https://www.whitenosesyndrome.org/topics/decontamination). Clothing, boots, gear, and equipment should all be thoroughly decontaminated between nights, as well as between netting sites.
- Request bat bands at least two weeks in advance of needing them. Bat bands can be obtained by e-mailing the ODNR-DOW Bat Survey Coordinator with how many bands are needed, current permit number, sizes, and a mailing address. Bands will not be issued until your permits are valid. We have three sizes of bands—2.4 mm, 2.9 mm, and 4.2 mm. The 2.4 mm split metal bat ring made of aluminum alloy is suitable for banding tricolored bats. 2.9 mm bands are suitable for Indiana, northern long-eared, and little brown bats. The larger 4.2 mm band is suitable for silver-haired (*Lasionycteris noctivagans*), big brown (*Eptesicus fuscus*), and hoary (*Lasiurus cinereus*) bats. You must band all Indiana, northern long-eared, little brown, and tricolored bats with ODNR-DOW bands; therefore, you should not be in the field without the 2.4 mm and 2.9 mm sized bands.
  NOTE: While ODNR-DOW obtains 2.9 mm bands per new 2024 USFWS guidelines, banding of endangered *Myotis* species should not be done until 2.9 mm bands are received. Please watch for updates from the Wildlife Permits email and request 2.9 mm bands when they become available.
- Only individuals who are named on the ODNR-DOW endangered species letter portion of the permit and on the corresponding federal bat permit may conduct and oversee mist-net surveys. Trained assistants may work on permitted bat activities under the direct and on-site supervision of a named permittee. All bat IDs must be verified by a named permittee. If an Indiana bat, northern long-eared bat, and/or tricolored bat is captured, the permittee shall notify the USFWS and the ODNR-DOW Bat Survey Coordinator referenced

above within 48 hours via email. If a little brown bat is captured, notify the ODNR-DOW Bat Survey Coordinator only within 48 hours via email. Reports of listed bat captures should include specific information such as spatial location of capture, band information, radio-transmitter frequency information, sex, reproductive status, and age of individual.

- For presence/absence surveys, ODNR-DOW requires all female and juvenile state endangered and threatened bat species (Indiana, northern long-eared, little brown, and tricolored bat) be radio-tracked if caught, in accordance with methods outlined in Appendix D of USFWS 2024 Range-wide Indiana Bat Summer Survey Guidelines.

If you are taking any biological samples (tissue, fur, blood, etc.), this must be specifically authorized in your state and federal permits and noted in your survey proposal.

After Field Season:

By March 15, you must submit your final ODNR-DOW report(s) from the previous summer. You are not required to fill out the ODNR-DOW Wildlife Diversity Bat Excel Spreadsheet; instead, please forward your USFWS Midwestern US Spreadsheet (found here: https://www.fws.gov/media/bat-reporting-spreadsheets) to the ODNR-DOW Bat Survey Coordinator and ODNR-DOW Permit Coordinator and include your state permit number along with an electronic copy of the project report. Electronic summaries emailed during the field season are NOT considered as full compliance of this reporting requirement.

Ohio Environmental Review Recommendations for projects involving disturbance near potential/known bat hibernacula (cliffs, caves, mines) or tree cutting:

Step 1: Coordinate with Ohio Division of Wildlife regarding existing records for state-listed endangered bat summer and/or winter occurrence information. Potential hibernacula found during a habitat assessment must address possible suitability for Indiana bats, northern long-eared bats, tricolored bats, and little brown bats.

If project site contains a known bat hibernaculum(a) –

- Both the DOW and USFWS should be contacted for guidance on projects occurring:
  - Within 5 miles of known or potential Indiana bat and/or northern long-eared bat hibernacula.
  - Within 3 miles of known or potential tricolored bat hibernacula
- Only ODNR-DOW should be contacted if a project occurs within 5 miles of known or potential little brown bat hibernacula.

If a project site does not contain known bat hibernaculum(a) –

- Conduct a desktop habitat assessment of the project area. Tools such as the ODNR Mines of Ohio Viewer, Karst Interactive Map, topographic maps, aerial photos, historical records, etc. should be used to determine if there are any potential caves, mines, karst features, rock ledges, or other features that may serve as potential hibernacula.
- If no such features are found, proceed to **Step 2**.
- If potential hibernacula are found during the desktop assessment:
  - Assume bats are using these hibernacula and refrain from clearing trees from March 15 - Nov 15

    OR

  - Conduct a field habitat assessment to determine if a potential hibernaculum(a) is present within the action area. We encourage impacts to ledges and rock outcroppings be avoided. If impacts cannot be avoided, features should be evaluated for potential roosting characteristics such as recesses, overhangs, and crevices.

- **NOTE**: The USFWS Range-wide Indiana Bat Guidelines, Appendix H, contains instructions for completing a habitat assessment for Indiana bat, but can be applied to other bat species.

Step 2: Conduct, a presence/absence survey following current ODNR-DOW guidelines, where applicable.

