East Lima – Sorenson 345 kV Transmission Line Rebuild Project Phase 1

AEP OHIO TRANSMISSION COMPANY℠

An AEP Company

BOUNDLESS ENERGY℠

PUCO Case No. 26-0276-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.

September 14, 2026

LETTER OF NOTIFICATION

AEP Ohio Transmission Company, Inc.

East Lima – Sorenson 345 kV Transmission Line Rebuild Project Phase 1

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 ("Adm.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 East Lima – Sorenson 345 kV Transmission Line Rebuild Project Phase 1 (the "Project") in Van Wert County, Ohio. The Project involves rebuilding and upgrading approximately 3.5 miles of the East Lima – Sorenson 345 kilovolt (kV) transmission line to double circuit, between the Ohio and Indiana state line and the RP Mone Station. The Project will be constructed within existing right-of-way but will require new and supplemental easements to obtain a 150-foot-wide right-of-way (ROW). The location of the Project is shown on Figure 1 in **Appendix A**.

The Project meets the requirements for a Letter of Notification (LON) as defined by Item 2(b) of Appendix A to Adm.Code 4906-1-01, *Application Requirement Matrix for Electric Power Transmission Lines*:

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

The Project has been assigned Case No. 26-0276-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 East Lima – Sorenson 345 kV Transmission Line has a PJM Interconnection LLC (PJM) mandated baseline reliability upgrade needed to address a thermal overload on the 27.8-mile line. To address the thermal overloads identified in PJM's Regional Transmission Expansion Plan (RTEP) assessment, the Company needs to rebuild the transmission line and install a larger capacity conductor to address the baseline violation and meet the required in-service date of December 2027. The rebuild of the remaining 9.5 miles of East Lima – Sorenson 345 kV transmission line in Ohio, between Maddox Creek and RP Mone stations, will be filed with OPSB under separate cover.

Failure to move forward with this Project may result in potential real-time operating concerns if the contingencies identified in the RTEP analysis occur as well as the need to continue to operate. If potential real-time overloads are identified by the Company or PJM Operations, switching procedures will need to be taken to eliminate the identified overload, up to and including potential load drop in the area as determined by PJM and the Company.

Ohio Substitute House Bill 15, effective in August 2025, requires applicants for certificates of environmental compatibility and public need for the construction of new transmission lines to submit a summary of studies that have been made by or for the applicant of cost-effective advanced transmission technologies that maximize the value, expand the capacity, or improve the reliability of the facility. R.C. 4906.06(A)(7). The statutory definition of advanced transmission technology includes advanced conductors, defined as "conductor with a direct current electrical resistance that is at least ten per cent lower than existing conductors of a similar diameter on the electric transmission system while simultaneously increasing the energy carrying capacity by at least seventy-five per cent." R.C. 4906.01(N). The Company evaluated the use of advanced Aluminum Conductor Composite Core conductor but determined that the additional benefits did not justify the increased cost and, therefore, it was not selected for the Project.

The need was identified during the 2023 RTEP window 2 on March 6, 2024. The solution was presented to the PJM Board on August 8, 2024, and subsequently assigned the PJM identifier, of B3851. The Project appears in the Company's 2026 Long Term Forecast Report (LTFR) on page 38 (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.

No major alternatives were considered for the Project because the Project is a rebuild and upgrade of an existing 345 kV transmission line and the existing ROW was determined to be the most feasible and appropriate location for the proposed facilities. The existing ROW provides a direct connection between the Indiana-Ohio state line and RP Mone Station, is already established for high-voltage transmission use, and can accommodate the proposed rebuild with limited alignment refinements and supplemental easements necessary to support the proposed 150-foot-wide ROW.

During project development, the Company evaluated the proposed route from engineering, constructability, environmental, land use, and ROW perspectives. The existing ROW supports the required reliability improvements while minimizing the need for new ROW acquisition and additional impacts that would likely be associated with a new transmission line route. The Project will be rebuilt primarily along or near the existing alignment, with minor alignment adjustments in select locations to accommodate final engineering, constructability, and ROW requirements.

Continued use of the existing ROW minimizes impacts to adjacent landowners, agricultural operations, and environmental resources by concentrating construction activities within an area already used for transmission purposes. A new greenfield route would require acquisition of additional ROW, affect additional landowners, and increase the potential for impacts to agricultural lands, streams, wetlands, cultural resources, and other environmental features without providing a corresponding engineering, reliability, or siting benefit. Accordingly, the Company concluded that the proposed route represents the most suitable location and the most appropriate solution for the Project.

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 Adm.Code 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 Adm.Code 4906-6-08(B). The Company maintains a website

(http://aeptransmission.com/ohio/) which provides the public access to an electronic copy of this LON and the public notice for this LON. An electronic copy of the LON will be served to the public library in each political subdivision for this Project. The Company retains ROW land agents that discuss Project timelines, construction and restoration activities and convey information to affected owners and tenants throughout the Project.

B(6) Construction Schedule

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

Construction of the Project is planned to begin in December 2026 with an anticipated in-service date of December 2027.

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 Dixon (1980) and Convoy (1972), Ohio quadrangle map. **Appendix A, Figure 2** displays the Project components on a 2024 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. Parcel Boundaries displayed on Figure 2, in **Appendix A,** were obtained from Van Wert County, Ohio Auditors GIS data and are provided for reference purposes only. Property acquisition requirements and impacted parcels were verified using project survey information.

Table 1 – Property Agreements

Property Parcel Number	Agreement Type	Easement or Option Obtained (Yes/No)
010014680000	Supplemental Easement	No
010014720000	Supplemental Easement	No
010014760000	Supplemental Easement	No
010014840000	Supplemental Easement	Yes
010015200000	Supplemental Easement	Yes
010015240000	Supplemental Easement	Yes
010015240100	Supplemental Easement	Yes
010015240200	Supplemental Easement	Yes
010015360000	Supplemental Easement	No
010015360500	Supplemental Easement	No
010015680000	Supplemental Easement	No
010015720000	Supplemental Easement	No
010015760000	Supplemental Easement	No
010015800000	Supplemental Easement	No
010015840000	Supplemental Easement	No
010016520000	Supplemental Easement	No
010016600000	Supplemental Easement	No
010016680000	Supplemental Easement	Yes

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.

Transmission Lines

The transmission line is estimated to include the following:

Voltage: 345 kV
Conductors: 1590 KCM 54/19 FALCON ACSR
Static Wire: (2) 144ct OPGW
Insulators: Polymer
Circuit: Double
ROW Width: Approximately 150 feet
Structure Type: Seventeen (17) double circuit, conventional steel lattice tower
Two (2), single circuit, steel monopole vertical dead-end

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.

One occupied residence is located within 100 feet of the edge of the proposed ROW. Electric and magnetic field calculations for the Project are provided in **Table 2** below.

B(9)(b)(i) Calculated electric and magnetic field strength levels at one meter above ground under the lowest conductors and at the edge of the right-of-way for:

i) Calculated Electric and Magnetic Field Levels

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

Electric and Magnetic Fields (EMF) levels were computed one meter above ground under the line and at the ROW edges (75/75 feet, left/right). The ROW is a total of 150 feet wide, centered on the tower, with 75 feet to the left and 75 to right.

Our results, calculated using Power Line Systems Computer Aided Design and Drafting (PLS-CADD) 3D EMF Calculator are summarized below.

*EMF levels (left ROW edge/maximum/right ROW edge) computed one meter above ground at the point of minimum ground clearance, assuming balanced phase currents and 1.05 P.U. Voltages. ROW width is 150 feet with 75 feet on either side of the tower center-line.

Table 2 – EMF Calculations

East Lima – Sorenson 345 kV Transmission Line Rebuild Project Phase I EMF Calculations (OH)					
Condition	**Circuit Load (A)**	**Phasing Arrangements**	**Ground Clearance (feet)**	**Electric Field (kV/m)***	**Magnetic Field (mG)***
(1) Normal Max. Loading^	669.4	C-B-A; C-B-A	46.25	.87/4.4/.87	40.2/61.9/40.4
(2) Emergency Line Loading^^	4689	C-B-A; C-B-A	37.5	.87/4.4/.87	281.2/433.9/282.8
(3) Winter Conductor Rating^^^	4127	C-B-A; C-B-A	39	.87/4.4/.87	248.1/381.9/248.9

^Peak line flow expected with all system facilities in service.
^^Maximum flow during a critical system contingency
^^^Maximum continuous flow that the line, including its terminal equipment, can withstand during winter conditions.

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

	General Public	Controlled Environment
	-------	----------
Electric Field Limit (kV/m)	5.0	20.0
Magnetic Field Limit (mG)	9040	27,100

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

B(9)(b)(ii) Design Alternatives

The applicant's consideration of design alternatives with respect to electric and magnetic fields and their strength levels, including alternate conductor configuration and phasing, tower height, corridor location, and right-of-way width.

Design alternatives were not considered due to EMF strength levels. Transmission lines, when energized, generate EMF. Laboratory studies have failed to establish a strong correlation between exposure to EMF and effects on human health. However, some people are concerned that EMF have impacts on human health. Due to these concerns, EMF associated with the new circuits was calculated and set forth in the table above. The EMF was computed in a manner to maximize the estimate, assuming the highest reasonable input values based on conditions along the proposed transmission line rebuild. Normal daily EMF levels would be less than these, which were calculated at maximum load conditions. Based on studies from the National Institutes of Health, the magnetic field (measured in milliGauss, or mG) associated with emergency loading at the highest EMF value for this transmission line is lower than those associated with normal household appliances like microwave ovens, electric shavers and hair dryers. For additional information regarding EMF, the National Institutes of Health has posted information on their website: http://www.niehs.nih.gov/health/topics/agents/emf/. Additionally, information on electric and magnetic fields is available on the Company's website: https://www.aepohio.com/community/education/emf. The information found on the Company's website describes the basics of electromagnetic field theory, scientific research activities, and EMF exposures encountered in everyday life. Similar material will be made available for those affected by the construction activities for this Project.

B(9)(c) Project Cost

The estimated capital cost of the project.

The cost estimate for the proposed Project, which is comprised of applicable tangible and capital costs, is approximately $33,096,443 using a Class 3-detailed estimate. Pursuant to the PJM Open Access Transmission Tariff (OATT), the costs for this Project will be recovered in the Company'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 area has historically been primarily agricultural land with few woodlots. An aerial photograph of the Project area is provided on Figure 2 in **Appendix A**. The Project area is mapped within Tully Township in Van Wert County. The Project area is currently rural in nature and is comprised primarily of agricultural land used for row crops, and lesser amounts of old fields, forested land, landscaped areas, and scattered residences. At the eastern end of the Project, the route crosses marginal industrial land associated with the Chicago, Fort Wayne and Eastern Railroad (Genesee & Wyoming) and the Convoy Power Plant. Approximately 1 acre of tree clearing is anticipated within the proposed ROW and 3.4 acres within the proposed route corridor.

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 agricultural land use with low density residential land uses dispersed throughout. The dominant agricultural use appears to be row crops (i.e. soybeans and corn). Large, open agricultural fields are present in the Project area along all major road corridors including County Road 700 E, Mentzer Road, Werner Road, Lare Road, Mentzer Church Road, and Van Horn Road. Approximately 59.7 acres of agricultural land are located within the proposed ROW, and approximately 118.8 acres are located within the route corridor of the Project.

Based on data received from the Van Wert County Auditor's office on August 3, 2026, there are four (4) agricultural district parcels within the potential disturbance area of the Project. These agricultural district parcels total approximately 13.7 acres within the proposed ROW and 27.4 acres within the route corridor of the Project.

The existing transmission line crosses both agricultural land and agricultural district land. Permanent impacts to these areas are anticipated to be limited primarily to structure-foundation footprints. Following construction, agricultural practices are expected to resume within the 150-foot ROW, except in areas immediately adjacent to structure locations.

B(10)(c) Archaeological and Cultural Resources

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

The Company considered both direct and indirect effects when developing the Area of Potential Effect (APE) for the Project. The direct APE was defined as the limits of disturbance totaling 156 acres; the indirect APE extends 1,000 feet from each side of the transmission line center line to include indirect, direct, and visual effects. As a result, the Company's consultant completed both Phase I Archaeological and Historic Architectural Resources surveys for the Project.

Prior to the Phase I archaeological survey, the Company's consultant submitted a letter on February 13, 2025, to the Ohio Historic Preservation Office (OHPO) summarizing the background records check and the overall Project. The OHPO requested a Phase I archaeological survey on March 14, 2025. The Phase I archaeological survey focused on the direct APE for the Project; field methods included both pedestrian survey and shovel testing. Three (3) archaeological resources were identified: 33VW0459 (historic-era domestic scatter), Schlemmer Farms Site (33VW0462, historic-era domestic scatter), and Whittenbarger Isolate (33VW0464, Early Archaic point). All of these archaeological resources were

recommended as not eligible for listing in the National Register of Historic Places (NRHP), and no further archaeological work was recommended. The Phase I report was submitted to the OHPO on August 28, 2026. The results of the coordination with the OHPO will be provided to OPSB once it has been received.

Prior to the Historic Architectural Resources Survey and in addition to the letter and Ohio Project Summary Form detailed above, the Company's consultant submitted a survey methodology and APE delineation to the OHPO on February 22, 2025. In their response on March 14, 2025, OHPO requested that any above-ground historic resource in the APE that appears over 50 years old should be documented and evaluated for NRHP eligibility. Field methods involved driving and walking along accessible roads within the indirect APE to identify architectural resources that appear 50 years of age or older, plotting those resources on a USGS quadrangle map, and photographing them with a high-resolution digital camera. A brief description of each resource, as well as information on outbuildings and landscape features, approximate dates of construction, physical integrity, and other pertinent information was also recorded. Eight (8) resources were identified within the indirect APE, including a mix of cemeteries, circa-1880 farmhouses, post-WWII architecture, and modern housing, set on larger farm parcels as well as smaller residential lots. All of these architectural resources were recommended not eligible for NRHP listing due to a loss of integrity and/or lack of significance. The Historic Architectural Resources Survey report was submitted to the OHPO for review on August 28, 2026. The results of the coordination with the OHPO will be provided to OPSB once it has been received.

The Company's consultant recommends a finding of no adverse effect on cultural resources for the overall Project and recommends that no further cultural resource work is necessary for the Project.

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 **Table 3**, below. There are no other known local, state, or federal requirements that must be met prior to commencement of the Project.

Table 3 – Anticipated Permits

Permit/Authorization/Coordination	Agency	Date
Stormwater General Permit for Discharges of Storm Water Associated with Construction Activity (OHC000006) Notice of Intent (NOI)	Ohio Environmental Protection Agency (OEPA)	NOI was approved on 9/4/2026 and remains effective until 4/22/2028 (**Appendix D**).
FAA Notice Criteria Tool	Federal Aviation Administration	Submitted through Criteria Tool on 7/23/2026, no further action required.
Road Use Maintenance Agreement (RUMA)	Van Wert County	Coordination with Van Wert County is ongoing. Road crossing permits anticipated.
Railroad Crossing Permit	Chicago, Fort Wayne and Eastern Railroad (Genesee & Wyoming)	Right of Entry Agreement was issued on 9/2/2026. (**Appendix C**).
Archaeology/Architectural	Ohio Historic Preservation Office	The Phase I cultural resources report was submitted to the OHPO 8/28/2026. OHPO concurrence is expected September 2026.
Federally Listed Endangered Species Review	United States Fish and Wildlife Service	USFWS Technical assistance letter was issued on 5/27/2026 (**Appendix D**).
Environmental Review (State T&E Species Consultation and Clearance)	Ohio Department of Natural Resources (ODNR) Office of Real Estate & Land Management	An ODNR consultation letter was issued on 6/18/2026. Hibernacula Assessment Consultation Response issued on 8/24/2026 (**Appendix D**).

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.

On May 15, 2026, 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 on June 18, 2026 and May 27, 2026, respectively. Copies of the agencies' responses are presented in **Appendix D**.

Table 4, in **Appendix E** lists the federal and state threatened or endangered species in the Project area.

Limited suitable bat roost habitat was observed within the Project area. This area is limited to approximately 1 acre that is at least partially forested and will require tree clearing within the proposed ROW and 3.4 acres within the route corridor. There is no other suitable bat roosting habitat, as generally no trees were present in the rest of the Project area. Tree clearing is anticipated to occur during the ODNR and USFWS recommended tree clearing window of October 1 through March 31. Further, no hibernaculum were observed within the Project area or in the visible vicinity of the Study Area; a separate hibernaculum assessment was submitted to ODNR on August 20, 2026, and a response was received on August 24, 2026.

Suitable habitat for the monarch butterfly was observed within the Project area. However, proposed threatened species are not protected by take prohibitions until the rule to list a species is finalized.

Based on the nature of the proposed Project activities and habitat characteristics of the surrounding vicinity, construction impacts to 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 a wetland and stream delineation survey on December 19, 2024, July 14-16, 2025, December 11, 2025, and April 13-17, 2026 and prepared an Ecological Survey Report, which is provided in **Appendix E**. The report was prepared for the entire Allen-Maddox Creek 345 kV Transmission Line Rebuild Project, which includes the Project addressed by this LON and adjacent segments. The ecological resources described in this section are limited to the Project area addressed by this application. The survey of the Project area identified two intermittent streams. No wetlands or ponds were identified within the Project area. The Project construction activities are not expected to result in discharge of fill material into either delineated stream. Both streams will be avoided by aerially spanning or bridged, with no work anticipated below the ordinary high-water mark.

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.

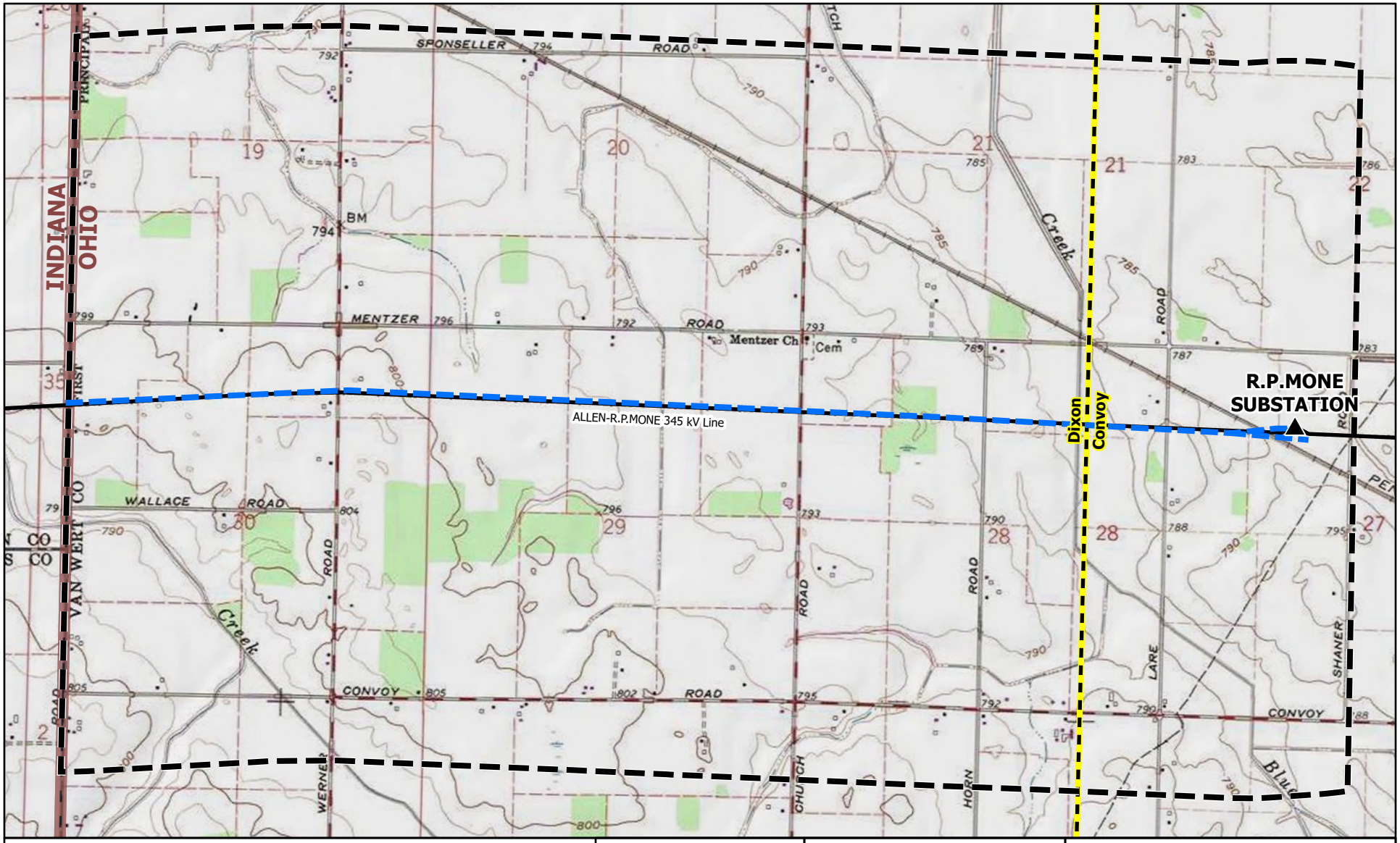
The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map ("FIRM") was reviewed to identify any floodplains/flood hazard areas that have been mapped within the Project Area (specifically, map numbers 39161C0025C and 39161C0050C). Based on this mapping, there are no FEMA-designated 100-year floodplains crossed by the Project.

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



Legend

- Existing Substation
- East Lima – Sorenson 345 kV Transmission Line Rebuild Project Phase 1
- Existing Transmission Line
- Study Area
- USGS 7.5' Topographic Quad Boundary
- State Boundary

Data Sources:
Topographic Map obtained from ESRI
USGS Topographic Quadrangles
Dixon (1980), Ohio
Convoy (1972), Ohio

NAD 1983
State Plane Ohio North
FIPS 3401 (US Feet)

September 03, 2026



Figure 1
Topographic Overview

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East Lima – Sorenson
345 kV Transmission Line Rebuild
Project Phase 1

0 0.25 0.5
Miles



Legend

- East Lima – Sorenson 345 kV Transmission Line Rebuild Project Phase 1
- Existing Transmission Line
- Proposed ROW (150')
- Proposed Route Corridor (300')
- Parcel Boundary
- State Boundary

Sources:
Aerial Imagery obtained from ESRI (2024);
Parcel data obtained from the Van Wert County Auditor's GIS Office (2026)

Page 1 of 4

NAD 1983
State Plane Ohio North
FIPS 3401 (US Feet)

September 03, 2026

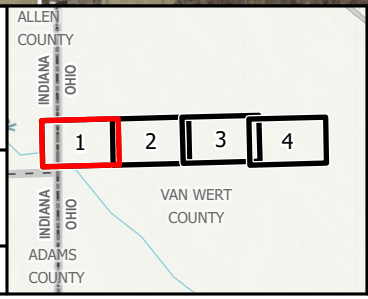


Figure 2
Aerial Overview

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East Lima – Sorenson
345 kV Transmission Line Rebuild
Project Phase 1

0 500 1,000
Feet



Legend

- East Lima – Sorenson 345 kV Transmission Line Rebuild Project Phase 1
- Existing Transmission Line
- Proposed ROW (150')
- Proposed Route Corridor (300')
- Parcel Boundary
- State Boundary

Sources:
Aerial Imagery obtained from ESRI (2024);
Parcel data obtained from the Van Wert County Auditor's GIS Office (2026)

Page 2 of 4

NAD 1983
State Plane Ohio North
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September 03, 2026

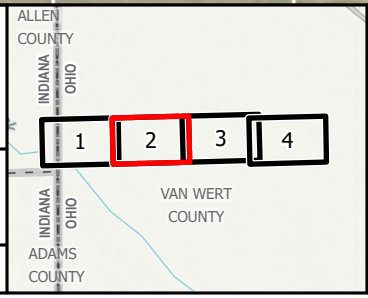
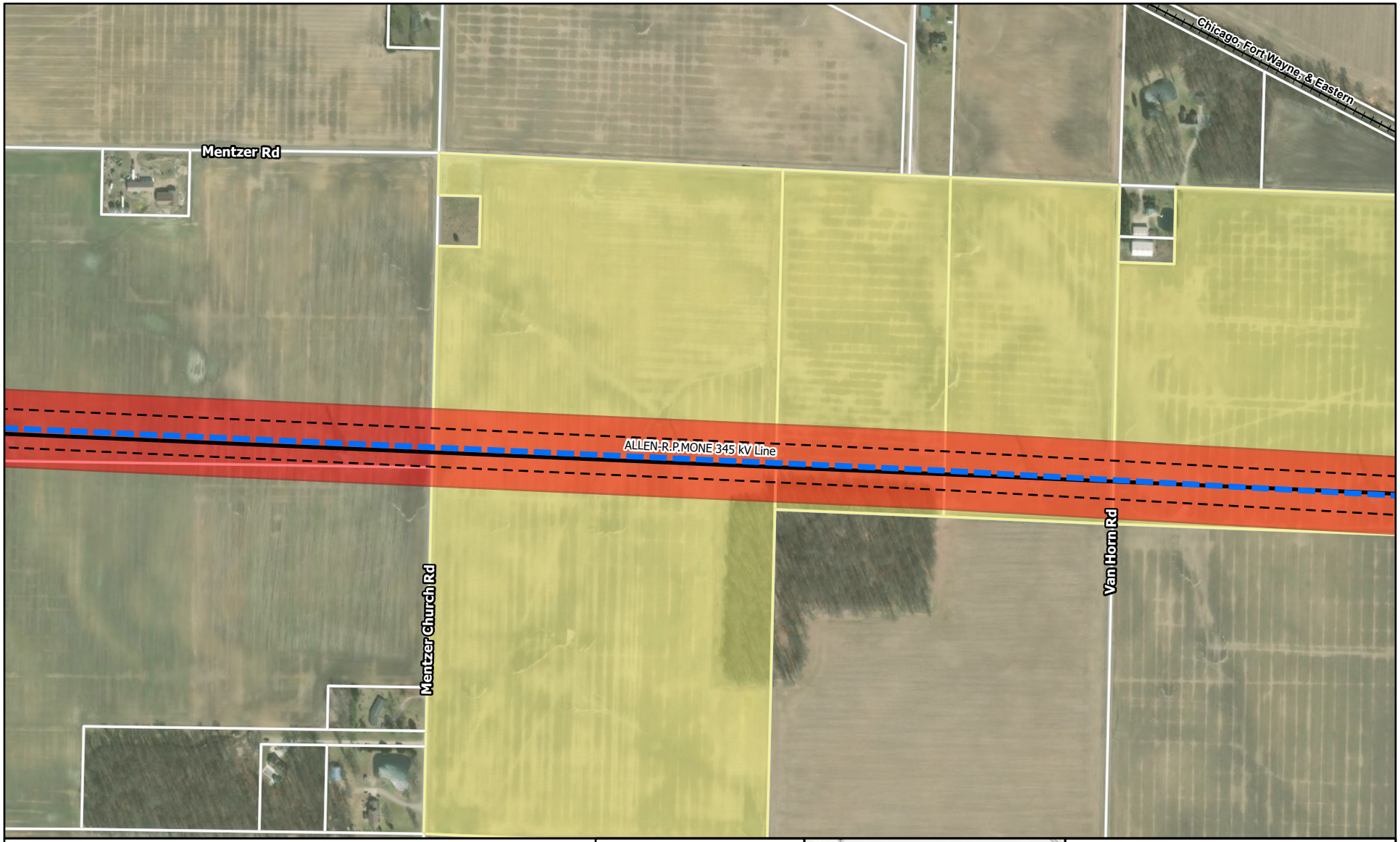


Figure 2
Aerial Overview

AEP OHIO TRANSMISSION COMPANY
An AEP Company
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East Lima – Sorenson
345 kV Transmission Line Rebuild
Project Phase 1

0 500 1,000
Feet



Legend

- East Lima – Sorenson 345 kV Transmission Line Rebuild Project Phase 1
- Existing Transmission Line
- Proposed ROW (150')
- Proposed Route Corridor (300')
- Agricultural District Parcel
- Parcel Boundary
- State Boundary
- Railroad

Sources:
Aerial Imagery obtained from ESRI (2024);
Parcel data obtained from the Van Wert County Auditor's GIS Office (2026)

Page 3 of 4

NAD 1983
State Plane Ohio North
FIPS 3401 (US Feet)

September 03, 2026

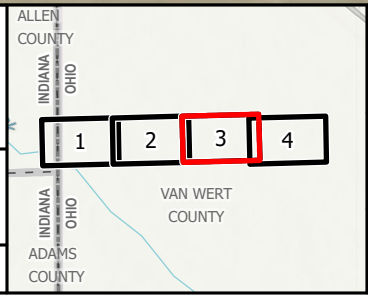
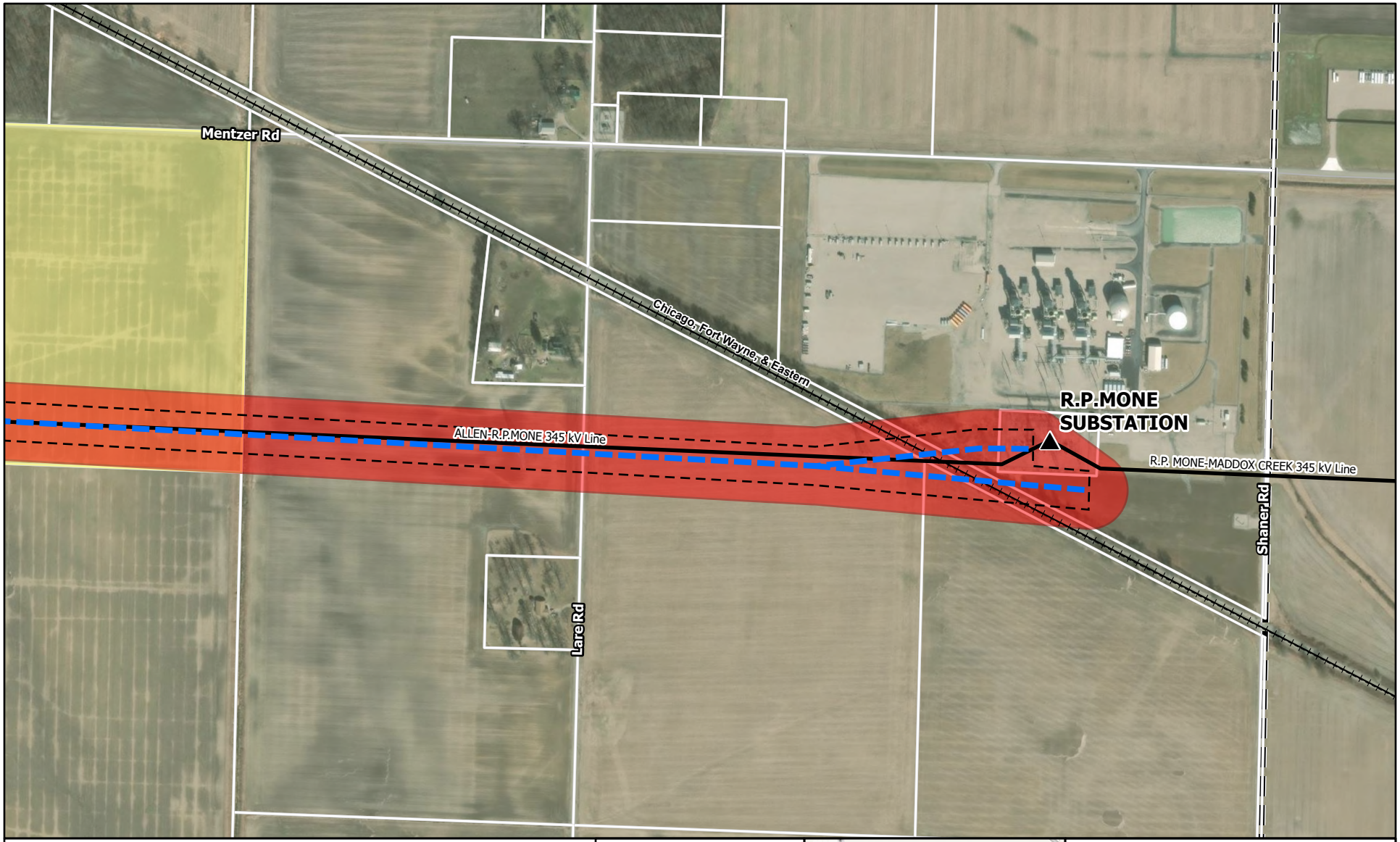


Figure 2
Aerial Overview

AEP OHIO TRANSMISSION COMPANY
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BOUNDLESS ENERGY

East Lima – Sorenson
345 kV Transmission Line Rebuild
Project Phase 1

0 500 1,000
Feet



Legend

- Existing Substation
- East Lima – Sorenson 345 kV Transmission Line Rebuild Project Phase 1
- Existing Transmission Line
- Proposed ROW (150')
- Proposed Route Corridor (300')
- Agricultural District Parcel
- Parcel Boundary
- State Boundary
- Railroad

Sources:
Aerial Imagery obtained from ESRI (2024);
Parcel data obtained from the Van Wert County Auditor's GIS Office (2026)

Page 4 of 4

NAD 1983
State Plane Ohio North
FIPS 3401 (US Feet)

September 03, 2026

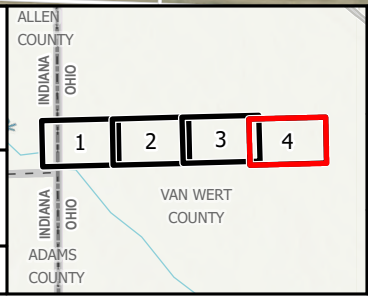


Figure 2
Aerial Overview

AEP OHIO TRANSMISSION COMPANY
An AEP Company
BOUNDLESS ENERGY

East Lima – Sorenson
345 kV Transmission Line Rebuild
Project Phase 1

0 500 1,000
Feet

Appendix B PJM Solution and Long Term Forecast Report

2023 RTEP Window 2 Second Review

Baseline Reliability Projects

PJM © 2024

AEP Transmission Zone: Baseline 2023 RTEP Window 2 Clusters 4 & 6

Process Stage: Recommended Solution – Second Read

Criteria: Summer/Winter Generator Deliverability

Assumption Reference: 2023 RTEP assumptions

Model Used for Analysis: 2028 RTEP cases

Proposal Window Exclusion: None

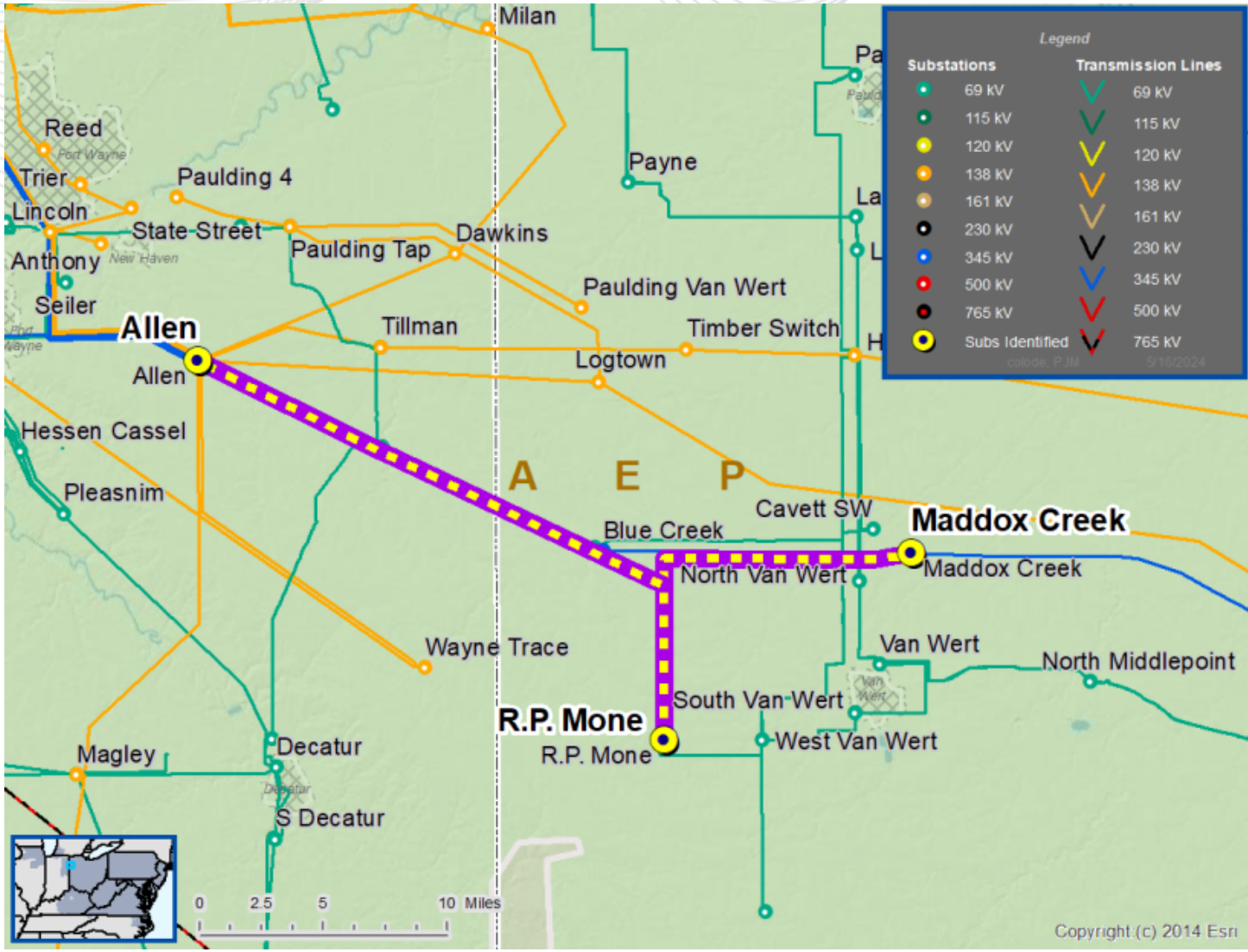
Problem Statement:

Cluster 4: 2023W2-GD-S170, 2023W2-GD-S142, 2023W2-GD-W213, 2023W2-GD-W58

In 2028 RTEP summer and winter cases, the R.P. Mone – Maddox Creek 345 kV line is overloaded in generator deliverability test for both N-1 and N-2 outages

Cluster 6: 2023W2-GD-W12

In 2028 RTEP winter cases, the Allen – R.P. Mone 345kV line is overloaded in generator deliverability test for a N-1 outage



PJM © 2024

AEP Transmission Zone: Baseline
2023 RTEP Window 2 Clusters 4 & 6

- As part of the 2023 RTEP Window #2, projects listed in the table below were proposed to address the violations in cluster 4, 6 or 4&6
- 7 total proposals submitted: all Upgrades from the same proposing entity - AEP

Proposal ID #	Cluster	Project Description	Total Cost ($M)	Analysis Summary
561	Cluster 4	Reconductor the 9.4 mile 345 kV line between RP Mone and Maddox Creek stations.	16.719	Solves the target FGs, causes overload on Maddox -E. Lima 345kV line, increases the loading on Alllen - RP Mone line
957	Cluster 4	Rebuild the 9.4 mile 345 kV line between RP Mone and Maddox Creek stations.	39.034	Solves the target FGs, causes overload on Maddox -E. Lima 345kV line, increases the loading on Alllen - RP Mone line
683	Cluster 6	Mitigate three clearance issues on Allen - RP Mone 345 kV line to allow line to operate to conductor's designed rating.	0.450	Solves the target FG. Margin is not big though (93.4%)
169	Cluster 6	Reconductor approximately 18.6 miles of 345 kV line between Allen and RP Mone stations.	32.486	Solves the target FG, increases the loading on the RPMORE- Maddox, causes overload on the Maddox - E Lima 345KV line
819	Cluster 6	Rebuild approximately 18.6 miles of 345 kV line between Allen and RP Mone stations.	49.875	Solves the target FG, increases the loading on the RPMORE- Maddox, causes overload on the Maddox - E Lima 345KV line
11	4 & 6	Install 345 kV Phase Shifting Transformer at East Lima station on line towards Fostoria Central.	40.301	Solves the target FGs ,causes overload on E. Lima transformer #2, W. Fremont - Fremont AEP/ATSI 138KV tie
334	4 & 6	String the open positions of the 345 kV line between Maddox Creek and Sorenson stations to establish a new 345 kV circuit between the two stations (42.6 miles). Reconductor the existing conductors on the line. Perform station work at Maddox Creek, Sorenson, and East Lima stations.	134.397	Solves the target FGs

AEP Transmission Zone: Baseline
2023 RTEP Window 2 Clusters 4 & 6

R.P. Mone – Maddox Creek 345kV line (in AEP EOL list)

- 9.4 miles of Paper Expanded (PE) Conductor originally installed in 1955
- All but one of the existing structures on the line were originally installed in 1955

Allen – R.P. Mone 345kV line (in AEP EOL list)

- 24.6 miles of Paper Expanded (PE) Conductor originally installed in 1955 and 1968
- All but two of the existing structures on the line were originally installed in 1955 or 1968

Options	Proposal #169 (Allen – R.P. Mone reconductor) Proposal #561 (R.P. Mone – Maddox Creek reconductor) Portion of Proposal #334 (Station work at E. Lima & Maddox Creek)	Proposal #819 (Allen – R.P. Mone rebuild) Proposal #957 (R.P. Mone – Maddox Creek rebuild) Portion of Proposal #334 (Station work at E. Lima & Maddox Creek)	Proposal #334
Cost ($M)	**52.766**	**92.470**	**134.397**
EOL factors	Partially addresses the EOL issues for both Allen - RP Mone and RP Mone - Maddox Creek 345kV circuits	Addresses the EOL issues for both Allen - RP Mone and RP Mone - Maddox Creek 345kV circuits	Partially addresses the EOL issues for both Allen - RP Mone and RP Mone - Maddox Creek 345kV circuits

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TEAC:
AEP Supplemental Projects

November 6, 2024

Needs

Stakeholders must submit any comments within 10 days of this meeting in order to provide time necessary to consider these comments prior to the next phase of the M-3 process

AEP Transmission Zone M-3 Process
Fort Wayne, IN

Need Number: AEP-2024-IM014
Process Stage: Need Meeting: 11/6/2024
Project Driver: Equipment Condition/Performance/Risk

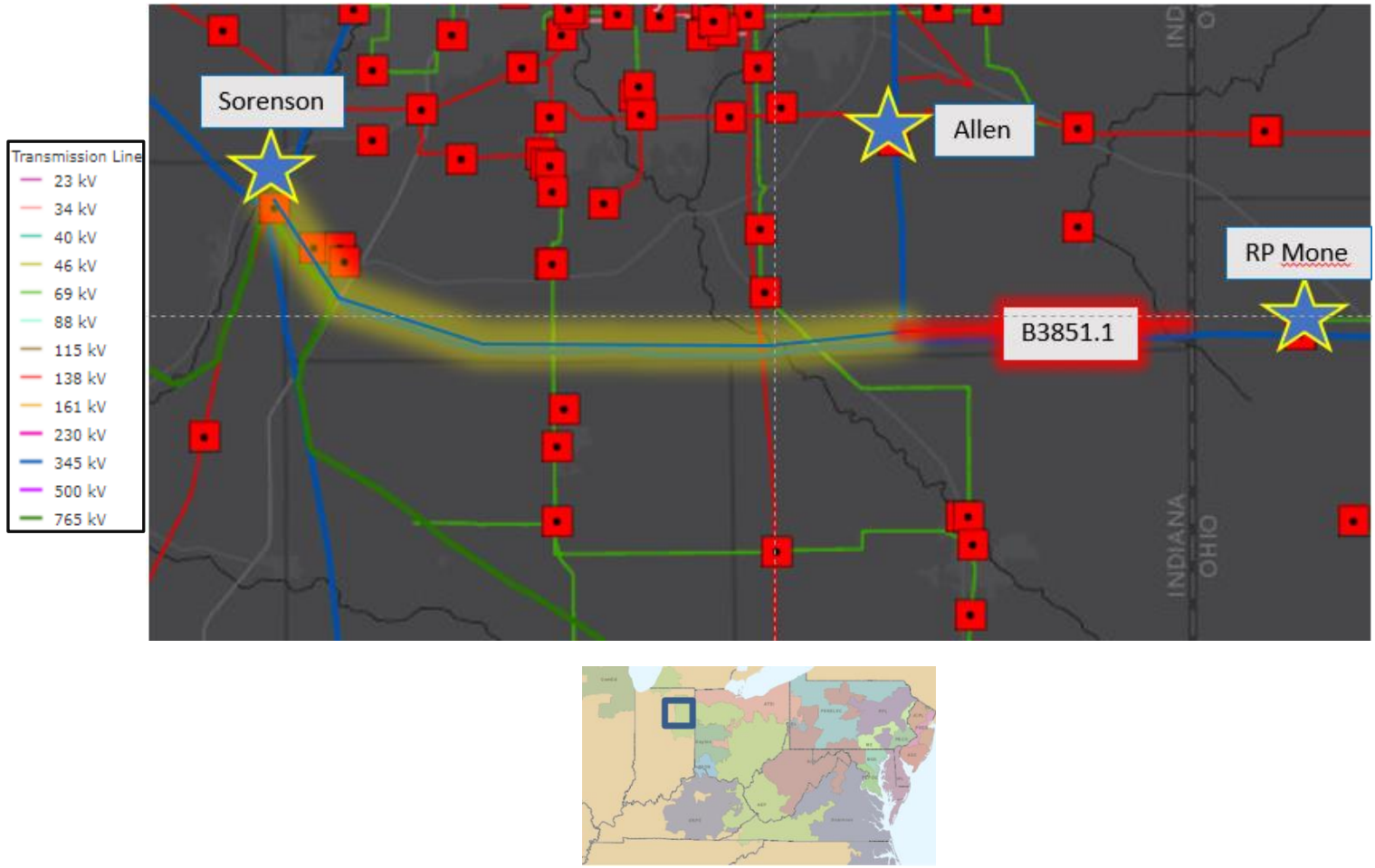
Specific Assumption Reference: AEP Guidelines for Transmission Owner Identified Needs (AEP Assumptions Slide 13)

Problem Statement:

On 05/09/2023 AEP presented phase 1 of the Paper Expanded lines plan along with specific concerns to the paper expanded conductor lines on AEP's footprint. The below line is part of this plan.

<u>East Lima – Sorenson 345kV Line Need</u>

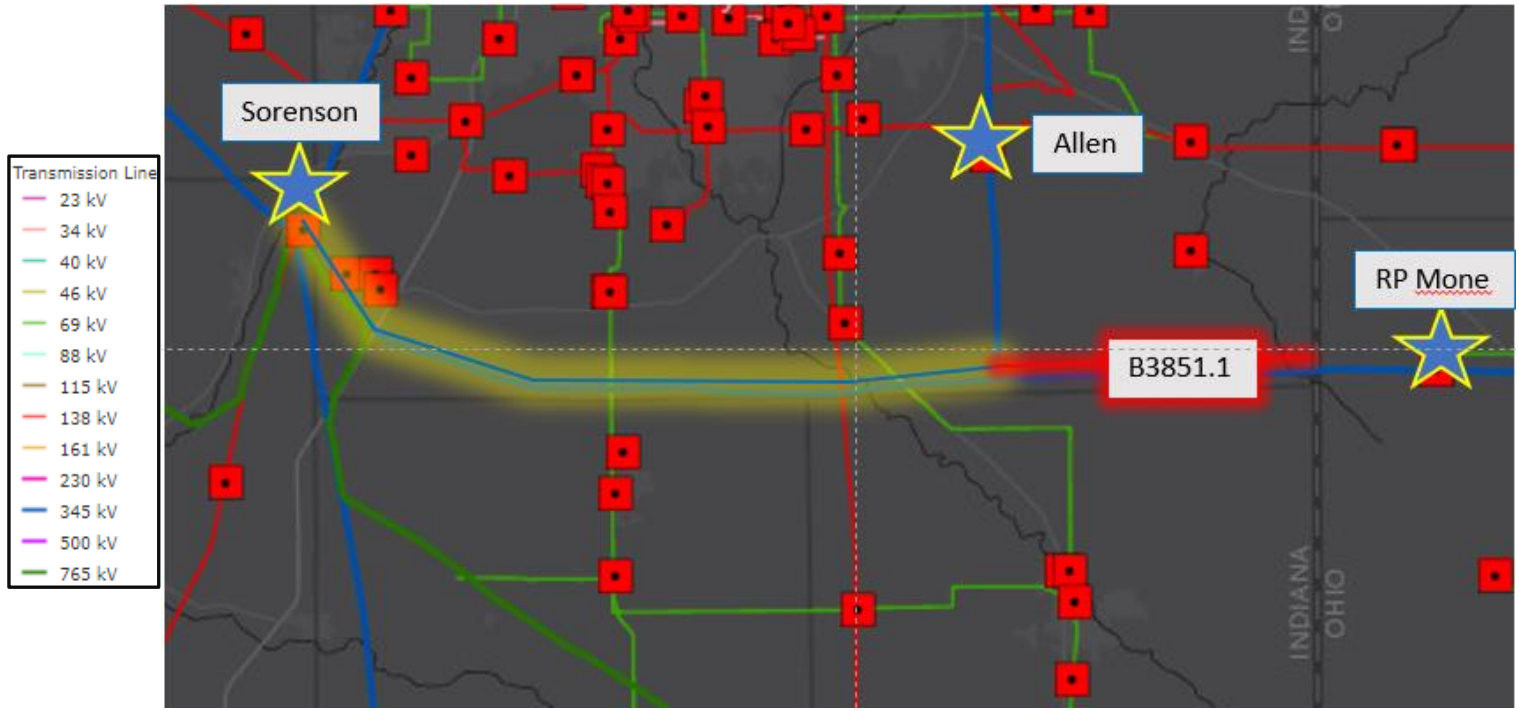
- The majority of the 30.01 miles of line (117/120 structures) consists of 1955-era double circuit steel lattice towers. This line consists of 2x 345kV circuits Allen – RP Mone 345kV, and Allen – Sorenson 345kV. The Allen – RP Mone 345kV circuit (~8.8 miles of the 30 mile line) is being rebuilt under B3851.1. This need covers the remainder of the line back to Sorenson station.
- The entire 345kV line consists of 1,275,000 ACSR/PE conductor
- There were 24 Structures throughout the line were assessed by drone and 13 structures assessed by ground crew. Of the structures that were assessed, the following conditions were found:
- All towers show corrosion



Need Number: AEP-2024-IM014

Problem Statement (continued):

- Most towers have corroded insulator attachment hardware, worn arm brackets where the C-hook insulator attachment hardware connects
- Approximately 38% of the towers have broken or flashed insulators
- Many vertical insulators are contaminated from paint droppings
- Much of the line is built across farmland that is difficult to access due to soil conditions
- Since 2019, there has been 1 direct momentary outage caused by lightning
- Currently, there are 117 structures with at least one open structural, shielding or hardware condition which relates to 98% of the structures on the line. These open conditions include, but are not limited to the following:
- Worn insulator assembly hardware, worn shield wire hardware, broken suspension insulators, and broken insulators. There is currently 1 open shielding condition related to broken shield wire strands





AEP Transmission Zone M-3 Process
New Carlisle, IN

Need Number: AEP-2024-IM016
Process Stage: Need Meeting: 11/6/2024
Project Driver: Customer Service

Specific Assumption Reference: AEP Interconnection Guidelines (AEP Assumptions Slide 12)

Problem Statement:

A customer has requested new service for 437MW of load in the New Carlisle, IN area. Initial service is requested by 3/15/2027.





PUCO FORM FE-T9

AEP Ohio Transmission Company, Inc.

Specifications of Planned Transmission Lines

1	LINE NAME AND NUMBER:	Allen - RP Mone 345 kV (TP2408404 b3851)
2	POINTS OF ORIGIN AND TERMINATION	Allen - RP Mone 345 kV INTERMEDIATE STATION - N/A
3	RIGHTS-OF-WAY: LENGTH / WIDTH / CIRCUITS	~18.5 mi / 150 ft / 2 circuit (~3.4 mi of OH T-line Work)
4	VOLTAGE: DESIGN / OPERATE	345 / 345 kV
5	APPLICATION FOR CERTIFICATE:	2026
6	CONSTRUCTION:	2026 - 2028
7	CAPITAL INVESTMENT:	$11.5 M
8	PLANNED SUBSTATION:	N/A
9	SUPPORTING STRUCTURES:	Steel
10	PARTICIPATION WITH OTHER UTILITIES	N/A
11	PURPOSE OF THE PLANNED TRANSMISSION LINE	To fix a N-1-1 overload
12	CONSEQUENCES OF LINE CONSTRUCTION DEFERMENT OR TERMINATION	Increased risk of equipment failure, reliability, and operational issues
13	MISCELLANEOUS:	
14	Advanced Transmission Technologies	Advanced conductors (ACCC) are currently being considered to install on this line. ACCC conductor is an aluminum transmission line conductor with a composite core that offers higher current carrying capability and energy efficiencies when compared to traditional ACSR (Aluminum Conductor Steel Reinforced) conductors.

Appendix C Property Agreement Easement Form and Right of Entry Agreement

Line Name: _____
Line No.: _____ Easement No.: __

SUPPLEMENTAL EASEMENT AND RIGHT OF WAY

On this ___ day of_____, 2026, _____, whose address is_____, ("Grantor"), whether one or more persons, owns an interest in a tract of real property that is more particularly described lands of the Grantor, situated in the State of Ohio, _____County, _____Township, _____Quarter section, Section ____, Township No.____, Range No.____, Tax Parcel Number _____, in that certain document, dated _____ recorded in _____, Page ___ of the real property records of _____ County, Ohio, and such tract is subject to easements and rights-of-way granted in favor of AEP Ohio Transmission Company, Inc..

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") is the current owner and holder of the rights, title, and interest, or a portion thereof, granted in or arising under that certain right of way and easement, dated _____, and recorded in Deed Book ___, Page____, of the official records of _____ County, Ohio (the "Original Easement").

NOW, THEREFORE, in consideration of the sum of Ten and NO/100 Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Grantor hereby grants, conveys and warrants this Supplemental Easement and Right of Way ("Easement") to AEP for electric transmission, distribution, and communication lines and appurtenant equipment and fixtures, being, in, on, over, under, through and across to supplement the Original Easement insofar as it encumbers such tract of real property owned by Grantor as more particularly described above.

Auditor/Key/Tax Number: _____

The location, width, and boundaries of the easement area are hereby revised, modified, and clarified to be as described and depicted on Exhibit "A", attached hereto and made a part hereof ("Easement Area").

The Easement is also supplemented by the addition of the following language:

AEP, its successors and assigns, are granted the right to construct, reconstruct, operate, maintain, alter, inspect and patrol (by ground or air), protect, repair, replace, renew, upgrade, relocate within the Easement Area, remove and replace poles, towers, and structures, made of wood, metal, concrete or other materials, including crossarms, guys, anchors, anchoring systems, grounding systems, underground conduits, ducts, vaults, transformers, pedestals, risers, pads, communications facilities, and all other appurtenant equipment and fixtures, and to string conductors, wires and cables. The electric facilities may consist of a variable number of towers, poles, wires, guys, anchors and associated fixtures, including the right to enlarge, and may transmit electricity of any voltage or amperage, 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 Area herein granted, together with the privilege of removing at any time any or all of said facilities erected on the Easement Area.

AEP and its successors and assigns, shall have the right, in AEP's reasonable discretion, to cut down, trim, and otherwise control, using herbicides or tree growth regulators, or other means, and at AEP's option, to remove from the Easement Area any and all trees, overhanging branches, vegetation, brush, including all root systems or other obstructions. AEP shall also have the right to cut down, trim, remove, and otherwise control trees situated on lands of the Grantor which adjoin the Easement Area, when in the reasonable 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.

AEP and its successors and assigns are granted the right of unobstructed ingress and egress, at any and all times, on, over, across, along and upon the Easement Area, and across the adjoining lands of Grantor as may be reasonably necessary to access the Easement Area for the above referenced purposes.

In no event 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 shall repair or pay Grantor for actual damages to growing crops, fences, gates, field tile, drainage ways, drives, or lawns caused by AEP in the exercise of the rights herein granted.

The failure of AEP to exercise any of the rights granted herein, including but not limited to the removal of any obstructions from the Easement Area, shall not be deemed to constitute a waiver of the rights granted herein and the removal of any facilities from the Easement Area shall not be deemed to constitute a permanent abandonment or release of the rights granted herein.

Except as modified by this Supplemental Easement and Right of Way, all terms and provisions of the Original Easement and all rights arising in connection with the Original Easement shall remain

in full force and effect, and the Original Easement shall keep its priority in title as of the date of its recording. Those provisions and rights are expressly ratified, reaffirmed by and incorporated within this Supplemental Easement and Right of Way. The Original Easement along with this Supplemental Easement and Right of Way shall for all purposes function as a single instrument, however, to the extent any terms or provisions of the Original Easement conflict with, limit or are inconsistent with any term or provision of the Supplemental Easement and Right of Way, the terms and provisions of this Supplemental Easement and Right of Way shall control. Nothing herein will in any manner vary, change, modify, or restrict the rights and privileges that AEP may have acquired through any instrument other than the Original Easement or by any other means.

The terms and conditions as supplemented by this instrument, are the complete agreement, expressed or implied between the parties hereto and shall inure to the benefit of and be binding on their respective successors, assigns, heirs, executors, administrators, lessees, tenants, licensees, and legal representatives.

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

Any remaining space on this page intentionally left blank. See next page(s) for signature(s).

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

GRANTOR

_____

_____

State of §

County of §

This instrument was acknowledged before me on the _____ day of _____, ____, by _____.

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

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

GRANTOR

_____
Rebecca J. Whittenbarger

State of §

County of §

This instrument was acknowledged before me on the _____ day of _____, 2026, by Rebecca J. Whittenbarger.

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

This instrument prepared by Marland L. Turner, Senior 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.

CONTRACTOR RIGHT OF ENTRY LICENSE AGREEMENT

THIS AGREEMENT (the "Agreement") is made as of _____, 2026, (the "Effective Date"), by and between Chicago, Ft Wayne & Eastern Railroad a division of Central Railroad Company of Indianapolis ("Railroad") and Indiana Michigan Power Company ("Licensee").

WITNESSETH:

WHEREAS, Licensee has submitted a written request or application to Railroad requesting permission to enter Railroad's property at or near the location specified in Section 1 below for the limited purpose of performing certain work; and

WHEREAS, Railroad is willing to grant to Licensee the limited right and permission to enter upon such property for the limited purpose of performing such work in accordance with the terms provided herein.

NOW THEREFORE, in consideration of these promises, the Agreement herein, and other good and valuable consideration the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

Section 1. LOCATION/PAYMENT/WORK PRACTICES:

1.1 Railroad hereby conveys to Licensee the limited right and permission to enter upon the Railroad's property located at or near Milepost 296.68, Lima Subdivision, Latitude: 40.9284, Longitude: -84.741 located in CONVOY, in the County of VAN WERT, State of OH as reflected on the map attached hereto as Exhibit A and incorporated herein by reference (the "Property") for the purpose of Licensee, through its employees, agents or contractors to REBUILD EXISTING 245kV TRANSMISSION WIRELINE CROSSING COVERED UNDER CR 153590 (the "Work"); and

1.2 Upon payment of a fee referenced in Section 11 herein, Railroad hereby grants to Licensee, the right and permission to enter upon Railroad's Property for the purpose of performing the Work, subject to the terms, conditions and provisions set forth in this Agreement.

1.3 The Work shall be performed at the entire cost and expense of Licensee, in accordance with good and sound engineering practices, to the satisfaction of Railroad's Chief Engineer, or his duly authorized representative (the "Representative"), and in a manner to avoid accident, damage or harm to persons or property and delays to or interference with the operations of Railroad.

Section 2. PRIOR NOTICE/FLAGGING/OTHER CONDITIONS.

2.1 Licensee or Licensee's contractor shall notify the Representative at least ten (10) business days before proceeding with any phase of the Work on the Property and shall abide by the instructions of the Representative concerning the safety of the Railroad. All persons entering the Property pursuant to the permission granted herein shall comply with and perform the Work in accordance with the following policies:

a) Genesee & Wyoming Inc.'s Contractor Safety Rules, available at: https://www.gwrr.com/wp-content/uploads/2021/05/GWI-Contractor-Safety-Rules.pdf; and
b) Genesee & Wyoming Inc.'s Code of Ethics and Conduct, available at: gwrr.com/about_us/code-of-ethics

The following Personal Protective Equipment ("PPE") must be worn at all times on the Property: Hard hats, safety footwear, certified eye protection with side shields and approved high-visibility work wear. Additional forms of PPE may be required under certain circumstances as specified in the aforesaid Contractor Safety Rules or as required by the Representative.

2.2 Railroad shall furnish such personnel, flagman or watchman which, in Railroad's sole discretion, may be necessary to protect the facilities and traffic of Railroad during the performance of the Work. If flagging or other special protective or safety measures are performed by Railroad, Railroad will invoice Licensee for such expenses incurred by Railroad based on the current fee schedule annexed hereto as Exhibit D. Licensee shall pay such invoices within thirty (30) days of Licensee's receipt of billing. If Railroad performs any flagging, or other special protective or safety measures are performed by Railroad, Licensee agrees that Licensee is not relieved of any of its responsibilities or liabilities set forth in this Agreement. The Licensee or its contractor shall reimburse Railroad promptly for the actual cost of said services, including all applicable surcharges, upon receipt of bill or bills therefor.

2.3 Unless Prior arrangements have been made with the Chief Engineer or his representative, Licensee shall not place or operate equipment at a distance of less than fifty (50) feet from the center of track, nor perform any Work at a distance of less than fifty (50) feet from the center of Railroad's track. Further, no equipment shall be moved across the Railroad's track(s) except at an established public crossing, unless prior arrangements have been made with the Chief Engineer or his Representative. All reasonable precautions must be taken by Licensee to avoid interference with and/or damage to Railroad's facilities during the course of the Work.

2.4 Prior to entering upon the Property, Licensee agrees to comply with **RAILROAD'S ROADWAY WORKER PROTECTION TRAINING POLICY** as set forth in Exhibit B, attached hereto and incorporated herein by reference, if such training is applicable as determined in the sole discretion of Railroad.

2.5 The permission herein granted is subject to all existing leases, licenses and occupancies of the Property by third parties. Licensee acknowledges that, in executing this Agreement, Railroad acts on its own behalf only and has no authority to act, and does not claim to act, on behalf of any other entity or person with respect to any right any such other entity or person may have to object to this Agreement. Licensee shall secure the consent, and protect the facilities, of each such third-party occupier of the Property.

2.6 Licensee shall implement and enforce a safety program conforming to all applicable requirements of federal, state and local laws, rules and regulations.

Section 3. LEGAL COMPLIANCE.

Licensee expressly agrees, at its own cost and expense, to comply and cause its agents, employees and contractor(s) to comply with all applicable ordinances, rules, regulations, requirements and laws of any governmental authority (state, federal or local) having jurisdiction over the Work or Licensee's activities, including the location, contact, excavation and protection regulations of the Occupational Safety and Health Act and state "One Call" - "Call Before You Dig" or similar requirements. Licensee shall indemnify, defend and save harmless Railroad, its parents, affiliates and subsidiaries, and the respective shareholders, directors, officers and employees of each (hereinafter collectively the "Railroad Indemnitees"), from and against, and shall pay, all expenses, damages, penalties, and claims, including without limitation reasonable counsel fees, that may arise from, or be imposed because of the failure of Licensee to comply with this Section.

Section 4. LIABILITY/INDEMNITY.

4.1 Licensee hereby assumes risk of and agrees to indemnify, defend, protect and save the Railroad Indemnitees harmless from and against (a) injury to or death of any person or persons whomsoever, including but not limited to the agents, employees or contractor(s) of the parties hereto, and (b) the loss or damage to any property whatsoever, including property claims, demands, suits, judgments or expenses incurred in connection therewith, resulting from or arising out of the acts or omissions of Licensee, its agents, employees or contractor(s), or resulting from, arising out of, or occurring in connection with the entry or presence of Licensee, its agents, employees or contractor(s) on the Property, or resulting from, arising out of, or occurring in connection with the performance or execution of the Work performed under this Agreement or incidental thereto, regardless of any negligence on the part of Licensee or Railroad. THE INDEMNITY PROVIDED IN THIS SECTION 4 IS SPECIFICALLY MEANT TO INCLUDE INDEMNITY OF THE RAILROAD INDEMNITEES FOR THEIR

OWN ORDINARY NEGLIGENCE, EXCEPT TO THE EXTENT CAUSED BY THE SOLE NEGLIGENCE OF RAILROAD INDEMNITEES. LICENSEE'S INDEMNITY OBLIGATIONS IN THIS SECTION 4 SHALL NOT BE LIMITED IN ANY WAY BY ANY LIMITATION ON THE AMOUNT OR TYPE OF DAMAGES, COMPENSATION OR BENEFITS AVAILABLE UNDER WORKERS' OR WORKMEN'S COMPENSATION ACTS, DISABILITY ACTS OR EMPLOYEE BENEFITS ACTS.

4.2 IN NO EVENT UNDER THIS AGREEMENT WILL THE RAILROAD INDEMNITEES HAVE ANY LIABILITY FOR INDIRECT, SPECIAL, PUNITIVE, INCIDENTAL OR CONSEQUENTIAL DAMAGES. ADDITIONALLY, THE TERM "RAILROAD INDEMNITEES" AS USED IN THIS SECTION 4 SHALL INCLUDE ANY OTHER RAILROAD COMPANY THAT MAY BE LAWFULLY OPERATING UPON AND OVER THE TRACKS OR THE TRACKS CROSSING OR ADJACENT TO THE TRACKS, AND THE OFFICERS, AGENTS, INVITEES AND EMPLOYEES THEREOF.

Section 5. INSURANCE.

Licensee agrees to comply with the **INSURANCE REQUIREMENTS FOR CONTRACTOR RIGHT-OF-ENTRY LICENSE AGREEMENTS** attached hereto as Exhibit C and incorporated herein by reference and shall provide the required Certificate of Insurance to Railroad with return of the signed duplicate original of this Agreement prior to the commencement of the Work.

Section 6. NOTIFICATION.

Licensee shall promptly notify the Chief Engineer of any loss, damage, injury or death arising out of or in connection with the Work.

Section 7. RESTORATION.

Upon completion of the Work or the termination or expiration of this Agreement, Contractor shall promptly remove from the Property all tools, equipment and materials placed thereon by Contractor. Contractor shall restore the Property to the same state and condition as when Contractor first entered thereon and shall leave the Property in a condition satisfactory to the Chief Engineer or the Representative.

Section 8. TERM/TERMINATION.

This Agreement and the permission conferred, and the license granted by it does not constitute a grant of permanent easement and shall terminate upon completion of the Work or at midnight 60 calendar days following the Effective Date, whichever occurs first, unless extended in writing by Railroad. Notwithstanding the foregoing, Railroad shall have the right to terminate this Agreement and the license granted hereunder immediately if Licensee defaults on any of the terms and/or conditions set forth herein.

Section 9. COMPLIANCE AND DOCUMENTATION.

Licensee agrees, and shall cause its agents, employees and contractor(s), to (a) understand and comply with the terms and conditions of this Agreement, (b) carry a copy of this Agreement at all times while on the Property, and (c) promptly present the copy of this Agreement to any employee of Railroad upon request.

Section 10. RAILROAD CONTACT INFORMATION.

The Railroad's Chief Engineer is:

Matthew Hissong
2715 Wayne Trace
Ft Wayne, IN 46803

The Railroad's Representative is:

National Railroad Safety Services, Inc., David Shepherd
513.755.4910

Railroad **EMERGENCY** Phone Number: **(800) 979-4958**
Reference Location: **Chicago, Ft Wayne & Eastern Railroad a division of Central Railroad Company of Indianapolis Subdivision Lima Milepost 296.68**

Section 11. FEE.

Upon execution of this Agreement, Licensee shall pay Railroad the sum of $1750 toward the cost of preparing this Agreement and for the privileges granted to the Licensee.

Section 12. NON-WAIVER.

If either party fails to enforce its respective rights under this Agreement, or fails to insist upon the performance of the other party's obligations hereunder, such failure shall not be construed as a permanent waiver of any rights or obligations in this Agreement.

Section 13. APPLICABLE LAW.

This Agreement shall be governed by and construed under the laws of the State of OH, without regard to the choice of law provisions thereof.

Section 14. ASSIGNMENT.

Licensee shall not assign this Agreement without the prior written consent of Railroad, which consent may be granted or withheld at Railroad's sole discretion. This Agreement shall be binding upon the parties and their respective successors and permitted assigns.

Section 15. INTERPRETATION/SEVERABILITY.

To the maximum extent possible, each provision of this Agreement shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Agreement shall be prohibited by, or held to be invalid under, applicable law, such provision shall be ineffective solely to the extent of such prohibition or invalidity, and this shall not invalidate the remainder of such provision or any other provision of this Agreement.

Section 16. COUNTERPARTS.

This Agreement may be executed in multiple counterparts, each of which shall, for all purposes, be deemed an original but which together shall constitute one and the same instrument, and counterparts of this Agreement may also be exchanged electronically and any electronic facsimile of any party's signature shall be deemed to be an original signature for all purposes.

Section 17. HEADINGS.

The headings of the sections of this Agreement are inserted for convenience only and are not intended to govern, limit or aid in the construction of any term or provision of this Agreement.

Section 18. CONSTRUCTION OF TERMS.

The terms of this Agreement have been arrived at after mutual negotiation and, therefore, it is the intention of the Parties that its terms not be construed against any of the Parties by reason of the fact that it was prepared by one of the Parties.

Section 19. CONFIDENTIALITY.

The parties shall not disclose the terms of this Agreement to a third party (a) other than as required by law so long as such party required to disclose the terms of this Agreement under applicable law provides the other party with prior written notice of such requirement, or (b) as otherwise agreed in writing between the parties. Notwithstanding the foregoing, the parties may disclose the terms and conditions of the Agreement to (1) a parent, subsidiary or affiliated company; or (2) to their lawyers and consultants, including but not limited to its auditors, provided that all such parties agree to maintain the confidentiality of such information in accordance with the terms of this provision. If any party violates this paragraph, any adversely affected party may cancel this Agreement without penalty and exercise any available remedies under applicable law.

[*Signature Page Follows*]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the Effective Date.

RAILROAD:
CHICAGO, FT WAYNE & EASTERN RAILROAD A DIVISION OF CENTRAL RAILROAD COMPANY OF INDIANAPOLIS

By:_____

Name:

Its:

LICENSEE:
INDIANA MICHIGAN POWER COMPANY

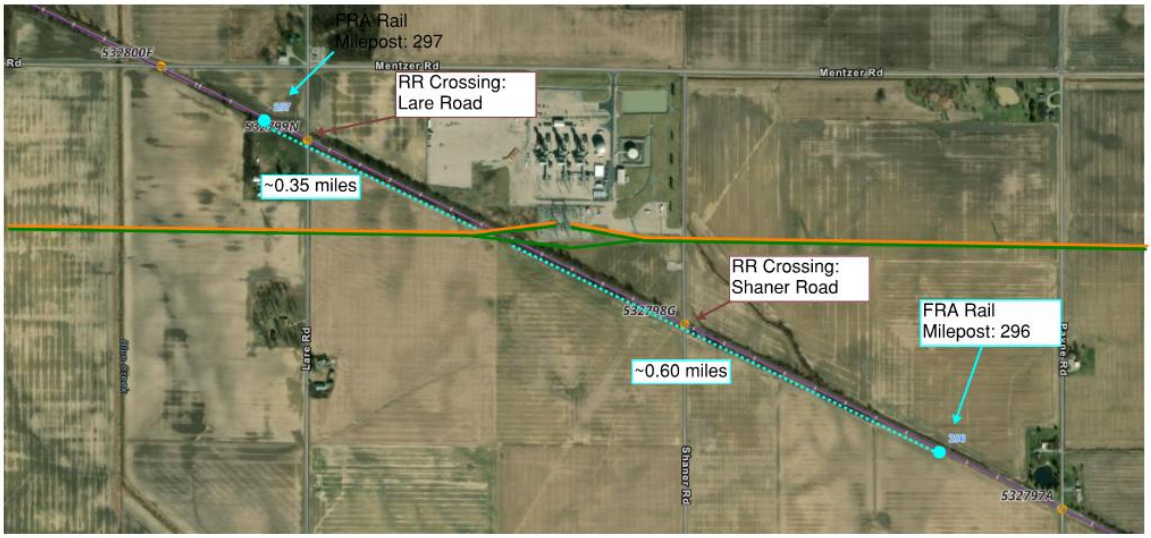
By:_____

Name:

Its:

EXHIBIT A

DESCRIPTION OF PROPERTY

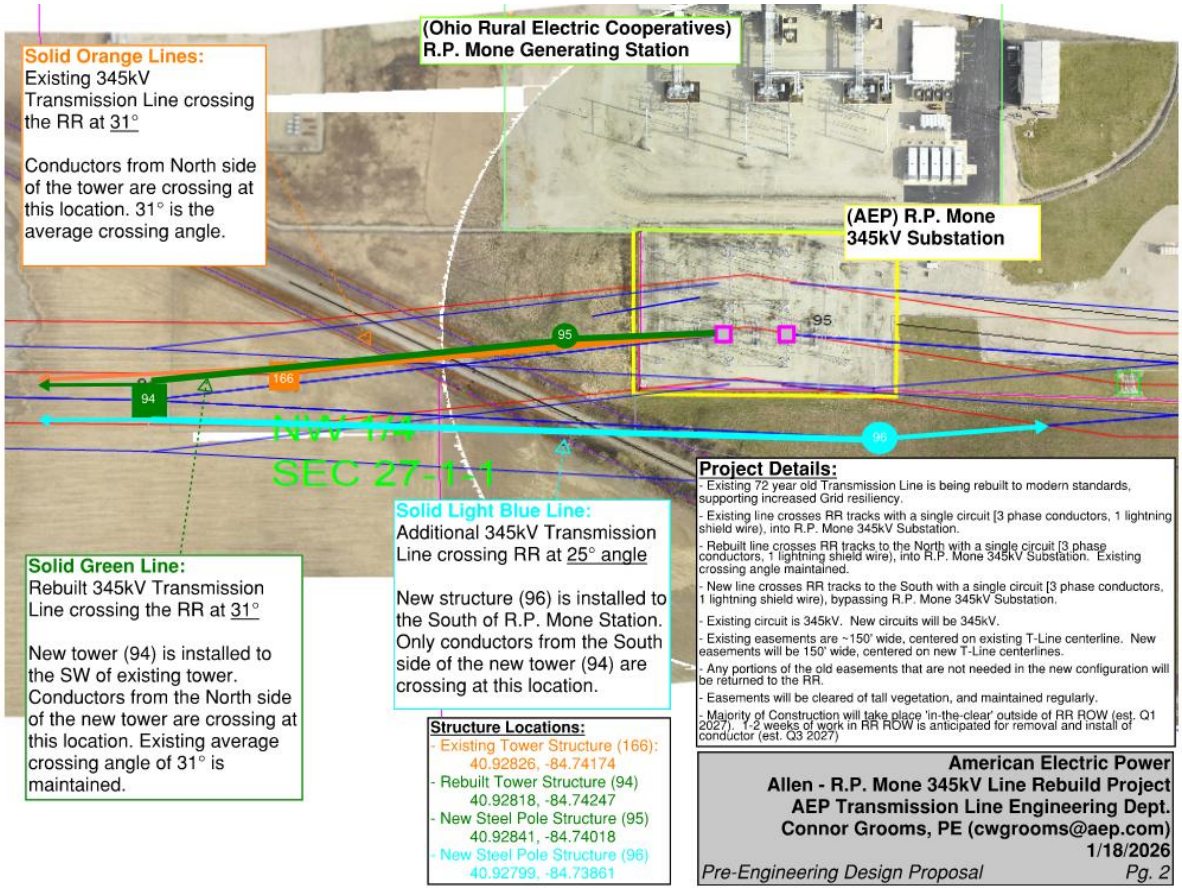


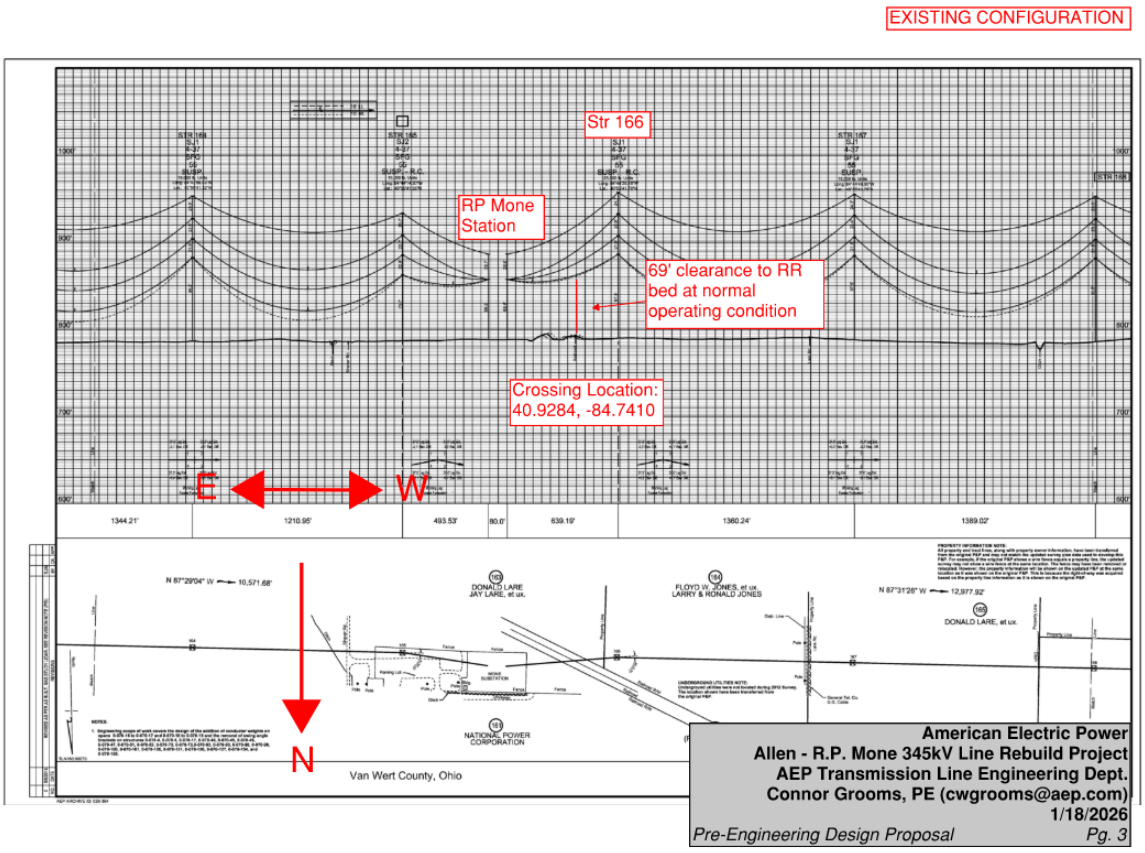
Orange: Approx. Existing AEP 345kV Transmission Line C/L

Green: Approx. Proposed AEP 345kV Transmission Line C/L

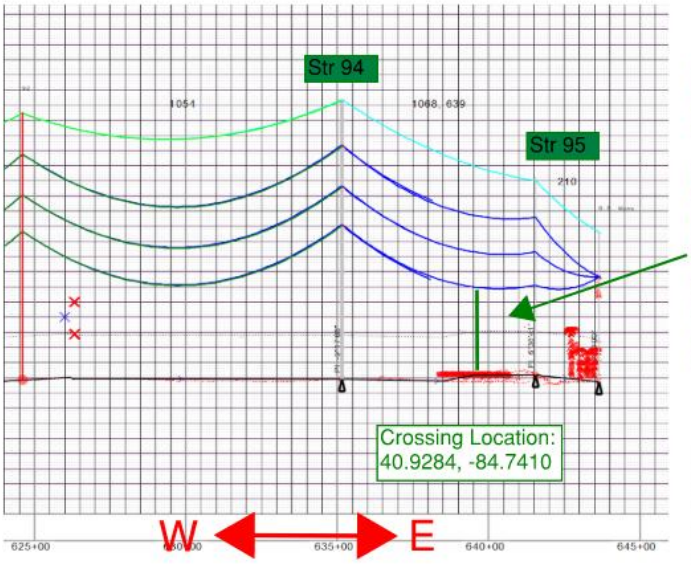
American Electric Power
Allen - R.P. Mone 345kV Line Rebuild Project
AEP Transmission Line Engineering Dept.
Connor Grooms, PE (cwgrooms@aep.com)
1/18/2026

Pre-Engineering Design Proposal *Pg. 1*


(Ohio Rural Electric Cooperatives)
R.P. Mone Generating Station
(AEP) R.P. Mone
345kV Substation
Solid Orange Lines:
Existing 345kV Transmission Line crossing the RR at 31°
Conductors from North side of the tower are crossing at this location. 31° is the average crossing angle.
Solid Green Line:
Rebuilt 345kV Transmission Line crossing the RR at 31°
New tower (94) is installed to the SW of existing tower. Conductors from the North side of the new tower are crossing at this location. Existing average crossing angle of 31° is maintained.
Solid Light Blue Line:
Additional 345kV Transmission Line crossing RR at 25° angle
New structure (96) is installed to the South of R.P. Mone Station. Only conductors from the South side of the new tower (94) are crossing at this location.
Structure Locations:
- Existing Tower Structure (166): 40.92826, -84.74174
- Rebuilt Tower Structure (94) 40.92818, -84.74247
- New Steel Pole Structure (95) 40.92841, -84.74018
- New Steel Pole Structure (96) 40.92799, -84.73861
NW 1/4
SEC 27-1-1
94
95
96
166
Project Details:
- Existing 72 year old Transmission Line is being rebuilt to modern standards, supporting increased Grid resiliency.
- Existing line crosses RR tracks with a single circuit [3 phase conductors, 1 lightning shield wire), into R.P. Mone 345kV Substation.
- Rebuilt line crosses RR tracks to the North with a single circuit [3 phase conductors, 1 lightning shield wire), into R.P. Mone 345kV Substation. Existing crossing angle maintained.
- New line crosses RR tracks to the South with a single circuit [3 phase conductors, 1 lightning shield wire), bypassing R.P. Mone 345kV Substation.
- Existing circuit is 345kV. New circuits will be 345kV.
- Existing easements are ~150' wide, centered on existing T-Line centerline. New easements will be 150' wide, centered on new T-Line centerlines.
- Any portions of the old easements that are not needed in the new configuration will be returned to the RR.
- Easements will be cleared of tall vegetation, and maintained regularly.
- Majority of Construction will take place 'in-the-clear' outside of RR ROW (est. Q1 2027). 1-2 weeks of work in RR ROW is anticipated for removal and install of conductor (est. Q3 2027)
American Electric Power
Allen - R.P. Mone 345kV Line Rebuild Project
AEP Transmission Line Engineering Dept.
Connor Grooms, PE (cwgrooms@aep.com)
1/18/2026
Pre-Engineering Design Proposal Pg. 2


EXISTING CONFIGURATION
Str 166
RP Mone Station
69' clearance to RR bed at normal operating condition
Crossing Location: 40.9284, -84.7410
E
W
N
Van Wert County, Ohio
American Electric Power
Allen - R.P. Mone 345kV Line Rebuild Project
AEP Transmission Line Engineering Dept.
Connor Grooms, PE (cwgrooms@aep.com)
1/18/2026
Pre-Engineering Design Proposal Pg. 3

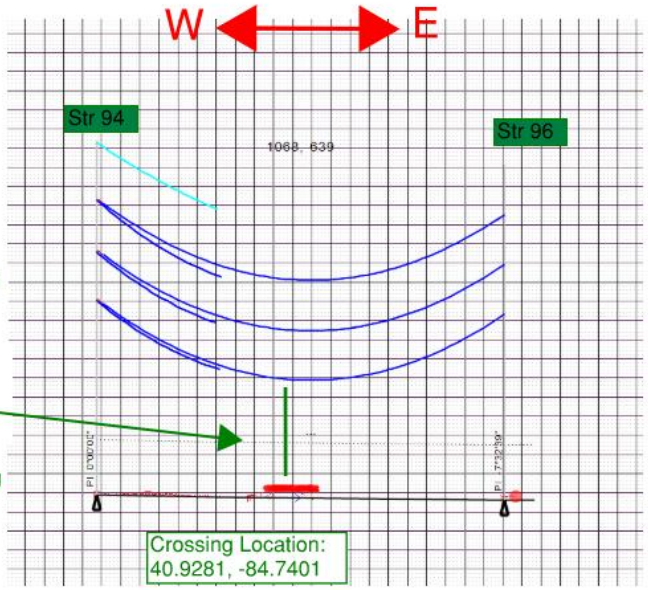
PROPOSED CONFIGURATIONS



Existing Crossing Location (31° crossing angle preserved)

57.5' Typical crossing clearance at T-Line normal operating temperature.

53.5' Minimum crossing clearance at T-Line maximum operating temperature.



New Crossing Location (25° crossing angle)

57.5' Typical crossing clearance at T-Line normal operating temperature.

50.5' Minimum crossing clearance at T-Line maximum operating temperature.

American Electric Power
Allen - R.P. Mone 345kV Line Rebuild Project
AEP Transmission Line Engineering Dept.
Connor Grooms, PE (cwgrooms@aep.com)
1/18/2026
Pre-Engineering Design Proposal Pg. 4

EXHIBIT B

ROADWAY WORKER PROTECTION TRAINING POLICY

A. In order to maintain the integrity and security of the Property and Railroad's operations, prior to each employee of Licensee and its contractor entering upon the Property (each a "Licensee Applicant"), Licensee shall cause its employees, and shall cause its contractor to require its employees, to successfully complete the Genesee & Wyoming Inc. Roadway Worker Training Program (the "Program") on an annual basis to be administered by Roadway Worker Training, Inc. (the "Program Administer"), at the sole cost and expense of the Licensee or contractor, as the case may be (the current cost of which is $75.00 USD per Licensee Applicant). The Program shall be available via the internet and instructions to access the Program set forth in Paragraph K.

B. Upon completion of the Program, the Licensee Applicant shall be required to satisfactorily complete a test administered by the Program Administer. The Program Administer shall be responsible for scoring such test and verifying whether the Licensee Applicant satisfies the requirements of Railroad to perform work on the Property. Any Licensee Applicant who fails to achieve a satisfactory score or who refuses to complete such test shall not be permitted to enter the Property.

C. When a satisfactory score is achieved by the Licensee Applicant, the Program Administrator shall furnish a certificate (the "Certificate") to the business address of Licensee or its contractor, as the case may be, for distribution to the Licensee Applicant. Until receipt of the Certificate from the Program Administrator, the Licensee Applicant shall print a temporary certificate authorizing the Licensee Applicant's access to the Property.

D. For the avoidance of doubt, satisfactory completion of the Program as evidenced by receipt of a Certificate does not in itself grant permission to the Licensee Applicant to enter the Property, except as expressly permitted under and in strict compliance with the terms of the Agreement.

E. The Licensee Applicant shall be responsible for carrying the Certificate at all times when on the Property.

F. All communications regarding Licensee Applicants, the Program, or any other matters described in this Exhibit B should be addressed to:

Kyle Baker
GWI Safety Department
13901 Sutton Park Drive South, Suite 270
Jacksonville, FL 32224
kyle.baker@gwrr.com
(904) 999-3356

G. Licensee and its contractor shall be responsible for managing and recovering Certificates from their employees who resign, retire or are terminated.

H. Notwithstanding the receipt of a Certificate by a Licensee Applicant, Railroad reserves the right to reject any Licensee Applicant from entering upon the Property in Railroad's sole discretion in accordance with:

i) Genesee & Wyoming Inc. Code of Ethics and Conduct,

ii) Genesee & Wyoming Inc. Contractor Safety Rules, or

iii) upon failure to comply with the terms and conditions of the Agreement and all applicable laws.

I. To the extent that any portion of the requirements set forth in this Exhibit B violates any law, ordinance, statute or regulation that portion shall be ignored and the Licensee or contractor, as the case may be,

shall comply with all remaining portions of Railroad's Roadway Protection Training Policy, the Program or the related application process.

J. Licensee or its contractor, as the case may be, shall be primarily responsible for enforcement of the Program; *provided, however*, that both Railroad and the Federal Railroad Administration reserve the right to audit Licensee and its contractor, as the case may be, for compliance with the Program and Railroad's Roadway Protection Training Policy. Should a Licensee or its contractor, as applicable, be found out of compliance, any and all fines or penalties incurred by Railroad due to such non-compliance shall be the sole obligation of the Licensee.

K. To access the G&W Roadway Worker Protection Training for Railroad Contractors Course on the RWT On-Line please follow these instructions:

- Start at website: https://www.bistrainer.com/store/railpros-store/productdetails/genesee-and-wyoming-roadway-worker-protection-for-contractors-training
- Click on the "On-Line Courses" button
- Select the G&W course by clicking on the course name
- On the right hand side of the page select "New User Registration"
- Fill out all of the fields on the registration page and submit
- You will receive a username and password via email
- After receiving the username and password go back to the On-Line Courses page and select the G&W course again
- Complete the registration process and training.

EXHIBIT C

INSURANCE REQUIREMENTS FOR RIGHT-OF-ENTRY LICENSE AGREEMENT

(a) The Licensee shall, at its own cost and expense, prior to entry onto the Property or the commencement of any work pursuant to this Agreement, procure and thereafter maintain throughout the term of this Agreement the following types and minimum amounts of insurance:

(i) The Licensee shall maintain Public Liability or Commercial General Liability Insurance ("CGL"), including Contractual Liability Coverage and CG 24 17 "Contractual Liability – Railroads" endorsement, or its equivalent, covering all liabilities assumed by the Licensee under this Agreement, without exception or restriction of any kind, with a combined single limit of not less than Two Million Dollars ($2,000,000) for Bodily Injury and/or Property Damage Liability per occurrence, and an aggregate limit of not less than Six Million Dollars ($6,000,000) per annual policy period. Such insurance policy shall provide a **Waiver of Subrogation in favor of the Railroad Indemnitees and** shall name the **Railroad Indemnitees as Additional Insureds**. An Umbrella or Excess policy may be utilized to satisfy the required limits of liability under this section but must "follow form" and afford no less coverage than the primary policy.

(ii) The Licensee shall maintain Commercial Automobile Insurance for all owned, non-owned and hired vehicles with a combined single limit of not less than One Million Dollars ($1,000,000) for Bodily Injury and/or Property Damage Liability per occurrence. Such insurance policy shall provide a **Waiver of Subrogation in favor of the Railroad Indemnitees and shall name the Railroad Indemnitees as Additional Insureds**.

(iii) The Licensee shall maintain Statutory Workers' Compensation and Employers' Liability Insurance for its employees (if any) with minimum limits of not less than One Million Dollars ($1,000,000) for Bodily Injury by Accident, Each Accident; One Million Dollars ($1,000,000) for Bodily Injury by Disease, Policy Limit; One Million Dollars ($1,000,000) for Bodily Injury by Disease, Each Employee. Such insurance policy shall provide a **Waiver of Subrogation in favor of the Railroad Indemnitees.**

(iv) **Prior to construction within 50' of the railroad tracks,** the Licensee shall purchase Railroad Protective Liability Insurance naming the Railroad Indemnitees as the named insured with limits of Two Million Dollars ($2,000,000) each occurrence and Six Million Dollars ($6,000,000) aggregate limit. The policy shall be issued on a standard ISO form CG 00 35 12 03 or its equivalent, or, if available, obtain such coverage from the Railroad.

(b) The following general insurance requirements shall apply:

(i) The specified insurance policies must be affected under standard form policies underwritten by insurers licensed in the state where work is to be performed and carry a minimum Best's rating of "A-" and size "Class VII" or better. The Railroad reserves the right to reject as inadequate any insurance coverage provided by an insurer that is rated less than the ratings specified in this section.

(ii) All coverages shall be **primary and non-contributory to any insurance coverages maintained by the Railroad Indemnitees.**

(iii) Licensee shall provide the Railroad with thirty (30) days prior written notice of cancellation, non-renewal or material changes.

(iv) The Licensee shall provide the Railroad with certificates of insurance evidencing the insurance coverages, terms and conditions required prior to commencement of any activities on or about the Property. Said

certificates should reference this Contractor Right of Entry License Agreement by agreement date and description and shall be furnished to the Railroad at the following address, or to such other address as the Railroad may hereafter specify:

Chicago, Ft Wayne & Eastern Railroad a division of Central Railroad Company of Indianapolis

C/O Genesee & Wyoming Railroad Services, Inc.
13901 Sutton Park Drive South, Suite 270
Jacksonville, FL 32224

(v) If any policies providing the required coverages are written on a Claims-Made basis, the following shall apply:

(1) The retroactive date shall be prior to the commencement of the work;

(2) The Licensee shall maintain such policies on a continuous basis;

(3) If there is a change in insurer or policies are canceled or not renewed, the Licensee shall purchase an extended reporting period of not less than three (3) years after the contract completion date; and

(4) Licensee shall arrange for adequate time for reporting of any loss under this Agreement.

(c) The Railroad may require the Licensee to purchase additional insurance if the Railroad reasonably determines that the amount of insurance then being maintained by the Licensee is insufficient in light of all relevant factors. If the Licensee is required to purchase additional insurance, the Railroad will notify the Licensee. Failure of the Licensee to comply within thirty (30) days shall be considered a default subject to termination of the Agreement.

(d) Furnishing of insurance by the Licensee shall not limit the Licensee's liability under this Agreement but shall be additional security therefor.

(e) The above indicated insurance coverages shall be enforceable by any legitimate claimant after the termination or cancellation of this Agreement, or any amendment hereto, whether by expiration of time, by operation of law or otherwise, so long as the basis of the claim against the insurance company occurred during the period of time when the Agreement was in effect and the insurance was in force.

(f) Failure to provide the required insurance coverages or endorsements (including contractual liability endorsement) or adequate reporting time shall be at Licensee's sole risk.

(g) If contractors are utilized, the Licensee agrees to require all such contractors to comply with the insurance requirements of this Exhibit C.

EXHIBIT D

APPLICABLE EXHIBIT D PER RAILROAD REGION WILL BE PROVIDED BY FLAGGING COORDINATOR UPON EXECUTION

Appendix D Agency Correspondence

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

May 27, 2026

Project Code: 2026-0051040

Dear [redacted]:

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

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and 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. Bridges and culverts have also been used as roosts. Additionally, northern long-eared bats have been observed roosting in other human-made structures, such as buildings, barns, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Restrictions 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. If bridges or culverts will be impacted, we recommend reviewing Appendix K in the most recent "Range-Wide Indiana Bat & Northern Long-Eared Bat Survey Guidelines" to determine if the bridge/culvert may be suitable roost habitat. We recommend impacts to suitable bridges and culverts only occur from October 1 and March 31. These seasonal restrictions are recommended to avoid adverse effects to Indiana bats and northern long-eared bats. Please note that, because Indiana bat and/or northern long-eared

bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for these species.

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.

On December 12, 2024 the Service proposed to list the monarch butterfly (*Danaus plexippus plexippus*) as threatened under the ESA. Monarch butterflies are found throughout Ohio and some populations migrate vast distances across multiple generations each year. Many monarchs fly between the U.S., Mexico and Canada – a journey of over 3,000 miles. Monarch populations have declined significantly in recent years. Threats include habitat loss – particularly the loss of milkweed, the monarch caterpillar's sole food source – and mortality resulting from pesticide use. The Service recommends the following actions to maintain habitat and avoid impacts to monarchs in Ohio: revegetate disturbed areas with native plant species including nectar-producing plants and milkweed endemic to the area; limit mowing monarch habitat from March 15 to August 31 when monarchs are breeding and from September 1 to October 31 when large numbers of monarchs are migrating; and avoid the use of pesticides and herbicides in and near monarch habitat.

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.

Bald Eagle: The project is in the range of the bald eagle (*Haliaeetus leucocephalus*), which is protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d). We recommend that you visit https://ohiodnr.gov/discover-and-learn/animals/birds/bald-eagle to determine if the project is within 0.5 mile of a documented eagle nest. Additionally, because not all eagle nests in the state have been mapped, we recommend that an on-site examination be conducted to determine if any large stick nests are visible from project area. If the project is within 0.5 mile of a documented eagle nest or the on-site examination reveals the presence of a potential eagle nest, we recommend visiting https://www.fws.gov/story/do-i-need-eagle-take-permit to determine if an eagle take permit is required.

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

Department of Natural Resources
ohiodnr.gov

Mike DeWine, *Governor*
Jim Tressel, *Lt. Governor*
Mary Mertz, *Director*

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

June 18, 2026

[redacted]
TRC Companies, Inc.
1382 West 9th Street, Suite 400
Cleveland, Ohio 44113

Re: 26-0852_Allen-Maddox Creek 345kV Rebuild

Project: The proposed project involves the rebuild of approximately 27.7 miles of 345kV overhead electric transmission line and pole structures within Allen County, Indiana and Van Wert County, Ohio.

Location: The proposed project is located in Hoaglin, Union, and Tully townships,, Van Wert County, Ohio.

Center Coordinates: (40.9277, -84.6686)

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 state endangered bat species has been established in the area, summer tree clearing is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree clearing 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 clusters of dead leaves on tree limbs. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree and/or tree limb clearing 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 a Diameter Breast Height (DBH) ≥ 20" if possible.

For every project, the DOW also recommends that a winter bat habitat assessment is conducted to determine if potential hibernacula are present within the project area. This is to limit possible disturbances that seasonal tree clearing and/or subsurface work (e.g., trenching, blasting, etc.) may cause to hibernating bats. Potential hibernacula include rocky outcroppings, caves, and underground mines. Direction on how to conduct winter habitat assessments can be found in the joint guidance OHIO DIVISION OF WILDLIFE AND U.S. FISH AND WILDLIFE SERVICE (OH-FIELD OFFICE) JOINT GUIDANCE FOR BAT SURVEYS. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile permanent tree clearing buffer around the hibernaculum entrance. Limited summer or winter tree clearing may be acceptable after consultation with the DOW. If a habitat assessment for projects involving subsurface disturbance finds that a potential hibernaculum is present within 5 miles of the project area, please consult with Eileen Wyza for project recommendations. If no tree clearing or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

This project must not have an impact on native mussels. This applies to both listed and non-listed species, as all species of mussel are protected in Ohio. Per the Ohio Mussel Survey Protocol (2025), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site.

Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. If there is no in-water work proposed, impacts to mussels are not likely.

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

Due to the potential for 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 not conducted a project specific review and/or comments, however, the guidance provided below should be reviewed by the Environmental Review applicant for applicability on this project and subsequent compliance.

If the subject project is in a floodplain regulated by the Federal Emergency Management Agency (FEMA), the 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.

Ohio Revised Code (ORC) Section 1521.16 mandates that any owner of a property or a facility that has the capacity of withdrawing 100,000 gallons per day (gpd) of water from groundwater, surface water, or both must register with the Division of Water Resources' Water Withdrawal Facilities Registration (WWFR) Program and report their withdrawals annually.

Additional coordination may be required depending on the location of the withdrawal and consumptive use. Permitting may be required for:

- New or increased consumptive use of water averaging 2 million gallons per day (mgd) within 30 days within the Ohio River basin.
- New or increased withdrawal and consumptive water use in the Lake Erie watershed averaging 1 million gallons per day (mgd) or more in 90 days.
- New or increased water withdrawal directly from Lake Erie averaging 2.5 million gallons per day (mgd) or more in 90 days.
- Diversion or movement of water across the Ohio River and Lake Erie basin divide.

If the project does not involve activities that are subject to water withdrawal regulatory requirements as described above, then no further action is required. For more information, visit the Water Inventory & Planning website.

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.*

From: Eileen.Wyza@dnr.ohio.gov
To: [redacted]
Subject: [EXTERNAL] RE: Desktop Hibernacula Assessment: AEP"s Allen-Maddox Creek (Allen-RP Mone (OH) Segment) 345 kV Transmission Rebuild Project
Date: Monday, August 24, 2026 8:32:55 AM
Attachments: image002.png
image004.png
image005.png
image006.png
image007.png
image008.png
image001.png

This is an **External** email. Do not click links or open attachments unless you validate the sender and know the content is safe.

ALWAYS hover over the link to preview the actual URL/site and confirm its legitimacy.

Hello [redacted],

Per review of the desktop survey provided for AEP's Allen-Maddox Creek (Allen-RP Mone (OH) Segment) 345 kV Transmission Rebuild Project, the Ohio Division of Wildlife concurs with your assessment that no caves, cliffs, or mine openings occur in the project area. Therefore, the project is not likely to impact hibernating bats.

Should any reported conditions change before or during construction, please contact me for additional guidance.

Thank you,

Eileen Wyza, Ph.D.
(she/her/hers)
Wildlife Biologist
Ohio Division of Wildlife
Phone: 614-265-6764
Email: Eileen.Wyza@dnr.ohio.gov

Support Ohio's wildlife. Buy a license at wildohio.gov.

This message is intended solely for the addressee(s). Should you receive this message by mistake, we would be grateful if you informed us that the message has been sent to you in error. In this case, we also ask that you delete this message and any attachments from your mailbox, and do not forward it or any part of it to anyone else. Thank you for your cooperation and understanding.
Please consider the environment before printing this email.

From: [redacted]
Sent: Thursday, August 20, 2026 3:16 PM
To: Wyza, Eileen <Eileen.Wyza@dnr.ohio.gov>
Cc: [redacted]
Subject: Desktop Hibernacula Assessment: AEP's Allen-Maddox Creek (Allen-RP Mone (OH) Segment) 345 kV Transmission Rebuild Project

Eileen,

In response to ODNR's DOW recommendations (26-0852; Attached), TRC completed a desktop hibernacula assessment to determine if potential hibernaculum is present within AEP's proposed Allen-Maddox Creek (Allen-RP Mone (OH) Segment) 345 kV Transmission Rebuild Project located in Van Wert County, Ohio.

Please let us know if you have any questions on the provided desktop assessment or require any additional

information, thank you!

[redacted]



CAUTION: This is an external email and may not be safe. If the email looks suspicious, please do not click links or open attachments and forward the email to csc@ohio.gov or click the Phish Alert Button if available.

September 4, 2026

AEP Ohio Transmission Company, Inc.
Jennifer Walker
8600 Smith's Mill Road
New Albany OH 43054

Re: Approval Under Ohio EPA National Pollutant Discharge Elimination System (NPDES) – Construction Site Stormwater General Permit – OHC000006

Dear Applicant,

Your NPDES Notice of Intent (NOI) application is approved for the following facility/site. Please use your Ohio EPA Facility Permit Number in all future correspondence.

Facility Name:	Allen-Maddox Creek (Allen-RP Mone (OH) Segment) 345 kV Transmission Rebuild Project
Facility Location:	Tully Township, Van Wert County, Ohio
City:	Lima
County:	Van Wert
Township:	Tully
Ohio EPA Facility Permit Number:	2GC08934*AG
Permit Effective Date:	September 4, 2026
Permit Expiration Date:	April 22, 2028

Please read and review the permit carefully. The permit contains requirements and prohibitions with which you must comply. A copy of the general permit may be viewed or downloaded from here. Coverage under this permit will remain in effect until a renewal of the permit is issued by the Ohio EPA.

If more than one operator (defined in the permit) will be engaged at the site, each operator shall seek coverage under the general permit. Additional operator(s) shall submit a Co-Permittee NOI to be covered under this permit. There is no fee associated with the Co-Permittee NOI form.

Please be aware that this letter only authorizes discharges in accordance with the above referenced General Permit. The placement to fill into regulated waters of the state may require a 401 Water Quality Certification and/or Isolated Wetlands Permit from Ohio EPA. Failure to obtain the required permits in advance is a violation of Ohio Revised Code 6111 and potentially subjects you to enforcement and civil penalties.

If you need assistance or have questions, please call (614) 644-2001 and ask for Construction Site Stormwater General Permit support or visit our website at epa.ohio.gov.

Sincerely,

John Logue
Director

Appendix E Ecological Survey Report

Ecological Survey Report

May 20, 2026
Revised June 24, 2026

TRC Project Nos. 723028, 723033, 723035

Allen-Maddox Creek Transmission Rebuild

Allen County, Indiana and
Van Wert County, Ohio

Prepared For:

AEP
8600 Smiths Mill Road
New Albany, Ohio 43054

Prepared By:

TRC Environmental Corporation
6737 W Washington St, Suite 3460
West Allis, WI 53214



TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY 1
2.0 INTRODUCTION 3
2.1 Agency Regulatory Authority 3
2.1.1 Wetlands and Waterways 3
2.1.2 Federal and State Threatened and Endangered Species 3
3.0 METHODS 4
3.1 Wetland and Waterway Delineation 4
3.1.1 Desktop Review 4
3.1.2 On-Site Field Investigation 5
3.2 Threatened and Endangered Species Review 5
4.0 RESULTS 6
4.1 Wetland and Waterway Delineation 6
4.1.1 Off-Site Review 6
4.1.2 On-Site Field Investigation 7
4.1.2.1 Site Description 7
4.1.2.2 Wetlands 7
4.1.2.3 Other Aquatic Resources 10
4.2 Threatened and Endangered Species Habitat Review 11
4.2.1 Upland Natural Communities 11
4.2.2 USFWS, IN DNR, and Ohio DNR Results 12
4.2.3 Habitat Survey Results 15
5.0 CONCLUSIONS 16
6.0 REFERENCES 17

TABLES

Table 1: Study Area Location Information 3
Table 2: Delineated Wetlands Summary Table 7
Table 3: Delineated Streams Summary Table 11
Table 4: Threatened and Endangered Species Summary Table 13

APPENDICES

Appendix A: Figures
Appendix B: Antecedent Precipitation Data
Appendix C: Exhibit A – Ecological Survey Map
Appendix D: Wetland Determination Data Forms and Photographs
Appendix E: ORAM Forms
Appendix F: Stream Data Forms (TRC Forms, HHEI and QHEI)
Appendix G: Threatened and Endangered Species Data

1.0 Executive Summary

On behalf of American Electric Power (AEP), TRC conducted an Ecological Survey which included a wetland and waterway delineation and threatened and endangered species habitat review within the Allen-Maddox Creek Transmission Rebuild Study Area (Study Area) located in Allen County, Indiana and Van Wert County, Ohio (Appendix A, Figure 1). The following is a bulleted list of major findings.

Delineated Wetlands

- A total of 13 wetlands were delineated with 12 in Indiana and one in Ohio.
- Eight of the delineated wetlands are palustrine emergent (PEM) and total 0.776 acres.
- One of the delineated wetlands is palustrine forested and totals 0.151 acres.
- Four of the delineated wetlands are a mix of PEM (3.831 acres), palustrine scrub-shrub (1.063 acres), and palustrine forested (1.800 acres) totaling 6.694 acres.

Delineated Waterways and Waterbody

- A total of 27 waterways were delineated with 10 in Indiana and 17 in Ohio.
- Fourteen of the delineated waterways were perennial, totaling 8,033 linear feet.
    - Eight of the perennial waterways occur in Indiana, totaling 3,294 linear feet.
    - Six perennial waterways occur in Ohio totaling 4,739 linear feet.
- Thirteen of the delineated waterways were intermittent, totaling 7,676 linear feet.
    - Two of the intermittent waterways occur in Indiana, totaling 1,407 linear feet.
    - Eleven of the intermittent waterways occur in Ohio, totaling 6,269 linear feet.
- Three ponds, totaling 1.47 acres, were delineated.
    - One pond occurs in Indiana, totaling 0.11 acres.
    - Two ponds occur in Ohio, totaling 1.36 acres.

Federally Threatened and Endangered Resources

- Suitable summer bat roosting habitat was observed in small sections of expanded Study Area in the woodlots along the northern and southern edge of the Study in the form of larger oak, maple, and hickory trees.
- One federal candidate species, the monarch butterfly, was reported for the Study Area. Because it is currently listed as a proposed species, it is not regulated; however, suitable habitat is present within the Study Area and impact to this species is possible.
- One non-essential experimental population, the whooping crane, was reported for the Study Area. This species is expected to only utilize the Study Area for temporary stopovers during migration.
- No other suitable habitat is present within the Study Area for the other federally listed threatened or endangered species.