Step 3: <u>If a state-listed endangered bat is captured or recorded during the survey:</u>

- Recommendation of no summer tree cutting, or limited cutting following guidelines detailed below, within 5 miles of an Indiana bat or little brown bat capture or 3 miles of a northern long-eared bat and/or tricolored bat capture if a roost is not located.
- Recommendation of no summer tree cutting, or limited cutting following guidelines detailed below, within a minimum of 2.5 miles of an Indiana bat or little brown bat roost or 1.5 miles of a northern long-eared bat and/or tricolored bat roost tree if located.
- Recommended tree clearing dates within capture record buffers are October 1 – March 31

<u>If no state-listed endangered bat is captured or recorded during the survey:</u>

- Summer tree cutting may proceed for 5 years before a new survey is needed under state guidance.

<u>Limited summer tree cutting guidance for little brown bats:</u> Limited tree cutting in summer may be permitted after consultation with ODNR-DOW, but clearing trees with the following characteristics should be avoided unless they pose a hazard: dead or live trees of any size with loose, shaggy bark; crevices, holes, or cavities; clusters of dead leaves; live trees of any species with DBH ≥ 20".

FREQUENTLY ASKED QUESTIONS

When does the ODNR-DOW Bat Survey protocol have to be used?

This protocol should be used anytime Indiana bat, northern long-eared bat, little brown bat, or tricolored bat summer presence/probable absence surveys are conducted in the state of Ohio.

How many detector nights are required for presence/probable absence acoustic surveys?

As described in the current USFWS Range-wide Indiana Bat and Northern Long-eared Bat Summer Survey Guidelines:

Level of effort for all state-listed endangered bat species: follow highest minimum detector nights as outlined in the federal guidance for northern long-eared bat and tricolored bat.

Northern Long-eared Bat and Tricolored Bat Level of Effort:
Linear projects: a minimum of 4 detector nights per km (0.6 miles) of suitable summer habitat
Non-linear projects: a minimum of 10 detector nights per 123 acres (0.5 km^2) of suitable summer habitat.
At least 2 detector locations per 123 acre "site" shall be sampled until at least 10 detector nights has been completed over the course of at least 2 calendar nights (may be consecutive). For example:

- 5 detectors for 2 nights each (can sample the same location or move within the site)
- 2 detectors for 5 nights each (can sample the same location or move within the site)
- 1 detector for 10 nights (must sample at least 2 locations and move within the site – we recommend evenly distributing LOE among locations)

Indiana Bat Level of Effort:
Linear projects: a minimum of 2 detector nights per km (0.6 miles) of suitable summer habitat
Non-linear projects: a minimum of 6 detector nights per 123 acres (0.5 km^2) of suitable summer habitat.
At least 2 detector locations per 123 acre "site" shall be sampled until at least 6 detector nights has been completed over the course of at least 2 calendar nights (may be consecutive). For example:

- 3 detectors for 2 nights each (can sample the same location or move within the site)
- 2 detectors for 3 nights each (can sample the same location or move within the site)
- 1 detector for 6 nights (must sample at least 2 locations and move within the site – we recommend evenly distributing LOE among locations)

How many net surveys are required for presence/probable absence?

Level of effort for all state-listed endangered bat species including Indiana bat and northern long-eared bats: Follow highest minimum net nights as outlined in the federal guidance for the northern long-eared bat and tricolored bat.

Net surveys for northern long-eared bat presence/probable absence shall incorporate, at a minimum, either 10 net nights per square 0.5 kilometer (123 acres) of project area, or four net nights per kilometer for linear projects. For linear projects, there must be at least one net night of survey on two different nights (minimum of two nights). This does not allow for two net nights on a single night for surveys.

Net surveys for Indiana bat presence/probable absence shall incorporate, at a minimum, either six net nights net nights per square 0.5 kilometer (123 acres) of project area, or two net nights per kilometer for linear projects. For

linear projects, there must be at least one net night of survey on two different nights (minimum of two nights). This does not allow for two net nights on a single night for surveys.

How long are the results of the surveys valid for an assessment of an area?

Mist-net or acoustic surveys documenting probable absence of state-listed endangered bats are valid for five years.

When can acoustic or net surveys occur in Ohio?

In Ohio, acoustic or net surveys may only be conducted from June 1 through August 15 unless indicated otherwise in your state permit. Any surveys outside of the June 1 - August 15 timeframe cannot be used in Ohio to assess the presence/probable absence of state-listed bats.

Can a presence/probable absence survey be conducted within a known bat capture/detection buffer?

Surveys generally cannot be used to document presence/probable absence of state-listed endangered bats where presence of the species has already been confirmed by prior surveys.

What if a project is proposing to clear trees between April 1 and September 30 when bats may be present but no bat records exist in the project area?

Any Ohio project that is not within a known bat record buffer, and tree clearing between April 1 and September 31 is being proposed, may have a presence/probable absence survey conducted between June 1 and August 15 following the range-wide guidance. If a presence/probable absence survey is not performed, presence of listed bats is assumed.

Where do I get bands?

If you need bands, email the ODNR-DOW Bat Survey Coordinator at least two weeks in advance with your current ODNR permit number, how many bands in each size (2.4 mm, 2.9 mm, and 4.2 mm) you will need this season, and a current address to ship the bands.

Do I have to band every bat?
No, currently this is optional. However, you are required as per your state permit to band all Indiana, northern long-eared, little brown, and tricolored bats.
NOTE: While ODNR-DOW obtains 2.9 mm bands per new 2024 USFWS guidelines, banding of endangered *Myotis* species should not be done until 2.9 mm bands are received. Please watch for updates from the Wildlife Permits email and request 2.9 mm bands when they become available.