Indiana Threatened and Endangered Resources

- IN DNR indicated that no threatened or endangered species are documented within 0.5 mile of the Study Area in Indiana. However, suitable summer bat roosting habitat was observed in small sections of expanded Study Area in the woodlots along the northern and southern edge of the Study in the form of larger oak, maple, and hickory trees.

Ohio Threatened and Endangered Resources

- The ODNR did not identify any records of species within 1 mile of the Study Area in Ohio.
- The Division of Wildlife (DOW) identified the entire state of Ohio as being within the ranges of the northern long-eared bat, Indiana bat, little brown bat, and tricolored bat, all state endangered.
- The DOW requires further consultation if tree cutting or clearing cannot be limited to October 1 through March 31 to minimize and avoid impacts to bat species, as well as conserving trees that are suitable for bat roosting when possible.
- DOW states the Project must not impact native mussel species, listed or unlisted. If stream impacts are unavoidable, the Ohio Mussel Survey Protocol (2025) should be used to assess the stream(s) for the presence of mussels.
- DOW identified the range of the state endangered pugnose minnow as overlapping the Study Area and recommends no in-water work occur in perennial streams between March 15 and June 30.

2.0 Introduction

On behalf of American Electric Power (AEP), TRC conducted an Ecological Survey which included a wetland and waterway delineation and threatened and endangered species habitat review within the Allen-Maddox Creek Transmission Rebuild Study Area (Study Area), which comprises approximately 1,076 acres (Appendix A, Figure 1). The State, County, Section, Township and Range for all parts of the Study Area are provided in Table 1, below.

Table 1. Study Area Location Information

County and State	Township	Range	Sections
Allen County, Indiana	30N	14E	31, 32
	29N	14E	05, 08, 17, 20, 29, 32, 33, 34, 35, 36
	29N	15E	31, 32, 33, 34, 35
Van Wert County, Ohio	1S	1E	30, 29, 28, 27, 26, 25
	1S	2E	30, 29, 28, 27, 26, 25
	1S	3E	30

The purpose of this Ecological Survey was to determine the current location and extent of wetlands and waterways and the potential for suitable threatened and endangered species habitat within the designated Study Area for proposed electrical transmission project improvements. Our study is presented here in terms of methodology, results, and conclusions.

2.1 Agency Regulatory Authority

2.1.1 Wetlands and Waterways

The wetlands and/or waterways identified in this report may be subject to federal regulation under the jurisdiction of the U.S. Army Corps of Engineers (USACE), state regulation under the jurisdiction of Indiana Department of Environmental Management (IDEM) and Ohio Environmental Protection Agency (OEPA), and local jurisdiction under county, town, city, or village.

2.1.2 Federal and State Threatened and Endangered Species

Section 7 of the Endangered Species Act of 1973 (ESA) requires all Federal agencies to use their authorities to conserve endangered and threatened species in consultation with U.S. Fish and Wildlife Service (USFWS). Under Section 7 implementing regulations (50 CFR Part 402), Federal agencies must review their actions to determine whether they may affect endangered or threatened species or critical habitat. The USFWS also governs the take of migratory birds under the Migratory Bird Treaty Act, and safeguards eagles through the Bald and Golden Eagle Protection Act.

The State of Indiana regulates nongame and endangered species through the Nongame and Endangered Species Conservation Act (IC 14-22-34) passed in 1973. Ohio Department of Natural Resources (ODNR) has legal authority over Ohio's fish and wildlife, which includes about 56 species of mammals, 200 species of breeding birds, 84 species and subspecies of amphibians and reptiles, 170 species of fish, 70 species of mollusks, and 20 species of crustaceans. Additionally, Ohio law allows the chief of the Division to adopt

rules restricting the taking or possessing of native wildlife threatened with statewide extirpation and to develop and periodically update a list of endangered species (Ohio Revised Code 1531.25).

3.0 Methods

3.1 Wetland and Waterway Delineation

This wetland and waterway delineation was conducted in accordance with the guidelines of the 1987 Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region and Northcentral and Northeast Region (Version 2.0, 2010; Version 2.0, 2011) and in general accordance with IDEM and OEPA guidelines. National Wetland Indicator status and taxonomic nomenclature is referenced from the 2022 Corps of Engineers National Wetland Plant List Version 3.6. National Wetland Indicator status is based on the Midwest Region and Northcentral and Northeast Region, Central Great Lakes Forest sub-region. Indicators of hydric soil are based on the Field Indicators of Hydric Soils in the United States guide Versions 9.0 and 9.2 (USDA NRCS 2024 and 2025).

For the purposes of this wetland and waterway delineation, Ohio wetland and waterway functional assessment forms (ORAM, HHEI, and QHEI[1]) were used to assess the functional values of delineated wetlands and waterways. ORAM forms were used in the state of Indiana and Ohio, whereas HHEI and QHEI forms were used only in Ohio. For Indiana streams, data were collected on TRC stream data forms. ORAM forms were used because there is no Indiana-specific form and the Ohio forms have been applied to wetland assessments in the past for AEP projects in Indiana. With the ORAM, a wetland quality category (Category 1, Category 2, or Category 3) is assigned for each wetland. In general, Category 1 wetlands are considered to be “low quality” while Category 3 wetlands are considered “high quality.”

The HHEI and QHEI methods assess stream habitat to provide a qualitative index (score) that may be used to determine the level of compensatory mitigation needed for impacts to waters of the U.S. Streams with a drainage area of greater than or equal to 1.0 square mile (2.6 square kilometers), or which have pools with maximum depths over 15.8 inches (40.0 centimeters) were evaluated using the QHEI. The HHEI was utilized to score streams with a drainage area of < 1.0 square mile. Using the scoring methods associated with these forms, the stream is placed into the following general narrative ranges, dependent on stream size; for smaller streams (≤ 20 square miles): Excellent >70, Good 55-69, Fair 43-54, Poor 30-42, and Very Poor <30; for larger streams (>20 square miles): Excellent >75, Good 60-74, Fair 45-59, Poor 30-44, and Very Poor <30.

3.1.1 Desktop Review

Prior to conducting fieldwork, several maps were reviewed including the United States Geological Survey (USGS) 7.5’ Quadrangle maps, Natural Resource Conservation Service (NRCS) Soil Survey Maps, National Wetland Inventory (NWI) Map, USGS National Hydrography Dataset (NHD), Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL) Map, Allen County Drain maps, and aerial imagery. These sources were used to identify areas likely to contain wetlands and waterways.

[1] ORAM – Ohio Rapid Assessment Method; HHEI – Primary Headwater Habitat Evaluation Form; QHEI – Qualitative Habitat Evaluation Index and Use Assessment Field Sheet.

The antecedent hydrologic condition was analyzed using the Antecedent Precipitation Tool (APT) Version 3.0 (USACE 2026) prior to the fieldwork to determine if antecedent hydrologic conditions at the time of the site visit were normal, wetter, or drier than the normal range.

An aerial imagery review (i.e., off-site hydrology review) was conducted for the Study Area to determine likely wetland or wetness signatures within agricultural areas. Potential wetland or wetness signatures in agricultural fields were identified and highlighted if they appeared in at least half of aerial image years reviewed so those areas could be reviewed in the field.

3.1.2 On-Site Field Investigation

Areas within the Study Area which may support wetlands, identified as wetlands on reviewed maps, and/or have wetland hydrology signatures were evaluated in the field by TRC wetland scientists Amanda Larsen and Danielle Anderson on December 19, 2024; Amanda Larsen, Nick Yuknis, Laura Giese, and Riley Bolt July 14-16, 2025; Amanda Larsen and Leah Cavaungh on December 11, 2025, and Danielle Anderson and Laura Giese April 13-17, 2026. Sample points were located in areas exhibiting wetland and upland characteristics to document the presence and/or absence of wetlands and to provide support for the delineated wetland boundaries. At each sample point, data were collected to document the vegetation and hydrophytic vegetation indicators, soil profile and hydric soil indicators, and wetland hydrology indicators.

Plant species were identified at each sample point and their wetland indicator status; obligate wetland [OBL], facultative wetland [FACW], facultative [FAC], facultative upland [FACU], or upland [UPL] was determined by referencing the 2022 Corps of Engineers National Wetland Plant List Version 3.6: Northcentral and Northeast Region and Midwest Region. Soil pits were dug to the depth needed to document a hydric soil indicator or confirm the absence of indicators. Soil color was determined using a Munsell soil color chart. The sample point plots, and soil pits were evaluated for presence of wetland hydrology indicators.

The wetland and waterway boundaries and sample point locations were surveyed by TRC using sub-meter accuracy GPS equipment. Wetland boundaries were generally determined by distinct to subtle differences in the dominance of hydrophytic vegetation and non-hydrophytic vegetation, presence versus absence of hydric soil indicators, and presence versus absence of wetland hydrology indicators.

3.2 Threatened and Endangered Species Review

Prior to the on-site field investigations, TRC completed an USFWS Information for Planning and Consultation (IPaC) review to identify federally listed species that may occur within or near the Study Area and submitted a request for Submittal Review to the USFWS to request information on known federally-listed species in the vicinity of the Study Area. Additionally, TRC reviewed the results of a recent Rare Species Review Request through the Indiana Department of Natural Resources (IDNR) Natural Heritage Data Review to identify state-listed species that may occur within or near the Study Area. TRC also submitted an Environmental Review to the ODNR to request information on known sensitive resources that may be present in the vicinity of the Study Area. The state and federally listed species data and associated habitat considerations were reviewed prior to the field surveys and used during field surveys to determine whether potentially suitable habitat for the listed species occurs within the Study Area.

The Study Area was reviewed with the specific intent of identifying suitable habitat for the state and federally listed species identified in the IPaC review, USFWS response, IDNR Natural Heritage Review, ODNR Environmental Review, and eagles/raptors to the extent possible given seasonal and access limitations. The TRC biologists walked the Study Area to observe the habitat conditions while considering the habitat requirements of the state and federally listed species provided by the IDNR, ODNR, and USFWS. TRC recorded vegetation community composition, quality, and suitability for rare species during the survey.

Although the USFWS removed the bald eagle from the federal list of threatened and endangered species, the bald eagle is protected under the Migratory Bird Treaty Act (MBTA) and Bald and Golden Eagle Protection Act (BGEPA). Additionally, other raptors and their nests were documented if they were observed within the Study Area.

4.0 Results

4.1 Wetland and Waterway Delineation

4.1.1 Off-Site Review

According to the NRCS Soil Survey Map (Appendix A, Figure 2) 32 mapped soil units are located within the Study Area. Nine (9) mapped soil units, that comprise approximately 67.28% of the Study Area, have drainage classifications of poorly drained or very poorly drained and hydric ratings between 90 and 100 percent. The remaining mapped soil units have drainage classifications of somewhat poorly drained, moderately well drained, well drained, or not listed, and hydric ratings of 9% or less. All mapped soils within the Study Area are provided in the soils summary table (Appendix A, Figure 2-27).

The Wetlands, Waterways, and Floodplains Map (Appendix A, Figure 3) depicted 27 NWI wetlands, with most of those being identified as riverine-type features (e.g., R5UBH). Numerous other NHD-mapped waterways overlap the Study Area, with most not being apparent in aerial imagery. A total of five (5) mapped IN DNR 100-year floodplains and four mapped IN DNR floodways overlap the Study Area in Indiana; one additional FEMA-mapped floodplain overlaps the Study Area in Ohio.

A review of Google Earth aerial imagery between 1999 to 2025 shows the Study Area consisting of a variety of land uses including agricultural (row-crop) fields, fallow field, planted turf-grass areas, old field, upland meadow, woodlands, and transportation and utility right-of-way.

Prior to conducting the field visits, antecedent precipitation data were analyzed utilizing the APT (Appendix B). Based on this analysis, for the December 2024 site visit, the antecedent hydrologic conditions were considered to be within a normal range, suggesting that climatic/hydrologic conditions were normal for this time of year. For the July and December 2025 site visits, based on this analysis, the antecedent hydrologic conditions were considered to be below a normal range suggesting that climatic / hydrologic conditions were drier than normal for both 2025 site visits. Based on this analysis, for the April 2026 site visit, the antecedent hydrologic conditions were considered to be within a normal range, suggesting that climatic/hydrologic conditions were normal for this time of year.

Aerial imagery available on Google Earth ranging from 1999 - 2025 was used to identify areas with wetness signatures that necessitated field investigation to confirm the presence or absence of wetlands.

4.1.2 On-Site Field Investigation

4.1.2.1 Site Description

The Study Area was primarily agricultural land (i.e., row-cropped) with a mix of soybeans and corn. As noted in the aerial imagery review, smaller sections of old field or meadow occur in the Study Area, primarily along stream corridors or between forested areas where the cleared ROW crosses a woodlot. The ROW extends into a few woodlots. To a lesser extent, some maintained or developed areas occur within the Study Area, which are mostly associated with public roadways, adjacent to commercial buildings, industrial facilities, or residential parcels. It is noted the majority of the Study Area includes the regularly maintained transmission line ROW, which limits the ability for substantial woody vegetation to become established.

4.1.2.2 Wetlands

Thirteen wetlands (W-AIN-01 through W-AIN-12 and W-LOH-01) totaling 12.515 acres were delineated within the Study Area. The delineated wetland boundaries and sample points are shown on the Ecological Survey Map (Appendix C, Exhibit A). Field data, including photographs, were collected and recorded on Wetland Determination Data Forms to document wetland and upland locations (Appendix D). The delineated wetlands are summarized in Table 2, below. Wetland functional assessments were completed for each delineated wetland using the ORAM forms, and are included in Appendix E.

Table 2. Delineated Wetlands Summary Table

Resource ID, Size (acres)[1], & Community Type(s)[2]	Sample Points	Potential Connectivity for Regulatory Status[3]	ORAM Category [4]	Notes
W-AIN-01 **(0.012 acre)** PEM	WETLAND SP-AIN01-01 UPLAND SP-AIN01-02	Drains into mapped NHD off-site to the west and north.	1	W-AIN-01 is a PEM wetland confined to a swale/drainage immediately north of an existing gravel access road that connects E Tillman Rd and the AEP Allen Substation. The wetland continues outside of the Study Area to the north, west and east, but likely drains to the northwest and through an off-site culvert across the railroad to the northeast. W-AIN-01 was dominated by lake sedge (*Carex lacustris*) and gray dogwood (*Cornus racemosa*). Hydrology within the wetland appeared to be driven by a combination of seasonal surface water/drainage and precipitation.
W-AIN-02 **(2.723 acres)** 2.200 acres - PEM 0.232 acre – PSS 0.291 acres - PFO	WETLAND SP-AIN02-01 SP-AIN02-03 SP-AIN02-05 UPLAND SP-AIN02-02 SP-AIN02-04	Continues off-site to the east and west and into adjacent mapped floodplain to south and west	2	W-AIN-02 is a mixed PEM/PSS/PFO wetland complex that is surrounded on two sides by unmanaged forest (to west and east), with the Study Area and delineated wetland occurring within the maintained ROW. A smaller pond (WB-AIN-01) was also connected to the wetland within the Study Area. The wetland continues outside of the Study Area to the west and east, but it is unclear if it connects to any off-site waterway or waterbody. The PEM portion of the wetland was dominated by reed canary grass (*Phalaris arundinacea*), with the PSS portion dominated by green ash (*Fraxinus pennsylvanica*) and reed canary grass and the PFO portion dominated by silver maple (*Acer saccharinum*). Hydrology within the wetland appeared to be primarily driven by precipitation.

Table 2. Delineated Wetlands Summary Table

Resource ID, Size (acres)[1], & Community Type(s)[2]	Sample Points	Potential Connectivity for Regulatory Status[3]	ORAM Category [4]	Notes
W-AIN-03 **(1.635 acre)** 0.288 acre - PEM 0.831 acre – PSS 0.516 acre - PFO	WETLAND SP-AIN03-01 SP-AIN03-03 SP-AIN03-04 SP-AIN03-06 UPLAND SP-AIN03-02 SP-AIN03-05	Continues off-site into adjacent NHD to the north and south	2	W-AIN-03 is a mixed PEM/PSS/PFO wetland complex that is surrounded on two sides by unmanaged forest (to the north and south), with the Study Area and delineated wetland occurring within the maintained ROW and slightly expanded Study Area to the north and south. The wetland continues outside of the Study Area to the north and south, but it is unclear if it connects to any off-site waterway or waterbody. The PEM portion of the wetland was dominated by river bulrush (*Schoenoplectus fluviatilis*), with the PSS portion dominated by buttonbush (*Cephalanthus occidentalis*), rough cocklebur (*Xanthium strumarium*), and reed canary grass and the PFO portion dominated by silver maple and cottonwood (*Populus deltoides*). Hydrology within the wetland appeared to be primarily driven by precipitation.
W-AIN-04 **(0.114 acre)** PEM	WETLAND SP-AIN04-01 UPLAND SP-AIN04-02	Entirely contained within Study Area in a closed depression	1	W-AIN-04 is a PEM wetland that occurs entirely within the maintained ROW and appeared to be an isolated depressional wetland. At the time of the delineation, the wetland had been recently mowed such that identification of much of the vegetation was difficult. However, the dominant vegetation that could be identified within the wetland was lake sedge and common hop sedge (*Carex lupulina*). Hydrology within the wetland appeared to be primarily driven by precipitation.
W-AIN-05 **(0.047 acre)** PEM	WETLAND SP-AIN05-01 UPLAND SP-AIN05-02	Contained within a closed depression that extends slightly north of Study Area	1	W-AIN-05 is a farmed PEM wetland that occurs entirely within an agricultural field, but extends outside of the Study Area to the north. While the northern boundary of this wetland was not reviewed in person, as it was outside of the Study Area, based on aerial imagery review, the wetland appears to be contained within the agricultural field and not continue into the adjacent forested area or into an adjacent waterway. The wetland had managed vegetation and was planted in corn (*Zea mays*) at the time of the delineation, but satisfied two secondary indicators of wetland hydrology (showed signs of crop stress and saturation visible on aerial imagery), and two field indicators of hydric soils, suggesting that the hydrophytic vegetation criterion would be satisfied if it was not managed. Hydrology within the wetland appeared to be primarily driven by precipitation.

Table 2. Delineated Wetlands Summary Table

Resource ID, Size (acres)[1], & Community Type(s)[2]	Sample Points	Potential Connectivity for Regulatory Status[3]	ORAM Category [4]	Notes
W-AIN-06 **(2.058 acres)** 1.296 acres-PEM 0.762 acres - PFO	WETLAND SP-AIN06-01 SP-AIN06-03 UPLAND SP-AIN06-02	Continues off-site to the north and south, possibly drains into adjacent NHD to south and east	1	W-AIN-06 is a PEM/PFO wetland that is comprised of three very similar wetland polygons that are disconnected within the Study Area, but may be connected outside the Study Area (W-AIN-06A, W-AIN-06B, and W-AIN-06C). W-AIN-06 is surrounded on two sides by unmanaged forest to the north and south, with the Study Area and delineated wetland occurring within the maintained ROW. The wetland continues outside of the Study Area to the north and south, but it is unclear if it connects to any off-site waterway or waterbody. The PEM portion of the wetland was dominated by crested sedge (*Carex cristatella*), Canada goldenrod (*Solidago canadensis*), and sandbar willow (*Salix interior*) with the PFO portion dominated by silver maple, cottonwood (*Populus deltoides*), and American elm (*Ulmus americana*). Hydrology within the wetland appeared to be primarily driven by precipitation.
W-AIN-07 **(0.278 acre)** 0.047 acres – PEM 0.231 acres PFO	WETLAND SP-AIN07-01 SP-AIN07-03 UPLAND SP-AIN08-02	Continues off-site to the south, possibly drains into adjacent NHD to south and east	2	W-AIN-07 is a PEM/PFO wetland that is comprised of two similar wetland polygons that are disconnected within the Study Area (W-AIN-07A and W-AIN-07B). W-AIN-07 shares an upland sample point with W-AIN-08. W-AIN-07A is surrounded entirely by the maintained ROW and Study Area, whereas W-AIN-07B is bordered on one side by unmanaged forest to the north and south, with the other two sides surrounded by the maintained ROW. W-AIN-07B continues outside of the Study Area to the south, but it is unclear if it connects to any off-site waterway or waterbody. The PEM portion of the wetland was dominated by soft rush (*Juncus effusus*) and cattail sedge (*Carex typhina*) with the PFO portion dominated by silver maple and American elm. Hydrology within the wetland appeared to be primarily driven by precipitation.
W-AIN-08 **(0.056 acre)** PEM	WETLAND SP-AIN08-01 UPLAND SP-AIN08-02	Entirely contained within Study Area in a closed depression	1	W-AIN-08 is a PEM wetland that is contained entirely within the Study Area in a closed depression. The wetland shares an upland sample point with W-AIN-07. The wetland was dominated by common reed (*Phragmites australis*). Hydrology within the wetland appeared to be primarily driven by precipitation.
W-AIN-09 **(0.032 acre)** PEM	WETLAND SP-AIN09-01 UPLAND SP-AIN09-02	Drains directly into stream S-AIN-08 (Brown Ditch)	1	W-AIN-09 is a PEM wetland that occurs along and drains into Brown Ditch (S-AIN-08) at a farm crossing point where the slope of the bank is much lower than the adjacent slope upstream or downstream of the crossing along the stream. The wetland continues for a short distance outside the Study Area to the north and south along S-AIN-08 before ending in the stream channel. The wetland was dominated by rice cut grass (*Leersia oryzoides*) and blunt spikerush (*Eleocharis obtusa*). Hydrology within the wetland appeared to be primarily driven by surface water from S-AIN-08.

Table 2. Delineated Wetlands Summary Table

Resource ID, Size (acres)[1], & Community Type(s)[2]	Sample Points	Potential Connectivity for Regulatory Status[3]	ORAM Category [4]	Notes
W-AIN-10 **(0.250 acre)** PEM	WETLAND SP-AIN10-01 UPLAND SP-AIN10-02	Continues off-site to the south, but not downgradient along mapped NHD to east and north	1	W-AIN-10 is a PEM wetland that was partially farmed and occurred along a mapped NHD line in a depressional area. At the time of the delineation, there was apparent fill that may have been dumped in the wetland relatively recently (e.g., within the last 1-2 years), based on observed gravel deposited in the wetland and surrounding area. The wetland continues outside the Study Area to the southwest, but did not continue off-site to the northeast, which is downgradient from the delineated wetland. The wetland was dominated by barnyard grass (*Echinochloa crus-galli*). Hydrology within the wetland appeared to be primarily driven by precipitation.
W-AIN-11 **(0.011 acre)** PEM	WETLAND SP-AIN11-01 UPLAND SP-AIN11-02	Contained entirely within enclosed depression in the Study Area	1	W-AIN-11 is a PEM wetland that occurs as a narrow swale adjacent to an unnamed tributary of Flatrock Creek (S-AIN-09). The wetland ended at the southern edge of the Study Area and was not connected to S-AIN-09 to the north. The wetland was dominated by reed canary grass and creeping jenny (*Lysimachia nummularia*). Hydrology within the wetland appeared to be primarily driven by precipitation.
W-AIN-12 **(0.151 acre)** PFO	WETLAND SP-AIN12-01 UPLAND SP-AIN12-02	Continues off-site to the north.	2	W-AIN-12 is a PFO wetland that originates north of the ROW and continues north outside the Study Area. The wetland was dominated by silver maple. Hydrology within the wetland appeared to be primarily driven by precipitation.
W-LOH-01 **(0.254 acre)** PEM	WETLAND SP-LOH01-01 UPLAND SP-LOH01-02	Continues off-site to the northwest and southeast.	1	W-LOH-01 is a PEM wetland that continues off-site to the northwest and southeast as a roadside drainage/ditch along US Highway 30. It is unclear if the wetland continues and drains into an adjacent waterway. Dominant vegetation included narrow-leaf cattail (*Typha angustifolia*), soft-stem bulrush (*Schoenoplectus tabernaemontani*), and Torrey's rush (*Juncus torreyi*). Hydrology within the wetland appeared to be primarily driven by precipitation.

[1] Area only includes the portion of the wetland within the Study Area.
[2] PEM – Palustrine emergent, PSS – Palustrine scrub/shrub, PFO – Palustrine forested.
[3] The ultimate authority to determine regulatory status lies with IDEM, OEPA, and USACE.
[4] If the ORAM category was between two distinct categories (e.g., modified category 2, category 1 or 2, etc.), the delineator's best professional judgement and field conditions were used to determine the ultimate category.

4.1.2.3 Other Aquatic Resources

Twenty-seven (27) waterways (S-AIN-01 through S-AIN-10, and S-LOH-01 through S-LOH-17), and three waterbodies (WB-AIN-01, WB-LOH-01, and WB-LOH-02) totaling 15,709 linear feet and 1.47 acres, respectively, were delineated within the Study Area. The approximate locations are shown on the Ecological Survey Map (Appendix C, Exhibit A). Additional information, including photographs can be

found on the TRC Stream and Waterbody Inventory Forms, HHEI and QHEI Forms in Appendix F. A summary of the delineated streams is included in Table 3, below.

Table 3. Delineated Waterway Summary Table[1]

Stream ID	Stream Name	Flow Regime	HHEI / QHEI Score	Linear Feet within Study Area
S-AIN-01	Dennis Ditch	Perennial	NA	240
S-AIN-02	Lepper Ditch	Perennial	NA	236
S-AIN-03	Renniger Ditch	Perennial	NA	132
S-AIN-04	Unnamed tributary to Hoffman Ditch	Perennial	NA	1,120
S-AIN-05	Houk Ditch	Perennial	NA	179
S-AIN-06	Bohnke Ditch	Perennial	NA	355
S-AIN-07	Brown Ditch	Intermittent	NA	825
S-AIN-08	Brown Ditch	Intermittent	NA	582
S-AIN-09	Unnamed tributary to Flatrock Creek	Perennial	NA	578
S-AIN-10	Flatrock Creek	Perennial	NA	454
S-LOH-01	Sponseller Ditch	Intermittent	HHEI - 35	300
S-LOH-02	Blue Creek	Intermittent	QHEI – 31	301
S-LOH-03	Unnamed tributary	Intermittent	HHEI - 6	839
S-LOH-04	Unnamed tributary	Intermittent	HHEI - 30	550
S-LOH-05	North Creek	Perennial	QHEI - 29	553
S-LOH-06	North Creek	Perennial	QHEI – 29	503
S-LOH-07	North Creek	Perennial	QHEI – 29	1,792
S-LOH-08	Unnamed tributary to North Creek	Perennial	HHEI – 45	450
S-LOH-09	Hoaglin Creek	Perennial	QHEI - 50	1,320
S-LOH-10	Unnamed tributary to Hoaglin Creek	Intermittent	QHEI - 24	605
S-LOH-11	Unnamed tributary to North Creek	Intermittent	HHEI - 30	1,509
S-LOH-12	Unnamed tributary to North Creek	Intermittent	HHEI - 20	604
S-LOH-13	Pottawatomie Creek	Intermittent	HHEI - 30	761
S-LOH-14	Unnamed tributary to Pottawatomie Creek	Intermittent	HHEI - 35	504
S-LOH-15	Hoffman Ditch	Intermittent	QHEI – 19	192
S-LOH-16	Unnamed tributary to North Creek	Intermittent	QHEI – 29	121
S-LOH-17	Unnamed tributary to North Creek	Intermittent	HHEI - 27	104

[1] All streams delineated within the Study Area are likely regulated by USACE, IDEM, and OEPA, but the ultimate decision on regulatory status lies with these agencies.

4.2 Threatened and Endangered Species Habitat Review

4.2.1 Upland Natural Communities

Upland natural communities observed within the Study Area included old field, meadows, shrub areas and small woodlots. Dominant woody species that were observed included gray dogwood, autumn olive (*Elaeagnus umbellata*), raspberries (*Rubus* spp.), black walnut (*Juglans nigra*), and green ash. Except for the expanded Study Area into the woodlots larger trees were generally absent from the existing ROW due to regular management to maintain clearances within the transmission line ROW. In this expanded Study Area, larger trees included red oak (*Quercus rubra*), burr oak (*Quercus macrocarpa*), shagbark hickory (*Caya ovata*) and silver maple (*Acer saccharinum*).

Herbaceous species that were prevalent within the Study Area included reed canary grass, smooth brome (*Bromus inermis*), tall goldenrod (*Solidago altissima*), Canada bluegrass (*Poa compressa*), Kentucky bluegrass (*Poa pratensis*), tall fescue (*Schedonorus arundinaceus*), and ragweed species (*Ambrosia* spp.).

4.2.2 USFWS, IN DNR, and Ohio DNR Results

Results from the USFWS (2025 and 2026), Indiana Natural Heritage Data, and Ohio DNR review are provided in Appendix G. The species identified during the review are further summarized in Table 4 below, including comments on the potential presence of suitable habitat within the Study Area for each species, agency comments, and TRC's preliminary assessment on the potential for impacts to each species.

The ODNR did not identify any records of species within 1-mile of the Study Area. However, the ODNR DOW indicated the Project is within the vicinity of records for the northern long-eared bat (*Myotis septentrionalis*), and within the range of the pugnose minnow (*Opsopoeodus emilae*). Additionally, the ODNR review noted that the entire state of Ohio is within the range of the Indiana bat (*Myotis sodalis*), northern long-eared bat, little brown bat (*Myotis lucifugus*) and tricolored bat (*Perimyotis subflavus*).

The IN DNR response indicated that no threatened and endangered species or significant areas are documented within 0.5-mile of the Study Area in Indiana. Regardless, each species listing status for the State of Indiana was identified for each species despite the fact that no threatened or endangered species or significant areas are documented within 0.5-mile of the Study Area in Indiana.

Table 4: Threatened and Endangered Species Summary Table

Species Name	Federal Listing	State Listing	Habitat Preference	Habitat Observed in Project Area?	Avoidance Dates	Agency Comment	Potential Impacts
Mammals							
Indiana bat (*Myotis sodalis*)	Endangered	Endangered (OH) Endangered (IN)	Roosting during the summer occurs in wooded areas under loose bark or dead or dying trees with a ≥5 inch diameter at breast height. Males roost alone or in small groups while females roost in larger groups of up to 100 bats. Indiana bats also forage in or along edges of forested areas. Winter roosting occurs in caves and mines (hibernacula).	Yes – approximately 16.12 acres in expanded Study Area (outside maintained ROW)	April 1 – September 30	USFWS and ODNR-DOW recommend conserving trees that meet suitability criteria for roosting and when clearing is unavoidable, recommends tree clearing/trimming only during October 1- March 31; if this timeframe cannot be adhered to, presence/absence surveys must be conducted between June 1 and August 15 by an approved, federally permitted surveyor. If Indiana bats are not detected during the survey, tree clearing/trimming can occur at any time of year.	Yes – if tree clearing occurs during roosting period (April-Sept)
Northern long-eared bat (*Myotis septentrionalis*)	Endangered	Endangered (OH) Endangered (IN)	Roosting during the summer occurs in wooded areas under loose bark, cavities and or crevices of living and dead trees typically with a ≥ 3 in diameter breast height. Indiana bats also forage in or along edges of forested areas. Winter roosting occurs in caves and mines (hibernacula).	Yes – approximately 16.12 acres in expanded Study Area (outside maintained ROW)	April 1 – September 30	USFWS and ODNR-DOW recommend conserving trees that meet suitability criteria for roosting and when clearing is unavoidable, recommends tree clearing/trimming only during October 1- March 31; if this timeframe cannot be adhered to, presence/absence surveys must be conducted between June 1 and August 15 by an approved, federally permitted surveyor. If northern long-eared bats are not detected during the survey, tree clearing/trimming can occur at any time of year.	Yes– if tree clearing occurs during roosting period (April-Sept)
Tricolored bat (*Perimyotis subflavus*)	Proposed Endangered (NA – 2026)	Endangered (OH) Endangered (IN)	Roosting in the spring, summer, and fall occurs in live and dead leaf clusters of live or recently dead deciduous hardwood trees, among pine needles, within artificial roosts like barns, porch roofs, bridges, concrete bunkers and rarely within caves. Winter hibernation occurs in caves and mines in the northern U.S.	Yes – approximately 16.12 acres in expanded Study Area (outside maintained ROW)	April 1 – September 30	USFWS and ODNR-DOW recommend conserving trees that meet suitability criteria for roosting and when clearing is unavoidable, recommends tree clearing/trimming only during October 1- March 31; if this timeframe cannot be adhered to, presence/absence surveys must be conducted between June 1 and August 15 by an approved, federally permitted surveyor. If Tri-colored bats are not detected during the survey, tree clearing/trimming can occur at any time of year.	Yes– if tree clearing occurs during roosting period (April-Sept)
Little brown bat (*Myotis lucifugus*)	NA	Endangered (OH) Endangered (IN)	Roosting in the spring, summer, and fall occurs in live and dead leaf clusters of live or recently dead deciduous hardwood trees, among pine needles, within artificial roosts like barns, porch roofs, bridges, concrete bunkers and rarely within caves. Winter hibernation occurs in caves and mines in the northern U.S.	Yes – approximately 16.12 acres in expanded Study Area (outside maintained ROW)	April 1 – September 30	ODNR-DOW recommends conserving trees that meet suitability criteria for roosting and when clearing is unavoidable, recommends tree clearing/trimming only during October 1- March 31; if this timeframe cannot be adhered to, presence/absence surveys must be conducted between June 1 and August 15 by an approved, federally permitted surveyor. If little brown bats are not detected during the survey, tree clearing/trimming can occur at any time of year.	Yes– if tree clearing occurs during roosting period (April-Sept)
Birds							
Whooping crane (*Grus americana*)	Experimental non-essential	Endangered (IN)	Migrating whooping cranes feed in cropland and roost in shallow freshwater wetlands.	Yes – stopover habitat, primarily in cropland.	NA	No USFWS, ODNR or IDNR comments included in the IPaC or any additional agency letters.	No

Table 4: Threatened and Endangered Species Summary Table

Species Name	Federal Listing	State Listing	Habitat Preference	Habitat Observed in Project Area?	Avoidance Dates	Agency Comment	Potential Impacts
			For the purposes of consultation, non-essential experimental populations are treated as threatened species on National Wildlife Refuge and National Park land, and as proposed species on private land (no Section 7(a)(2) requirements, but Federal agencies must not jeopardize their existence.				
Insects							
Monarch butterfly (*Danaus Plexippus*)	Proposed threatened	NA - Indiana	Milkweed species (*Asclepias* spp.) are their obligate host plants for the larval stage; adults nectar on a variety of wildflowers.	Yes	NA	No USFWS, ODNR or IDNR comments included in the IPaC or any additional agency letters. USFWS in general recommends to avoid disturbance to areas that are observed to have milkweed species present.	Yes – limited impacts to areas with milkweed
Fish							
Pugnose minnow (*Opsopoeodus emilae*)	NA	Endangered (Ohio) NA - Indiana	Requires clear vegetated lakes and pools and runs of low gradient streams and rivers, and are extremely intolerant to turbidity	No	March 15 – June 30 (in water work for perennial streams only)	ODNR-DOW – If no in-water work is proposed in a perennial stream, this project is not likely to impact this or other aquatic species.	No

4.2.3 Habitat Survey Results

Based on responses from the IN DNR Natural Heritage Review, USFWS IPaC review, ODNR, field observations, and a review of habitat requirements of the State- and federally-listed species, confirmed suitable habitat was present for the monarch butterfly. Several locations of documented milkweed species (*Asclepias* spp.) were mapped within the Study Area, primarily along unmowed stream corridors or within the maintained ROW between forested areas (Appendix C, Exhibit A). However, proposed threatened species are not protected by take prohibitions until the rule to list a species is finalized.

The whooping crane also has suitable habitat in the form of potential stopover areas in agricultural fields or PEM wetlands during migration; however, due to the species listing status as Experimental population, Non-essential (EXPN), it is treated as a threatened species on National Wildlife Refuge and National Park land and as a proposed species on private land. Because the Study Area is private land, this species is treated as a proposed species according to the Endangered Species Act.

Suitable bat roost habitat was observed within the Study Area, within an expanded Study Area that extends into a small section of unmanaged forest. This area is limited to approximately 16.12 acres of expanded Study Area that is at least partially forested and may require some tree clearing. There is no other suitable bat roosting habitat, as generally no trees were present in the rest of the Study Area. Further, no hibernaculum were observed within the Study Area or in the visible vicinity of the Study Area; a separate hibernaculum assessment is being prepared to document those results.

For the pugnose minnow, no suitable habitat (i.e., clear streams) was delineated within the Study Area, as all streams observed in the Study Area in Ohio either did not have sufficient flow or had higher turbidity noted.

No bald eagles, eagle nests or other raptor nests were observed during the site visits.

5.0 Conclusions

Based on the Ecological Survey completed by TRC, 13 wetlands totaling approximately 7.621 acres, 27 waterways totaling 15,709 linear feet, and three ponds totaling 1.47 acres were delineated within the Study Area.

Suitable habitat was observed on-site for the monarch butterfly, with limited bat summer roosting habitat and stopover migratory habitat for the whooping crane noted.

Wetlands and other aquatic resources delineated and identified in this report are a professional finding based on current regulatory policy accepted by USACE, OEPA and IDEM methodology at the time the resources were delineated. Unknown and future conditions that affect observations of field indicators or change in interpretation of regulatory policy or methods may modify future findings.

The ultimate authority to determine the location of the wetland boundary and jurisdictional authority over the wetlands and other aquatic resources identified in this report resides with the USACE, Ohio EPA, and IDEM. Decisions made by staff of these regulatory agencies may result in modifications to the location of the wetland or other aquatic resource boundaries shown in this report. In addition, the USACE, OEPA, and IDEM have jurisdictional authority to determine which features are exempt from regulation including stormwater ponds and conveyance features. Furthermore, municipalities, townships and counties may have local zoning authority over certain areas or types of wetlands and waterways. The determination that a wetland or waterway is subject to regulatory jurisdiction is made independently by the agencies.

Any activity in a delineated wetland or below the Ordinary High-Water Mark of other aquatic resources may require USACE, OEPA, and/or IDEM permits, and local government permits. If the Client proceeds to change, modify or utilize the property in question without obtaining authorization from the appropriate regulatory agency, it will be done at the Client's own risk and TRC shall not be responsible or liable for any resulting damages.

Consultation with the USFWS and state agencies are recommended to determine the potential for adverse impacts for the listed species with potential suitable habitat. Updates to the species lists may be required periodically and prior to permitting because species lists and/or regulatory status may change which may affect future determinations.

6.0 References

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USDA Natural Resources Conservation Service Web Soil Survey (Web Address: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx)

USDA NRCS Climate Analysis by County Web Site (WETS). (Web Address: http://www.wcc.nrcs.usda.gov/climate/wetlands.html)

Appendix A:
Figures



STUDY AREA

BASE MAP: ESRI "STREETMAP" ONLINE SERVICE LAYER
DATA SOURCES: TRC, ESRI

N

0 2 4

MILES

1:240,000 1" = 4 MILES



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AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

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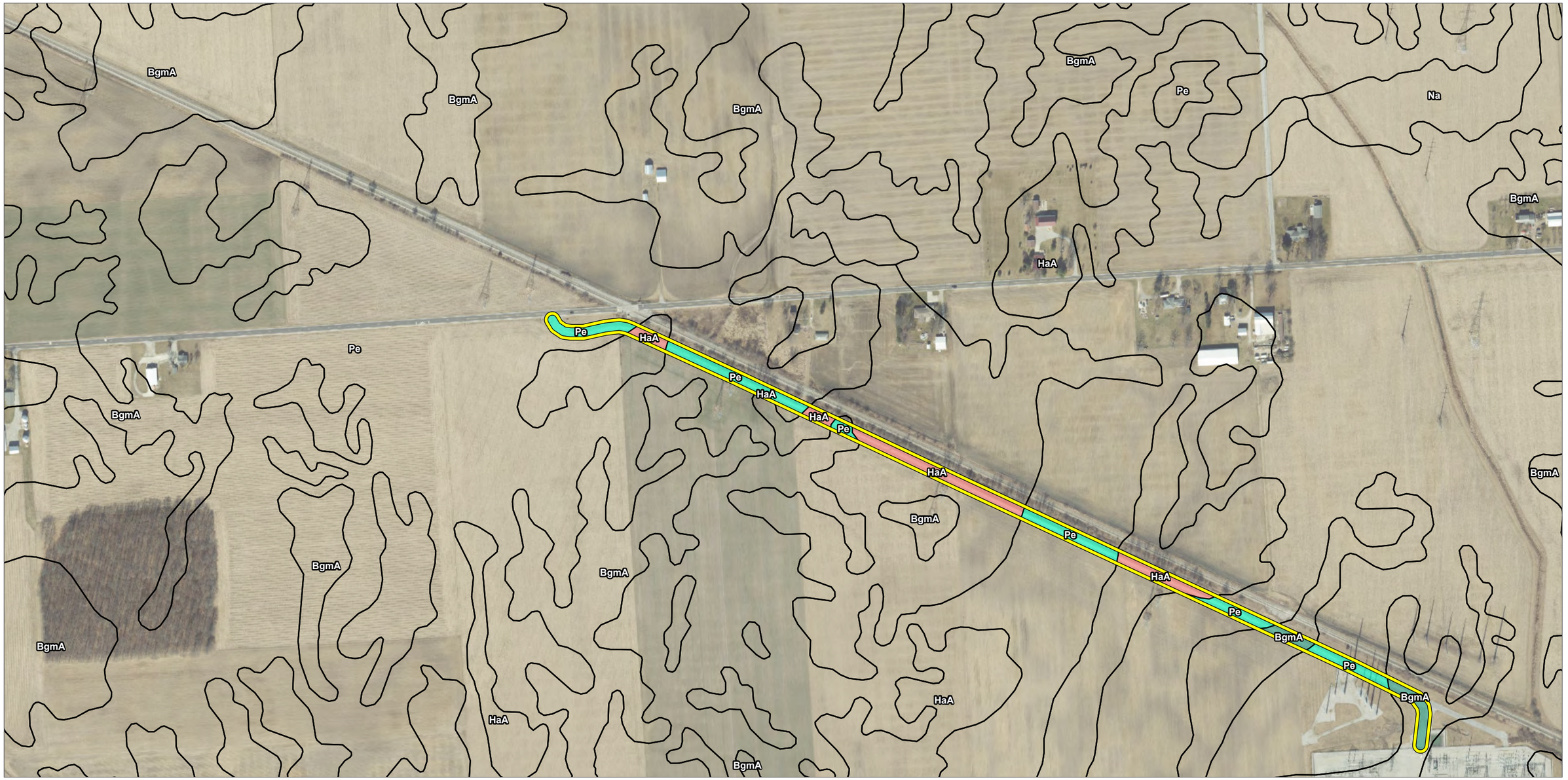
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CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 1

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SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR

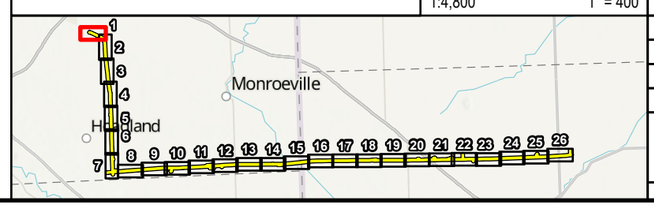
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- STUDY AREA
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- HASKINS LOAM, 0 TO 3 PERCENT SLOPES
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

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1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

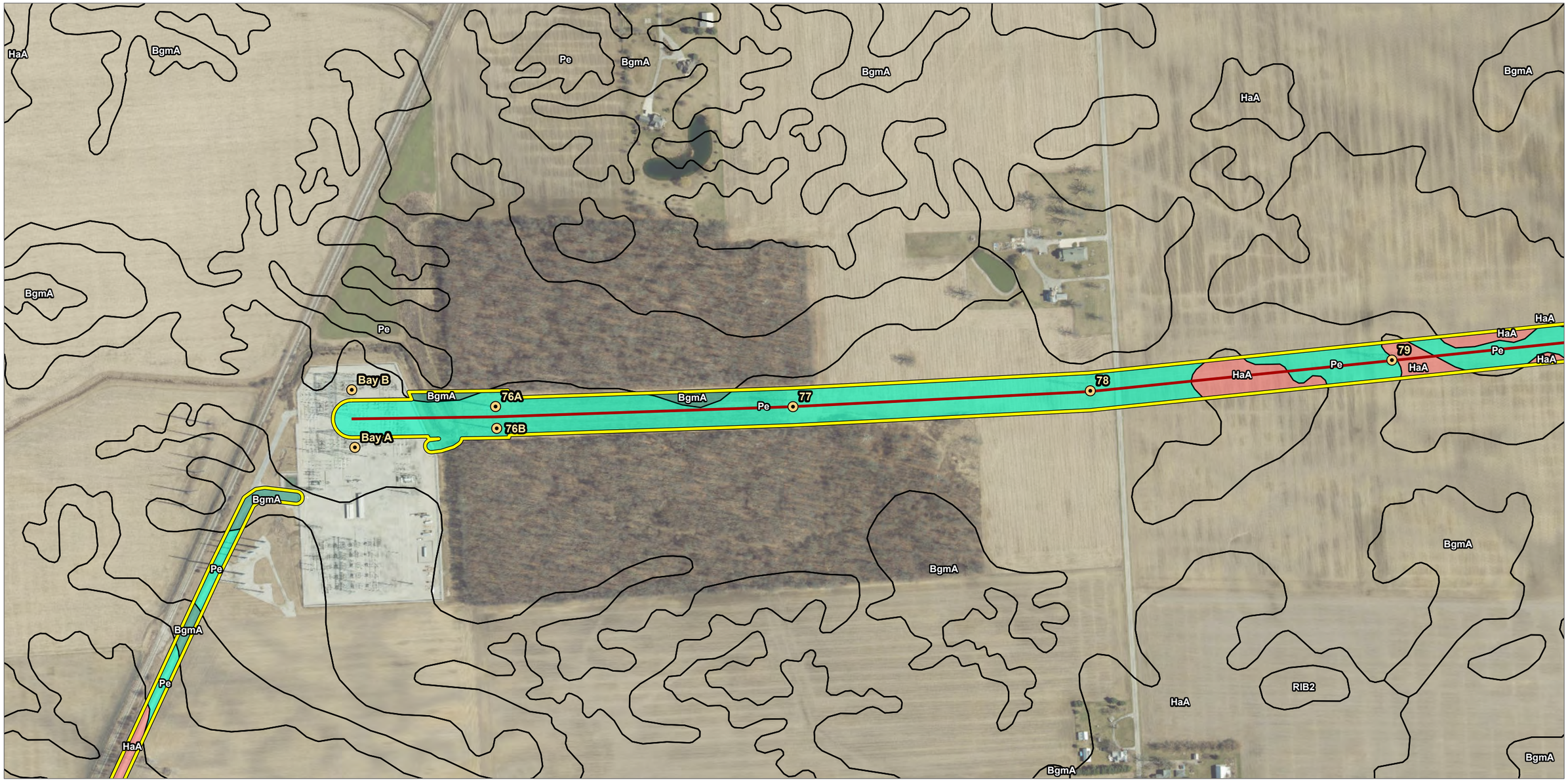
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NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 2-1
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

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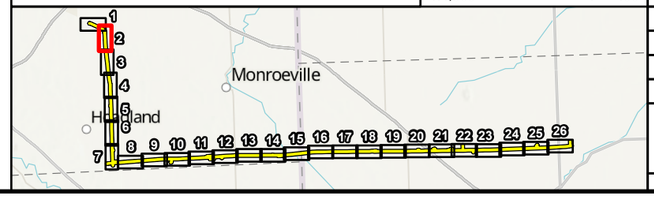
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- HASKINS LOAM, 0 TO 3 PERCENT SLOPES
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

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1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

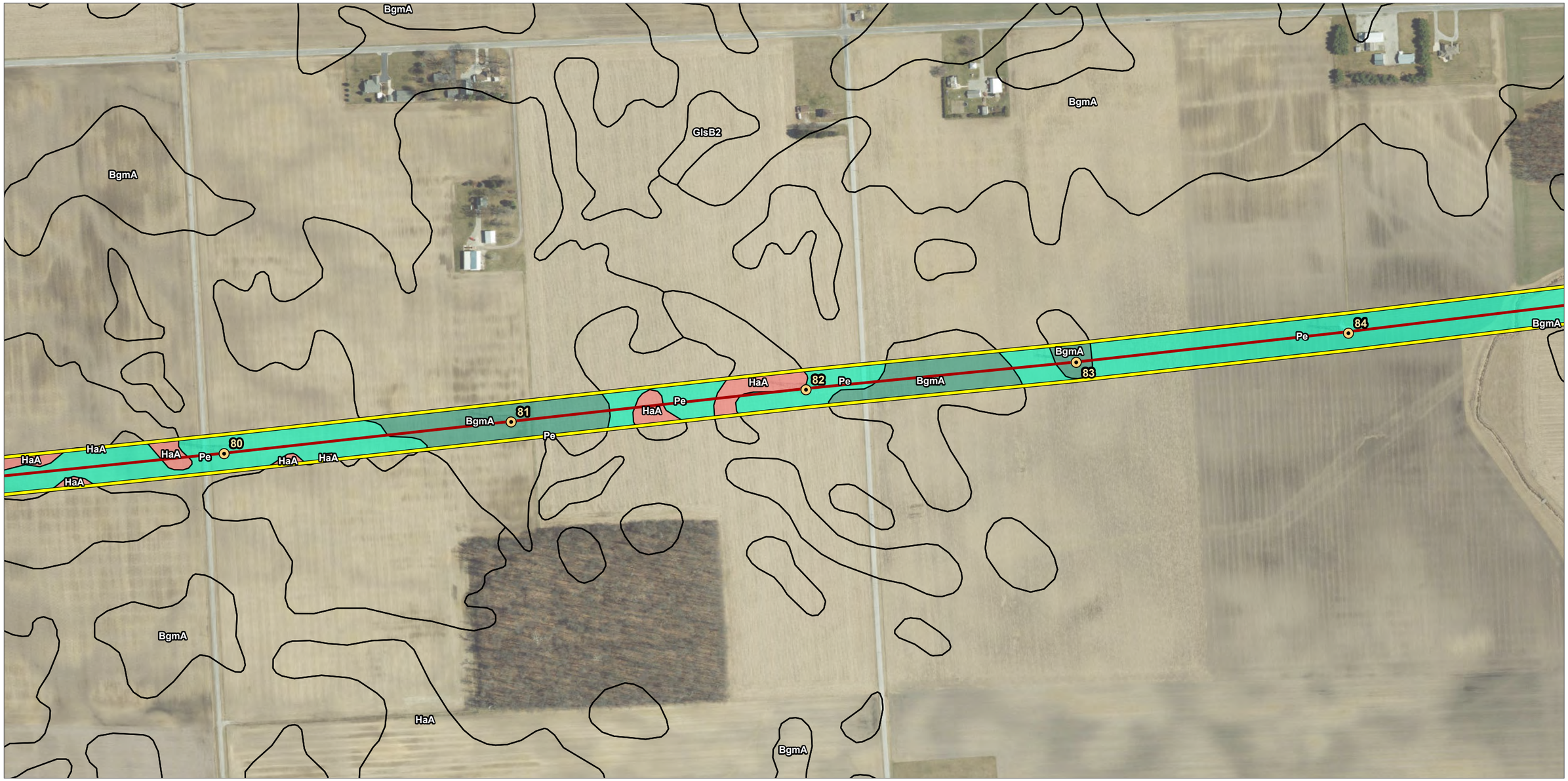
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NRCS SOILS MAP

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CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 2-2
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

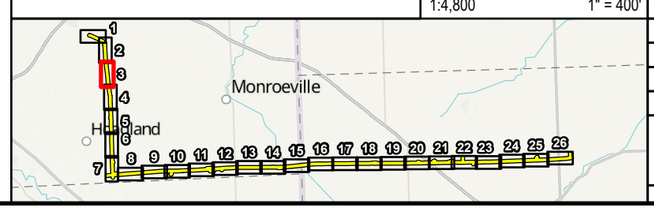
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- HASKINS LOAM, 0 TO 3 PERCENT SLOPES
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

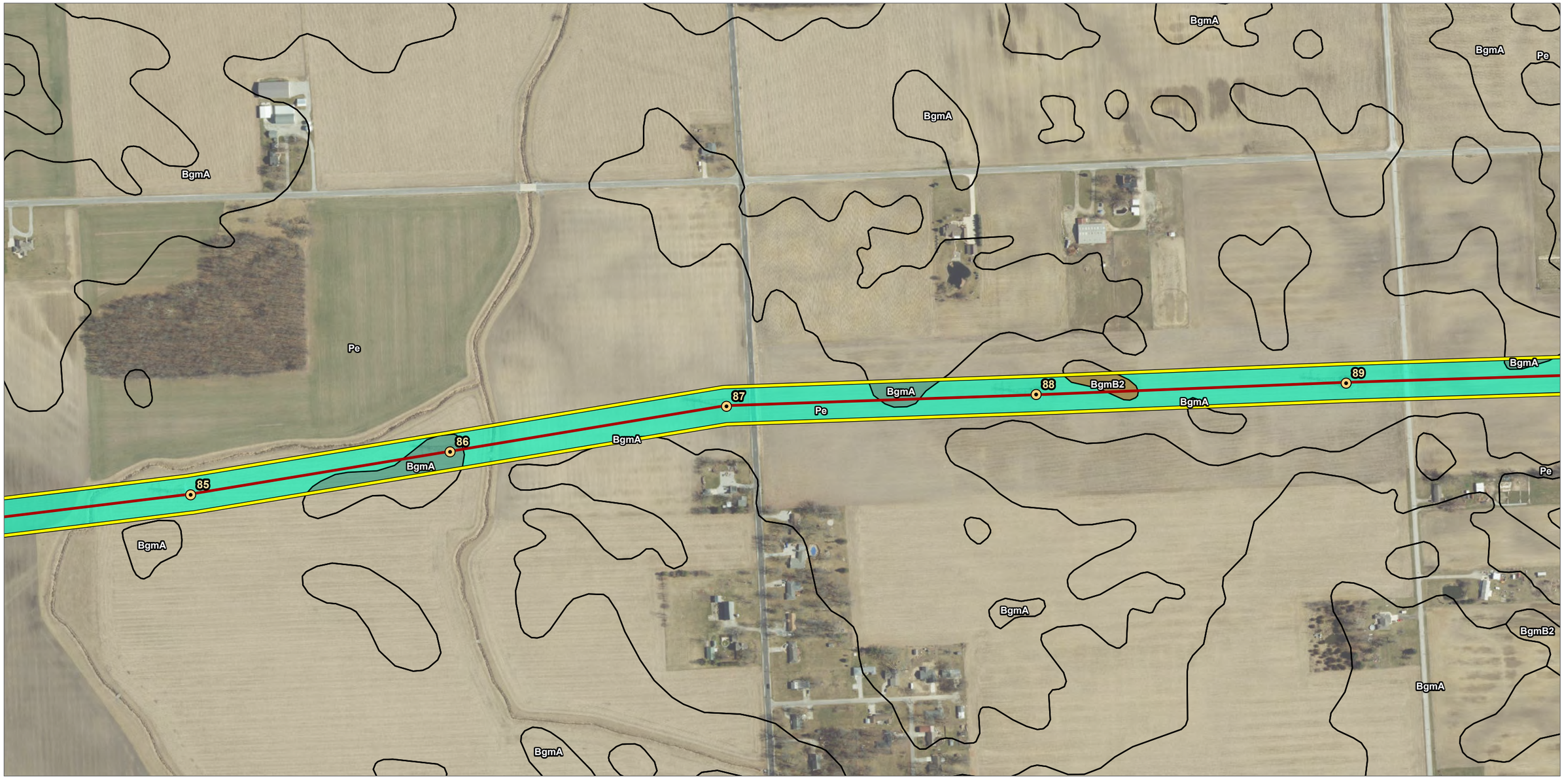
TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 2-3
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

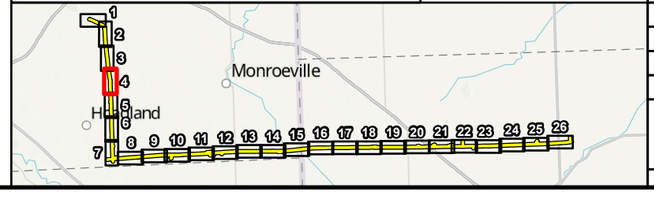
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- BLOUNT SILT LOAM, GROUND MORAINE, 1 TO 4 PERCENT SLOPES, ERODED
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 2-4

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

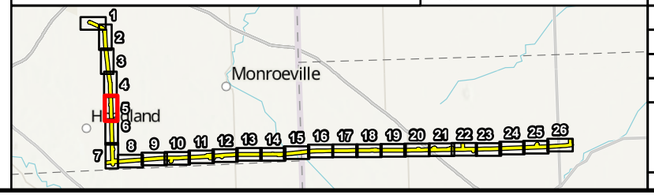
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

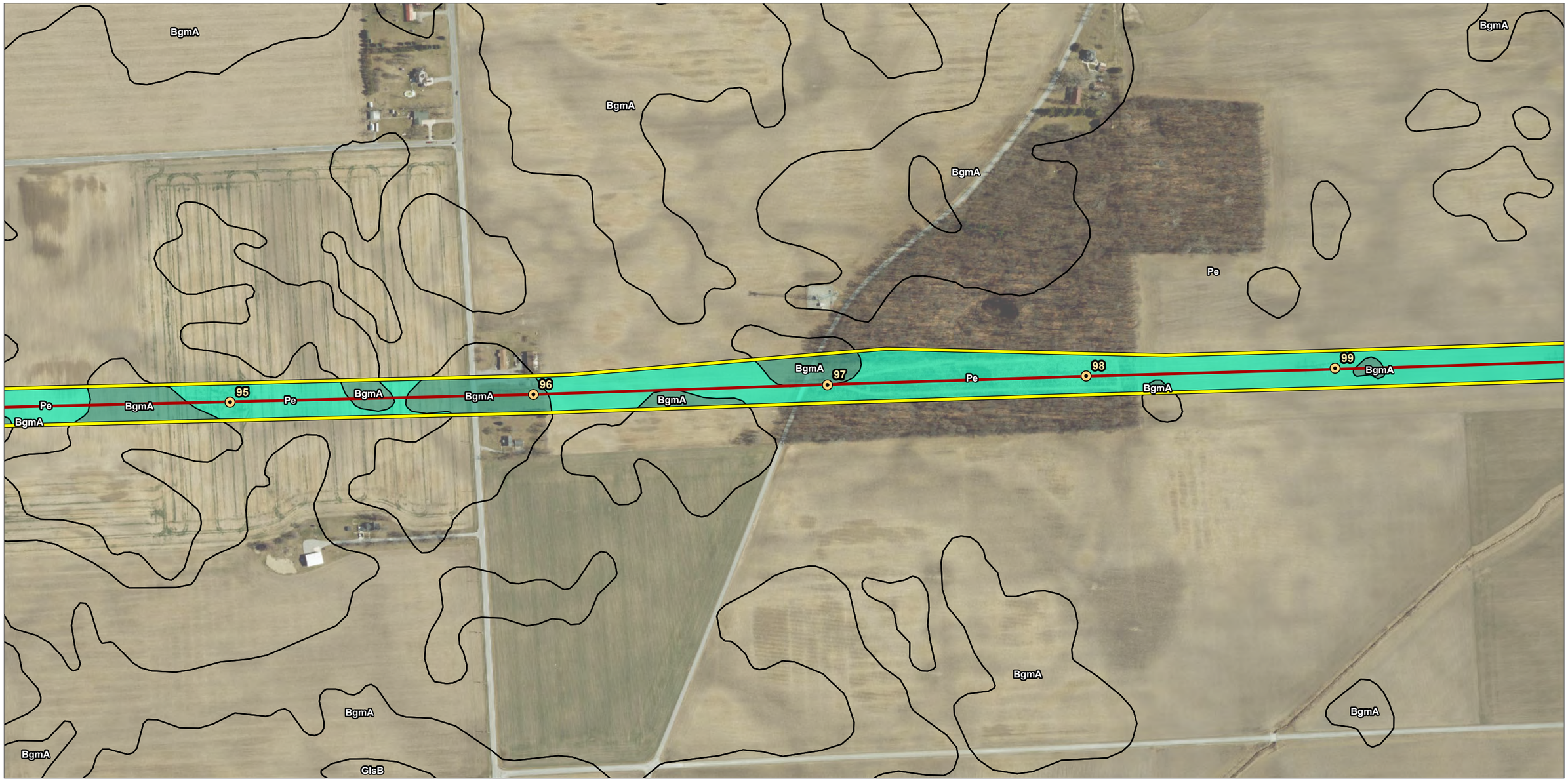
TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		**FIGURE 2-5**
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

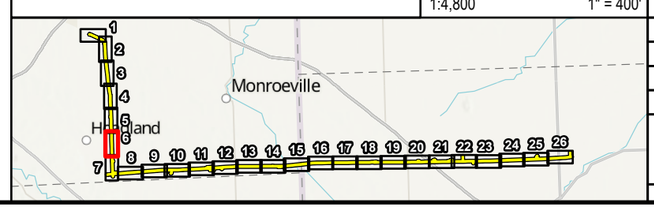
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS
CHECKED BY:	A. CLINE
APPROVED BY:	N. YUKNIS
DATE:	MAY 2026

PROJ. NO.: 624605

FIGURE 2-6

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

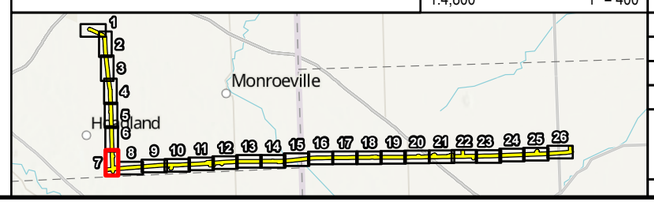
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, END MORAINE, 0 TO 2 PERCENT SLOPES
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

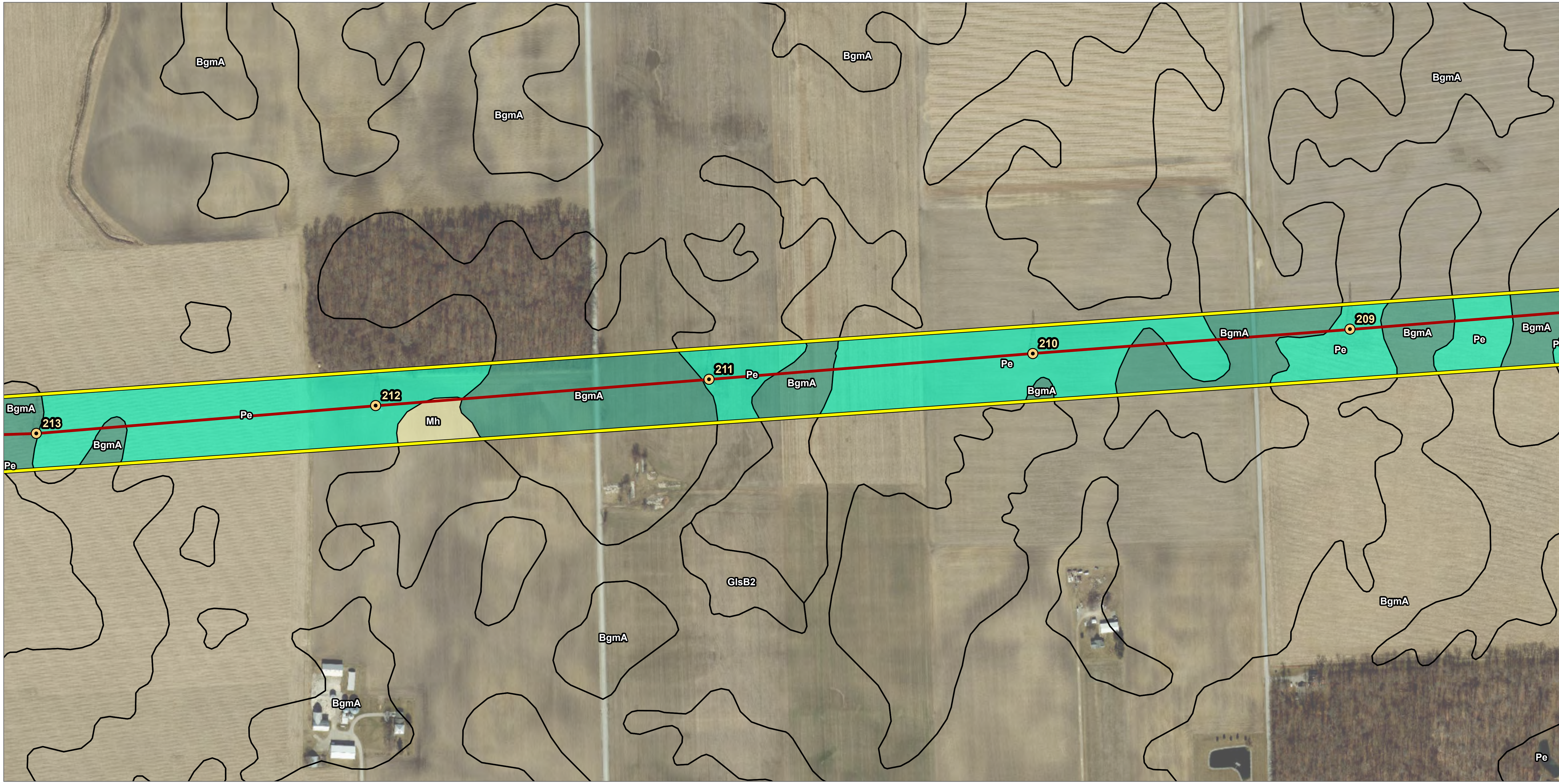
TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		**FIGURE 2-7**
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

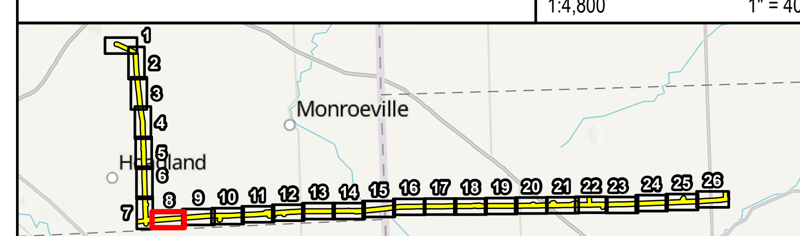
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- MERMILL COMPLEX
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO



N
0 200 400 FEET
1:4,800 1" = 400'

PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

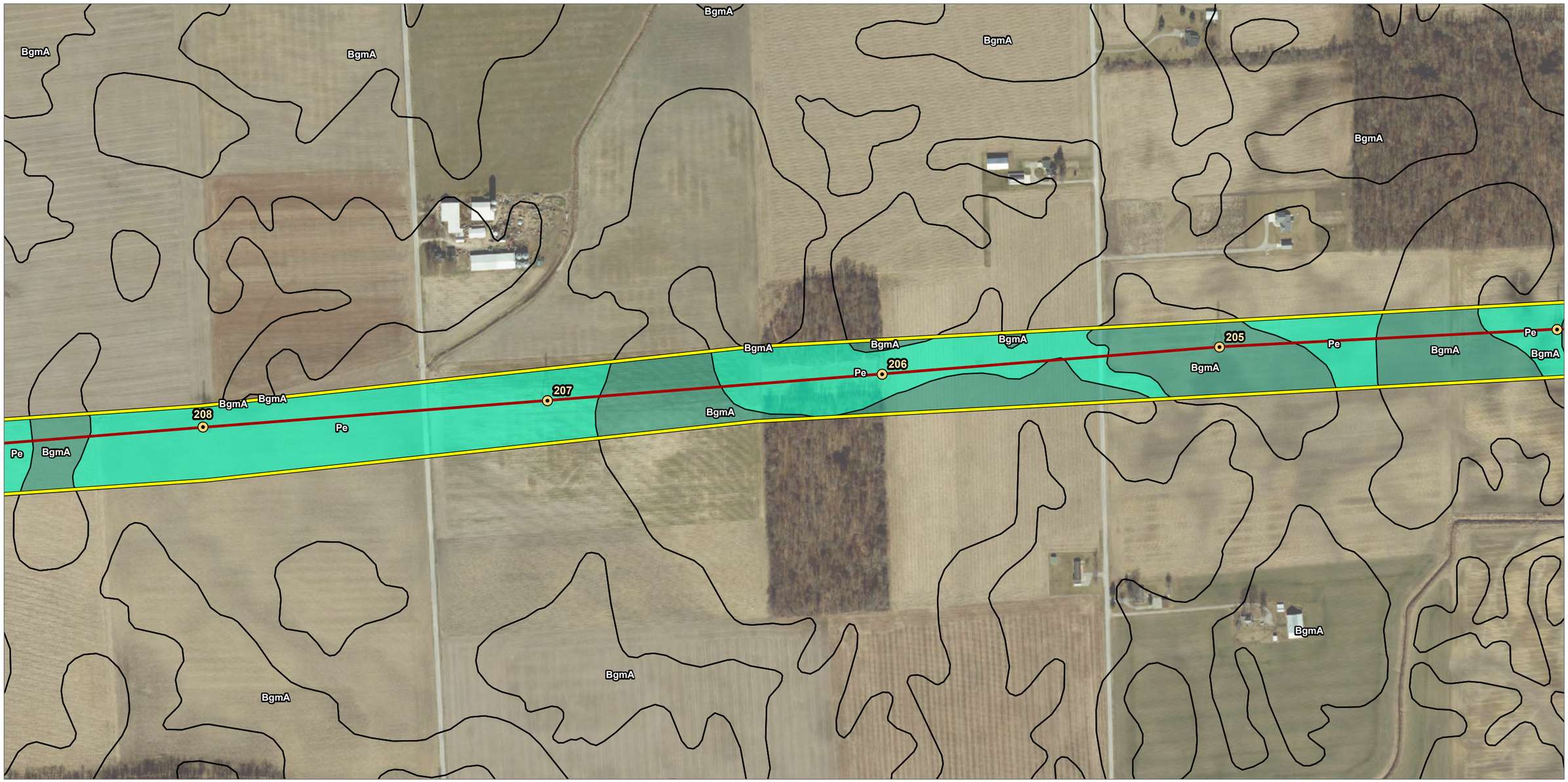
TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE	FIGURE 2-8	
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

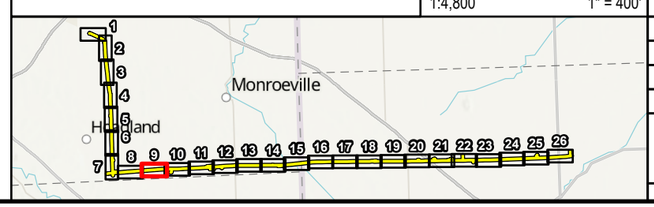
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS
CHECKED BY:	A. CLINE
APPROVED BY:	N. YUKNIS
DATE:	MAY 2026

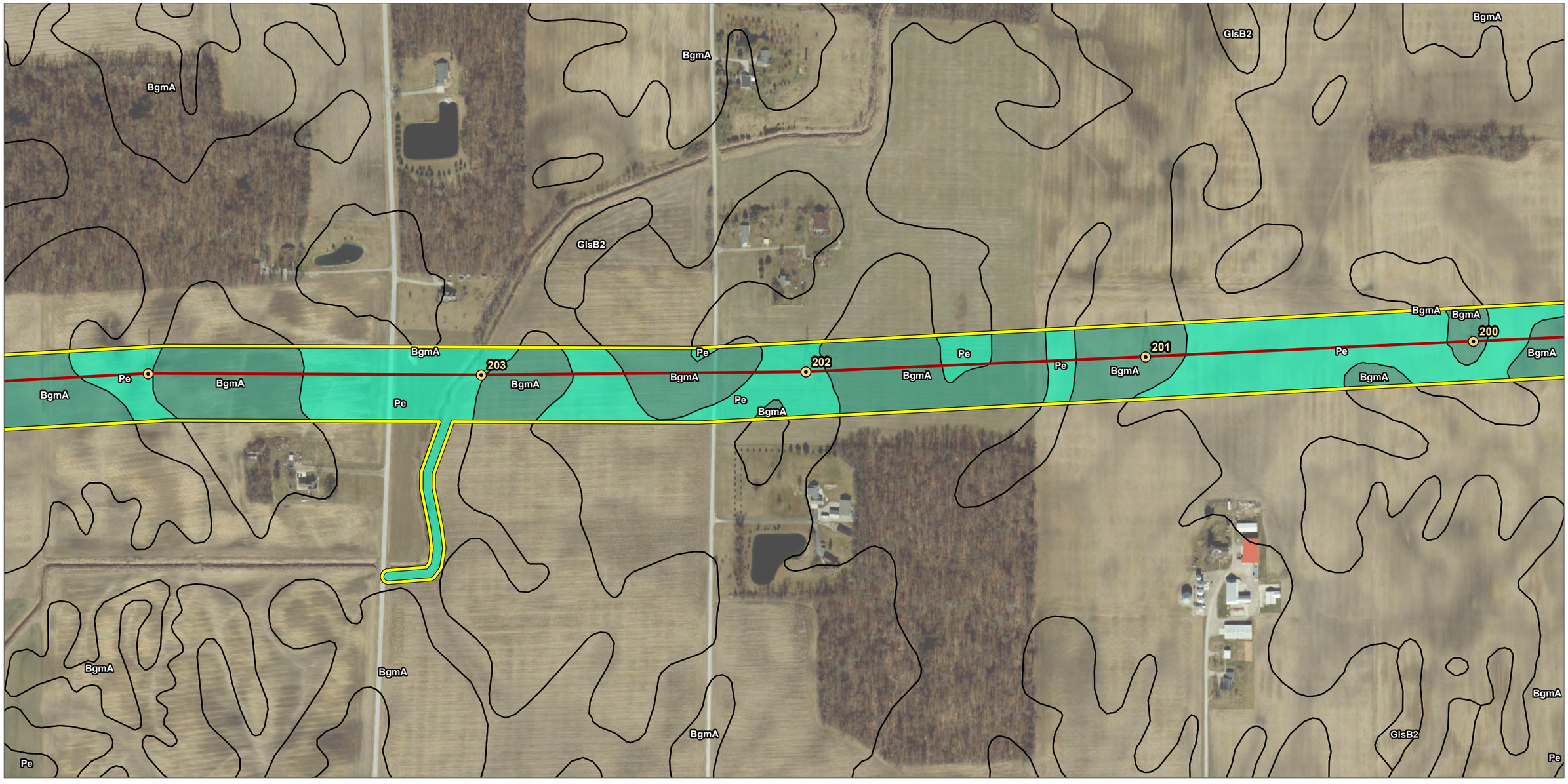
PROJ. NO.: 624605

FIGURE 2-9

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

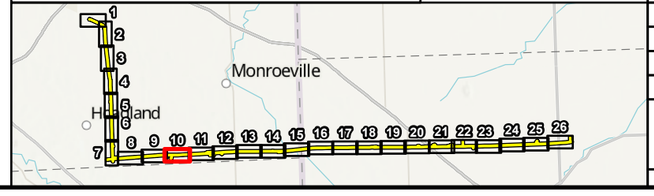
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

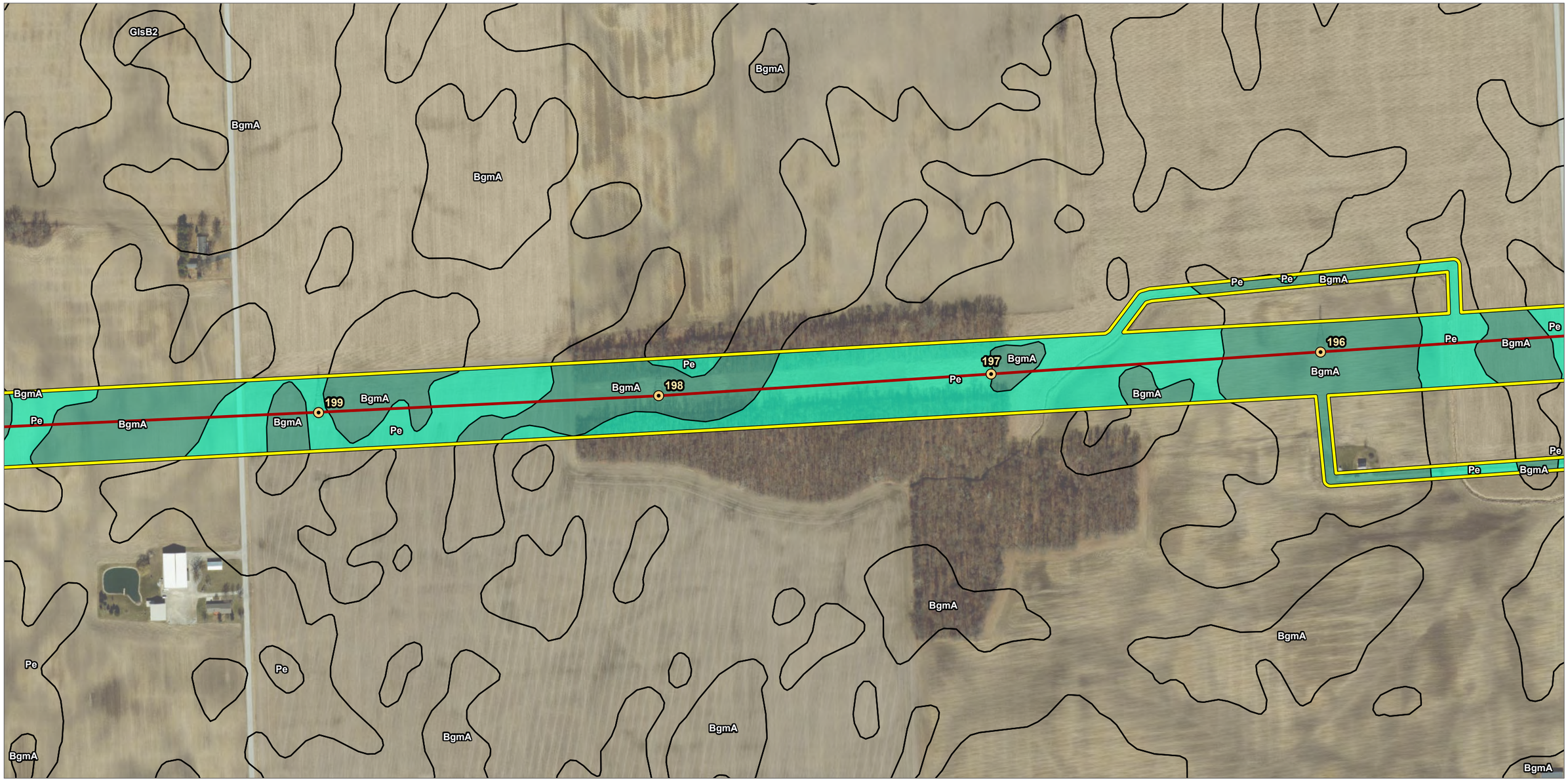
TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 2-10
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
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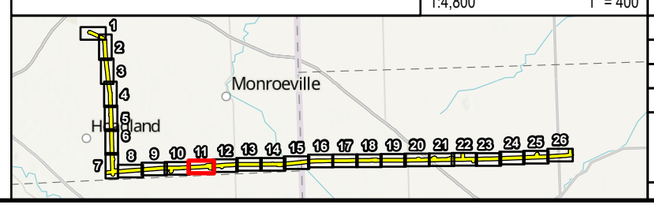
- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

N

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

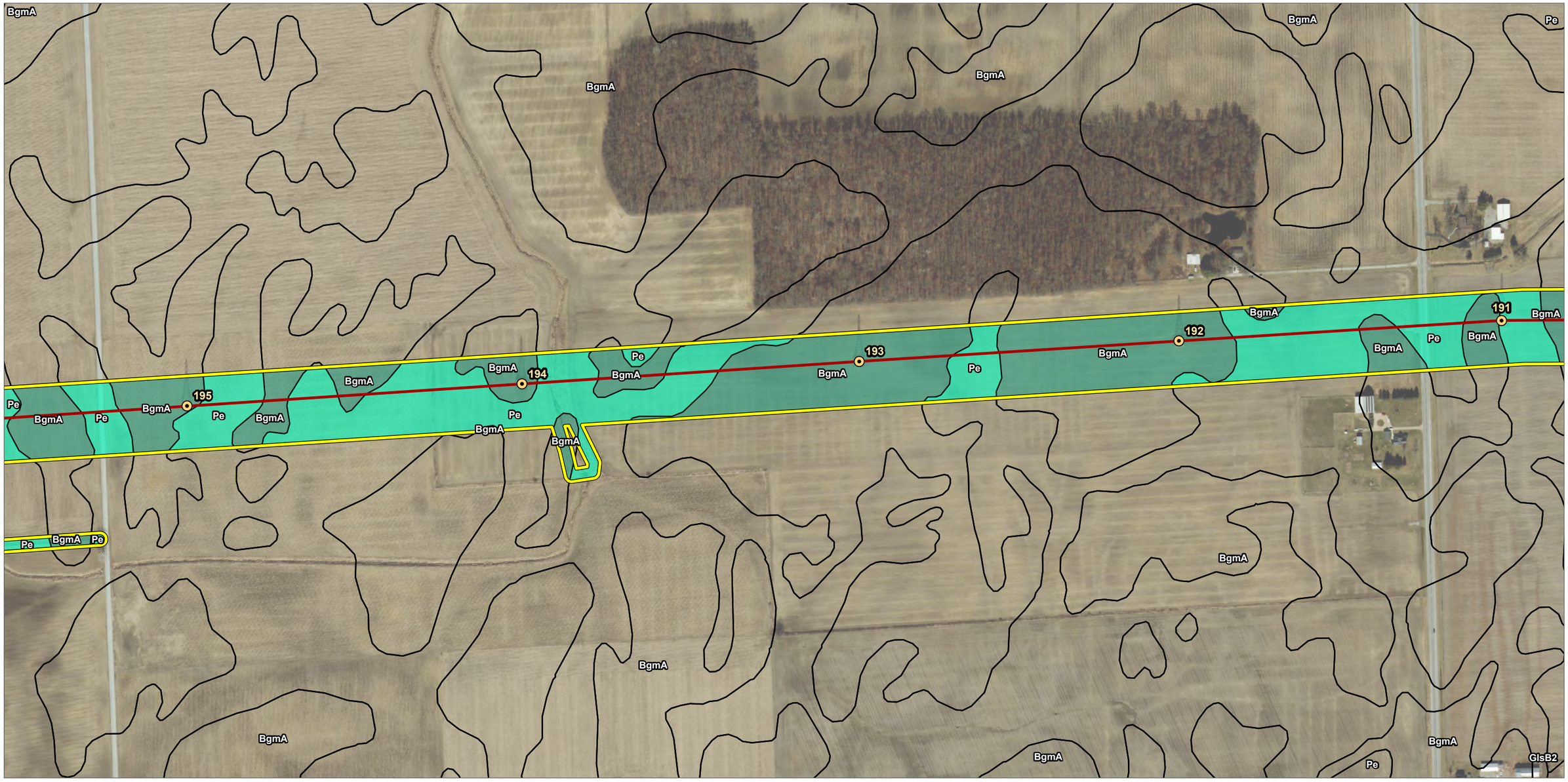
TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 2-11
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

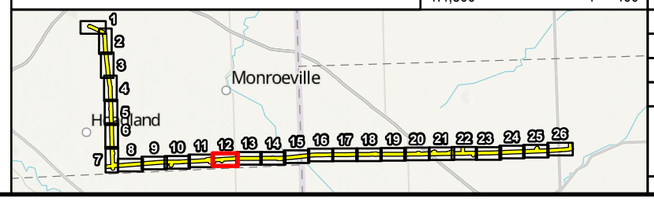
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

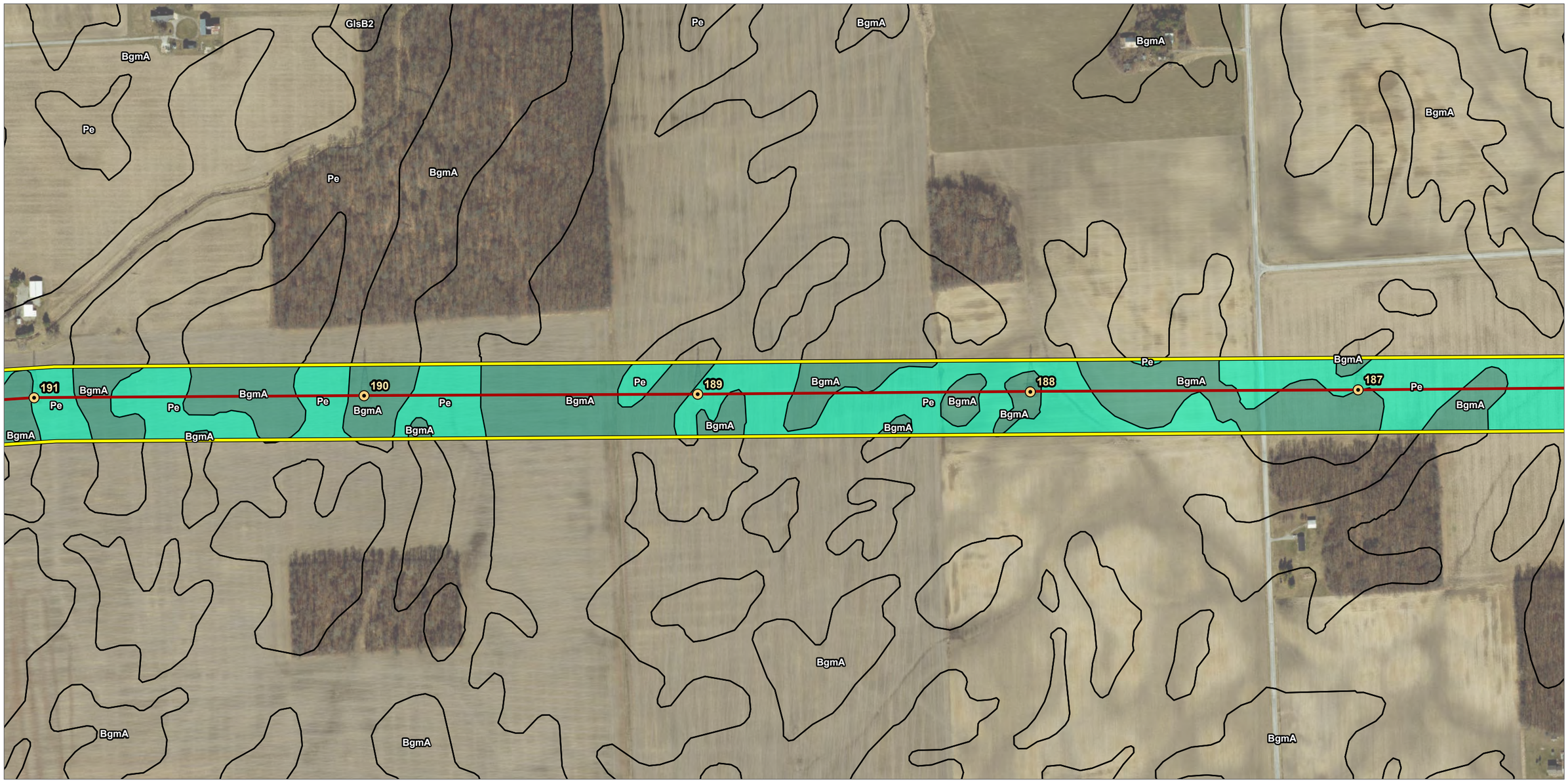
TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 2-12
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

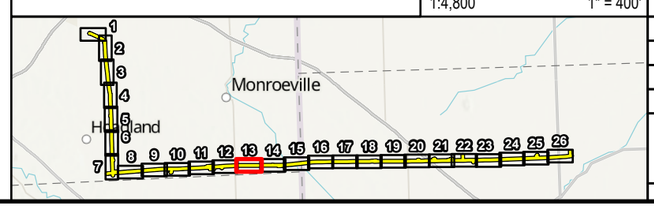
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

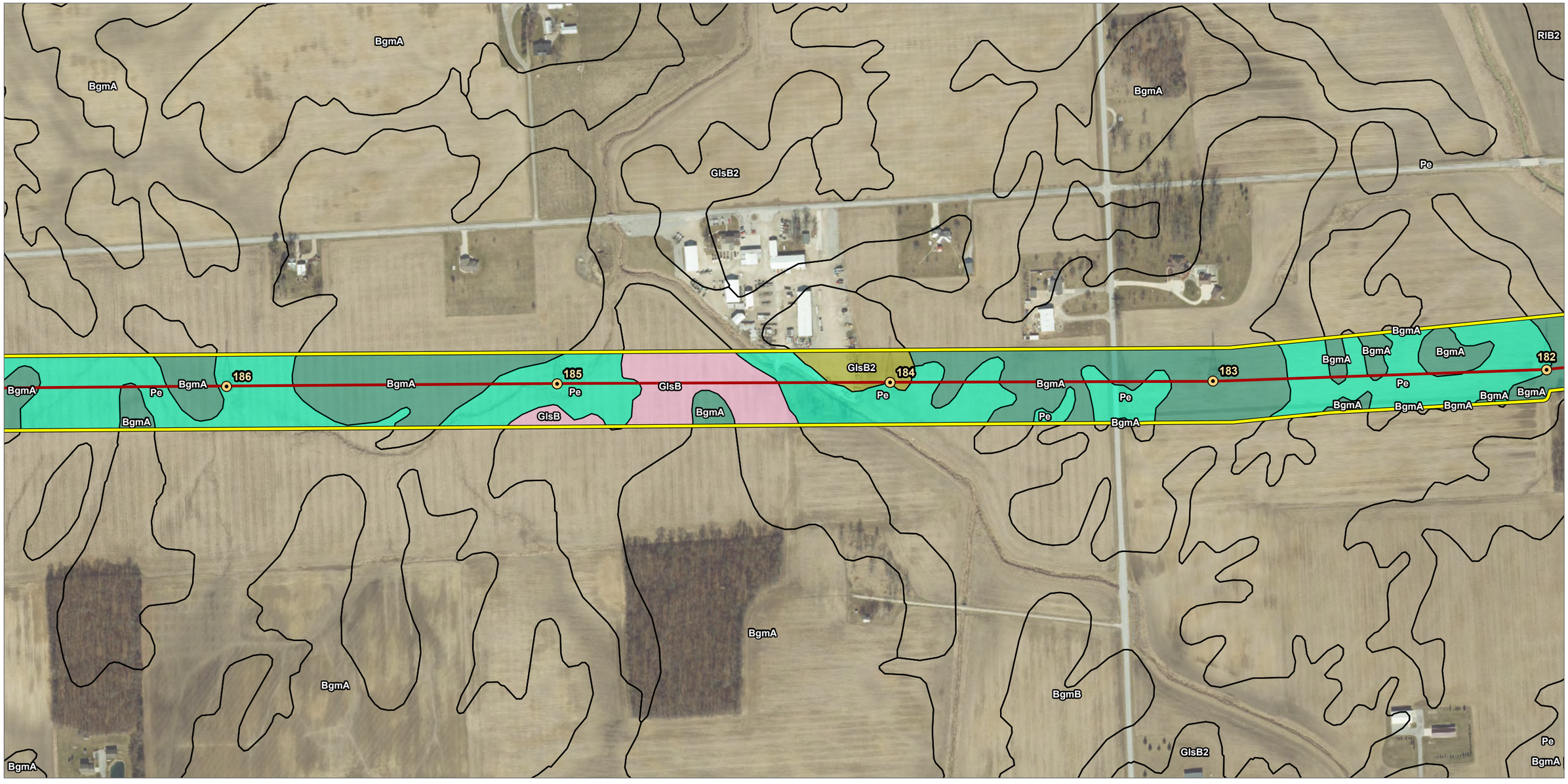
TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 2-13
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

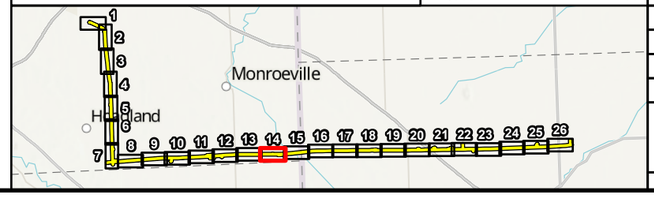
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- GLYNWOOD SILT LOAM, GROUND MORAINE, 2 TO 6 PERCENT SLOPES
- GLYNWOOD SILT LOAM, GROUND MORAINE, 2 TO 6 PERCENT SLOPES, ERODED
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
NRCS SOILS MAP

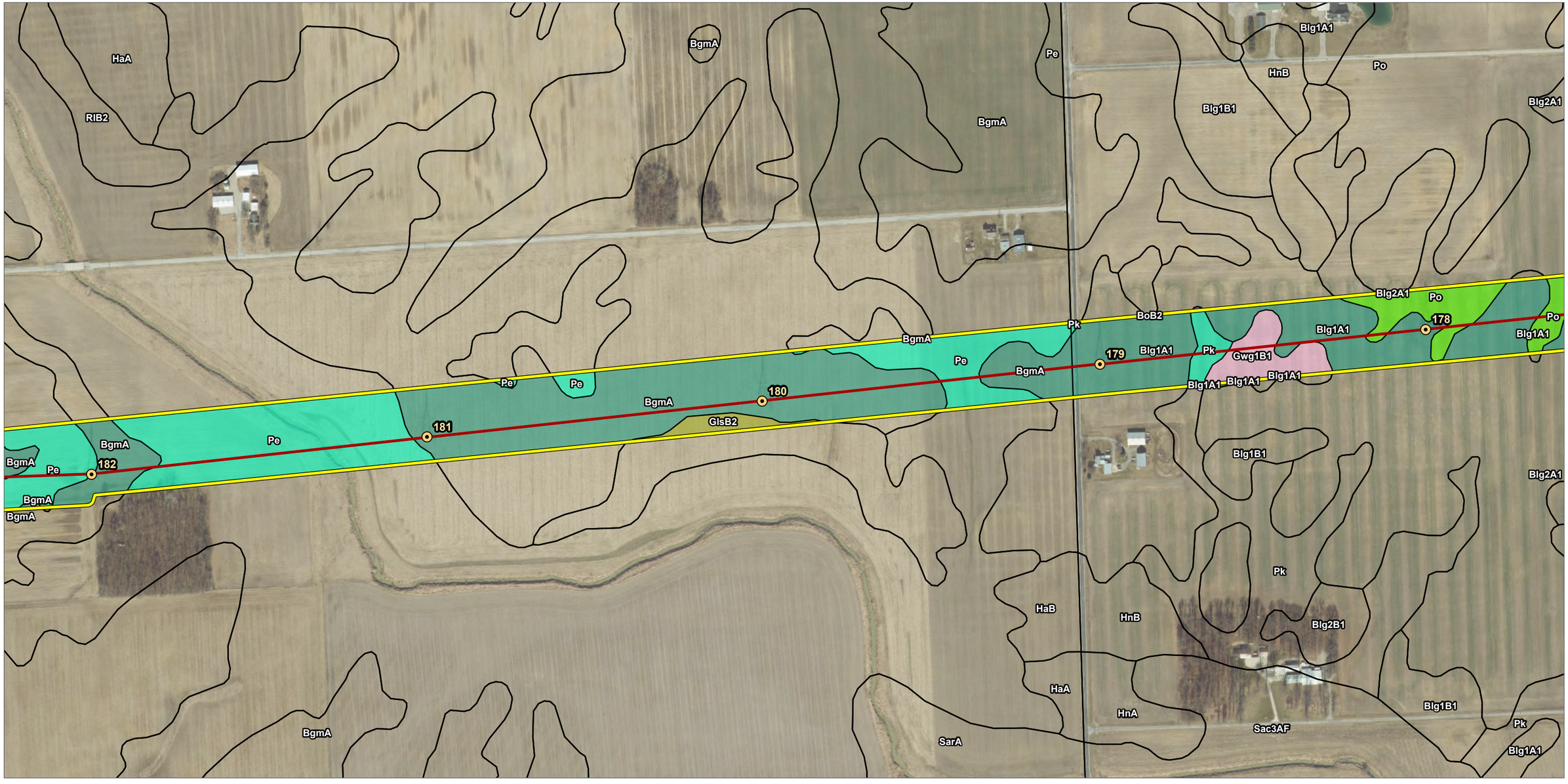
DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 2-14

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
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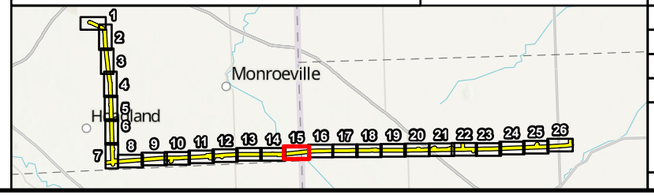


- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- BLOUNT SILT LOAM, 2 TO 6 PERCENT SLOPES, ERODED
- GLYNWOOD SILT LOAM, GROUND MORAINE, 2 TO 6 PERCENT SLOPES
- GLYNWOOD SILT LOAM, GROUND MORAINE, 2 TO 6 PERCENT SLOPES, ERODED
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES
- PEWAMO SILTY CLAY, 0 TO 2 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, NRCS SSURGO

N

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
NRCS SOILS MAP

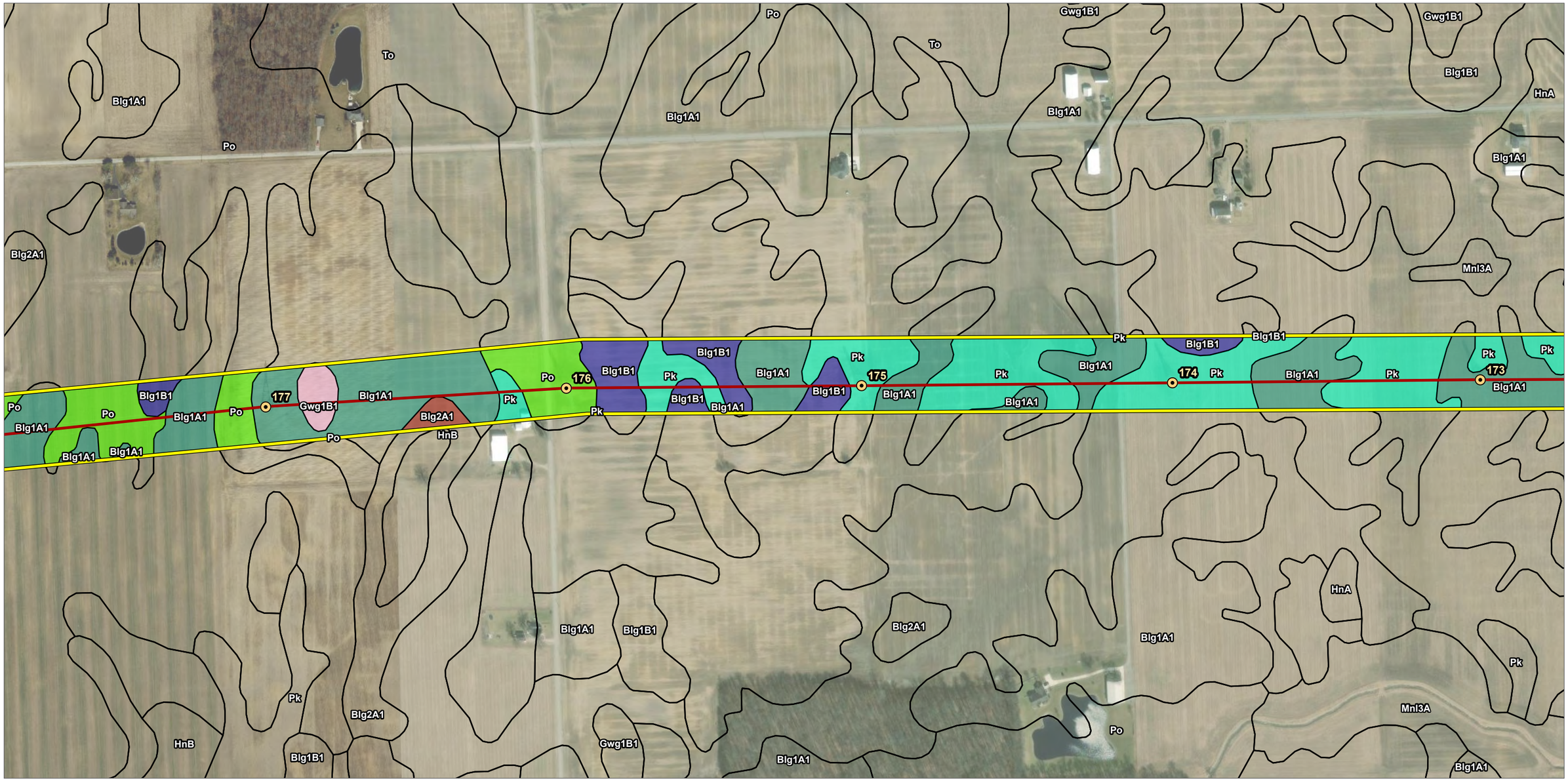
DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 2-15

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

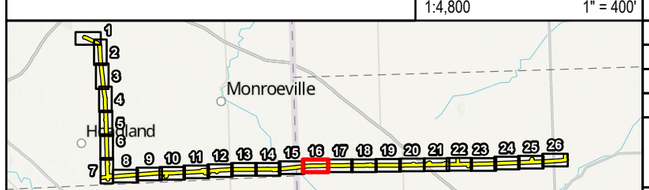
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STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
SOIL BOUNDARY
BLOUNT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
BLOUNT SILT LOAM, GROUND MORAINE, 2 TO 4 PERCENT SLOPES
GLYNWOOD SILT LOAM, GROUND MORAINE, 2 TO 6 PERCENT SLOPES
HASKINS LOAM, 2 TO 6 PERCENT SLOPES
PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES
PEWAMO SILTY CLAY, 0 TO 2 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
NRCS SOILS MAP

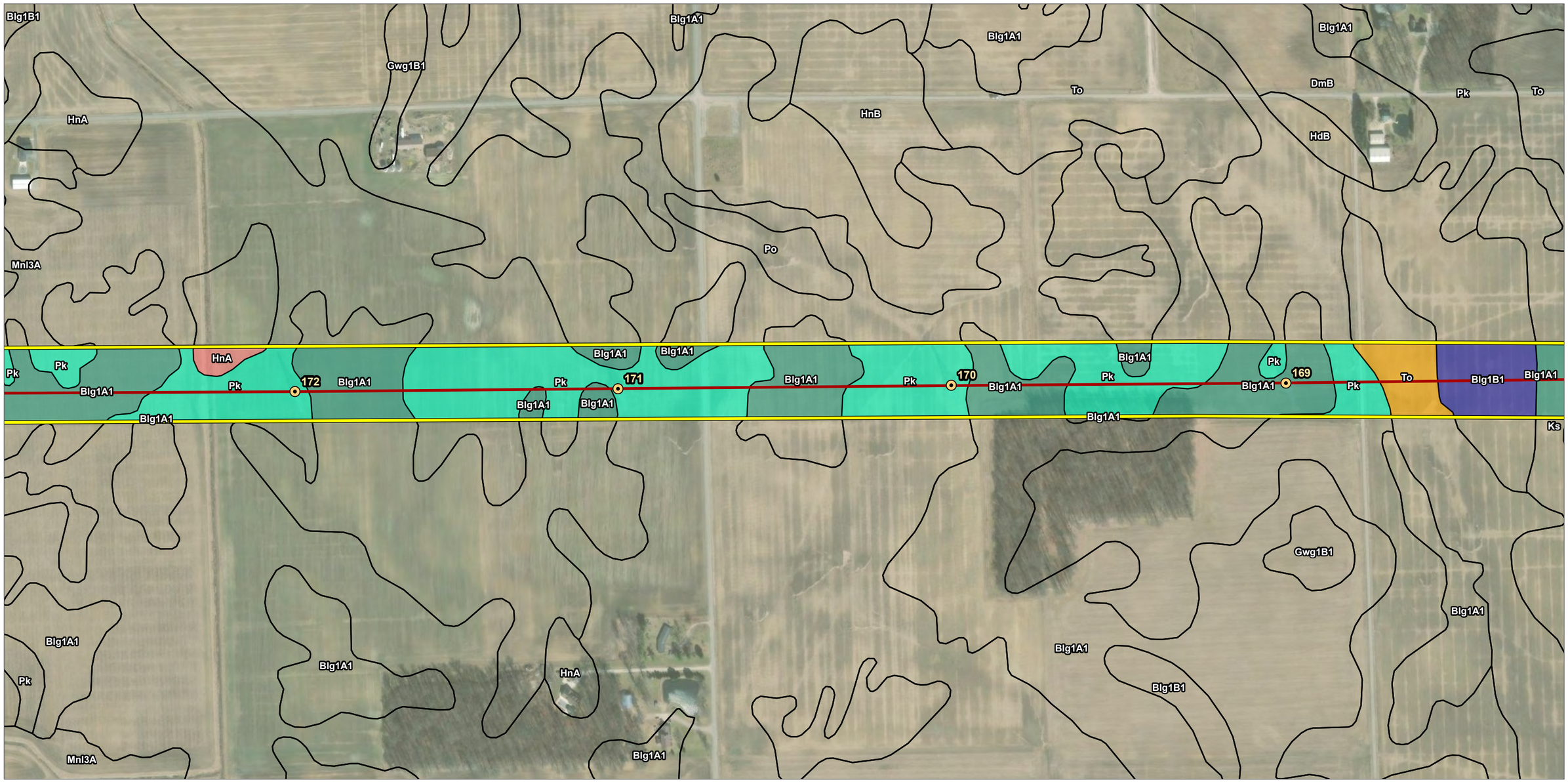
DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 2-16

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

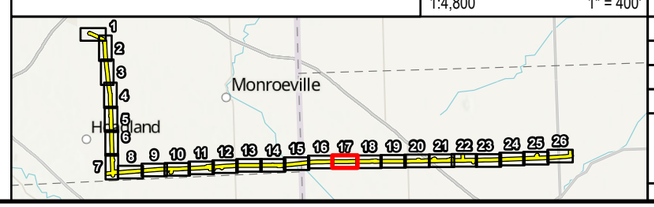
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- BLOUNT SILT LOAM, GROUND MORAINE, 2 TO 4 PERCENT SLOPES
- HASKINS LOAM, 0 TO 3 PERCENT SLOPES
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES
- TOLEDO SILTY CLAY, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
NRCS SOILS MAP

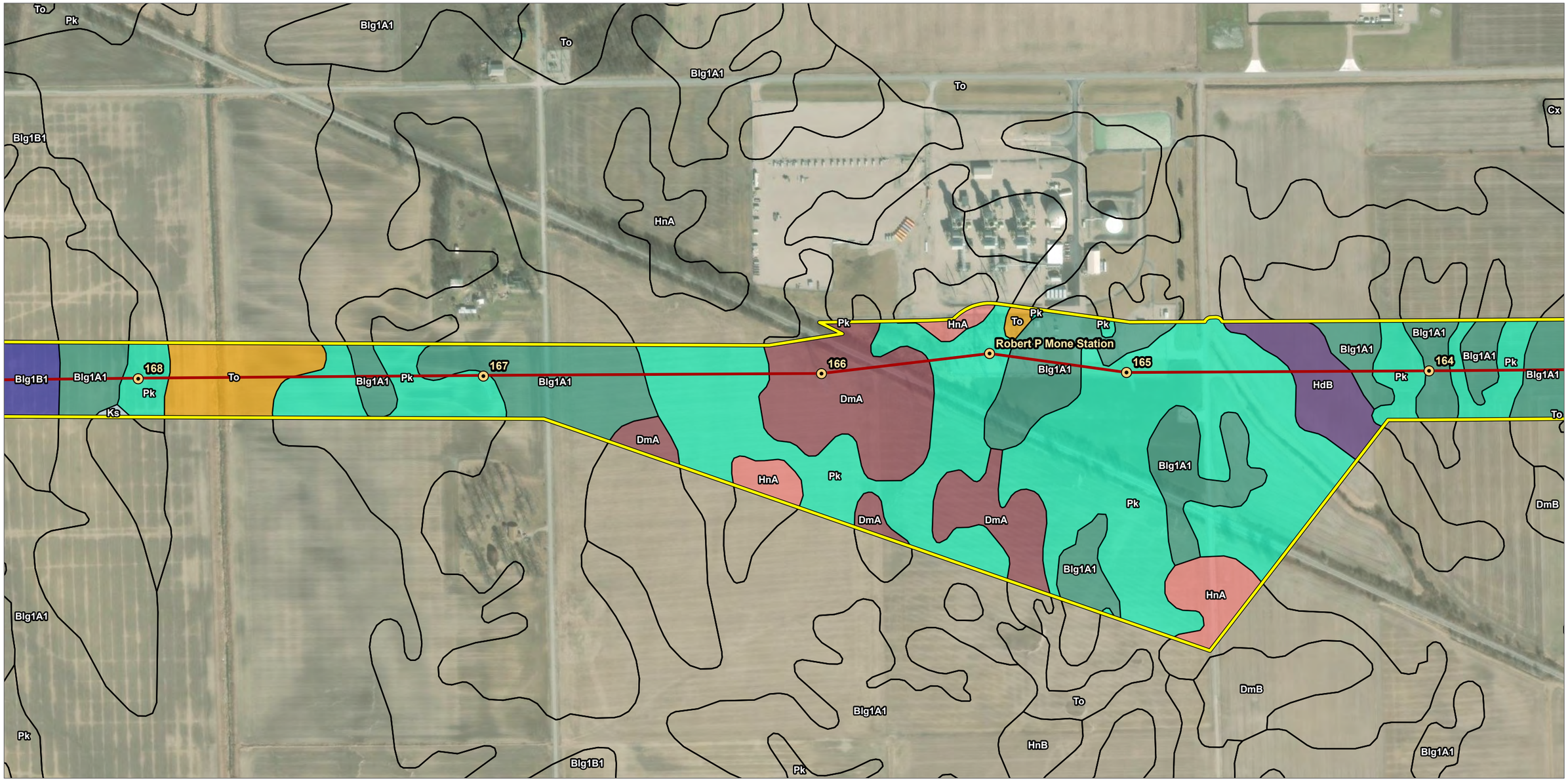
DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 2-17

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

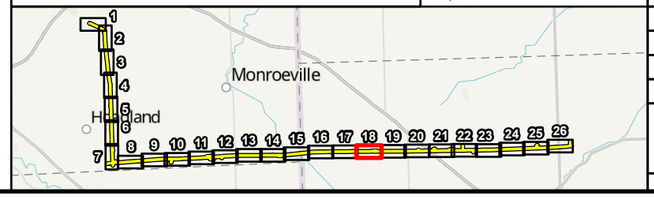
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- BLOUNT SILT LOAM, GROUND MORAINE, 2 TO 4 PERCENT SLOPES
- DIGBY LOAM, 0 TO 2 PERCENT SLOPES
- HANEY LOAM, 2 TO 6 PERCENT SLOPES
- HASKINS LOAM, 0 TO 3 PERCENT SLOPES
- KIBBIE SILT LOAM
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES
- TOLEDO SILTY CLAY, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
NRCS SOILS MAP

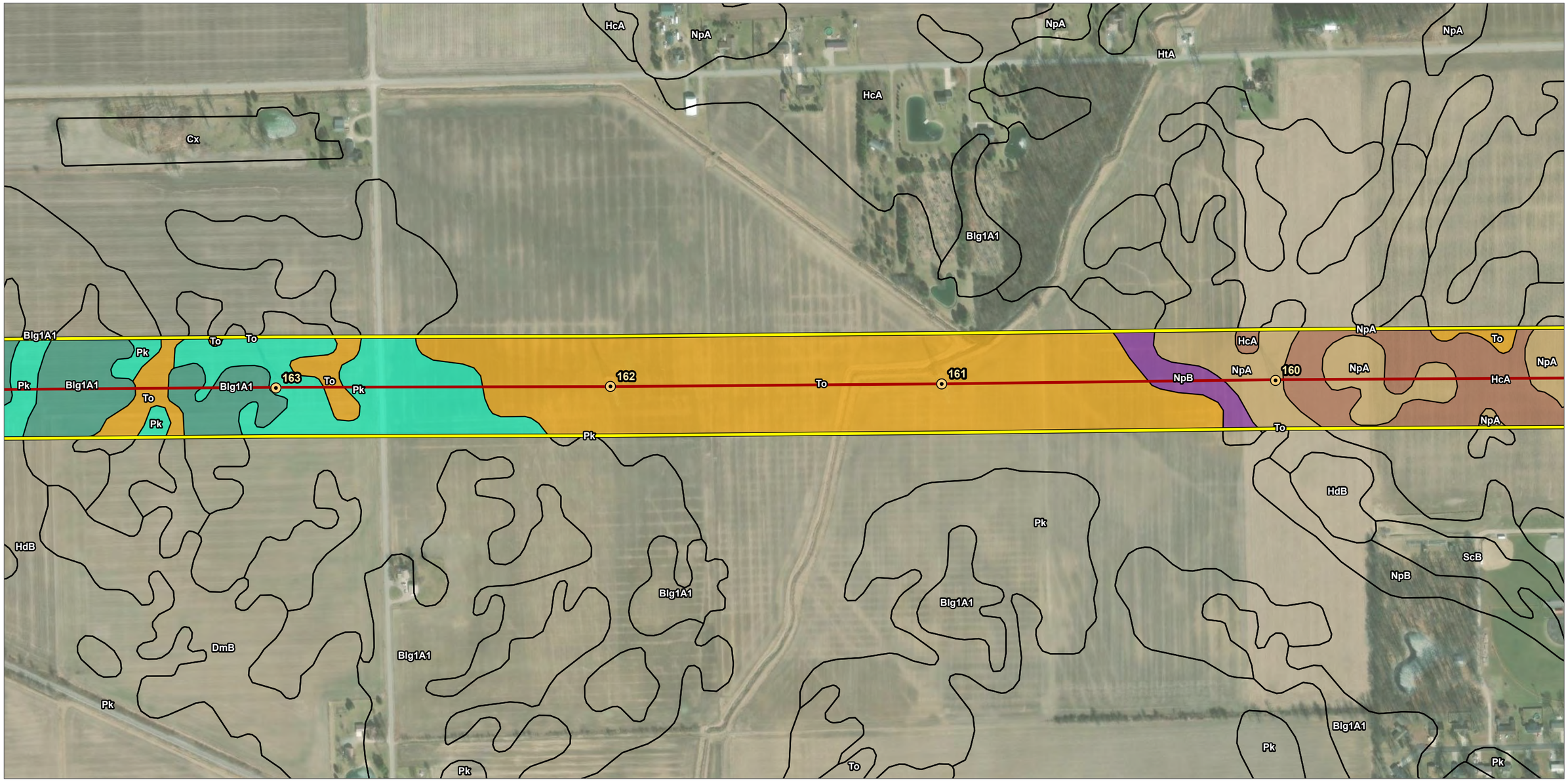
DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 2-18

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
Saved By: AFARRIS on 5/1/2026, 1:14:03 PM; File Path: T:\PROJECTS\AEP\624605_AllenRP\Maddox\2_APRX\Allen_MaddoxCreek_WDR\Allen_MaddoxCreek_WDR.aprx; Layout Name: Fig2_Soil

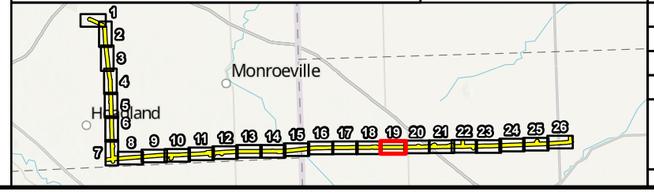


- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- HOYTVILLE SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES
- NAPPANEE SILT LOAM, 0 TO 2 PERCENT SLOPES
- NAPPANEE SILT LOAM, 2 TO 6 PERCENT SLOPES
- PEWAMO SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES
- TOLEDO SILTY CLAY, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, NRCS SSURGO

N

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

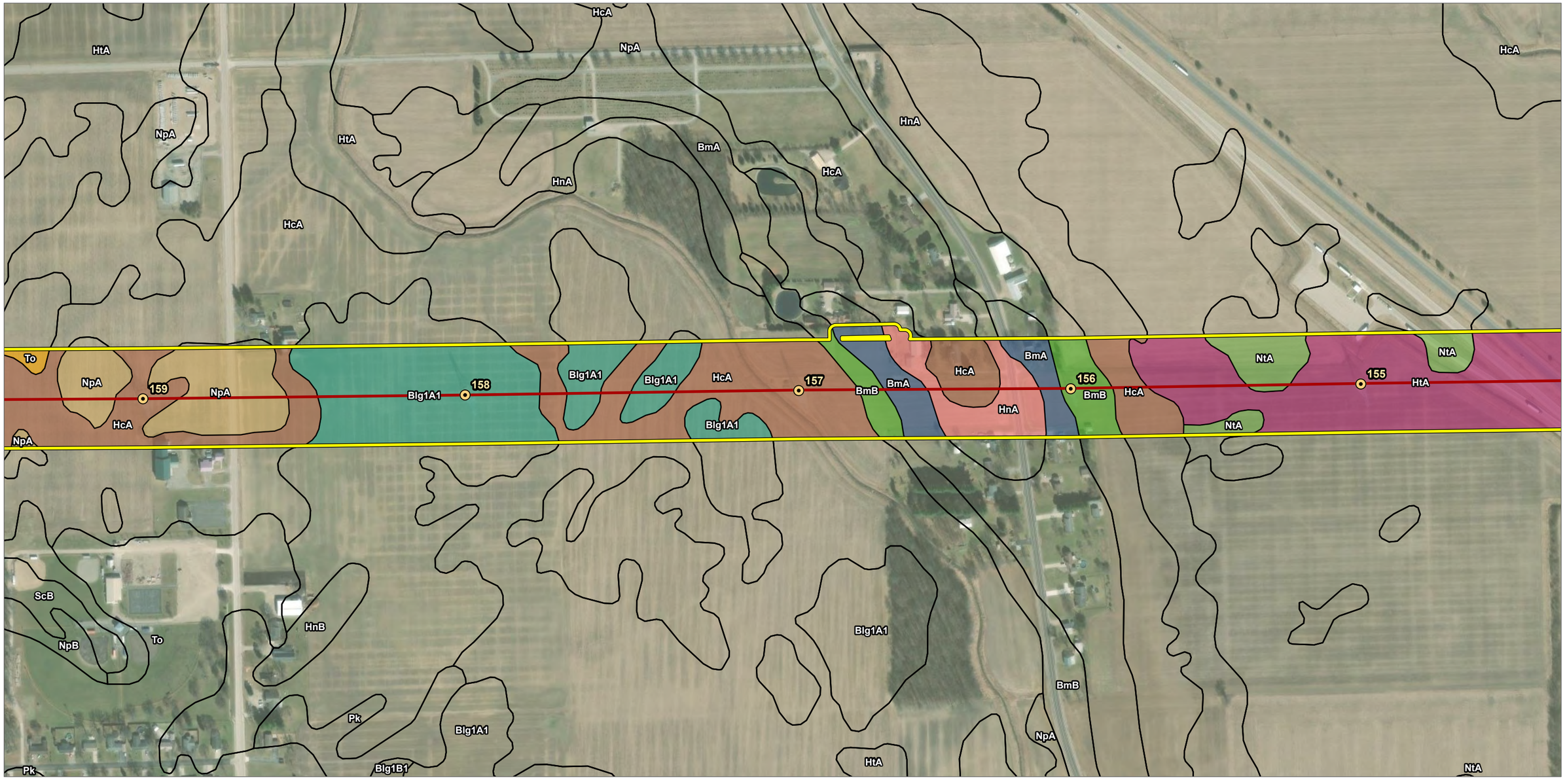
TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		**FIGURE 2-19**
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

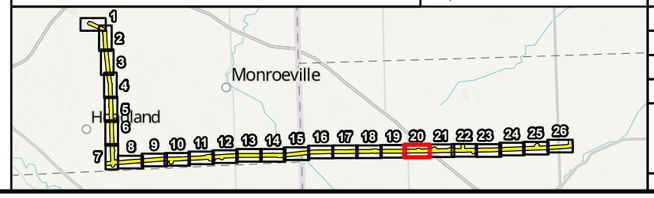
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BELMORE LOAM, 0 TO 2 PERCENT SLOPES
- BELMORE LOAM, 2 TO 6 PERCENT SLOPES
- BLOUNT SILT LOAM, GROUND MORAINE, 0 TO 2 PERCENT SLOPES
- HASKINS LOAM, 0 TO 3 PERCENT SLOPES
- HOYTVILLE SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES
- HOYTVILLE SILTY CLAY, 0 TO 1 PERCENT SLOPES
- NAPPANEE SILT LOAM, 0 TO 2 PERCENT SLOPES
- NAPPANEE SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES
- TOLEDO SILTY CLAY, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

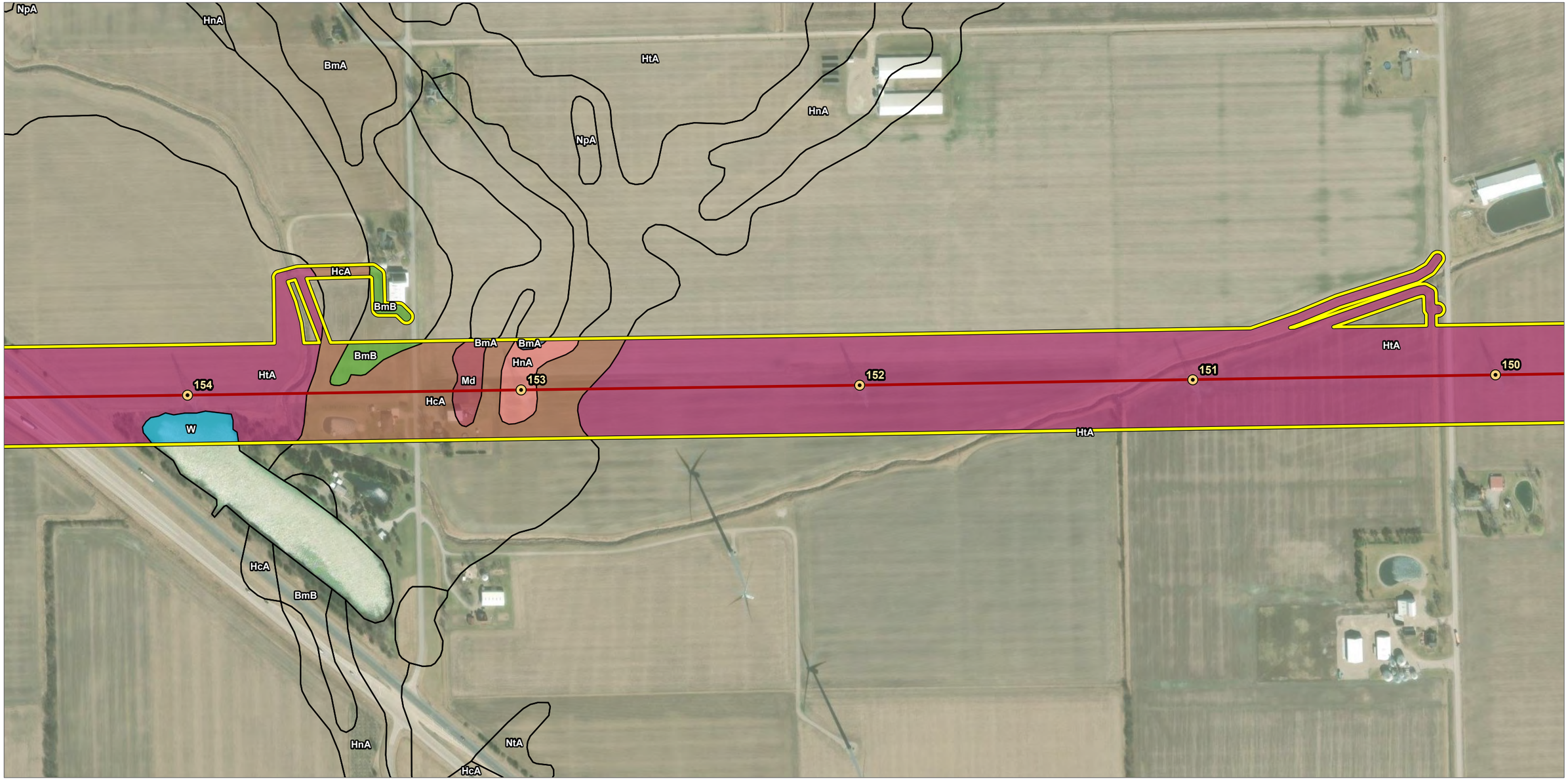
TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 2-20
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

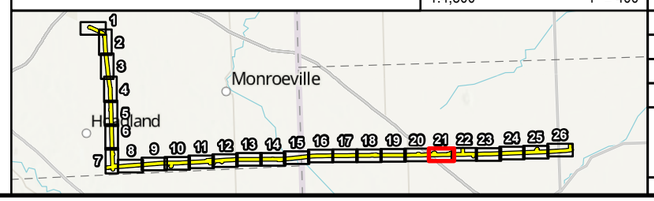
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- BELMORE LOAM, 0 TO 2 PERCENT SLOPES
- BELMORE LOAM, 2 TO 6 PERCENT SLOPES
- HASKINS LOAM, 0 TO 3 PERCENT SLOPES
- HOYTVILLE SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES
- HOYTVILLE SILTY CLAY, 0 TO 1 PERCENT SLOPES
- MERMILL SILT LOAM
- WATER

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

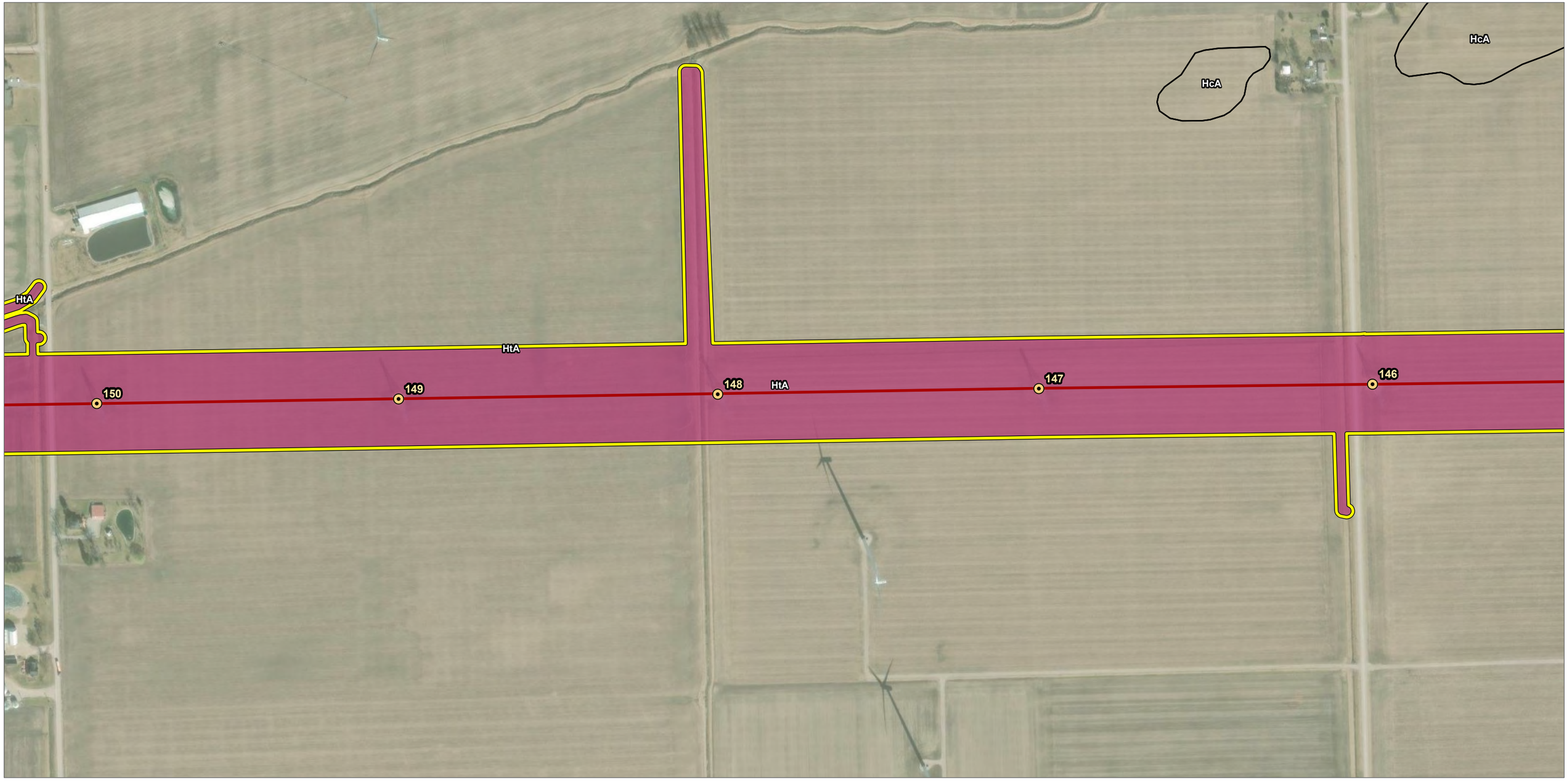
TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 2-21
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

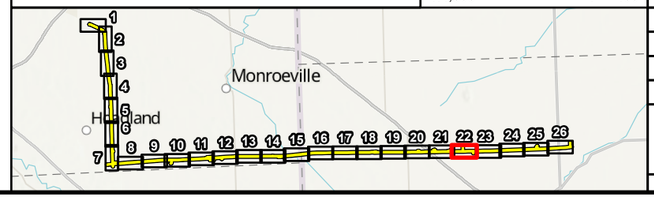
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STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
SOIL BOUNDARY
HOYTVILLE SILTY CLAY, 0 TO 1 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

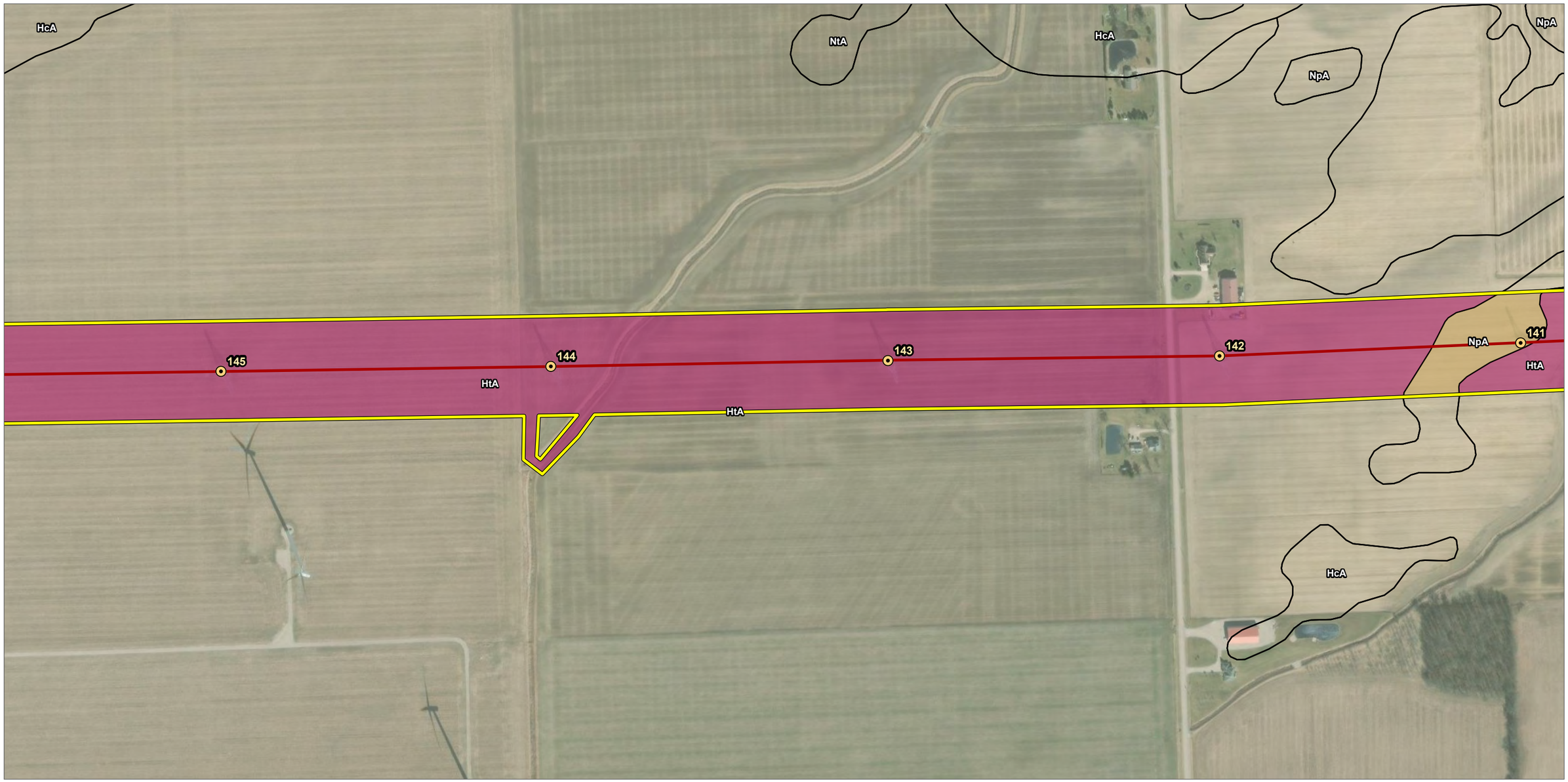
TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 2-22
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

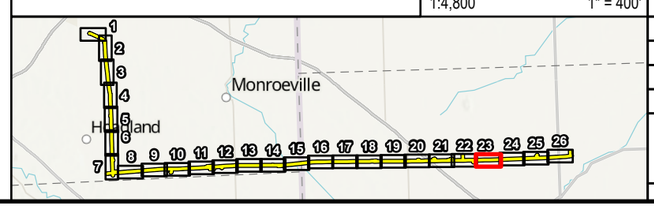
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STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
SOIL BOUNDARY
HOYTVILLE SILTY CLAY, 0 TO 1 PERCENT SLOPES
NAPPANEE SILT LOAM, 0 TO 2 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/12/2021
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

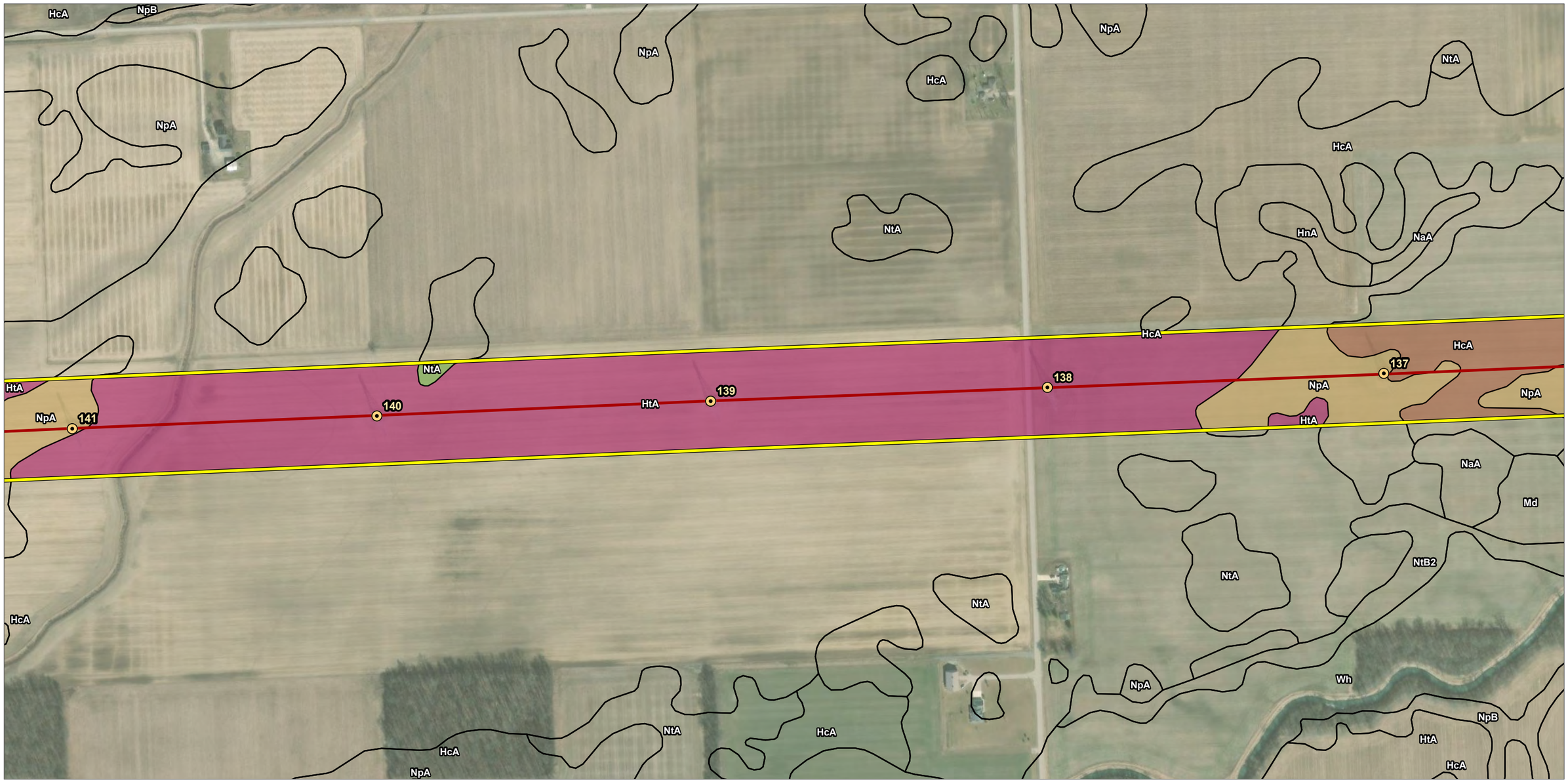
TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 2-23
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
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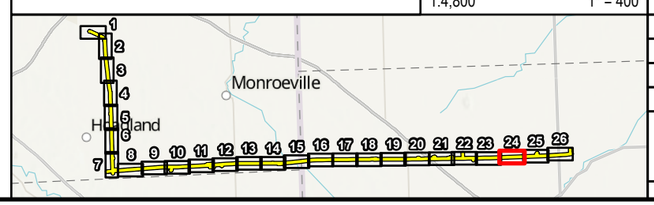
- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- HOYTVILLE SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES
- HOYTVILLE SILTY CLAY, 0 TO 1 PERCENT SLOPES
- NAPPANEE SILT LOAM, 0 TO 2 PERCENT SLOPES
- NAPPANEE SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/12/2021
DATA SOURCES: TRC, NRCS SSURGO

N

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
NRCS SOILS MAP

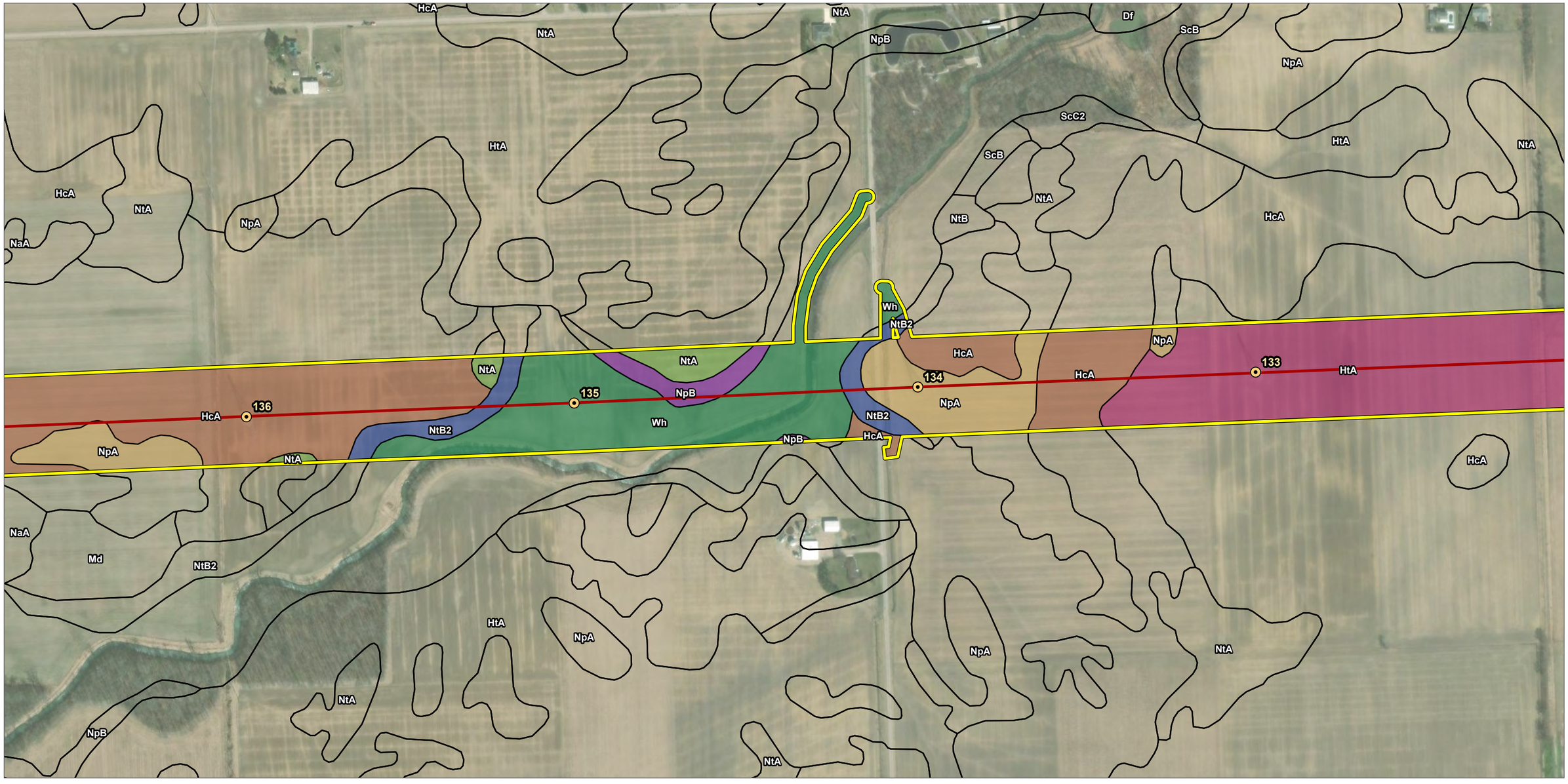
DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 2-24

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

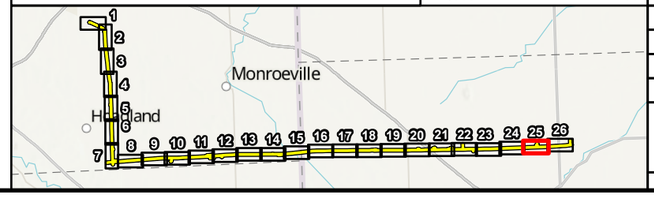
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- HOYTVILLE SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES
- HOYTVILLE SILTY CLAY, 0 TO 1 PERCENT SLOPES
- NAPPANEE SILT LOAM, 0 TO 2 PERCENT SLOPES
- NAPPANEE SILT LOAM, 2 TO 6 PERCENT SLOPES
- NAPPANEE SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES
- NAPPANEE SILTY CLAY LOAM, 2 TO 6 PERCENT SLOPES, MODERATELY ERODED
- WABASHA SILTY CLAY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/12/2021
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
NRCS SOILS MAP

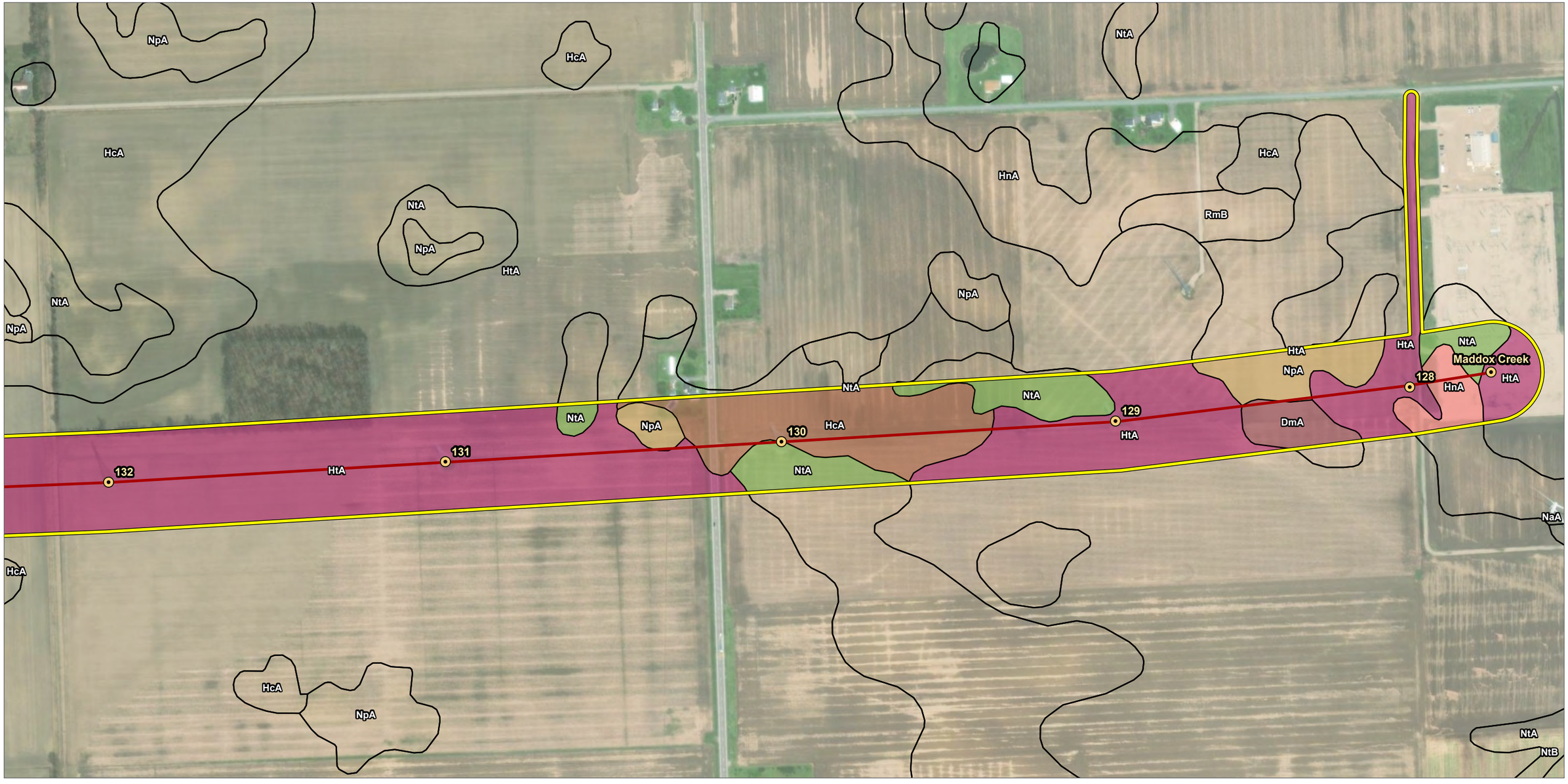
DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 2-25

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

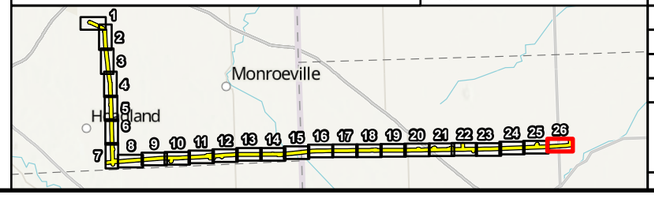
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- SOIL BOUNDARY
- DIGBY LOAM, 0 TO 2 PERCENT SLOPES
- HASKINS LOAM, 0 TO 3 PERCENT SLOPES
- HOYTVILLE SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES
- HOYTVILLE SILTY CLAY, 0 TO 1 PERCENT SLOPES
- NAPPANEE SILT LOAM, 0 TO 2 PERCENT SLOPES
- NAPPANEE SILTY CLAY LOAM, 0 TO 2 PERCENT SLOPES

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/12/2021
DATA SOURCES: TRC, NRCS SSURGO

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
NRCS SOILS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 2-26
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

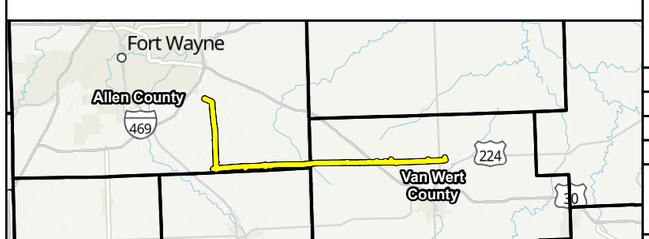
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Map-Unit Symbol	Map-Unit Name	Farmland Classification	Drainage Classification	Hydric Rating	Acres	Percentage
BgmA	Blount silt loam, ground moraine, 0 to 2 percent slopes	Prime farmland if drained	Somewhat poorly drained	9	172.59	16.04%
BgmB2	Blount silt loam, ground moraine, 1 to 4 percent slopes, eroded	Prime farmland if drained	Somewhat poorly drained	9	0.4	0.04%
BleA	Blount silt loam, end moraine, 0 to 2 percent slopes	Prime farmland if drained	Somewhat poorly drained	6	1.42	0.13%
Blg1A1	Blount silt loam, ground moraine, 0 to 2 percent slopes	Prime farmland if drained	Somewhat poorly drained	9	77.43	7.2%
Blg1B1	Blount silt loam, ground moraine, 2 to 4 percent slopes	Prime farmland if drained	Somewhat poorly drained	9	7.17	0.67%
Blg2A1	Blount loam, ground moraine, 0 to 2 percent slopes	Prime farmland if drained	Somewhat poorly drained	6	0.53	0.05%
BmA	Belmore loam, 0 to 2 percent slopes	All areas are prime farmland	Well drained	0	2.95	0.27%
BmB	Belmore loam, 2 to 6 percent slopes	All areas are prime farmland	Well drained	0	3.68	0.34%
BoB2	Blount silt loam, 2 to 6 percent slopes, eroded	Prime farmland if drained	Somewhat poorly drained	6	0	0%
DmA	Digby loam, 0 to 2 percent slopes	Prime farmland if drained	Somewhat poorly drained	8	12.96	1.21%
GlsB	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	All areas are prime farmland	Moderately well drained	6	4.04	0.38%
GlsB2	Glynwood silt loam, ground moraine, 2 to 6 percent slopes, eroded	All areas are prime farmland	Moderately well drained	6	2.11	0.2%
Gwg1B1	Glynwood silt loam, ground moraine, 2 to 6 percent slopes	All areas are prime farmland	Moderately well drained	6	2.51	0.23%
HaA	Haskins loam, 0 to 3 percent slopes	Prime farmland if drained	Somewhat poorly drained	8	5.53	0.51%
HcA	Hoytville silty clay loam, 0 to 1 percent slopes	Prime farmland if drained	Very poorly drained	90	58.93	5.48%
HdB	Haney loam, 2 to 6 percent slopes	All areas are prime farmland	Moderately well drained	0	3.25	0.3%
HnA	Haskins loam, 0 to 3 percent slopes	Prime farmland if drained	Somewhat poorly drained	8	9.61	0.89%
HnB	Haskins loam, 2 to 6 percent slopes	Prime farmland if drained	Somewhat poorly drained	3	0	0%
HtA	Hoytville silty clay, 0 to 1 percent slopes	Prime farmland if drained	Very poorly drained	90	258.91	24.07%
Ks	Kibbie silt loam	Prime farmland if drained	Somewhat poorly drained	5	0.1	0.01%
Md	Mermill silt loam	Prime farmland if drained	Very poorly drained	100	0.79	0.07%
Mh	Mermill complex	Prime farmland if drained	Poorly drained	100	1.03	0.1%
NpA	Nappanee silt loam, 0 to 2 percent slopes	Prime farmland if drained	Somewhat poorly drained	8	29.2	2.71%
NpB	Nappanee silt loam, 2 to 6 percent slopes	Prime farmland if drained	Somewhat poorly drained	8	3.01	0.28%
NtA	Nappanee silty clay loam, 0 to 2 percent slopes	Prime farmland if drained	Somewhat poorly drained	8	10.03	0.93%
NtB2	Nappanee silty clay loam, 2 to 6 percent slopes, moderately eroded	Prime farmland if drained	Somewhat poorly drained	3	2.6	0.24%
Pe	Pewamo silty clay loam, 0 to 1 percent slopes	Prime farmland if drained	Very poorly drained	91	264.82	24.62%
Pk	Pewamo silty clay loam, 0 to 1 percent slopes	Prime farmland if drained	Very poorly drained	91	85.92	7.99%
Po	Pewamo silty clay, 0 to 2 percent slopes	Prime farmland if drained	Very poorly drained	91	7.36	0.68%
To	Toledo silty clay, 0 to 1 percent slopes	Prime farmland if drained	Very poorly drained	93	33.81	3.14%
W	Water	Not prime farmland		0	1	0.09%
Wh	Wabasha silty clay	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season	Very poorly drained	100	12.16	1.13%

NOTES:

SOILS DATA ACQUIRED FROM NRCS SSURGO DATABASE



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
NRCS SOILS TABLE

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 2-27
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

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R5UBFx

R5UBFx

R4SBC

R4SBC

STUDY AREA

NHD FLOWLINE

NWI WETLAND

INDNR FLOOD ZONE

100-YEAR FLOODPLAIN (ZONE A)

FLOODWAY (ZONE AE)

FEMA FLOOD ZONES

100-YEAR FLOODPLAIN (ZONE A)

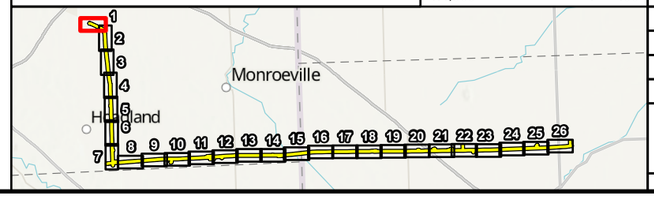
FLOODPLAIN (ZONE AE)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

N

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 3-1

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

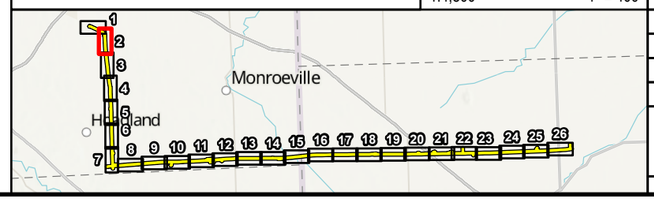
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R4SBC
PUBGx
PEM1F
PFO1C
R4SBC
Bay B
76A
76B
77
78
79
Bay A
PFO1A
R5UBFx

STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
NHD FLOWLINE
NWI WETLAND
NHD WATERBODY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

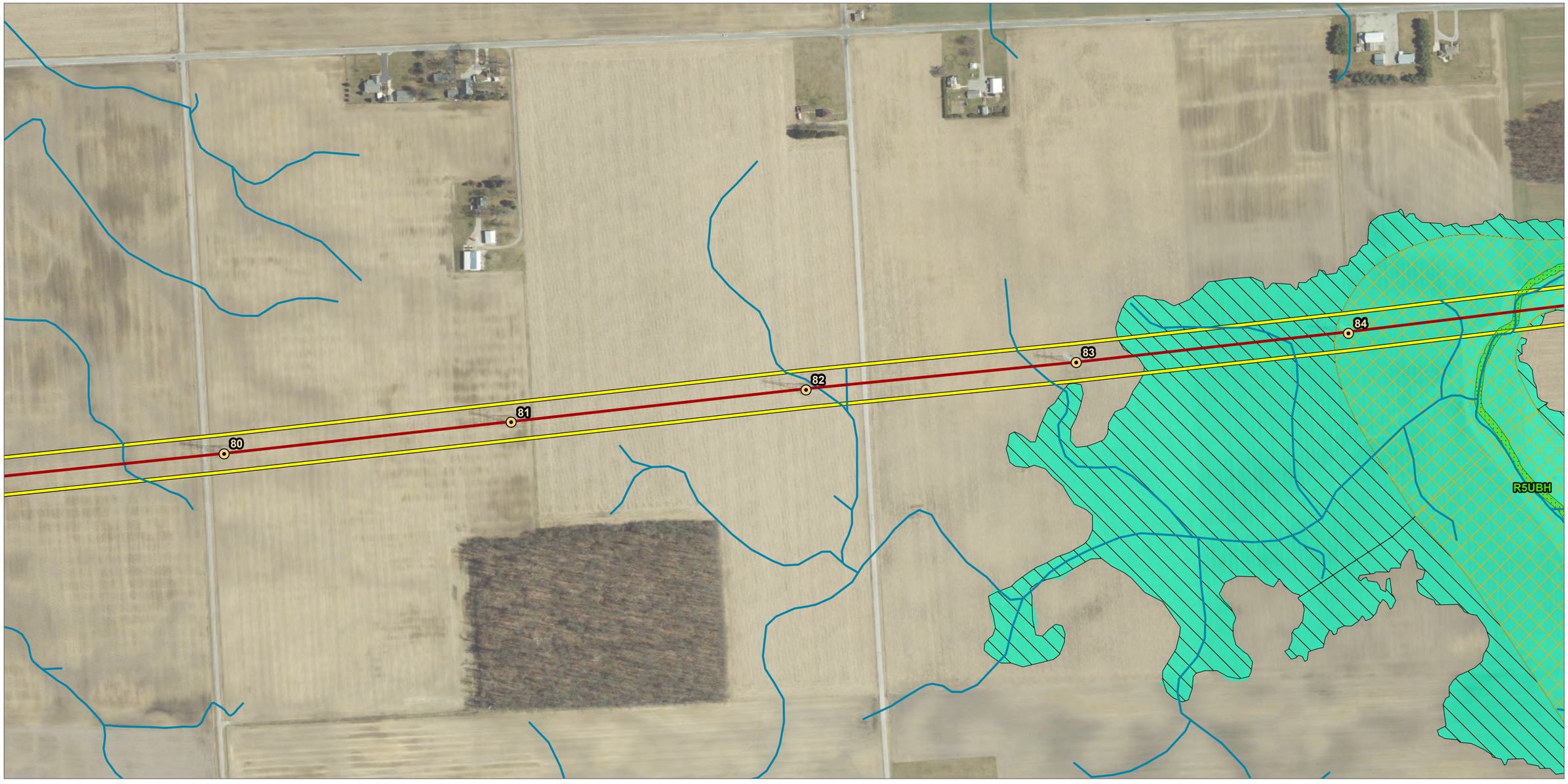
TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 3-2
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 90
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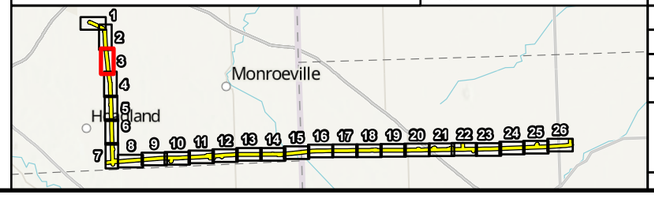
STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
NHD FLOWLINE
NWI WETLAND

INDNR FLOOD ZONE
100-YEAR FLOODPLAIN (ZONE A)
APPROXIMATE FLOODWAY

FEMA FLOOD ZONES
100-YEAR FLOODPLAIN (ZONE A)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

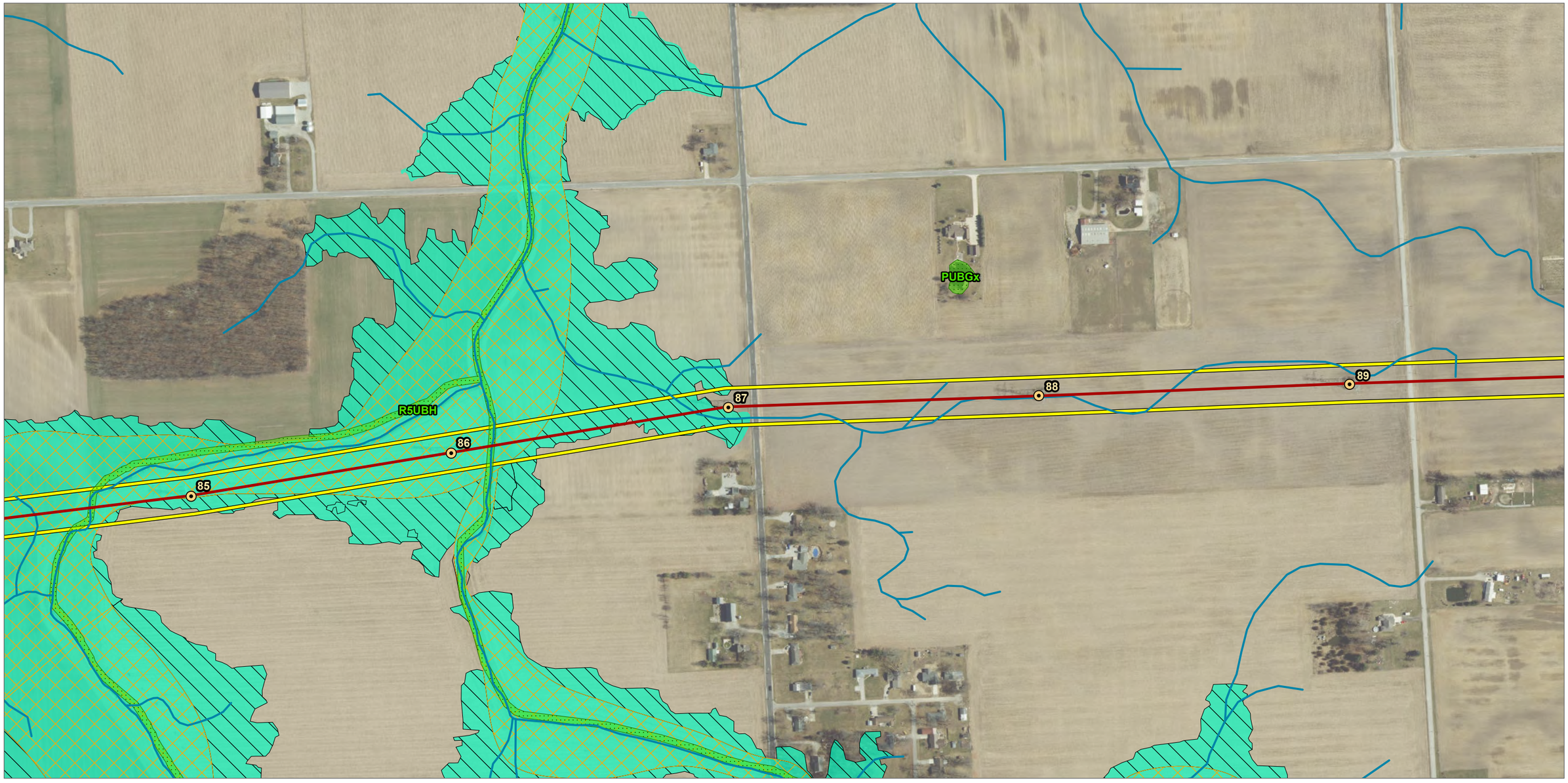
TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 3-3
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N Map Rotation: 90
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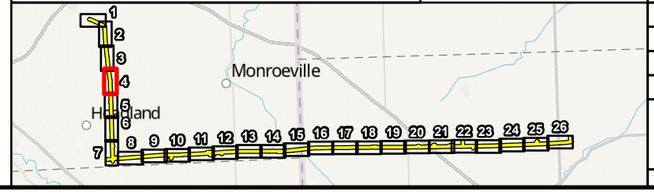
STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
NHD FLOWLINE
NWI WETLAND

INDNR FLOOD ZONE
100-YEAR FLOODPLAIN (ZONE A)
APPROXIMATE FLOODWAY

FEMA FLOOD ZONES
100-YEAR FLOODPLAIN (ZONE A)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 3-4

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

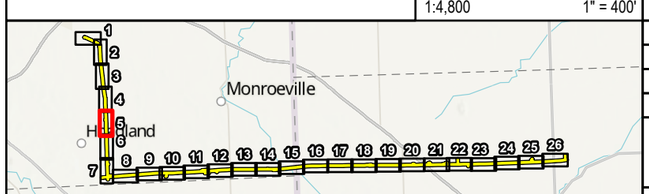
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STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
NHD FLOWLINE
NWI WETLAND
NHD WATERBODY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 3-5

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N - Map Rotation: 90
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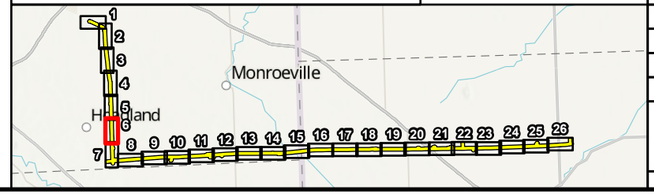
- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- NHD FLOWLINE
- NWI WETLAND
- NHD WATERBODY

INDNR FLOOD ZONE
- 100-YEAR FLOODPLAIN (ZONE A)
- FLOODWAY (ZONE AE)

FEMA FLOOD ZONES
- 100-YEAR FLOODPLAIN (ZONE A)
- FLOODPLAIN (ZONE AE)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

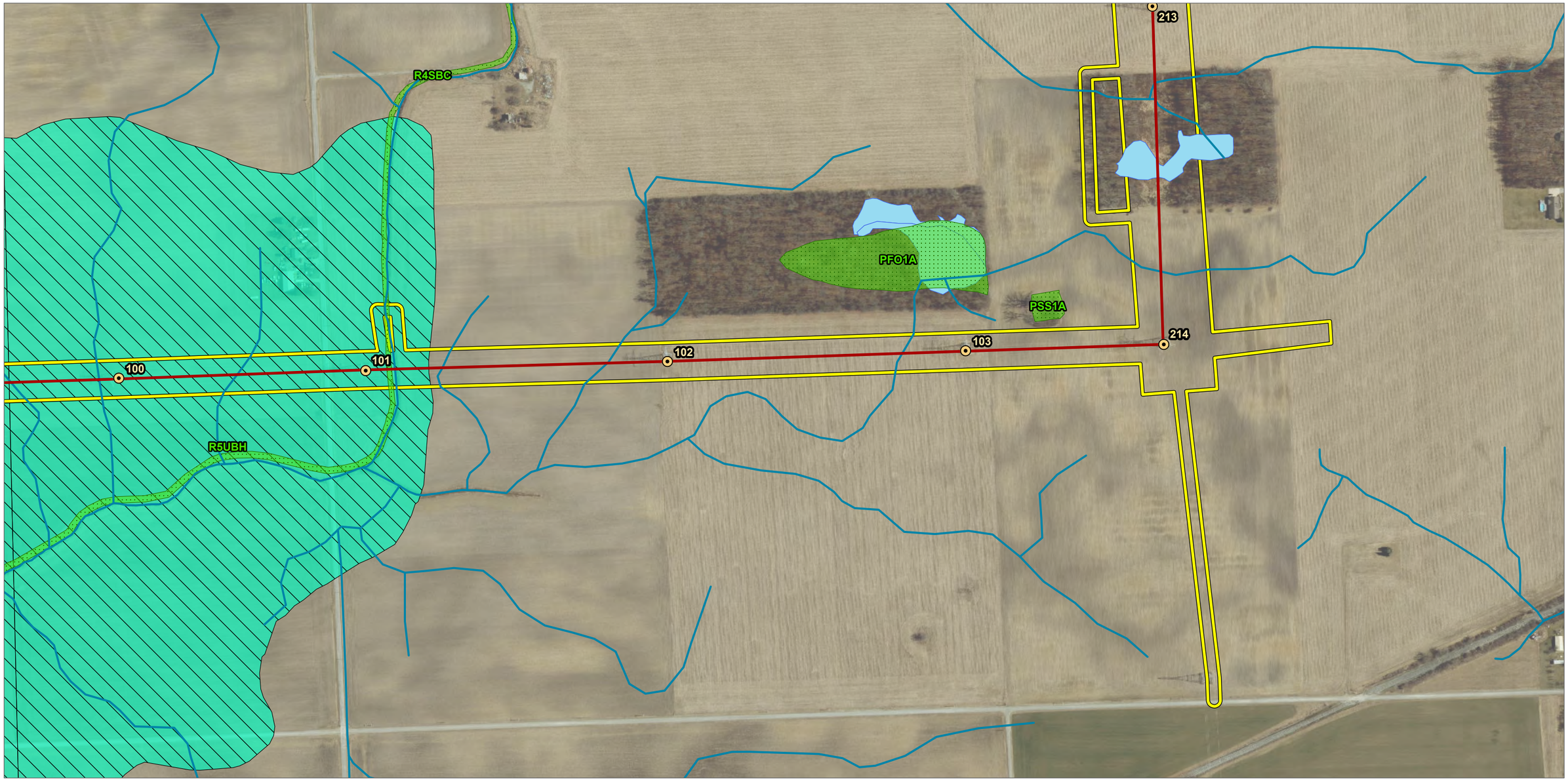
DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 3-6

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N - Map Rotation: 90
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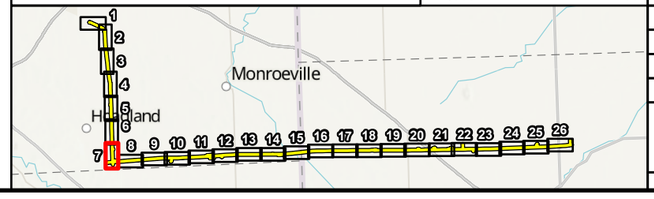
STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
NHD FLOWLINE
NWI WETLAND
NHD WATERBODY

INDNR FLOOD ZONE
100-YEAR FLOODPLAIN (ZONE A)

FEMA FLOOD ZONES
100-YEAR FLOODPLAIN (ZONE A)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 3-7
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N, Map Rotation: 90
Saved By: AFARRIS on 5/14/2026, 8:38:32 PM, File Path: T:\PROJECTS\AEP\624605_Allen\PM\Maddox\2-A1PRX\Allen_MaddoxCreek_WDR\Allen_MaddoxCreek_WDR.aprx; Layout Name: Fig3_Hydro



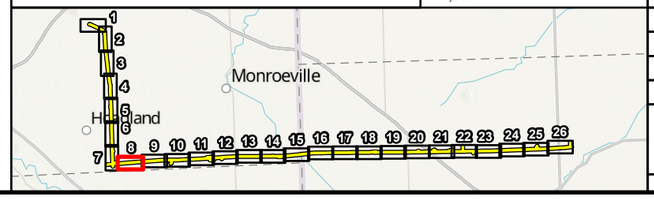
- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- NHD FLOWLINE
- NWI WETLAND
- NHD WATERBODY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

N

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 3-8

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

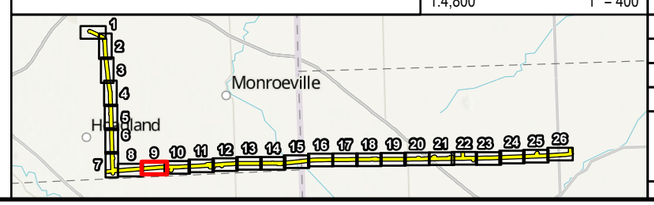
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- NHD FLOWLINE
- NWI WETLAND

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

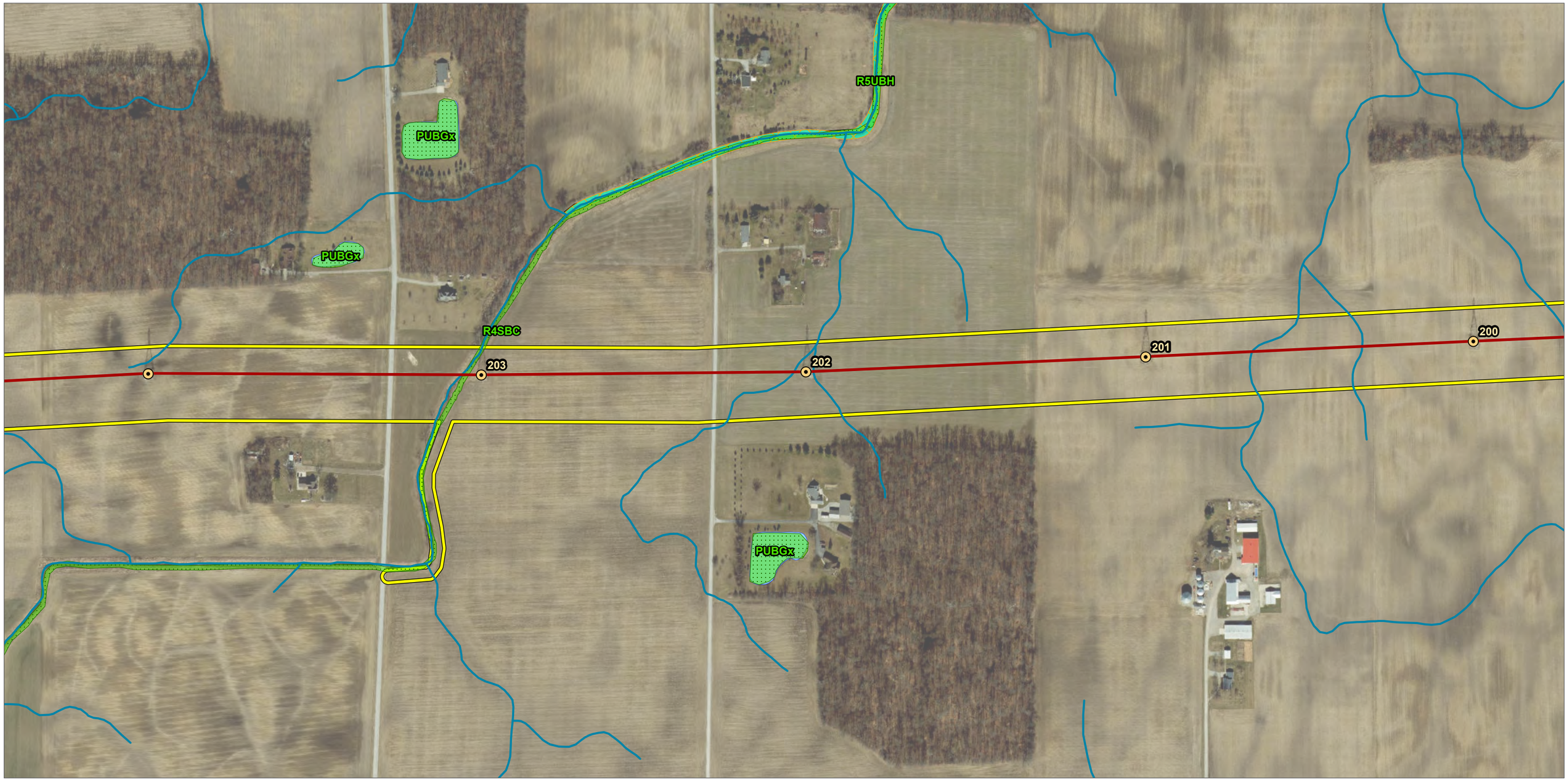
DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 3-9

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
Saved By: AFARRIS on 5/14/2026, 8:38:32 PM; File Path: T:\PROJECTS\AEP\624605_Allen\PM\Maddox\2-4\PRX\Allen_MaddoxCreek_WDR\Allen_MaddoxCreek_WDR.aprx; Layout Name: Fig3_Hydro



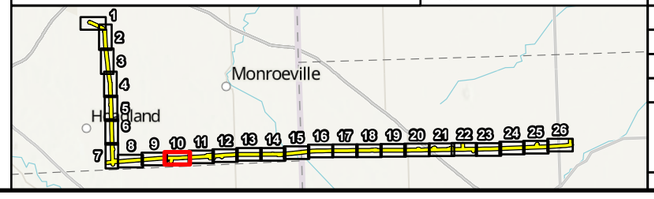
STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
NHD FLOWLINE
NWI WETLAND
NHD WATERBODY

INDNR FLOOD ZONE
100-YEAR FLOODPLAIN (ZONE A)
APPROXIMATE FLOODWAY

FEMA FLOOD ZONES
100-YEAR FLOODPLAIN (ZONE A)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 3-10
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

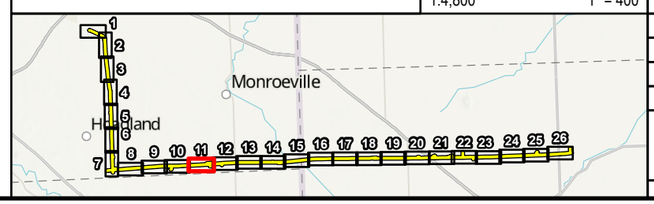
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- NHD FLOWLINE
- NWI WETLAND
- NHD WATERBODY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 3-11
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
Saved By: AFARRIS on 5/14/2026, 10:38:32 PM; File Path: T:\PROJECTS\AEP\624605_Allen\RPM\Maddox\3-APRX\Allen_MaddoxCreek_WDR\Allen_MaddoxCreek_WDR.aprx; Layout Name: Fig3_Hydro

R5UBH
R5UBH
PUBG
PUBG
R4SBC
R4SBC
R4SBC
R4SBC
191
192
193
194
195

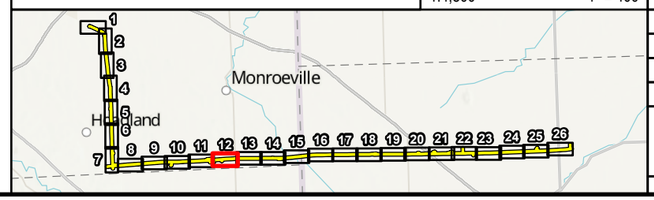
STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
NHD FLOWLINE
NWI WETLAND
NHD WATERBODY

INDNR FLOOD ZONE
100-YEAR FLOODPLAIN (ZONE A)
APPROXIMATE FLOODWAY

FEMA FLOOD ZONES
100-YEAR FLOODPLAIN (ZONE A)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 3-12

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

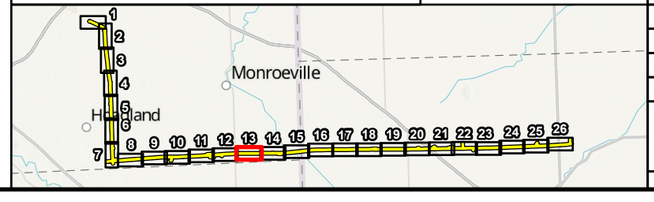
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R4SBC
R4SBC
PFO1A
PFO1A
191
190
189
188
187

STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
NHD FLOWLINE
NWI WETLAND

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

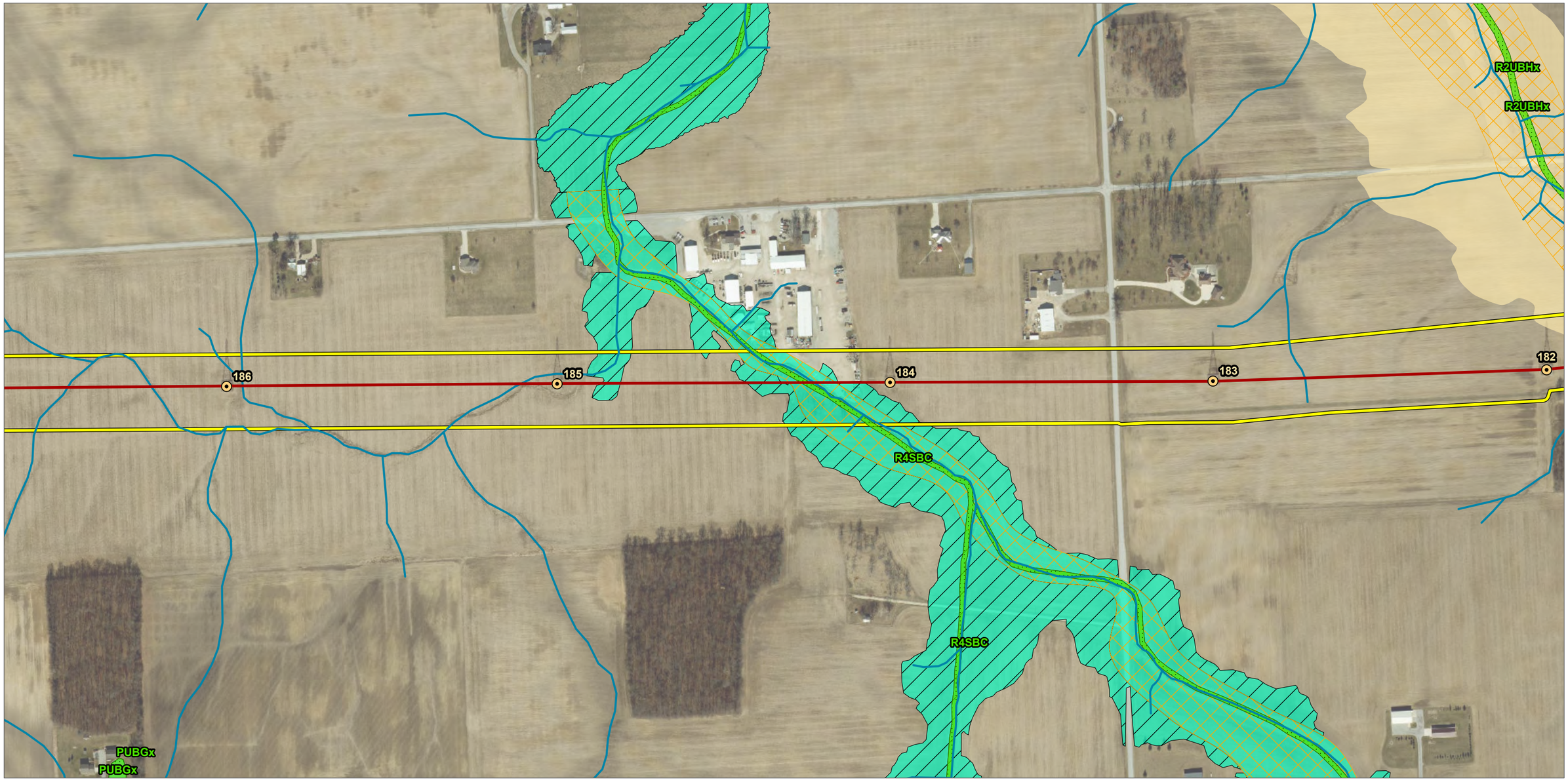
DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 3-13

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
Saved By: AFARRIS on 5/14/2026, 18:33:32 PM; File Path: T:\PROJECTS\AEP\624605_Allen\RPM\addox\2-4.PRX\Allen_MaddoxCreek_WDR\Allen_MaddoxCreek_WDR.aprx; Layout Name: Fig3_Hydro



- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- NHD FLOWLINE
- NWI WETLAND
- NHD WATERBODY

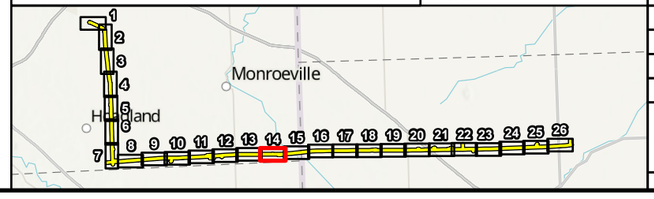
INDNR FLOOD ZONE
- 100-YEAR FLOODPLAIN (ZONE A)
- APPROXIMATE FLOODWAY

FEMA FLOOD ZONES
- 100-YEAR FLOODPLAIN (ZONE A)
- FLOODPLAIN (ZONE AE)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

N

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 3-14

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
Saved By: AFARRIS on 5/14/2026, 8:38:32 PM; File Path: T:\PROJECTS\AEP\624605_Allen\RP\Maddox\2-4.RPX\Allen_MaddoxCreek_WDR\Allen_MaddoxCreek_WDR.aprx; Layout Name: Fig3_Hydro



STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
NHD FLOWLINE
NWI WETLAND

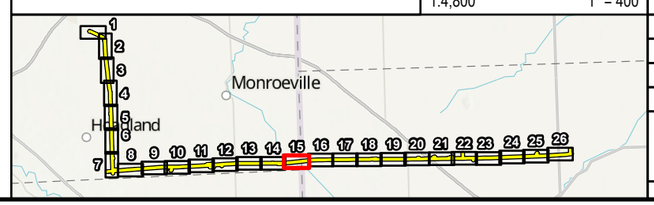
INDNR FLOOD ZONE
APPROXIMATE FLOODWAY

FEMA FLOOD ZONES
FLOODPLAIN (ZONE AE)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

N

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		**FIGURE 3-15**
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
Saved By: AFARRIS on 5/14/2026 8:32:32 PM; File Path: T:\PROJECTS\AEP\624605_AllenRP\Maddox\2-APRX\Allen_MaddoxCreek_WDR.aprx; Layout Name: Fig3_Hydro



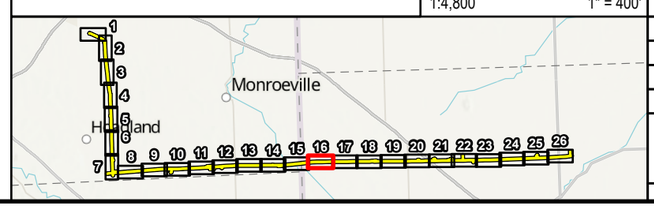
- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- NHD FLOWLINE
- NWI WETLAND

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

N

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		**FIGURE 3-16**
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
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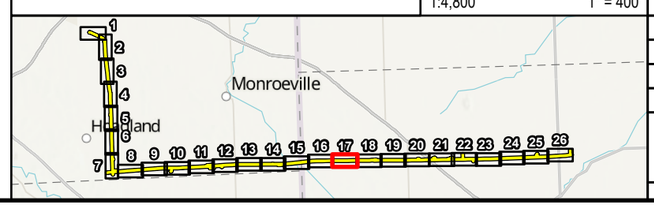


- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- NHD FLOWLINE
- NWI WETLAND
- NHD WATERBODY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

N

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

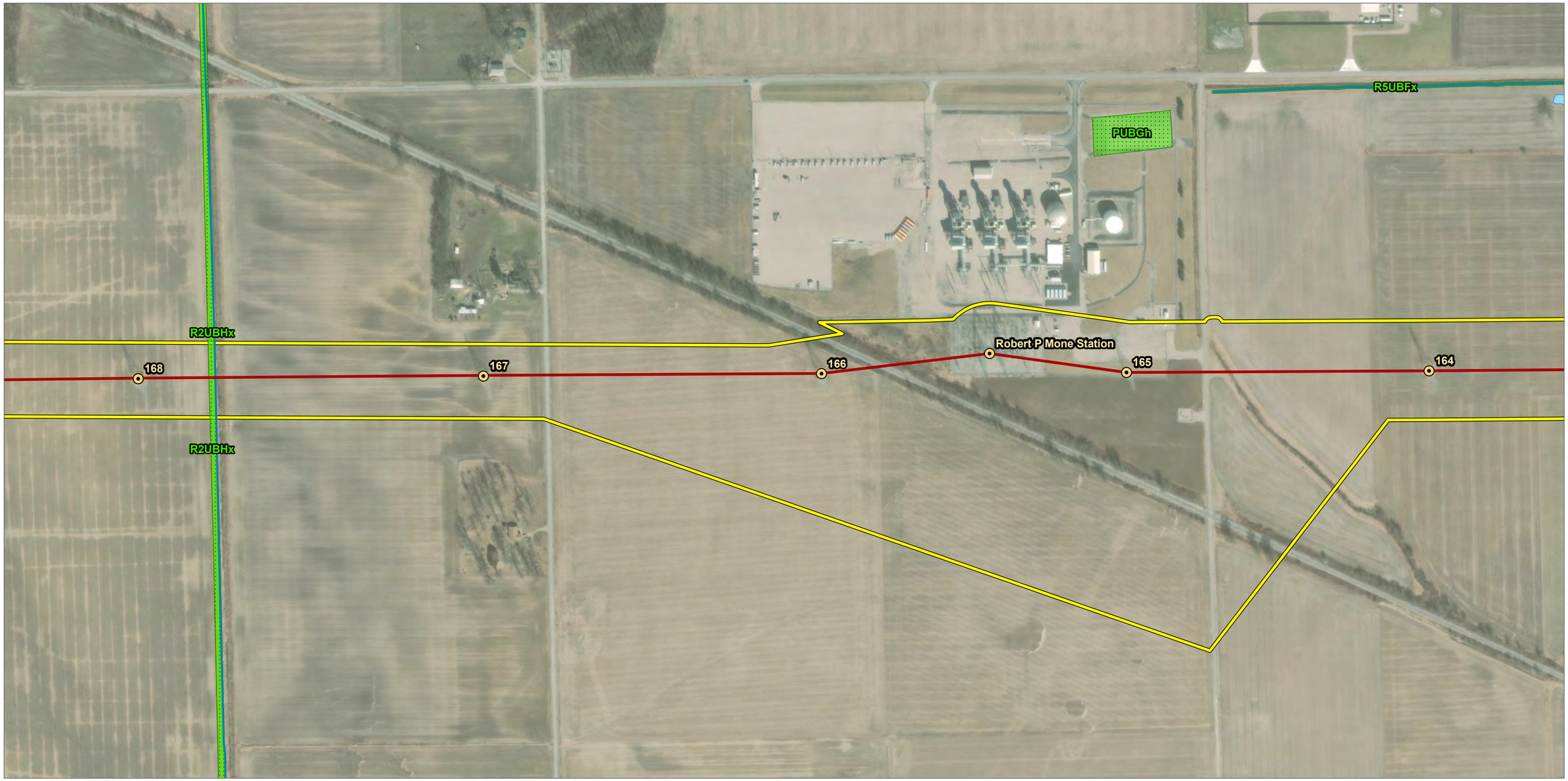
DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 3-17

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

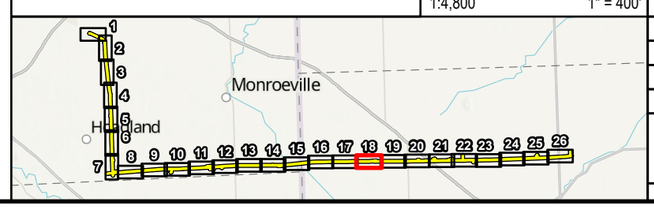
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- NHD FLOWLINE
- NWI WETLAND
- NHD WATERBODY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 3-18
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

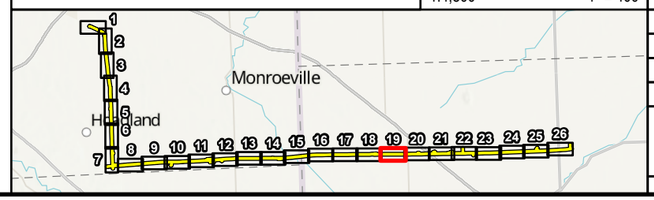
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PUBGx
PUBGx
PUBGx
R5UBFx
PUBGx
163
162
161
160
R4SBC
PUBGx

STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
NHD FLOWLINE
NWI WETLAND
NHD WATERBODY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 3-19
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

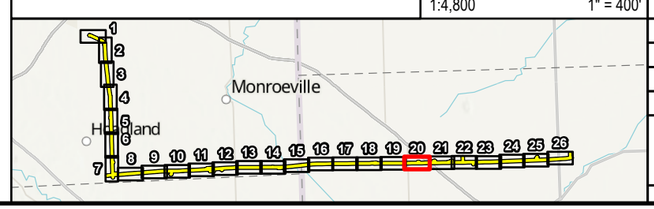
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STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
NHD FLOWLINE
NWI WETLAND

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

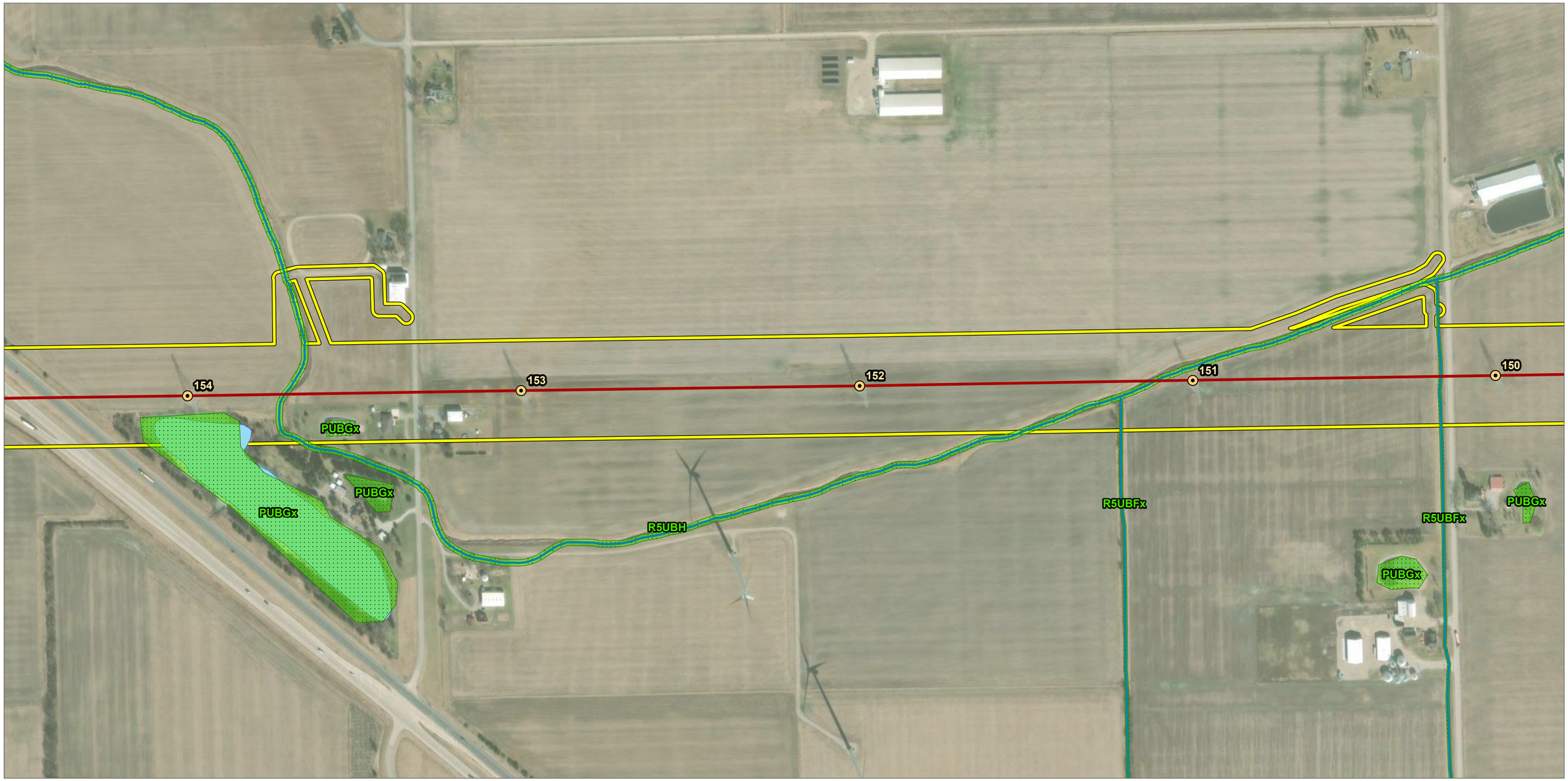
TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 3-20
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

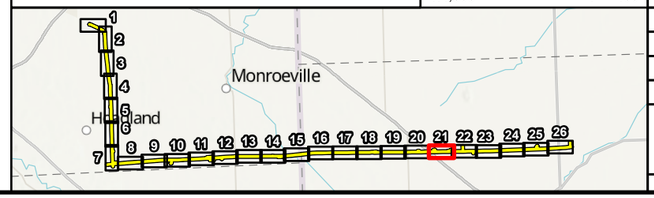
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- NHD FLOWLINE
- NWI WETLAND
- NHD WATERBODY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 3-21

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

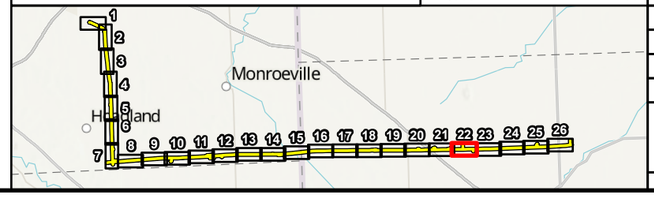
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- NHD FLOWLINE
- NWI WETLAND

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 3-22
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
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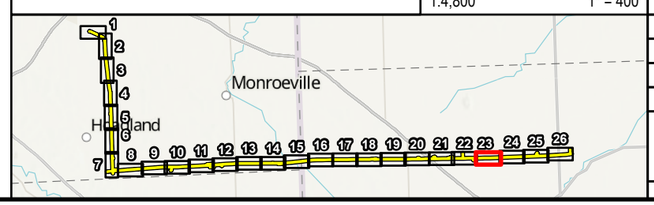
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- EXISTING STRUCTURE
- TRANSMISSION LINE
- NHD FLOWLINE
- NWI WETLAND

NOTES:
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AERIAL DATE: 3/12/2021
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

N

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 3-23
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
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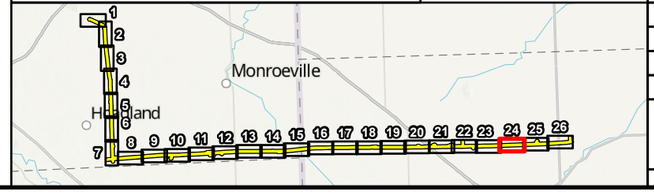


STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
NHD FLOWLINE
NWI WETLAND
NHD WATERBODY

FEMA FLOOD ZONES
100-YEAR FLOODPLAIN (ZONE A)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/12/2021
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 3-24
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

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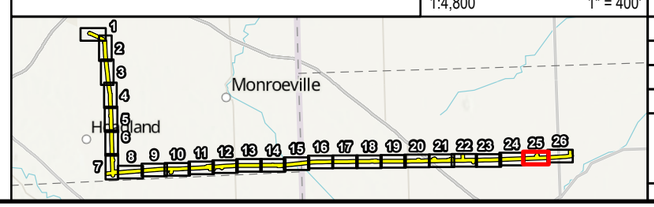
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R5UBH
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PFO1A
PFO1C
PFO1C

STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
NHD FLOWLINE
NWI WETLAND

FEMA FLOOD ZONES
100-YEAR FLOODPLAIN (ZONE A)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/12/2021
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		FIGURE 3-25
DATE:	MAY 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

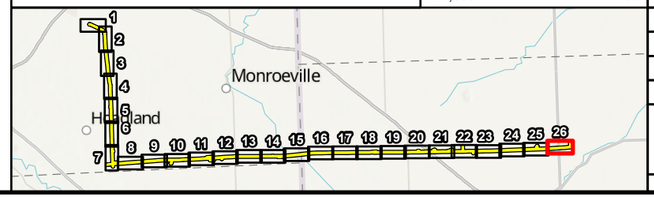
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- STUDY AREA
- EXISTING STRUCTURE
- TRANSMISSION LINE
- NHD FLOWLINE
- NWI WETLAND

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/12/2021
DATA SOURCES: TRC, INDNR, FEMA, NWI, NHD

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
WETLANDS, WATERBODIES, AND FLOODPLAINS MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		
DATE:	MAY 2026		

FIGURE 3-26

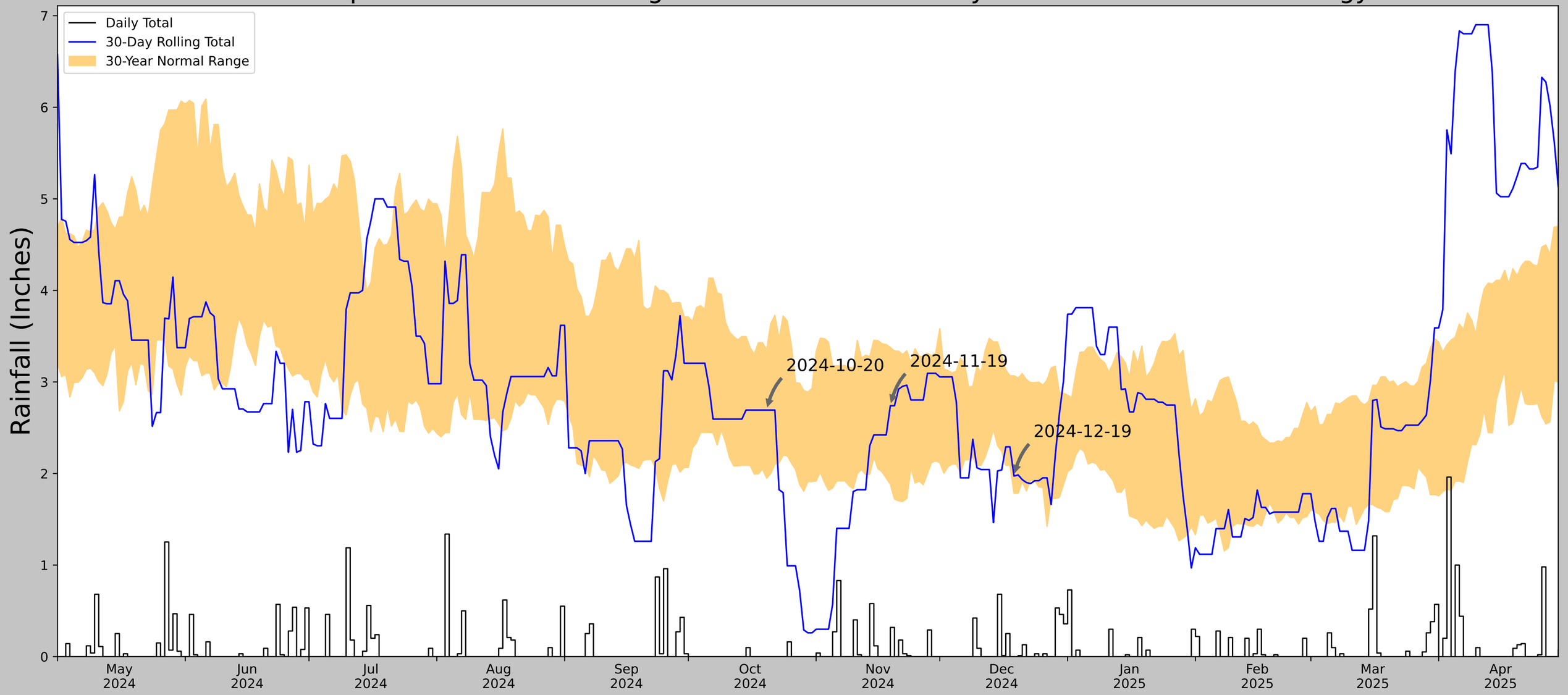
TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
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Appendix B:
Antecedent Precipitation Data

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	40.92759, -84.81365
Observation Date	2024-12-19
Elevation (ft)	786.817
Drought Index (PDSI)	Moderate drought
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-12-19	1.785039	3.06811	1.972441	Normal	2	3	6
2024-11-19	1.882677	3.377953	2.740158	Normal	2	2	4
2024-10-20	1.949606	3.353937	2.692913	Normal	2	1	2
Result							Normal Conditions - 12

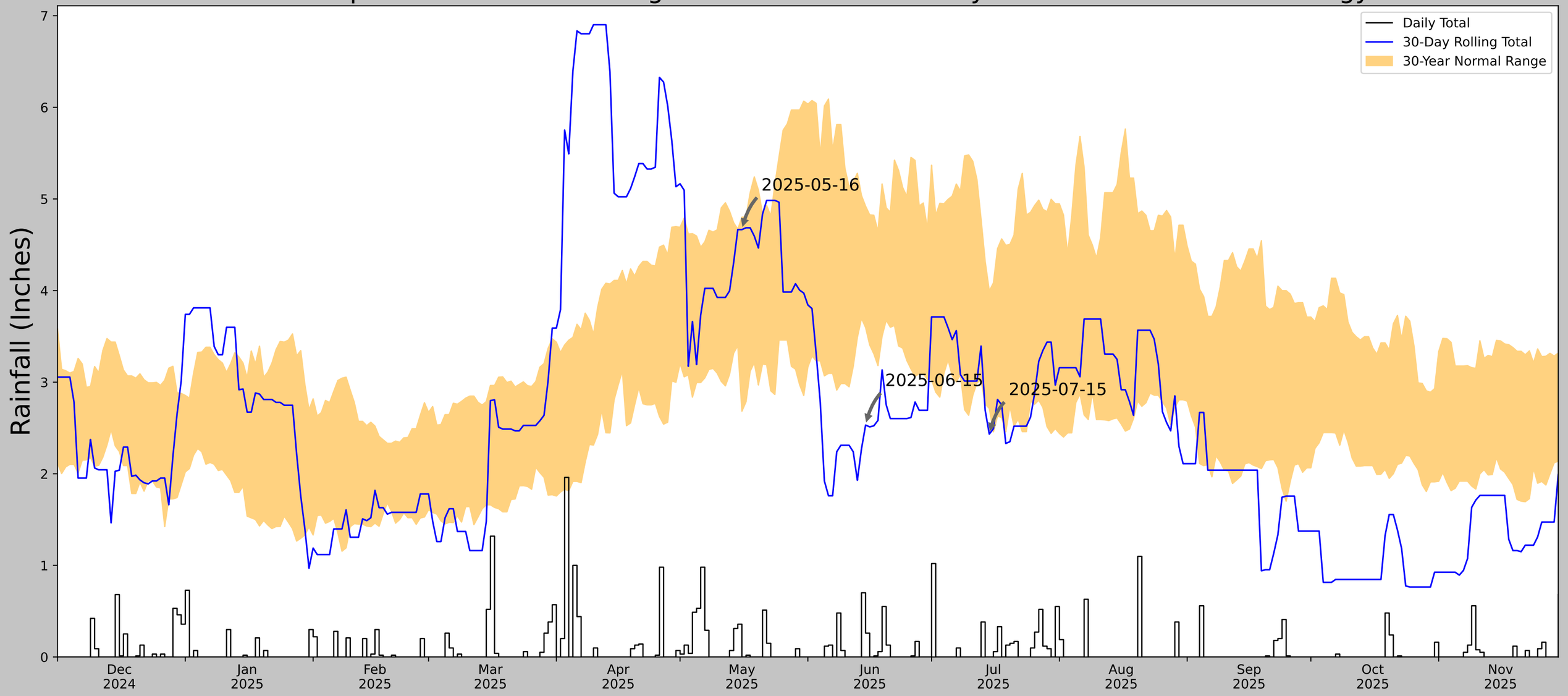
Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0

US Army Corps of Engineers.
ERDC

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DECATUR 1 N	40.8483, -84.93	785.105	8.182	1.712	3.696	11321	90
MONROEVILLE 1 NW	40.9867, -84.8836	794.948	9.865	9.843	4.536	1	0
FORT WAYNE 9.1 SE	40.9915, -85.0029	813.976	10.601	28.871	5.077	1	0
FT WAYNE INTL AP	40.9725, -85.2064	796.916	16.791	11.811	7.754	30	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	40.92759, -84.81365
Observation Date	2025-07-15
Elevation (ft)	786.817
Drought Index (PDSI)	Mild drought
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-07-15	2.714173	3.995276	2.433071	Dry	1	3	3
2025-06-15	3.596063	4.920866	2.531496	Dry	1	2	2
2025-05-16	2.683071	4.8	4.665354	Normal	2	1	2
Result							Drier than Normal - 7

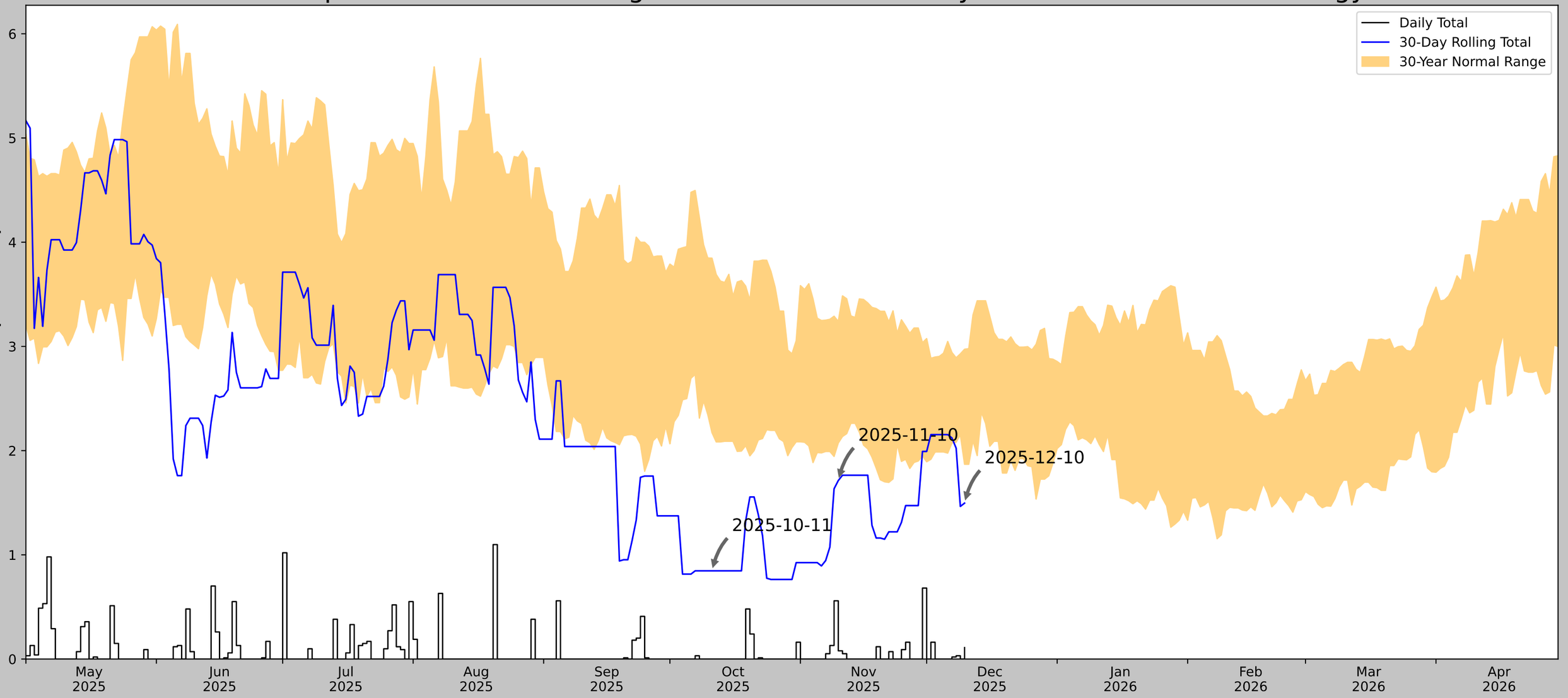
Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0

US Army Corps of Engineers.
ERDC

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DECATUR 1 N	40.8483, -84.93	785.105	8.182	1.712	3.696	11321	90
MONROEVILLE 1 NW	40.9867, -84.8836	794.948	9.865	9.843	4.536	1	0
FORT WAYNE 9.1 SE	40.9915, -85.0029	813.976	10.601	28.871	5.077	1	0
FT WAYNE INTL AP	40.9725, -85.2064	796.916	16.791	11.811	7.754	30	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	40.92759, -84.81365
Observation Date	2025-12-10
Elevation (ft)	786.817
Drought Index (PDSI)	Severe drought (2025-11)
WebWIMP H_2O Balance	Wet Season

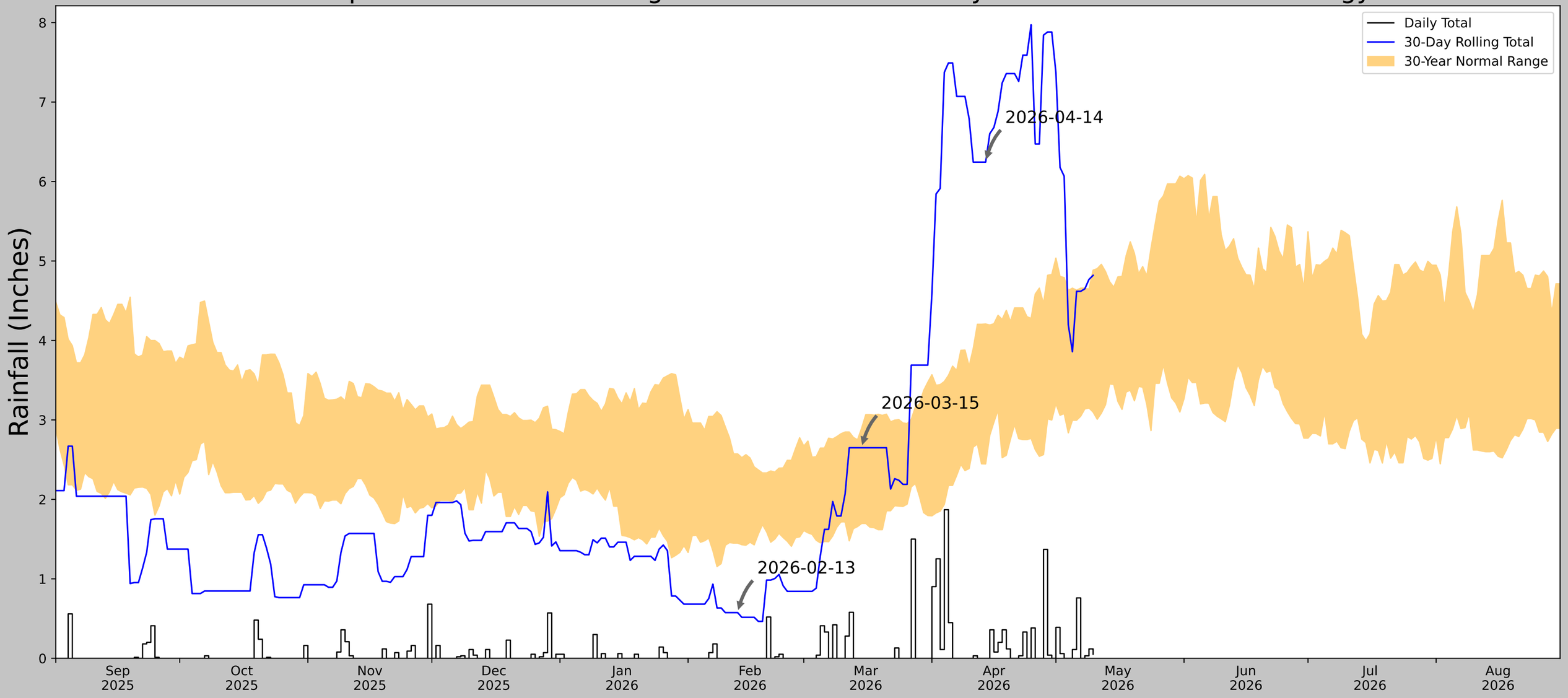
30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-12-10	1.868898	2.972835	1.496063	Dry	1	3	3
2025-11-10	2.072835	3.239764	1.712598	Dry	1	2	2
2025-10-11	2.172047	3.846851	0.846457	Dry	1	1	1
Result							Drier than Normal - 6

Figures and tables made by the Antecedent Precipitation Tool Version 3.0

US Army Corps of Engineers.
ERDC

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DECATUR 1 N	40.8483, -84.93	785.105	8.182	1.712	3.696	11322	76
HOAGLAND 1.5 SSW	40.9275, -84.9989	833.005	6.55	47.9	3.261	0	12
MONROE 0.2 NW	40.7467, -84.9433	820.866	7.054	35.761	3.427	0	1
MONROEVILLE 0.2 ESE	40.9713, -84.8636	790.026	9.179	4.921	4.176	0	1
FORT WAYNE 9.1 SE	40.9915, -85.0029	813.976	10.601	28.871	5.077	1	0
FT WAYNE INTL AP	40.9725, -85.2064	796.916	16.791	11.811	7.754	30	0



Coordinates	40.92913, -84.79703
Observation Date	2026-04-14
Elevation (ft)	799.506
Drought Index (PDSI)	Severe drought
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-04-14	2.446063	4.207087	6.244095	Wet	3	3	9
2026-03-15	1.69685	2.897638	2.649606	Normal	2	2	4
2026-02-13	1.45	2.572047	0.574803	Dry	1	1	1
Result							Normal Conditions - 14

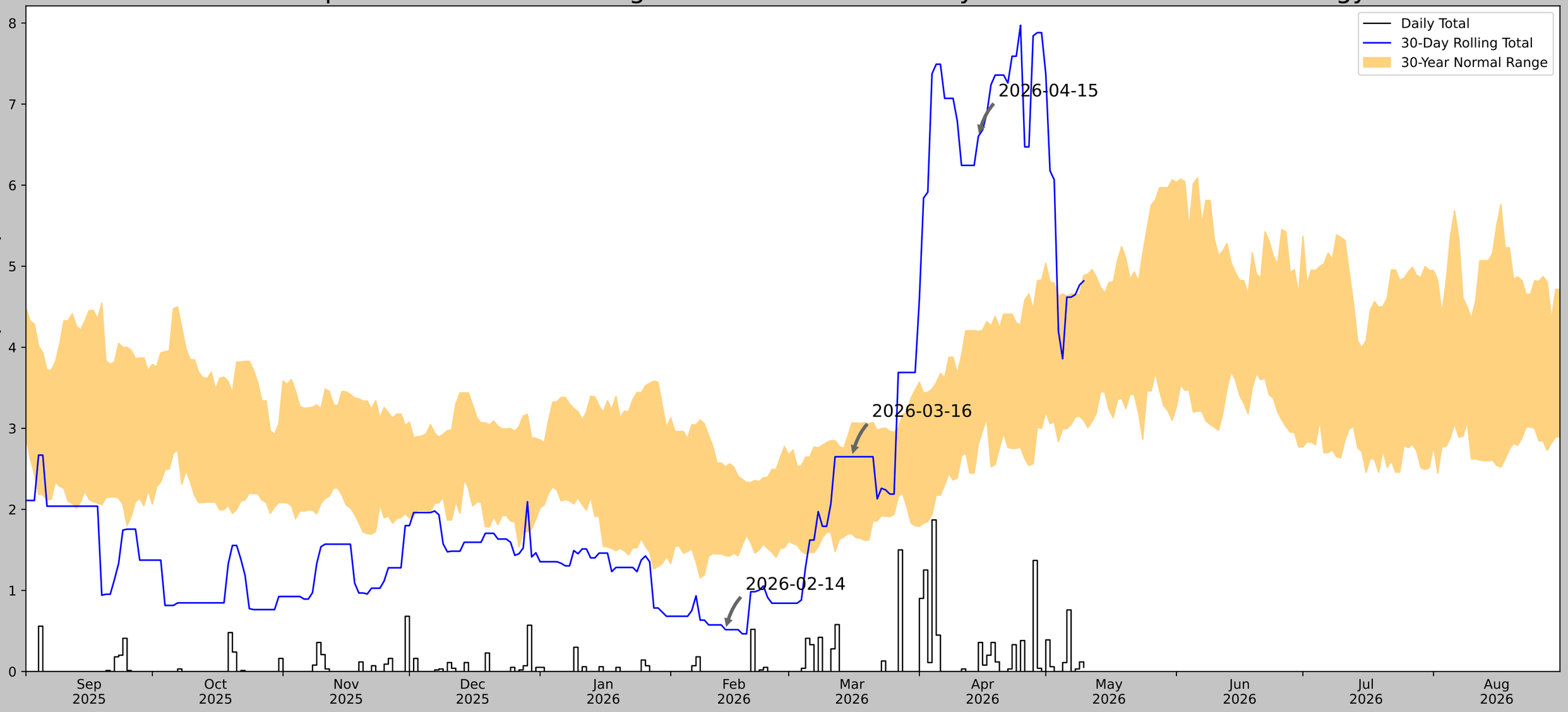
Figures and tables made by the Antecedent Precipitation Tool Version 3.0

US Army Corps of Engineers.

ERDC

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DECATUR 1 N	40.8483, -84.93	785.105	8.912	14.401	4.139	11322	80
HOAGLAND 1.5 SSW	40.9275, -84.9989	833.005	6.55	47.9	3.261	0	10
FORT WAYNE 9.1 SE	40.9915, -85.0029	813.976	10.601	28.871	5.077	1	0
FT WAYNE INTL AP	40.9725, -85.2064	796.916	16.791	11.811	7.754	30	0



Coordinates	40.92913, -84.79703
Observation Date	2026-04-15
Elevation (ft)	799.506
Drought Index (PDSI)	Severe drought
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-04-15	2.806299	4.194095	6.602362	Wet	3	3	9
2026-03-16	1.69685	3.066536	2.649606	Normal	2	2	4
2026-02-14	1.429134	2.525197	0.515748	Dry	1	1	1
Result							Normal Conditions - 14

Figures and tables made by the Antecedent Precipitation Tool Version 3.0

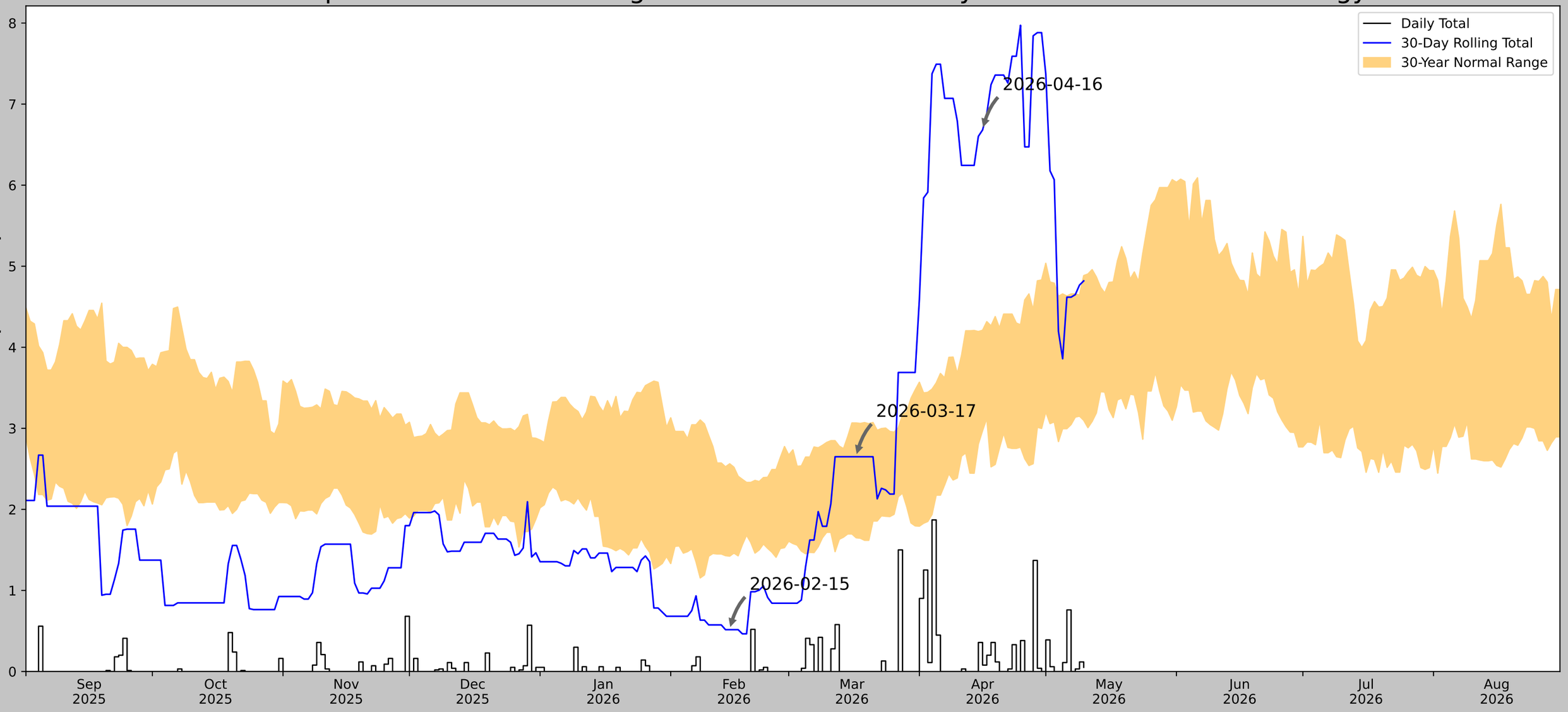
US Army Corps of Engineers.

ERDC

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DECATUR 1 N	40.8483, -84.93	785.105	8.912	14.401	4.139	11322	80
HOAGLAND 1.5 SSW	40.9275, -84.9989	833.005	6.55	47.9	3.261	0	10
FORT WAYNE 9.1 SE	40.9915, -85.0029	813.976	10.601	28.871	5.077	1	0
FT WAYNE INTL AP	40.9725, -85.2064	796.916	16.791	11.811	7.754	30	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	40.92913, -84.79703
Observation Date	2026-04-16
Elevation (ft)	799.506
Drought Index (PDSI)	Severe drought
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-04-16	2.971654	4.209843	6.681103	Wet	3	3	9
2026-03-17	1.65	3.066536	2.649606	Normal	2	2	4
2026-02-15	1.423228	2.562599	0.515748	Dry	1	1	1
Result							Normal Conditions - 14

Figures and tables made by the Antecedent Precipitation Tool Version 3.0

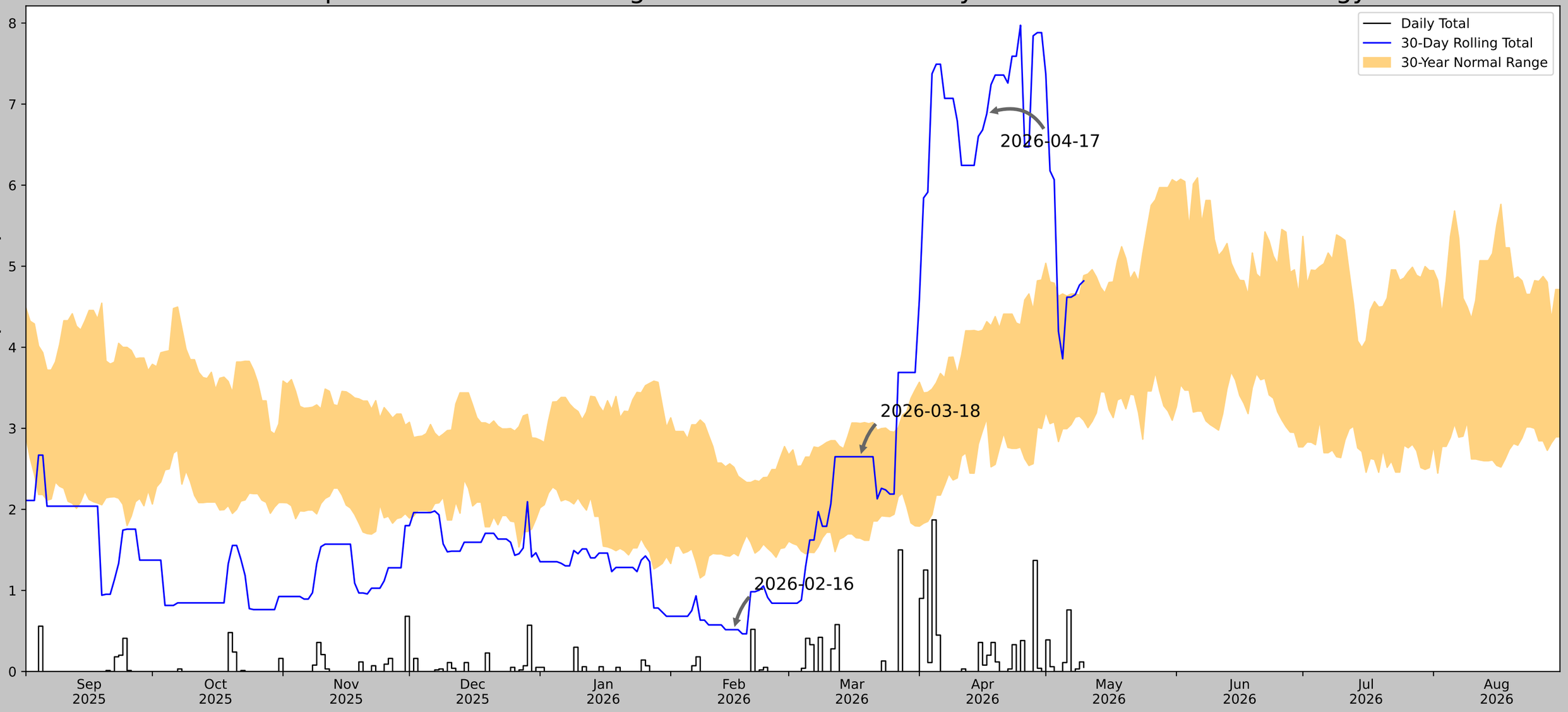
US Army Corps of Engineers.

ERDC

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DECATUR 1 N	40.8483, -84.93	785.105	8.912	14.401	4.139	11322	80
HOAGLAND 1.5 SSW	40.9275, -84.9989	833.005	6.55	47.9	3.261	0	10
FORT WAYNE 9.1 SE	40.9915, -85.0029	813.976	10.601	28.871	5.077	1	0
FT WAYNE INTL AP	40.9725, -85.2064	796.916	16.791	11.811	7.754	30	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	40.92913, -84.79703
Observation Date	2026-04-17
Elevation (ft)	799.506
Drought Index (PDSI)	Severe drought
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2026-04-17	3.123622	4.316536	6.88189	Wet	3	3	9
2026-03-18	1.644095	3.060236	2.649606	Normal	2	2	4
2026-02-16	1.461024	2.520473	0.515748	Dry	1	1	1
Result							Normal Conditions - 14

Figures and tables made by the
Antecedent Precipitation Tool
Version 3.0

US Army Corps of Engineers.
ERDC

Developed by:
U.S. Army Corps of Engineers and
U.S. Army Engineer Research and
Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
DECATUR 1 N	40.8483, -84.93	785.105	8.912	14.401	4.139	11322	80
HOAGLAND 1.5 SSW	40.9275, -84.9989	833.005	6.55	47.9	3.261	0	10
FORT WAYNE 9.1 SE	40.9915, -85.0029	813.976	10.601	28.871	5.077	1	0
FT WAYNE INTL AP	40.9725, -85.2064	796.916	16.791	11.811	7.754	30	0

Appendix C:
Exhibit A – Ecological Survey Map



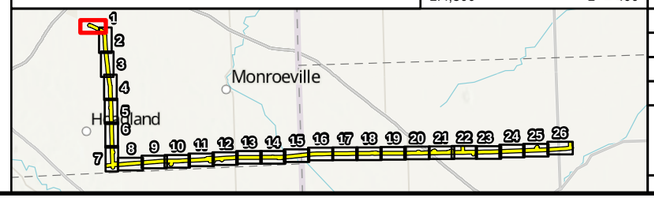
STUDY AREA
UPLAND DATA POINT
WETLAND DATA POINT
CULVERT
TRC DELINEATED WETLAND (PEM)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

F

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-1
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

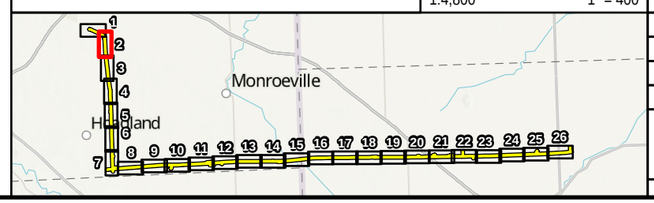
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STUDY AREA
EXISTING STRUCTURE
RTE SPECIES
CULVERT
TRANSMISSION LINE
STREAM CENTERLINE
BANK LINE
NON-JD DRAINAGE
TRC DELINEATED WATERBODY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-2
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

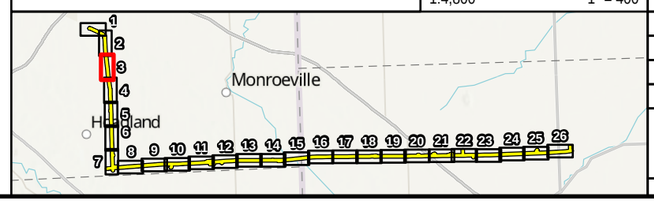
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STUDY AREA
EXISTING STRUCTURE
DRAIN TILE OUTLET
TRANSMISSION LINE
STREAM CENTERLINE
BANK LINE
TRC DELINEATED WATERBODY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-3
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

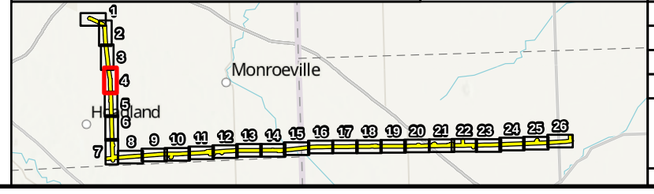
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- STUDY AREA
- EXISTING STRUCTURE
- DRAIN TILE OUTLET
- CULVERT
- TRANSMISSION LINE
- STREAM CENTERLINE
- BANK LINE
- TRC DELINEATED WATERBODY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-4
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

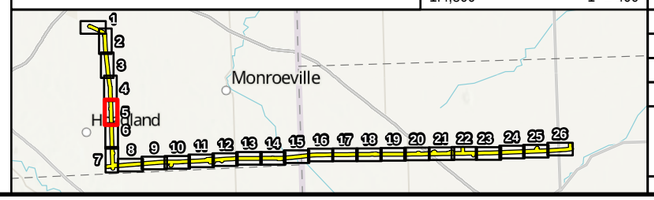
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STUDY AREA
EXISTING STRUCTURE
RTE SPECIES
UPLAND DATA POINT
DRAIN TILE OUTLET
CULVERT
TRANSMISSION LINE
STREAM CENTERLINE
BANK LINE
NON-JD DRAINAGE
TRC DELINEATED WATERBODY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-5
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 90
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Franke Rd

Adair Rd

Hoagland Rd

Adair Rd

Emenhiser Rd

Emenhiser Rd

Houk Ditch

95

96

97

98

99

SP-AIN02-05

SP-AIN02-01

W-AIN-02
0.291 (AC)

WB-AIN-01
0.11 (AC)

W-AIN-02
0.232 (AC)

SP-AIN02-02

ASCLEPIAS
SPP.

ASCLEPIAS
SPP.

W-AIN-02
2.20 (AC)

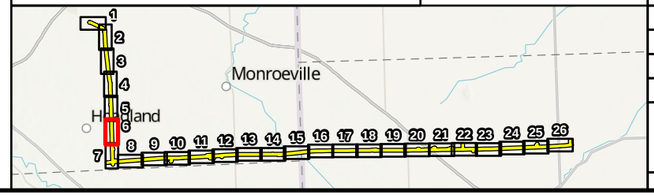
SP-AIN02-04

SP-AIN02-03

- STUDY AREA
- EXISTING STRUCTURE
- RTE SPECIES
- UPLAND DATA POINT
- WETLAND DATA POINT
- TRANSMISSION LINE
- TRC DELINEATED WATERBODY
- TRC DELINEATED WETLAND (PEM)
- TRC DELINEATED WETLAND (PSS)
- TRC DELINEATED WETLAND (PFO)
- POTENTIAL BAT HABITAT

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-6
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

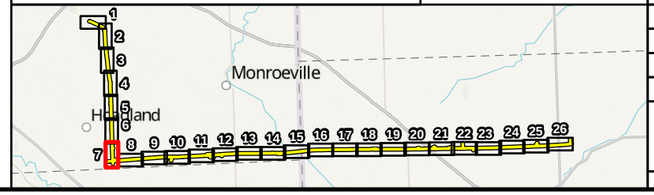
Coordinate System: NAD 1983 2011 UTM Zone 16N, Map Rotation: 90
Saved By: AFARRIS on 4/20/2026, 12:27:44 PM, File Path: T:\PROJECTS\AEP\624605_AllenRP\Maddox\2.APRX\Allen_MaddoxCreek_WDR.Allen_MaddoxCreek_WDR.aprx, Layout Name: Appendix - Delineation



- STUDY AREA
- EXISTING STRUCTURE
- RTE SPECIES
- UPLAND DATA POINT
- WETLAND DATA POINT
- TRANSMISSION LINE
- STREAM CENTERLINE
- BANK LINE
- TRC DELINEATED WATERBODY
- TRC DELINEATED WETLAND (PEM)
- TRC DELINEATED WETLAND (PSS)
- TRC DELINEATED WETLAND (PFO)
- POTENTIAL BAT HABITAT

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS
CHECKED BY:	A. CLINE
APPROVED BY:	N. YUKNIS
DATE:	APRIL 2026

PROJ. NO.: 624605

EXHIBIT A-7

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N Map Rotation: 90
Saved By: AFARRIS on 4/20/2026 1:27:24 PM File Path: I:\1-PROJECTS\AEP\624605_AllenPR\Maddox\2-APRX\Allen_MaddoxCreek_WDR.aprx Layout Name: Appendix - Delineation

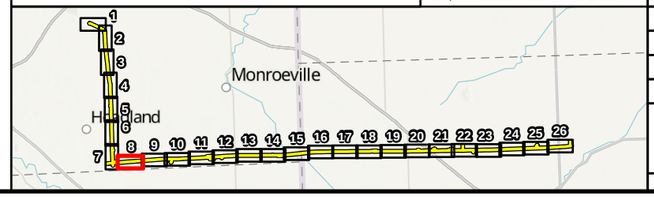


STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE
POTENTIAL BAT HABITAT

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

F

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

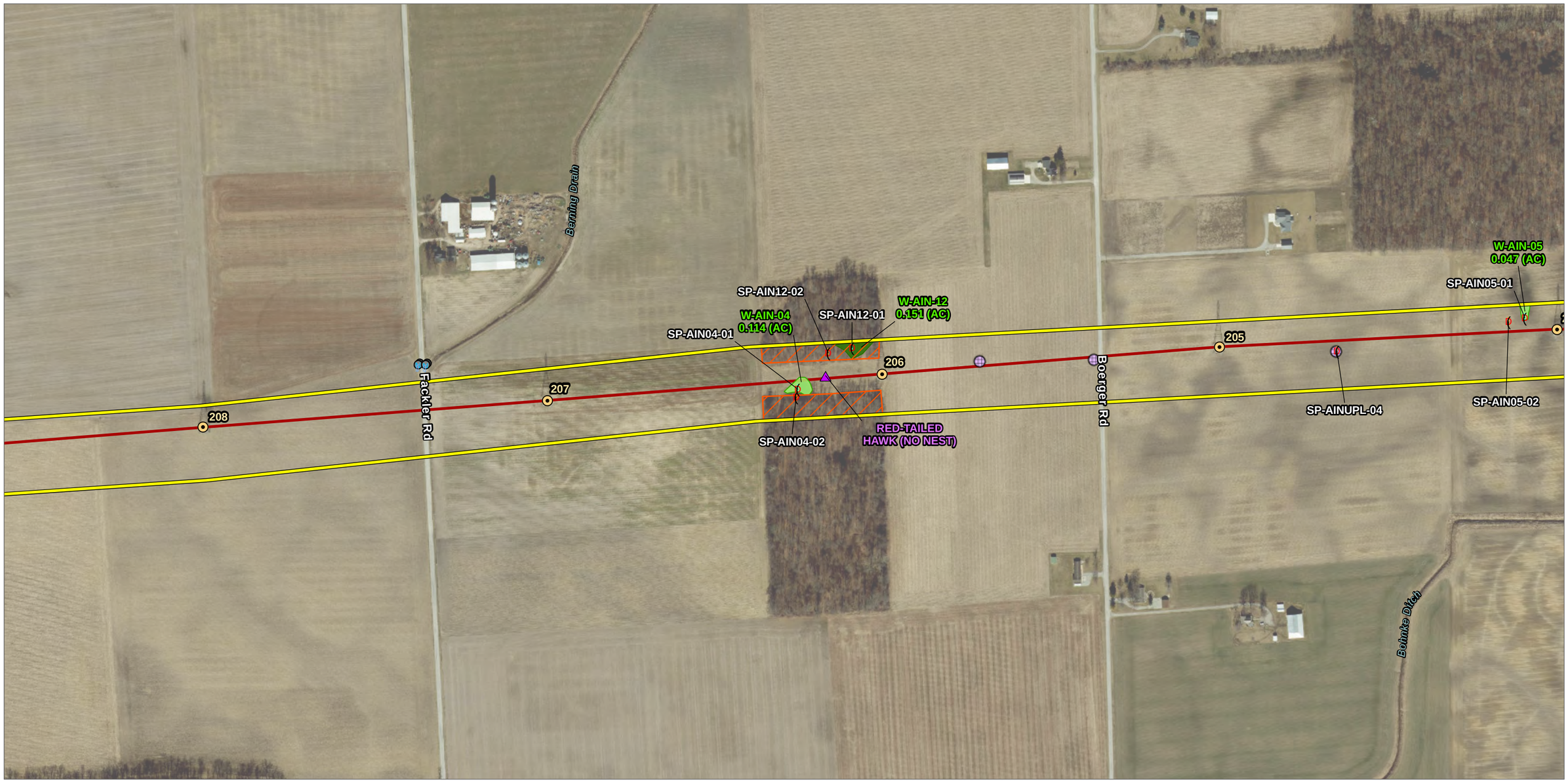
TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-8
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

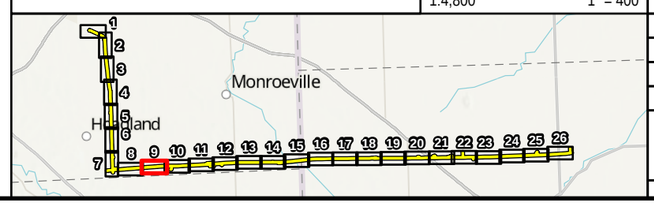
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STUDY AREA
EXISTING STRUCTURE
RTE SPECIES
UPLAND DATA POINT
WETLAND DATA POINT
DRAIN TILE INLET
CULVERT
TRANSMISSION LINE
TRC DELINEATED WETLAND (PEM)
TRC DELINEATED WETLAND (PFO)
POTENTIAL BAT HABITAT

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

F
0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS
CHECKED BY:	A. CLINE
APPROVED BY:	N. YUKNIS
DATE:	APRIL 2026

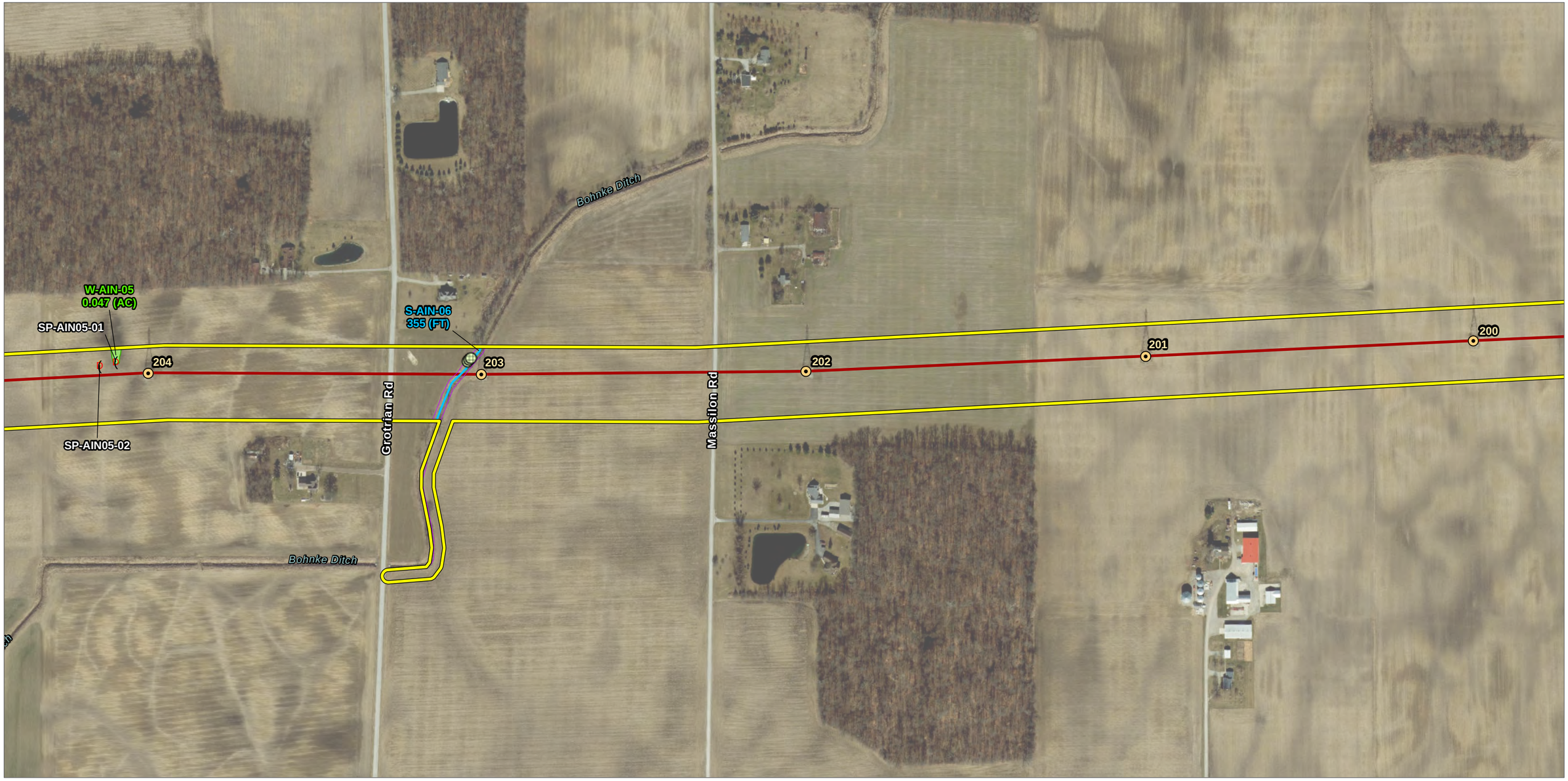
PROJ. NO.: 624605

EXHIBIT A-9

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N Map Rotation: 0
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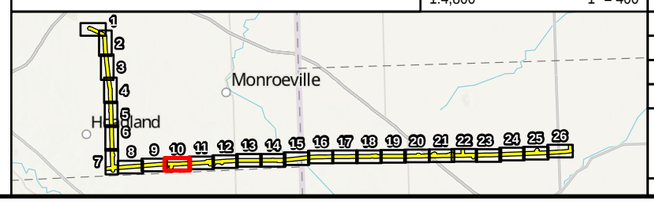


STUDY AREA
EXISTING STRUCTURE
UPLAND DATA POINT
WETLAND DATA POINT
DRAIN TILE OUTLET
TRANSMISSION LINE
STREAM CENTERLINE
BANK LINE
TRC DELINEATED WETLAND (PEM)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

F

0 200 400 FEET
1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-10
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
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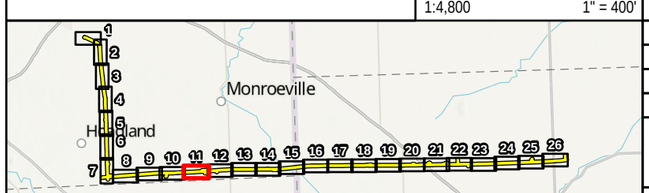
- STUDY AREA
- EXISTING STRUCTURE
- RTE SPECIES
- UPLAND DATA POINT
- WETLAND DATA POINT
- DRAIN TILE OUTLET
- CULVERT
- TRANSMISSION LINE
- STREAM CENTERLINE
- BANK LINE
- TRC DELINEATED WETLAND (PEM)
- TRC DELINEATED WETLAND (PFO)
- POTENTIAL BAT HABITAT

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

F

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

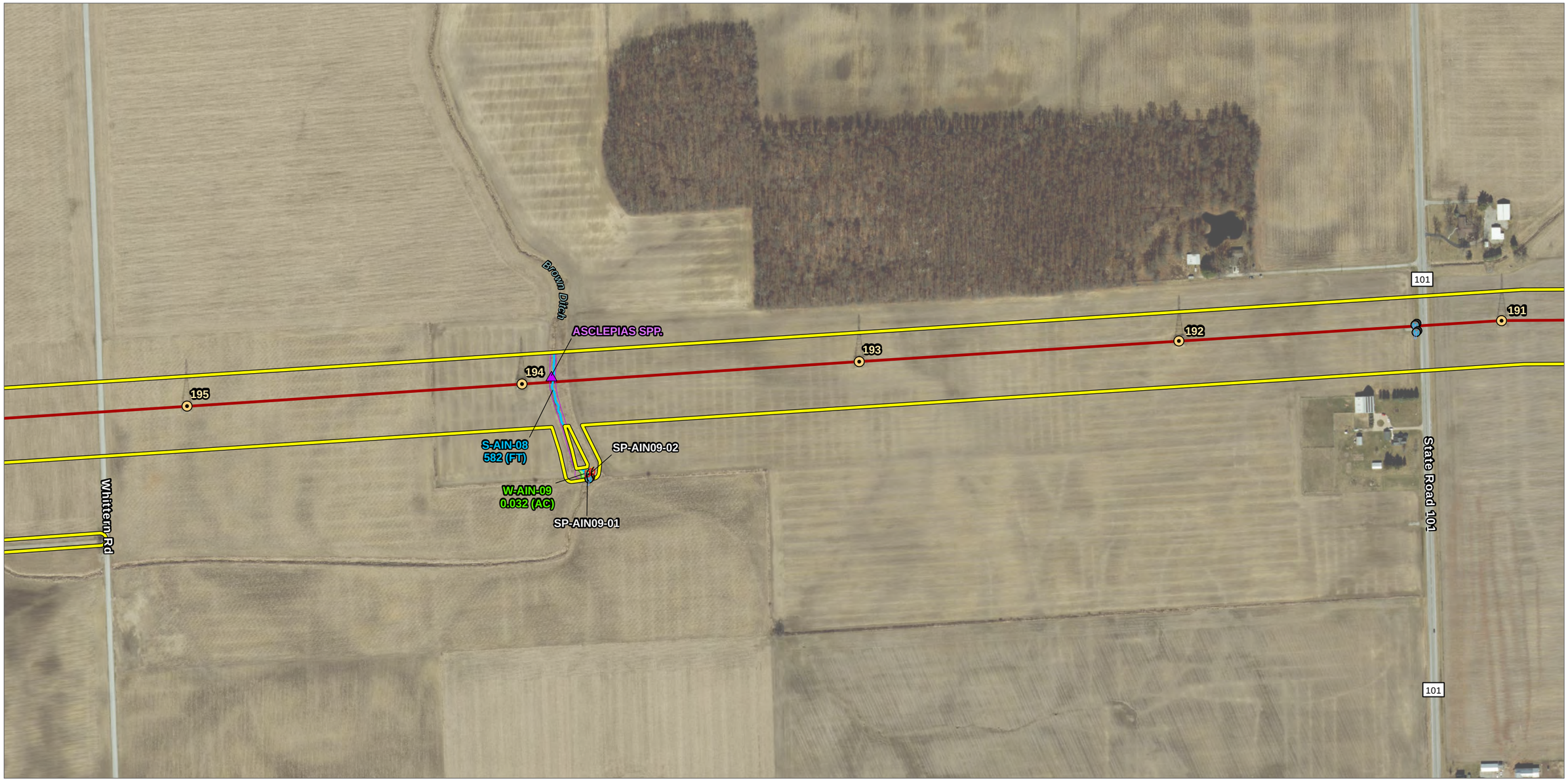
TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE	EXHIBIT A-11	
APPROVED BY:	N. YUKNIS		
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
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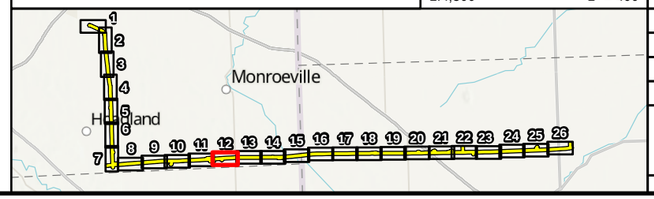
STUDY AREA
EXISTING STRUCTURE
RTE SPECIES
UPLAND DATA POINT
WETLAND DATA POINT
CULVERT
TRANSMISSION LINE
STREAM CENTERLINE
BANK LINE
TRC DELINEATED WETLAND (PEM)

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

F

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-12
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
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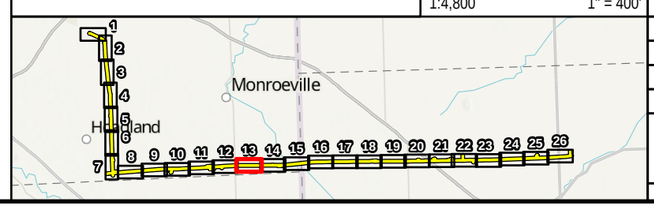
- STUDY AREA
- EXISTING STRUCTURE
- UPLAND DATA POINT
- TRANSMISSION LINE

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

F

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS
CHECKED BY:	A. CLINE
APPROVED BY:	N. YUKNIS
DATE:	APRIL 2026

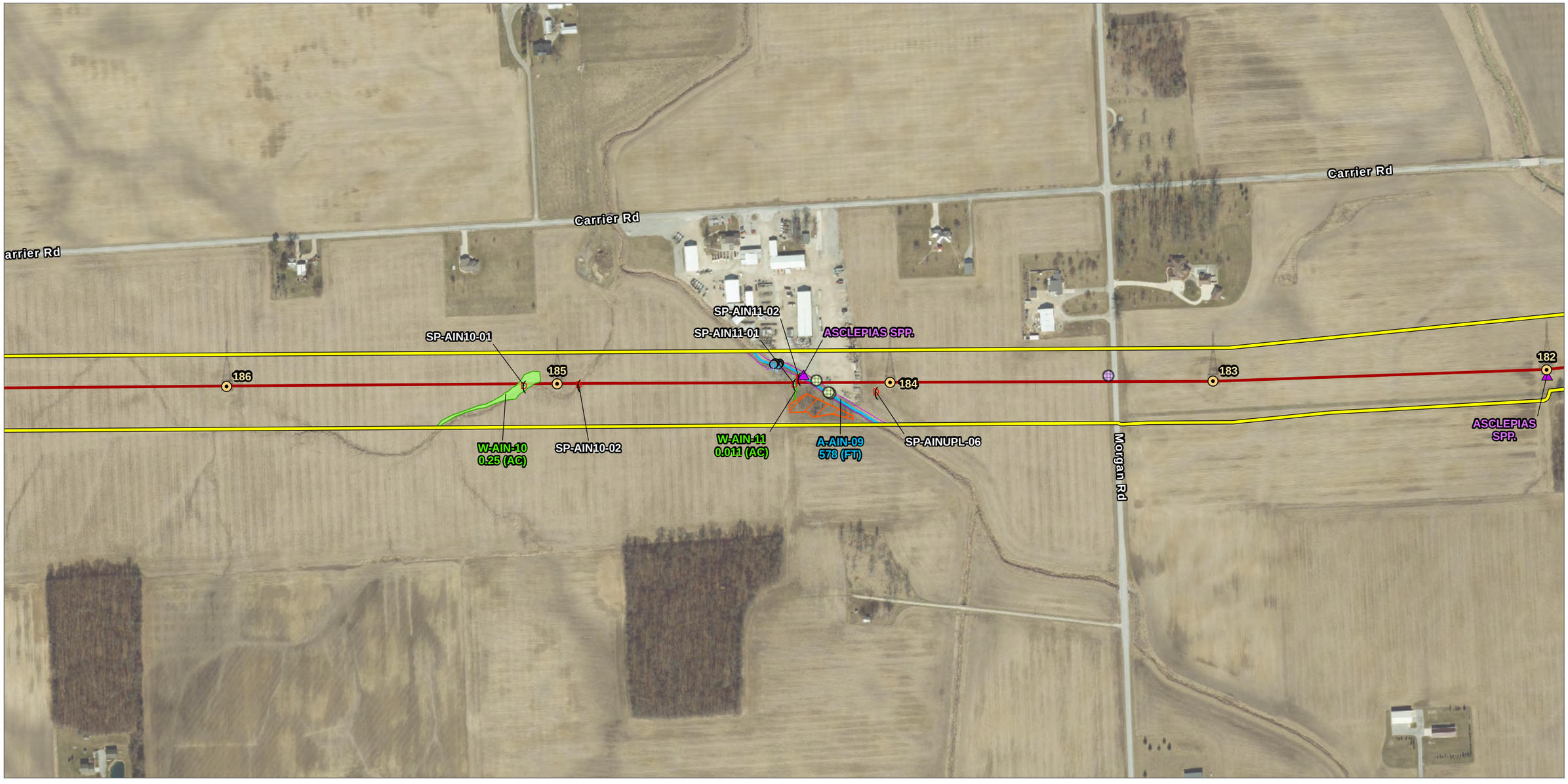
PROJ. NO.: 624605

EXHIBIT A-13

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
Stored By: AFARRIS on 4/20/2026, 12:27:14 PM; File Path: T:\PROJECTS\AEP\624605_AllenDPMaddoxV2.APRX\Allen_MaddoxCreek_WDR.Allen_MaddoxCreek_WDR.aprx; Layout Name: Appendix - Delineation



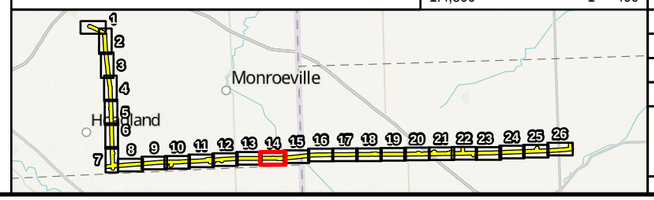
- STUDY AREA
- EXISTING STRUCTURE
- RTE SPECIES
- UPLAND DATA POINT
- WETLAND DATA POINT
- DRAIN TILE INLET
- DRAIN TILE OUTLET
- CULVERT
- TRANSMISSION LINE
- STREAM CENTERLINE
- BANK LINE
- TRC DELINEATED WETLAND (PEM)
- POTENTIAL BAT HABITAT

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

F

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS
CHECKED BY:	A. CLINE
APPROVED BY:	N. YUKNIS
DATE:	APRIL 2026

PROJ. NO.: 624605

EXHIBIT A-14

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
Saved By: AFARRIS on 4/20/2026, 1:27:14 PM; File Path: T:\PROJECTS\AEP\624605_AllenPP\Maddox\2-APRX\Allen_MaddoxCreek_WDR.aprx; Layout Name: Appendix - Delineation



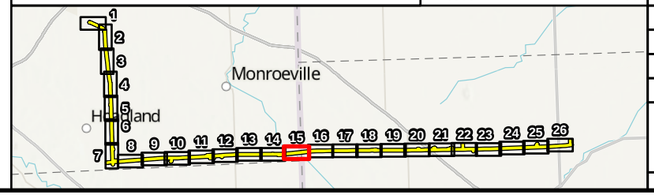
STUDY AREA
EXISTING STRUCTURE
RTE SPECIES
UPLAND DATA POINT
DRAIN TILE INLET
TRANSMISSION LINE
STREAM CENTERLINE
BANK LINE
TRC DELINEATED WATERBODY

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 2/14/2024
DATA SOURCES: TRC, ESRI

F

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS
CHECKED BY:	A. CLINE
APPROVED BY:	N. YUKNIS
DATE:	APRIL 2026

PROJ. NO.: 624605

EXHIBIT A-15

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
Saved By: AFARRIS on 4/20/2026, 1:27:14 PM; File Path: T:\PROJECTS\AEP\624605_AllenRP\Maddox\2-APRX\Allen_MaddoxCreek_WDR.aprx; Layout Name: Appendix - Delineation



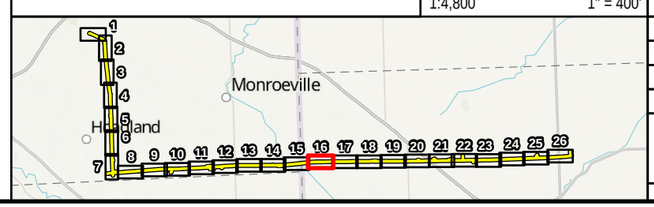
STUDY AREA
EXISTING STRUCTURE
TRANSMISSION LINE

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, ESRI

F

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

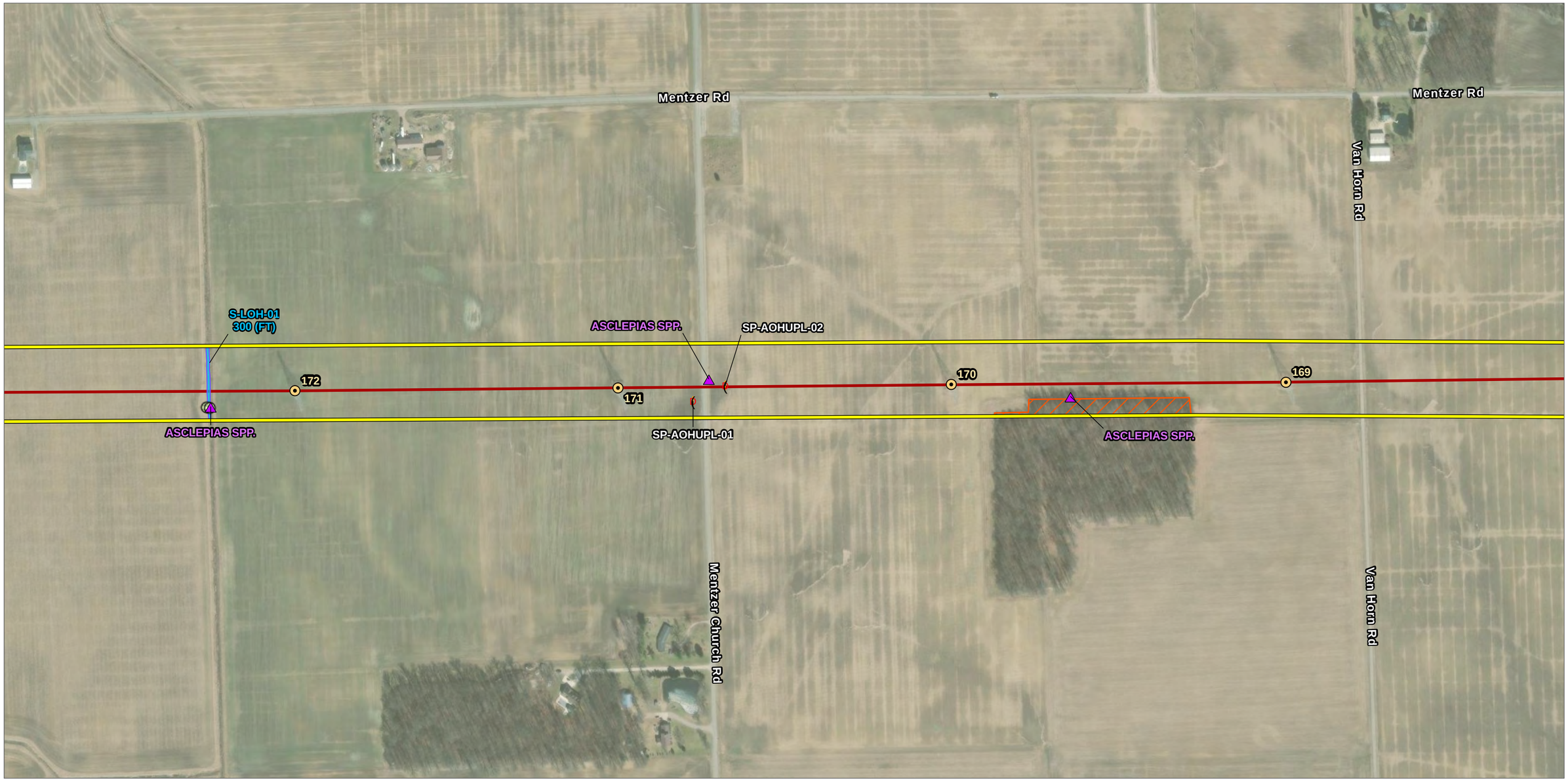
TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE	EXHIBIT A-16	
APPROVED BY:	N. YUKNIS		
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

Coordinate System: NAD 1983 2011 UTM Zone 16N; Map Rotation: 0
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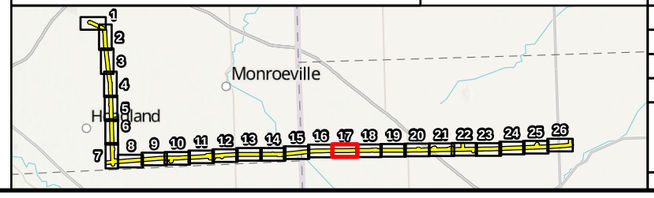
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- EXISTING STRUCTURE
- RTE SPECIES
- UPLAND DATA POINT
- DRAIN TILE OUTLET
- TRANSMISSION LINE
- BANK LINE
- TRC DELINEATED WATERBODY
- POTENTIAL BAT HABITAT

NOTES:
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
AERIAL DATE: 3/9/2023
DATA SOURCES: TRC, ESRI

F

0 200 400 FEET

1:4,800 1" = 400'



PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

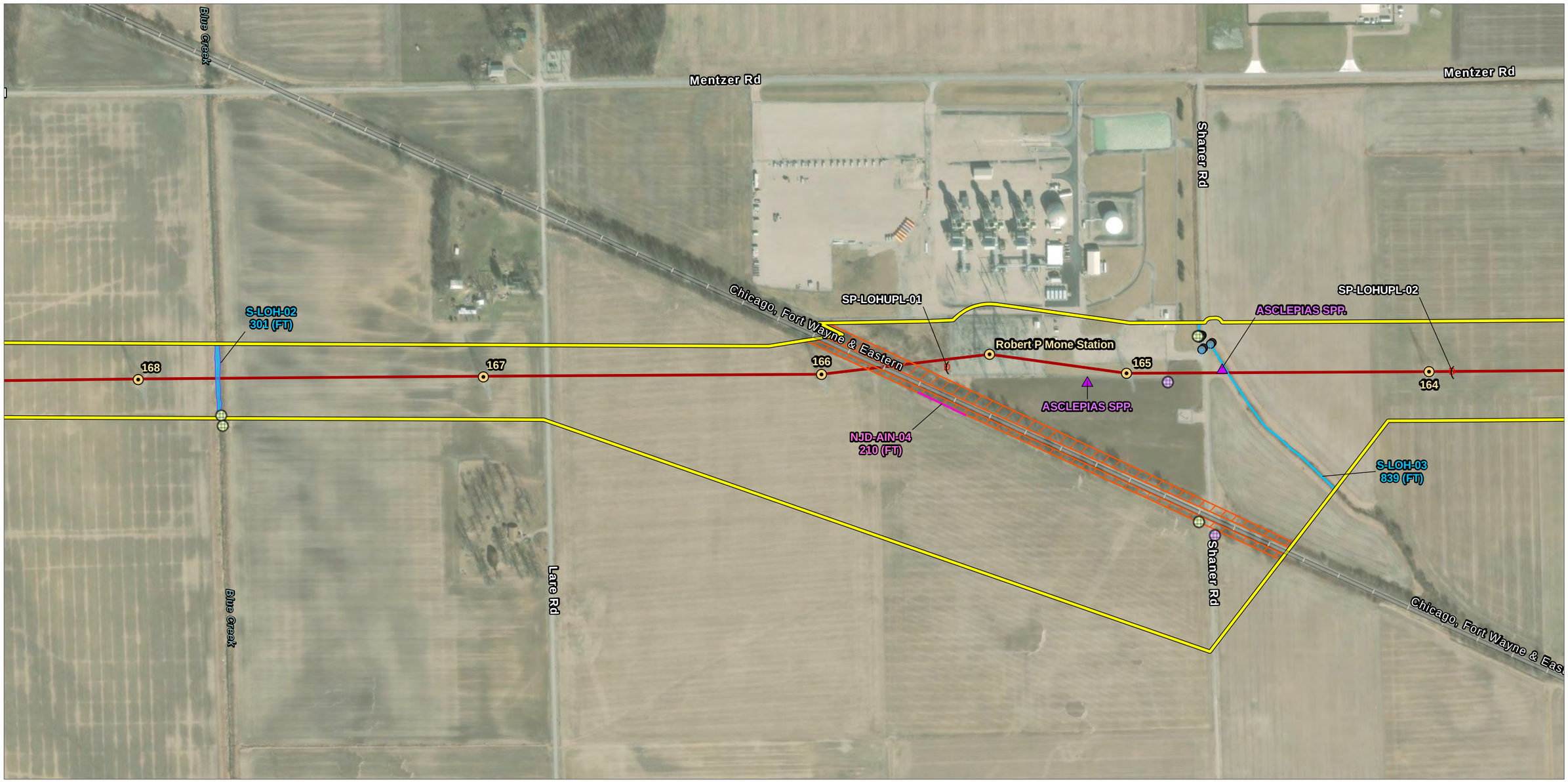
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ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-17
DATE:	APRIL 2026		

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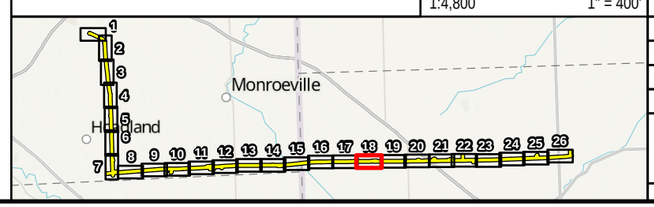
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STUDY AREA
EXISTING STRUCTURE
RTE SPECIES
UPLAND DATA POINT
DRAIN TILE INLET
DRAIN TILE OUTLET
CULVERT
TRANSMISSION LINE
STREAM CENTERLINE
BANK LINE
NON-JD DRAINAGE
TRC DELINEATED WATERBODY
POTENTIAL BAT HABITAT

NOTES:
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ALLEN COUNTY, IN & VAN WERT COUNTY, OH

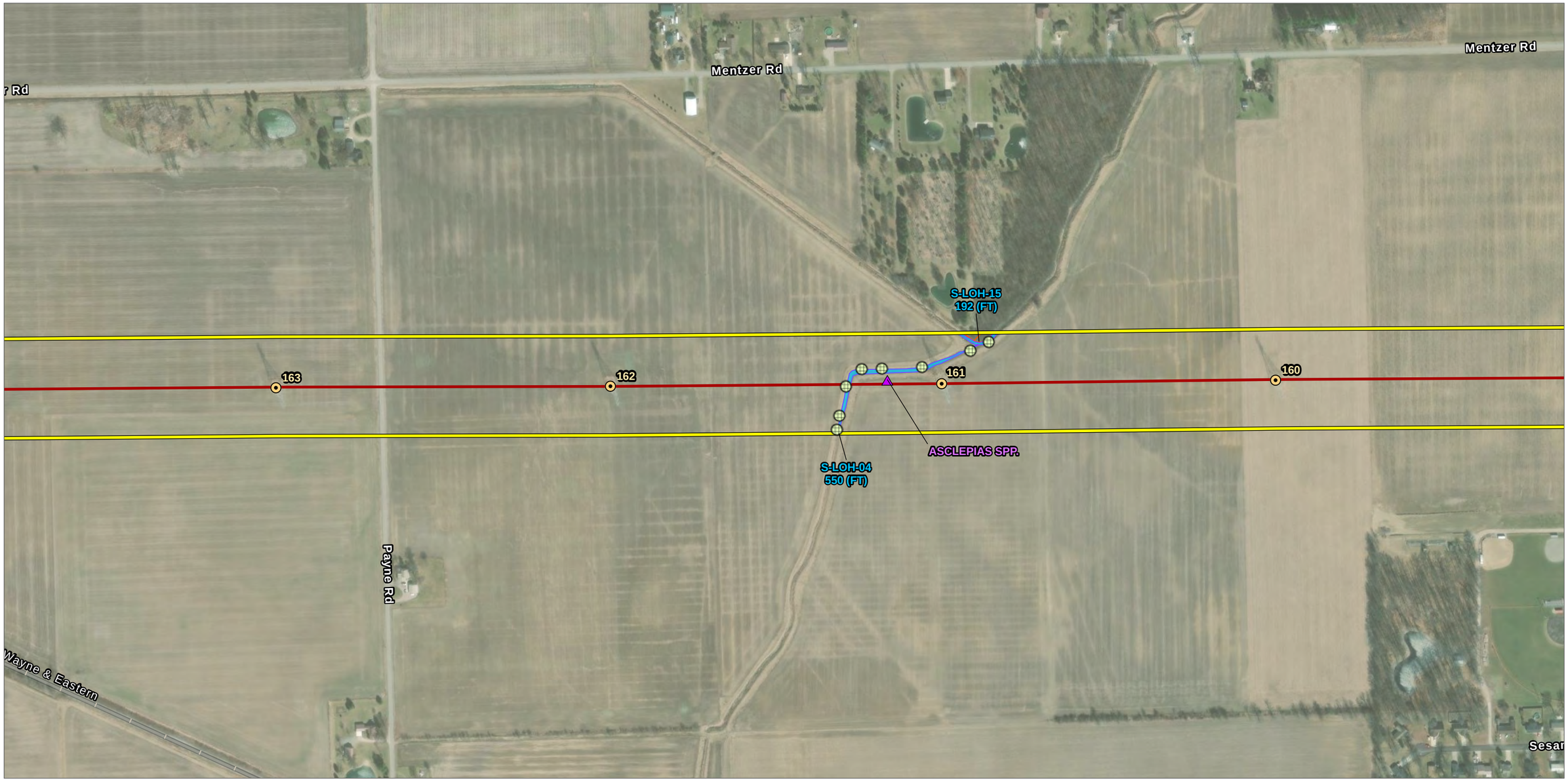
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ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE	EXHIBIT A-18	
APPROVED BY:	N. YUKNIS		
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

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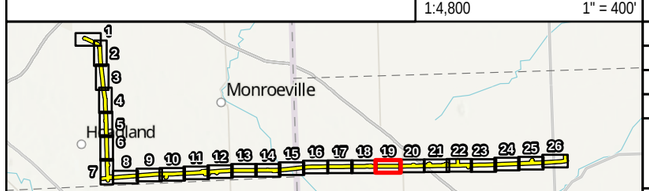
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- EXISTING STRUCTURE
- RTE SPECIES
- DRAIN TILE OUTLET
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- BANK LINE
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NOTES:
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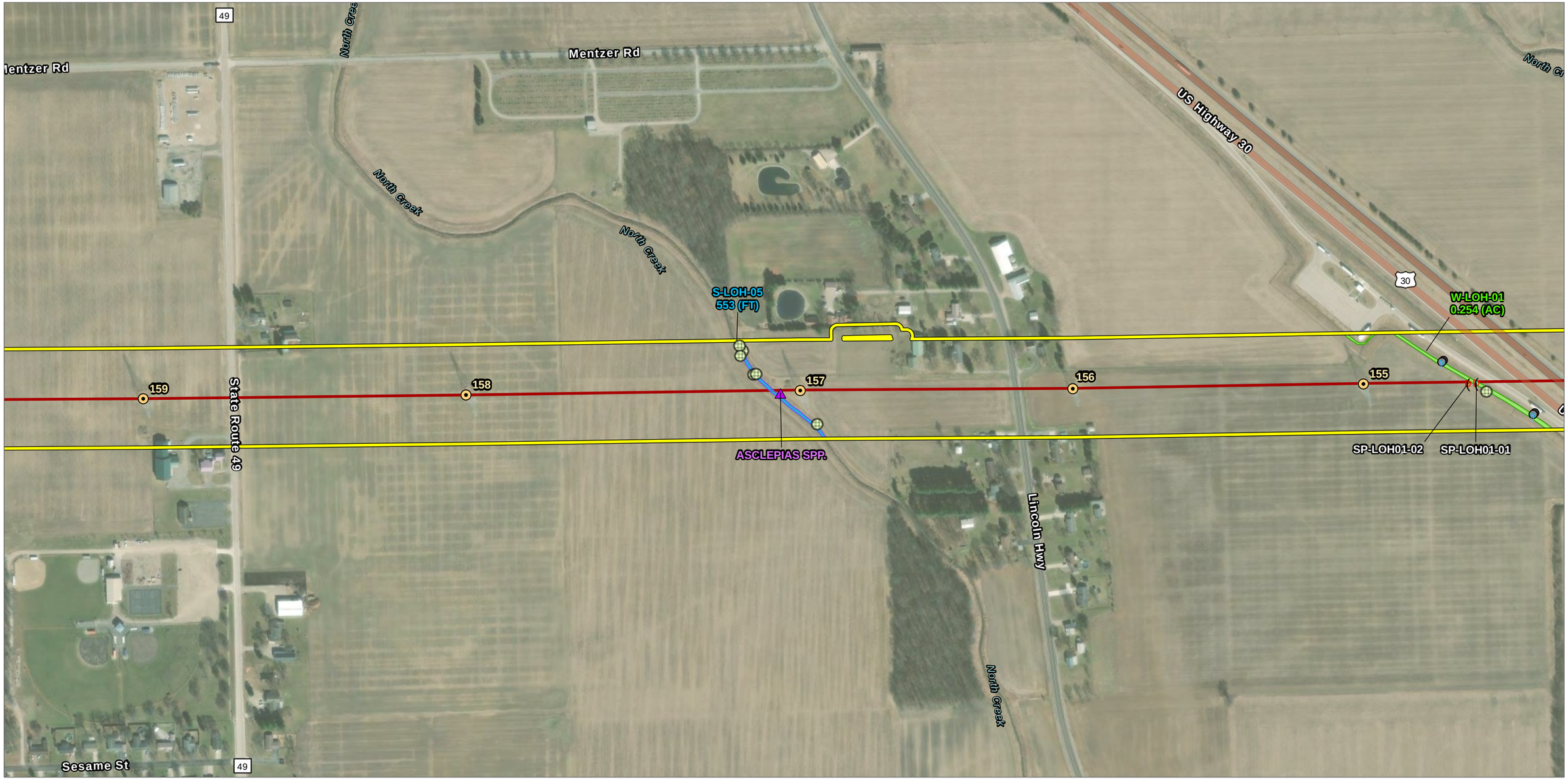
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ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE	EXHIBIT A-19	
APPROVED BY:	N. YUKNIS		
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

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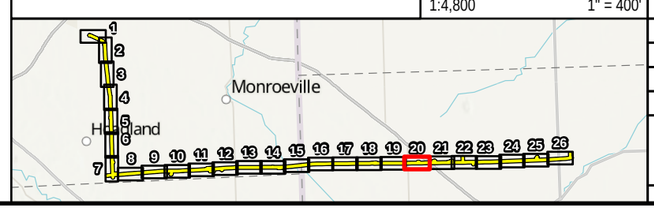
- STUDY AREA
- EXISTING STRUCTURE
- RTE SPECIES
- UPLAND DATA POINT
- WETLAND DATA POINT
- DRAIN TILE OUTLET
- CULVERT
- TRANSMISSION LINE
- BANK LINE
- TRC DELINEATED WATERBODY
- TRC DELINEATED WETLAND (PEM)

NOTES:
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1:4,800 1" = 400'



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AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-20
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
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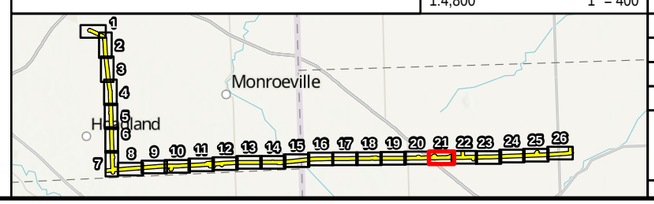
- STUDY AREA
- EXISTING STRUCTURE
- DRAIN TILE OUTLET
- CULVERT
- TRANSMISSION LINE
- STREAM CENTERLINE
- BANK LINE
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- TRC DELINEATED WETLAND (PEM)
- POTENTIAL BAT HABITAT

NOTES:
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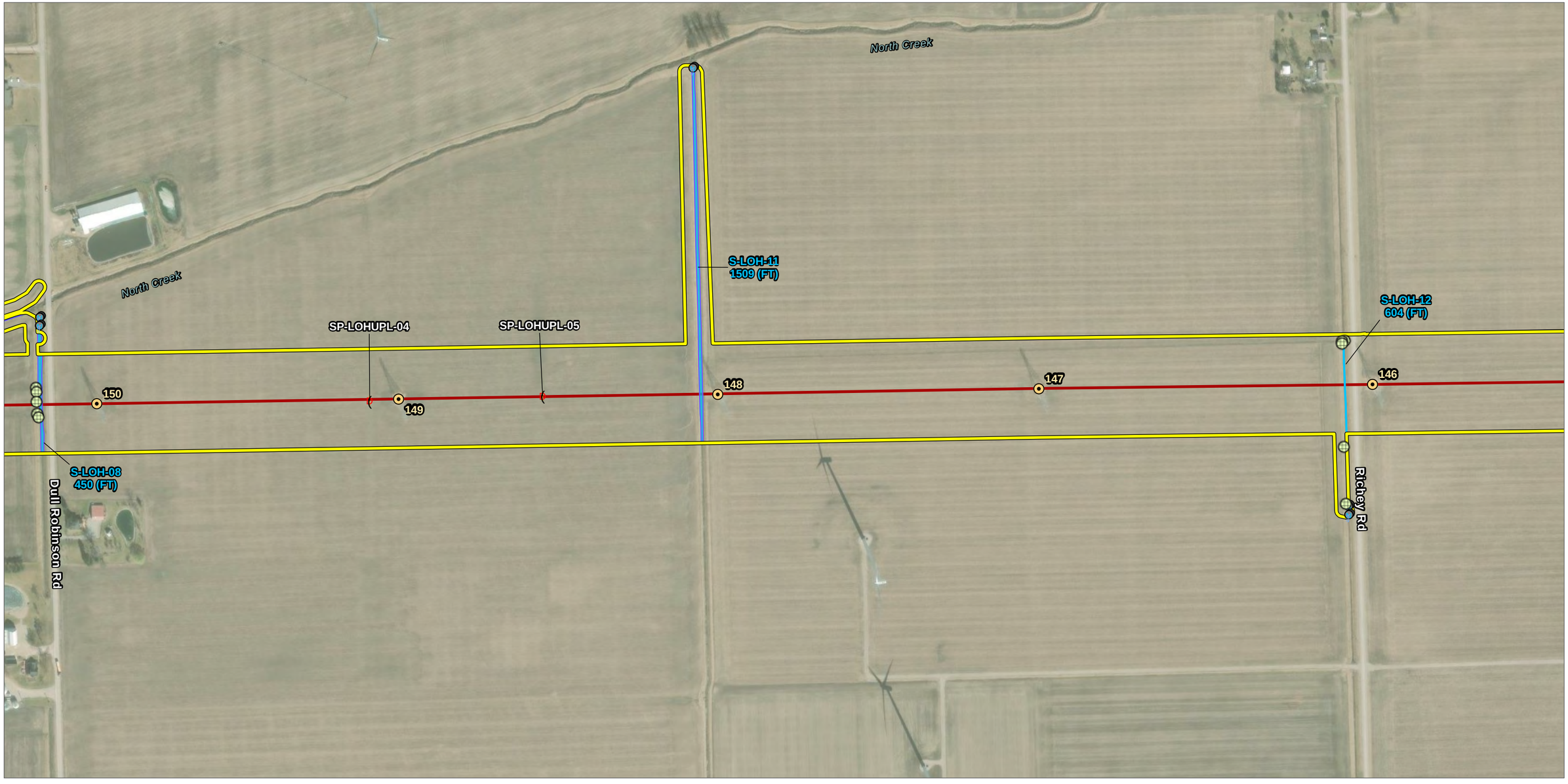
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DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-21
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
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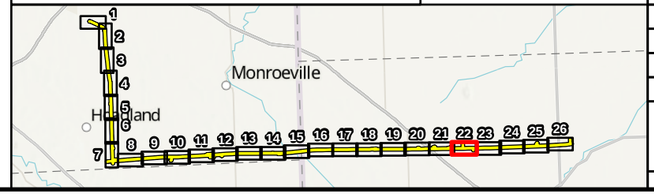


STUDY AREA
EXISTING STRUCTURE
UPLAND DATA POINT
DRAIN TILE OUTLET
CULVERT
TRANSMISSION LINE
STREAM CENTERLINE
BANK LINE
TRC DELINEATED WATERBODY

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PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-22
DATE:	APRIL 2026		

TRC
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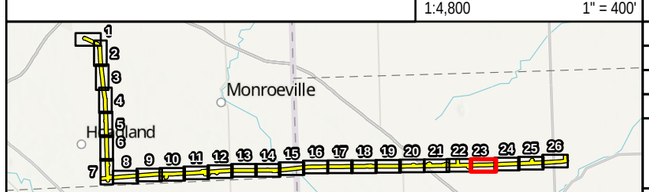
- STUDY AREA
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ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE	EXHIBIT A-23	
APPROVED BY:	N. YUKNIS		
DATE:	APRIL 2026		

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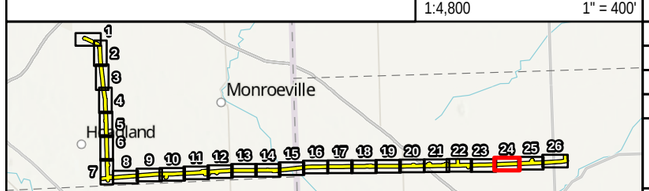
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PROJECT:
AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE	EXHIBIT A-24	
APPROVED BY:	N. YUKNIS		
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

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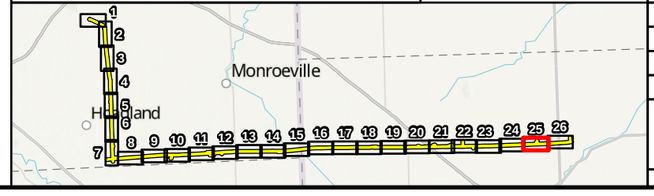
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ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE		
APPROVED BY:	N. YUKNIS		EXHIBIT A-25
DATE:	APRIL 2026		

TRC
1382 WEST NINTH STREET
SUITE 400
CLEVELAND, OH 44113
PHONE: 216-344-3072

FILE: ALLEN_MADDOXCREEK_WDR.APRX

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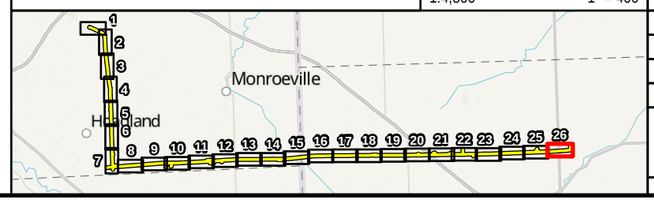
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AEP
ALLEN - MADDOX CREEK
ALLEN COUNTY, IN & VAN WERT COUNTY, OH

TITLE:
ECOLOGICAL SURVEY MAP

DRAWN BY:	A. FARRIS	PROJ. NO.:	624605
CHECKED BY:	A. CLINE	EXHIBIT A-26	
APPROVED BY:	N. YUKNIS		
DATE:	APRIL 2026		

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Appendix D:
Wetland Determination Data Forms and Photographs

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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Jefferson, Allen County Sampling Date: 2025-7-16
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN01-01
Investigator(s): Nick Yuknis, Amanda Larsen Section, Township, Range: 31-T30N-R14E
Landform (hillslope, terrace, etc): Swale Local relief (concave, convex, none): Concave
Slope (%): 0 to 1 Lat: 41.019171 Long: -84.987111 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: R5UBFx
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus racemosa*	20	Yes	FAC
2.			
3.			
4.			
5.			
	20	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Carex lacustris*	45	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	45	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	45	x 1 =	45
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	65 (A)		105 (B)

Prevalence Index = B/A = 1.6

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 ____

Remarks:
Palustrine emergent plant community. The criterion for hydrophytic vegetation is met.

SOIL Sampling Point: SP-AIN01-01

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 to 3	10YR 3/2	100					Silt Loam	
3 to 8	10YR 3/1	90	10YR 4/6	10	C	M	Silty Clay Loam	
8 to 24	10YR 3/2	75	10YR 5/8	25	C	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✘ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘	Depth (inches): ___
Water Table Present?	Yes ___	No ✘	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ✘	Depth (inches): ___

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Jefferson, Allen County Sampling Date: 2025-7-16
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN01-02
Investigator(s): Nick Yuknis, Amanda Larsen Section, Township, Range: 31-T30N-R14E
Landform (hillslope, terrace, etc): Back slope Local relief (concave, convex, none): Convex
Slope (%): 2 to 5 Lat: 41.019138 Long: -84.987132 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of all three parameters, this area is an upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pyrus calleryana*	10	Yes	UPL
2.			
3.			
4.			
5.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cornus racemosa*	20	Yes	FAC
2. *Juniperus virginiana*	5	Yes	FACU
3.			
4.			
5.			
	25	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Bromus inermis*	75	Yes	FACU
2. *Toxicodendron radicans*	40	Yes	FAC
3. *Apocynum cannabinum*	5	No	FAC
4. *Morus alba*	2	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	122	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	67	x 3 =	201
FACU species	80	x 4 =	320
UPL species	10	x 5 =	50
Column Totals:	157 (A)		571 (B)

Prevalence Index = B/A = 3.6

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 ✘

Remarks:
The criterion for hydrophytic vegetation is not met. Upland meadow.

SOIL Sampling Point: SP-AIN01-02

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 to 2	10YR 3/2	100					Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

Refusal at 2 inches due to roadside gravel fill. The criterion for hydric soil is not met in this shallow pit.

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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-16
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN02-01
Investigator(s): Nick Yuknis, Amanda Larsen Section, Township, Range: 29-T29N-R14E
Landform (hillslope, terrace, etc): Foot slope Local relief (concave, convex, none): Concave
Slope (%): 1 to 3 Lat: 40.94427 Long: -84.971971 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Phalaris arundinacea*	90	Yes	FACW
2. *Apocynum cannabinum*	10	No	FAC
3. *Cirsium arvense*	10	No	FACU
4. *Dipsacus fullonum*	2	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	112	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	90	x 2 =	180
FAC species	10	x 3 =	30
FACU species	12	x 4 =	48
UPL species	0	x 5 =	0
Column Totals:	112 (A)		258 (B)

Prevalence Index = B/A = 2.3

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 ____

Remarks:
Palustrine emergent plant community. The criterion for hydrophytic vegetation is met.

SOIL

Sampling Point: SP-AIN02-01

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 to 4	10YR 3/2	95	10YR 4/6	5	C	M	Silty Clay Loam	
4 to 14	10YR 5/1	85	10YR 5/8	15	C	M	Clay Loam	
14 to 24	10YR 5/1	70	10YR 5/8	30	C	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘ Depth (inches): ___

Water Table Present? Yes ___ No ✘ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✘ Depth (inches): ___

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-16
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN02-02
Investigator(s): Amanda Larsen, Nick Yuknis Section, Township, Range: 29-T29N-R14E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): None
Slope (%): 0 to 1 Lat: 40.944332 Long: -84.972346 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of two of three parameters, this area is an upland.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Phalaris arundinacea*	35	Yes	FACW
2. *Collinsonia canadensis*	30	Yes	FAC
3. *Solidago altissima*	25	Yes	FACU
4. *Apocynum androsaemifolium*	20	No	UPL
5. *Cirsium arvense*	15	No	FACU
6. *Monarda fistulosa*	5	No	FACU
7.			
8.			
9.			
10.			
	130	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= Total Cover	

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	30	x 3 =	90
FACU species	45	x 4 =	180
UPL species	20	x 5 =	100
Column Totals:	130 (A)		440 (B)

Prevalence Index = B/A = 3.4

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 ____

Remarks:
The criterion for hydrophytic vegetation is met. Upland old field.

SOIL Sampling Point: SP-AIN02-02

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 to 14	10YR 3/1	100					Loam	
14 to 18	10YR 3/1	60	10YR 5/1	25	D	M	Silt Loam	
14 to 18			10YR 6/8	15	C	M		
18 to 24	10YR 5/1	85	10YR 6/8	15	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

The criterion for hydric soil is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-16
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN02-03
Investigator(s): Nick Yuknis, Amanda Larsen Section, Township, Range: 29-T29N-R14E
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave
Slope (%): 0 to 1 Lat: 40.942312 Long: -84.972206 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PSS. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Fraxinus pennsylvanica*	55	Yes	FACW
2. *Ulmus americana*	5	No	FACW
3. *Rosa multiflora*	2	No	FACU
4.			
5.			
	62	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Phalaris arundinacea*	70	Yes	FACW
2. *Agrimonia parviflora*	15	No	FACW
3. *Solidago canadensis*	15	No	FACU
4. *Symphyotrichum lanceolatum*	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	105	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	145	x 2 =	290
FAC species	5	x 3 =	15
FACU species	17	x 4 =	68
UPL species	0	x 5 =	0
Column Totals:	167 (A)		373 (B)

Prevalence Index = B/A = 2.2

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 ____

Remarks:
Palustrine scrub-shrub plant community. The criterion for hydrophytic vegetation is met.

SOIL

Sampling Point: SP-AIN02-03

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 to 4	10YR 3/2	95	10YR 4/6	5	C	M	Silty Clay Loam	
4 to 10	10YR 4/2	85	10YR 5/8	15	C	M	Clay Loam	
10 to 24	10YR 5/1	75	10YR 5/8	25	C	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes ✘ **No** _____

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-16
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN02-04
Investigator(s): Amanda Larsen, Nick Yuknis Section, Township, Range: 29-T29N-R14E
Landform (hillslope, terrace, etc): Knoll Local relief (concave, convex, none): Convex
Slope (%): 2 to 5 Lat: 40.942958 Long: -84.972233 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: PSS1A
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of two of three parameters, this area is an upland.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Elaeagnus umbellata*	5	Yes	UPL
2. *Fraxinus pennsylvanica*	5	Yes	FACW
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Solidago altissima*	50	Yes	FACU
2. *Phalaris arundinacea*	30	Yes	FACW
3. *Rubus allegheniensis*	20	No	FACU
4. *Asclepias syriaca*	10	No	FACU
5. *Agrimonia parviflora*	5	No	FACW
6. *Smilax rotundifolia*	5	No	FAC
7.			
8.			
9.			
10.			
	120	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	5	x 3 =	15
FACU species	80	x 4 =	320
UPL species	5	x 5 =	25
Column Totals:	130 (A)		440 (B)

Prevalence Index = B/A = 3.4

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 ✘

Remarks:
The criterion for hydrophytic vegetation is not met. Upland old field.

SOIL Sampling Point: SP-AIN02-04

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 to 16	10YR 3/1	90	10YR 5/8	10	C	M	Clay Loam	
16 to 24	10YR 5/1	85	10YR 6/8	15	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):
Type: _____
Depth (inches): _____

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

Remarks:
The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘	Depth (inches): _____
Water Table Present?	Yes _____	No ✘	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✘	Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen -Maddox Creek City/County: Hoagland, Allen County Sampling Date: 2026-4-17
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN02-05
Investigator(s): Laura Giese Section, Township, Range: 29 29N 14E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): Concave
Slope (%): 0 to 1 Lat: 40.9443395608 Long: -84.9717788697 Datum: WGS84
Soil Map Unit Name: Blount silt loam, ground moraine, 0 to 2 percent slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No ____ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PFO. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	70	Yes	FACW
2. *Fraxinus pennsylvanica*	5	No	FACW
3. *Quercus palustris*	5	No	FACW
4.			
5.			
	80	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	15	Yes	FACW
2.			
3.			
4.			
5.			
	15	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Fraxinus pennsylvanica*	10	Yes	FACW
2. *Poa palustris*	5	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	15	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	110	x 2 =	220
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		220 (B)

Prevalence Index = B/A = 2

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 ____

Remarks:
Palustrine forested plant community. The criterion for hydrophytic vegetation is met.

SOIL Sampling Point: SP-AIN02-05

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 to 2	10YR 2/1	100					Loam	
2 to 10	10YR 3/1	90	7.5YR 5/8	10	C	M	Clay Loam	
10 to 20	10YR 4/1	80	7.5YR 5/8	20	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ✘ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✘ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘ Depth (inches): ___

Water Table Present? Yes ___ No ✘ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✘ Depth (inches): ___

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are within a normal range. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison Twnshp, Allen Cnty Sampling Date: 2024-12-19
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN03-01
Investigator(s): Danielle Anderson, Amanda Larsen Section, Township, Range: 32-T29N-R14E
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave
Slope (%): 1 to 3 Lat: 40.924823 Long: -84.969535 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No ____ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 feet linear)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Schoenoplectus fluviatilis*	100	Yes	OBL
2. *Phragmites australis*	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	110	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	100	x 1 =	100
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		120 (B)

Prevalence Index = B/A = 1.1

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 ____

Remarks:
Palustrine emergent plant community. The criterion for hydrophytic vegetation is met.

SOIL

Sampling Point: SP-AIN03-01

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 to 6	7.5YR 2.5/1	95	7.5YR 4/4	5	C	M	Silty Clay Loam	
6 to 13	7.5YR 2.5/1	90	7.5YR 4/4	5	C	M	Clay Loam	Mixed
6 to 13			10YR 6/1	5	D	M		
13 to 23	2.5Y 5/1	65	2.5Y 5/6	10	C	M	Clay Loam	
13 to 23	7.5YR 3/1	25						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘ Depth (inches): ___

Water Table Present? Yes ___ No ✘ Depth (inches): ___

Saturation Present? Yes ___ No ✘ Depth (inches): ___

(includes capillary fringe)

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are within a normal range. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison Twnshp, Allen Cnty Sampling Date: 2024-12-19
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN03-02
Investigator(s): Danielle Anderson, Amanda Larsen Section, Township, Range: 32-T29N-R14E
Landform (hillslope, terrace, etc): Back slope Local relief (concave, convex, none): Convex
Slope (%): 2 to 5 Lat: 40.924811 Long: -84.968963 Datum: WGS84
Soil Map Unit Name: Blount silt loam, ground moraine, 0 to 2 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No ____ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of all three parameters, this area is an upland.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 feet linear)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Poa compressa*	35	Yes	FACU
2. *Agrostis gigantea*	30	Yes	FACW
3. *Rosa multiflora*	20	No	FACU
4. *Solidago canadensis*	10	No	FACU
5. *Cyperus esculentus*	10	No	FACW
6. *Geum canadense*	5	No	FAC
7. *Rubus idaeus*	5	No	FACU
8. *Hypericum punctatum*	3	No	FAC
9.			
10.			
	118	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	8	x 3 =	24
FACU species	70	x 4 =	280
UPL species	0	x 5 =	0
Column Totals:	118 (A)		384 (B)

Prevalence Index = B/A = 3.3

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 ✘

Remarks:
The criterion for hydrophytic vegetation is not met. Upland old field.

SOIL

Sampling Point: SP-AIN03-02

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 to 4	10YR 3/2	100					Silt Loam	
4 to 12	2.5Y 5/3	90	10YR 5/6	10	C	M	Silt Loam	
12 to 20	2.5Y 5/2	85	10YR 5/6	15	C	M	Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

The criterion for hydric soil is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are within a normal range. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison Twnshp, Allen Cnty Sampling Date: 2024-12-19
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN03-03
Investigator(s): Danielle Anderson, Amanda Larsen Section, Township, Range: 32-T29N-R14E
Landform (hillslope, terrace, etc): Foot slope Local relief (concave, convex, none): Concave
Slope (%): 1 to 3 Lat: 40.924867 Long: -84.969379 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No ____ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PSS. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 feet linear)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Cephalanthus occidentalis*	60	Yes	OBL
2.			
3.			
4.			
5.			
	60	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Xanthium strumarium*	35	Yes	FAC
2. *Phalaris arundinacea*	25	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	60	= Total Cover	

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

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	25	x 2 =	50
FAC species	35	x 3 =	105
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	120 (A)		215 (B)

Prevalence Index = B/A = 1.8

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 ____

Remarks:
Palustrine scrub-shrub plant community. The criterion for hydrophytic vegetation is met.

SOIL

Sampling Point: SP-AIN03-03

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 to 7	7.5YR 2.5/1	100					Fibric Clay Loam	
7 to 16	7.5YR 2.5/1	95	7.5YR 4/4	5	C	M	Clay Loam	
16 to 20	2.5Y 5/1	80	7.5YR 4/6	20	C	M	Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes ✘ **No** _____

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are within a normal range. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Decatur, -- Sampling Date: 2025-12-11
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN03-04
Investigator(s): Amanda Larsen, Leah Cavanaugh Section, Township, Range: 32-T29N-R14E
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave
Slope (%): 0 to 1 Lat: 40.9245422 Long: -84.9692871 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PSS. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	15	Yes	FACW
2.			
3.			
4.			
5.			
	15	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharinum*	20	Yes	FACW
2. *Fraxinus pennsylvanica*	10	Yes	FACW
3. *Acer rubrum*	5	No	FAC
4.			
5.			
	35	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	

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

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	45	x 2 =	90
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	50 (A)		105 (B)

Prevalence Index = B/A = 2.1

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 ____

Remarks:
Palustrine scrub-shrub plant community. The criterion for hydrophytic vegetation is met.

SOIL

Sampling Point: SP-AIN03-04

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 to 11	7.5YR 2.5/1	90	10YR 5/6	10	C	M	Loam	
11 to 24	7.5YR 3/1	75	7.5YR 4/1	15	D	M	Clay Loam	
11 to 24			10YR 5/8	10	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

No soil comments.

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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes ✘ **No** _____

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Decatur, -- Sampling Date: 2025-12-11
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN03-05
Investigator(s): Amanda Larsen, Leah Cavanaugh Section, Township, Range: 32 T29N R14E
Landform (hillslope, terrace, etc): Hillslope Local relief (concave, convex, none): Convex
Slope (%): 3-5 Lat: 40.9245699 Long: -84.969615 Datum: WGS84
Soil Map Unit Name: Blount silt loam, ground moraine, 0 to 2 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of all three parameters, this area is an upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus rubra*	10	Yes	FACU
2. *Quercus macrocarpa*	5	Yes	FAC
3. *Carya ovata*	5	Yes	FACU
4.			
5.			
	20	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Fagus grandifolia*	10	Yes	FACU
2. *Ostrya virginiana*	10	Yes	FACU
3. *Acer rubrum*	5	No	FAC
4. *Carpinus caroliniana*	5	No	FAC
5.			
	30	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Fagus grandifolia*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	5	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1. *Toxicodendron radicans*	10	Yes	FAC
2.			
	10	= Total Cover	

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 7 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 28.6% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	65 (A)		235 (B)

Prevalence Index = B/A = 3.6

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 ✘

Remarks:
The criterion for hydrophytic vegetation is not met. Upland woodland.

SOIL Sampling Point: SP-AIN03-05

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 to 17	7.5YR 2.5/1	100					Clay Loam	
17 to 24	7.5YR 4/1	85	7.5YR 4/6	15	C	M	Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):
Type: _____
Depth (inches): _____

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

Remarks:
The criterion for hydric soil is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘	Depth (inches): _____
Water Table Present?	Yes _____	No ✘	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✘	Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen -Maddox Creek City/County: Decatur, -- Sampling Date: 2026-4-14
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN03-06
Investigator(s): Laura Giese Section, Township, Range: 32 29N 14E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): Concave
Slope (%): 1 to 3 Lat: 40.9243234 Long: -84.9690147 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No ____ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PFO. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	55	Yes	FACW
2. *Populus deltoides*	30	Yes	FAC
3.			
4.			
5.			
	85	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	55	x 2 =	110
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	85 (A)		200 (B)

Prevalence Index = B/A = 2.4

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 ____

Remarks:
Palustrine forested plant community. The criterion for hydrophytic vegetation is met.

SOIL

Sampling Point: SP-AIN03-06

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 to 3	10YR 2/1	100					Silty Clay Loam	
3 to 12	10YR 3/1	98	10YR 5/6	2	C	M	Clay	
12 to 20	2.5Y 4/2	95	2.5Y 5/6	5	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✘ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘	Depth (inches): ___		
Water Table Present?	Yes ✘	No ___	Depth (inches): 6		
Saturation Present? (includes capillary fringe)	Yes ✘	No ___	Depth (inches): 0		

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are within a normal range. High water table may be due to recent rains . The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-16
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN04-01
Investigator(s): Nick Yuknis, Amanda Larsen Section, Township, Range: 34-T29N-R14E
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave
Slope (%): 1 to 3 Lat: 40.926062 Long: -84.934448 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland. Chapter 5 procedures were used for making the determination at this sample point. Circumstances are not normal due to mowing of vegetation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Carex lacustris*	50	Yes	OBL
2. *Carex lupulina*	35	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	85	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = 1

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 ____

Remarks:
Palustrine emergent plant community. The criterion for hydrophytic vegetation is met. Vegetation identified based on residual inflorescence after mowing. Vegetation is significantly disturbed as a result of mowing.

SOIL

Sampling Point: SP-AIN04-01

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 to 2	10YR 2/2	100					Silty Clay Loam	
2 to 12	10YR 3/1	90	10YR 5/8	10	C	M	Silty Clay	
12 to 24	10YR 5/1	85	10YR 5/8	15	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘ Depth (inches): ___

Water Table Present? Yes ___ No ✘ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✘ Depth (inches): ___

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-16
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN04-02
Investigator(s): Amanda Larsen, Nick Yuknis Section, Township, Range: 34-T29N-R14E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): Convex
Slope (%): 2 to 5 Lat: 40.925977 Long: -84.934474 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of two of three parameters, this area is an upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tilia americana*	10	Yes	FACU
2. *Ulmus pumila*	10	Yes	UPL
3. *Quercus alba*	5	No	FACU
4. *Prunus virginiana*	5	No	FACU
5. *Carpinus caroliniana*	5	No	FAC
	35	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lindera benzoin*	20	Yes	FACW
2. *Carpinus caroliniana*	10	Yes	FAC
3. *Tilia americana*	8	No	FACU
4. *Cornus racemosa*	5	No	FAC
5. *Quercus rubra*	3	No	FACU
	46	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Poa compressa*	80	Yes	FACU
2. *Potentilla simplex*	15	No	FACU
3. *Viola sororia*	8	No	FAC
4. *Cyperus esculentus*	5	No	FACW
5. *Plantago major*	3	No	FAC
6.			
7.			
8.			
9.			
10.			
	111	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 5 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 40% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	31	x 3 =	93
FACU species	126	x 4 =	504
UPL species	10	x 5 =	50
Column Totals:	192 (A)		697 (B)

Prevalence Index = B/A = 3.6

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 ✘

Remarks:
Shrub and tree strata used from immediately outside row to capture as natural unmanaged condition. The criterion for hydrophytic vegetation is not met.

SOIL Sampling Point: SP-AIN04-02

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 to 5	10YR 3/2	95	10YR 4/6	5	C	M	Clay Loam	
5 to 11	10YR 3/2	85	10YR 4/6	15	C	M	Clay Loam	
11 to 24	10YR 4/1	80	10YR 5/8	20	C	M	Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-16
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN05-01
Investigator(s): Amanda Larsen, Nick Yuknis Section, Township, Range: 34-T29N-R14E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): Concave
Slope (%): 0 to 1 Lat: 40.926659 Long: -84.923837 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland. Circumstances are not normal due to agricultural activities. Chapter 5 procedures were used for making the determination at this sample point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 0 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: % (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0

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 ____

Remarks:
10% Zea mays, no volunteer species present. Based on the presence of hydric soil and wetland hydrology indicators, it is anticipated that this area would support a hydrophytic plant community under normal circumstances. The criterion for hydrophytic vegetation is met. Vegetation is significantly disturbed as a result of crop farming.

SOIL

Sampling Point: SP-AIN05-01

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 to 11	10YR 3/1	90	10YR 4/6	10	C	M	Clay Loam	
11 to 17	10YR 4/1	80	10YR 5/8	20	C	M	Clay	
17 to 24	10YR 5/2	85	10YR 5/8	15	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ✘ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✘ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘ Depth (inches): ___

Water Table Present? Yes ___ No ✘ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✘ Depth (inches): ___

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-16
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN05-02
Investigator(s): Amanda Larsen, Nick Yuknis Section, Township, Range: 34-T29N-R14E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): Convex
Slope (%): 1 to 3 Lat: 40.926621 Long: -84.924073 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of the wetland hydrology and hydric soil parameters, this area is an upland. Circumstances are not normal due to agricultural activities. Chapter 5 procedures were used for making the determination at this sample point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 0 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: % (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0

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 ____

Remarks:
90% Zea mays, no volunteer species present. The unmanaged condition of vegetation could not be determined. Vegetation is significantly disturbed as a result of crop farming.

SOIL

Sampling Point: SP-AIN05-02

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 to 16	10YR 4/3	90	10YR 6/6	10	C	M	Clay Loam	
16 to 24	10YR 5/4	80	10YR 6/8	20	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

The criterion for hydric soil is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - E:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-15
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN06-01
Investigator(s): Nick Yuknis, Amanda Larsen Section, Township, Range: 36-T29N-R14E
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave
Slope (%): 1 to 3 Lat: 40.926867 Long: -84.892694 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Salix interior*	10	Yes	FACW
2.			
3.			
4.			
5.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Carex cristatella*	55	Yes	FACW
2. *Solidago canadensis*	40	Yes	FACU
3. *Juncus effusus*	20	No	OBL
4. *Apocynum cannabinum*	10	No	FAC
5. *Carex vulpinoidea*	5	No	FACW
6.			
7.			
8.			
9.			
10.			
	130	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	70	x 2 =	140
FAC species	10	x 3 =	30
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	140 (A)		350 (B)

Prevalence Index = B/A = 2.5

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 ____

Remarks:
Palustrine emergent plant community. The criterion for hydrophytic vegetation is met.

SOIL Sampling Point: SP-AIN06-01

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 to 4	10YR 3/2	100					Silt Loam	
4 to 12	10YR 3/1	80	10YR 5/8	20	C	M	Silt Loam	
12 to 24	10YR 4/1	75	10YR 5/8	25	C	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘ Depth (inches): ___

Water Table Present? Yes ___ No ✘ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✘ Depth (inches): ___

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-15
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN06-02
Investigator(s): Amanda Larsen, Nick Yuknis Section, Township, Range: 36-T29N-R14E
Landform (hillslope, terrace, etc): Knob Local relief (concave, convex, none): Convex
Slope (%): 2 to 5 Lat: 40.926633 Long: -84.892656 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of two of three parameters, this area is an upland.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Juglans nigra*	5	Yes	FACU
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Solidago canadensis*	45	Yes	FACU
2. *Rubus allegheniensis*	35	Yes	FACU
3. *Carex typhina*	30	Yes	OBL
4. *Oxalis stricta*	20	No	FACU
5. *Geum canadense*	15	No	FAC
6. *Fragaria virginiana*	15	No	FACU
7. *Quercus rubra*	10	No	FACU
8. *Apocynum androsaemifolium*	10	No	UPL
9. *Agrostis gigantea*	10	No	FACW
10.			
	190	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	10	x 2 =	20
FAC species	15	x 3 =	45
FACU species	130	x 4 =	520
UPL species	10	x 5 =	50
Column Totals:	195 (A)		665 (B)

Prevalence Index = B/A = 3.4

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 ✘

Remarks:
The criterion for hydrophytic vegetation is not met. Upland old field.

SOIL Sampling Point: SP-AIN06-02

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 to 5	10YR 3/1	100					Loam	
5 to 12	10YR 3/1	90	10YR 5/8	10	C	M	Loam	
12 to 24	10YR 4/1	80	10YR 5/8	20	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘ Depth (inches): ___

Water Table Present? Yes ___ No ✘ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✘ Depth (inches): ___

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen -Maddox Creek City/County: Monroeville, Allen County Sampling Date: 2026-4-14
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN06-03
Investigator(s): Laura Giese Section, Township, Range: 36 29N 14E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): Concave
Slope (%): 0 to 1 Lat: 40.9264144 Long: -84.8943166 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No _____ (If no, explain in Remarks.)
Are Vegetation _____ , Soil _____ , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 _____	**Is the Sampled Area within a Wetland?** Yes ✘ No _____
Hydric Soil Present?	Yes ✘	No _____	
Wetland Hydrology Present?	Yes ✘	No _____	

Remarks:
Covertype is PFO. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	55	Yes	FACW
2. *Populus deltoides*	15	No	FAC
3. *Ulmus americana*	15	No	FACW
4.			
5.			
	85	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Fraxinus pennsylvanica*	30	Yes	FACW
2. *Carex tribuloides*	2	No	OBL
3. *Galium aparine*	2	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	34	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	100	x 2 =	200
FAC species	15	x 3 =	45
FACU species	2	x 4 =	8
UPL species	0	x 5 =	0
Column Totals:	119 (A)		255 (B)

Prevalence Index = B/A = 2.1

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 _____

Remarks:
Palustrine forested plant community. The criterion for hydrophytic vegetation is met.

SOIL Sampling Point: SP-AIN06-03

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 to 2	10YR 2/2	100					Loam	
2 to 9	10YR 3/1	95	7.5YR 5/8	5	C	M	Clay Loam	
9 to 20	10YR 4/1	90	7.5YR 5/8	10	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✘ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘ Depth (inches): ___

Water Table Present? Yes ___ No ✘ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✘ Depth (inches): ___

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are within a normal range. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - NE :



Plot Photo(s) - SW:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-15
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN07-01
Investigator(s): Nick Yuknis, Amanda Larsen Section, Township, Range: 36-T29N-R14E
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave
Slope (%): 0 to 1 Lat: 40.92691 Long: -84.891231 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Juncus effusus*	45	Yes	OBL
2. *Carex typhina*	40	Yes	OBL
3. *Euthamia graminifolia*	10	No	FACW
4. *Solidago canadensis*	8	No	FACU
5. *Geum canadense*	5	No	FAC
6. *Symphyotrichum lanceolatum*	5	No	FAC
7. *Glyceria striata*	3	No	OBL
8. *Carex vulpinoidea*	3	No	FACW
9.			
10.			
	119	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	88	x 1 =	88
FACW species	13	x 2 =	26
FAC species	10	x 3 =	30
FACU species	8	x 4 =	32
UPL species	0	x 5 =	0
Column Totals:	119 (A)		176 (B)

Prevalence Index = B/A = 1.5

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 ____

Remarks:
Palustrine emergent plant community. The criterion for hydrophytic vegetation is met.

SOIL Sampling Point: SP-AIN07-01

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 to 4	10YR 3/2	95	10YR 5/8	5	C	M	Sandy Loam	
4 to 12	10YR 5/2	85	10YR 5/8	15	C	M	Sandy Loam	
12 to 24	10YR 4/1	75	10YR 5/8	25	C	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes ✘ **No** _____

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-15
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN07/08-02
Investigator(s): Amanda Larsen, Nick Yuknis Section, Township, Range: 36-T29N-R14E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): None
Slope (%): 0 to 1 Lat: 40.926669 Long: -84.890201 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of the wetland hydrology parameter, this area is an upland. Circumstances are not normal due to agricultural activities. Chapter 5 procedures were used for making the determination at this sample point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 0 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: % (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0

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 ____

Remarks:
100% Zea mays, no volunteer species present. The unmanaged condition of vegetation could not be determined. Vegetation is significantly disturbed as a result of crop farming.

SOIL Sampling Point: SP-AIN07/08-02

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 to 9	10YR 3/1	90	10YR 5/6	10	C	M	Loam	
9 to 16	10YR 4/1	85	10YR 5/8	15	C	M	Clay Loam	
16 to 24	10YR 5/2	85	10YR 5/8	15	C	M	Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘ Depth (inches): ___

Water Table Present? Yes ___ No ✘ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✘ Depth (inches): ___

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - E:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen -Maddox Creek City/County: Decatur, Adams County Sampling Date: 2026-4-14
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN07-03
Investigator(s): Laura Giese Section, Township, Range: 36 29N 14E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): Concave
Slope (%): 0 to 1 Lat: 40.9264174 Long: -84.8915089 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No ____ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PFO. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	60	Yes	FACW
2. *Ulmus americana*	10	No	FACW
3.			
4.			
5.			
	70	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Lindera benzoin*	15	Yes	FACW
2.			
3.			
4.			
5.			
	15	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Carex sp.*	15	Yes	FACW
2. *Poa palustris*	10	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	25	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 4 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	110	x 2 =	220
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		220 (B)

Prevalence Index = B/A = 2

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 ____

Remarks:
Palustrine forested plant community. The criterion for hydrophytic vegetation is met.

SOIL Sampling Point: SP-AIN07-03

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 to 3	10YR 2/1	100					Slightly greasy Muck	
3 to 24	10YR 3/1	90	10YR 4/6	10	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):
Type: _____
Depth (inches): _____

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

Remarks:
The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- ✘ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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	✘	Depth (inches): _____
Water Table Present?	Yes	_____	No	✘	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes	✘	No	_____	Depth (inches): 0

Wetland Hydrology Present? Yes ✘ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are within a normal range. Episaturation may be from recent rains. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-15
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN08-01
Investigator(s): Nick Yuknis, Amanda Larsen Section, Township, Range: 36-T29N-R14E
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave
Slope (%): 1 to 3 Lat: 40.926632 Long: -84.890066 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Phragmites australis*	55	Yes	FACW
2. *Ambrosia trifida*	15	No	FAC
3. *Cyperus esculentus*	8	No	FACW
4. *Persicaria pensylvanica*	5	No	FACW
5. *Solidago canadensis*	5	No	FACU
6. *Apocynum cannabinum*	3	No	FAC
7. *Eupatorium perfoliatum*	2	No	OBL
8. *Euthamia graminifolia*	2	No	FACW
9.			
10.			
	95	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	70	x 2 =	140
FAC species	18	x 3 =	54
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	95 (A)		216 (B)

Prevalence Index = B/A = 2.3

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 ____

Remarks:
Palustrine emergent plant community. The criterion for hydrophytic vegetation is met.

SOIL

Sampling Point: SP-AIN08-01

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 to 4	10YR 3/2	100					Silt Loam	
4 to 14	10YR 5/1	75	10YR 4/6	25	C	M	Sandy Clay	
14 to 24	10YR 5/1	65	10YR 4/6	35	C	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘ Depth (inches): ___

Water Table Present? Yes ___ No ✘ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✘ Depth (inches): ___

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Monroe, Allen County Sampling Date: 2025-7-15
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN09-01
Investigator(s): Amanda Larsen, Nick Yuknis Section, Township, Range: 31-T29N-R15E
Landform (hillslope, terrace, etc): Swale Local relief (concave, convex, none): Concave
Slope (%): 1 to 3 Lat: 40.926308 Long: -84.874072 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Leersia oryzoides*	35	Yes	OBL
2. *Eleocharis obtusa*	25	Yes	OBL
3. *Phalaris arundinacea*	10	No	FACW
4. *Elymus virginicus*	5	No	FACW
5. *Verbena urticifolia*	5	No	FAC
6.			
7.			
8.			
9.			
10.			
	80	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	15	x 2 =	30
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	80 (A)		105 (B)

Prevalence Index = B/A = 1.3

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 ____

Remarks:
Palustrine emergent plant community. The criterion for hydrophytic vegetation is met.

SOIL

Sampling Point: SP-AIN09-01

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 to 11	10YR 4/1	85	10YR 5/6	15	C	M	Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: concrete slab

Depth (inches): 11

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✘ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘ Depth (inches): ___

Water Table Present? Yes ___ No ✘ Depth (inches): ___

Saturation Present? Yes ✘ No ___ Depth (inches): 0

(includes capillary fringe)

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Monroe, Allen County Sampling Date: 2025-7-15
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN09-02
Investigator(s): Nick Yuknis, Amanda Larsen Section, Township, Range: 31-T29N-R15E
Landform (hillslope, terrace, etc): Back slope Local relief (concave, convex, none): Convex
Slope (%): 5 to 10 Lat: 40.926331 Long: -84.874001 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is PEM. Based on the absence of all three parameters, this area is an upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Schedonorus arundinaceus*	50	Yes	FACU
2. *Phleum pratense*	35	Yes	FACU
3. *Poa pratensis*	20	No	FAC
4. *Helianthus grosseserratus*	8	No	FACW
5. *Cirsium arvense*	5	No	FACU
6. *Pastinaca sativa*	5	No	UPL
7. *Melilotus officinalis*	3	No	FACU
8. *Daucus carota*	2	No	UPL
9.			
10.			
	128	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	8	x 2 =	16
FAC species	20	x 3 =	60
FACU species	93	x 4 =	372
UPL species	7	x 5 =	35
Column Totals:	128 (A)		483 (B)

Prevalence Index = B/A = 3.8

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 ✘

Remarks:
The criterion for hydrophytic vegetation is not met. Upland old field.

SOIL

Sampling Point: SP-AIN09-02

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 to 4	10YR 3/2	100					Sandy Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

Refusal at 4 inches due to gravel fill for farm access stream crossing approach. The criterion for hydric soil is not met in this shallow pit.

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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Monroe, Allen County Sampling Date: 2025-7-14
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN10-01
Investigator(s): Nick Yuknis, Amanda Larsen Section, Township, Range: 33-T29N-R15E
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave
Slope (%): 0 to 1 Lat: 40.927345 Long: -84.832199 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ✘ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland. Chapter 5 procedures were used for making the determination at this sample point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Echinochloa crus-galli*	45	Yes	FACW
2. *Ambrosia artemisiifolia*	5	No	FACU
3. *Amaranthus retroflexus*	3	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	53	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	45	x 2 =	90
FAC species	0	x 3 =	0
FACU species	8	x 4 =	32
UPL species	0	x 5 =	0
Column Totals:	53 (A)		122 (B)

Prevalence Index = B/A = 2.3

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 ____

Remarks:
Palustrine emergent plant community. The criterion for hydrophytic vegetation is met.

SOIL

Sampling Point: SP-AIN10-01

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 to 4	10YR 3/2	100					Silt Loam	
4 to 8	10YR 3/2	95	10YR 3/6	5	C	M	Clay Loam	
8 to 24	10YR 3/1	80	10YR 3/6	20	C	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

Soil is disturbed from recent gravel fill. The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- ✘ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes ✘ **No** _____

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Monroe, Allen County Sampling Date: 2025-7-14
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN10-02
Investigator(s): Amanda Larsen, Nick Yuknis Section, Township, Range: 33-T29N-R15E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): Undulating
Slope (%): 0 to 1 Lat: 40.927342 Long: -84.831402 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ✘ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of all three parameters, this area is an upland. Soil disturbed due to addition of gravel fill throughout area.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Setaria faberi*	40	Yes	FACU
2. *Panicum capillare*	20	Yes	FAC
3. *Portulaca oleracea*	15	No	FACU
4. *Ambrosia artemisiifolia*	10	No	FACU
5. *Amaranthus retroflexus*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
	90	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	20	x 3 =	60
FACU species	70	x 4 =	280
UPL species	0	x 5 =	0
Column Totals:	90 (A)		340 (B)

Prevalence Index = B/A = 3.8

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 ✘

Remarks:
The criterion for hydrophytic vegetation is not met. Upland fallow field.

SOIL Sampling Point: SP-AIN10-02

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 to 10	10YR 3/2	100					Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):
Type: Gravel
Depth (inches): 10

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

Remarks:
The criterion for hydric soil is not met in this shallow pit.

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

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Monroe, Allen County Sampling Date: 2025-7-14
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN11-01
Investigator(s): Nick Yuknis, Amanda Larsen Section, Township, Range: 33-T29N-R15E
Landform (hillslope, terrace, etc): Swale Local relief (concave, convex, none): Concave
Slope (%): 1 to 3 Lat: 40.927289 Long: -84.828264 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ____	**Is the Sampled Area within a Wetland?** Yes ✘ No ____
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ✘	No ____	

Remarks:
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Phalaris arundinacea*	40	Yes	FACW
2. *Lysimachia nummularia*	20	Yes	FACW
3. *Apocynum cannabinum*	5	No	FAC
4. *Cyperus esculentus*	5	No	FACW
5. *Rumex crispus*	2	No	FAC
6.			
7.			
8.			
9.			
10.			
	72	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	65	x 2 =	130
FAC species	7	x 3 =	21
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	72 (A)		151 (B)

Prevalence Index = B/A = 2.1

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 ____

Remarks:
Palustrine emergent plant community. The criterion for hydrophytic vegetation is met.

SOIL Sampling Point: SP-AIN11-01

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 to 8	10YR 4/2	90	10YR 4/6	10	C	M	Silty Clay Loam	
8 to 24	10YR 4/1	75	10YR 3/6	25	C	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):
Type: Silty clay layer
Depth (inches): 8

Hydric Soil Present? Yes ✘ **No** __

Remarks:
The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- ✘ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘	Depth (inches): __
Water Table Present?	Yes __	No ✘	Depth (inches): __
Saturation Present? (includes capillary fringe)	Yes __	No ✘	Depth (inches): __

Wetland Hydrology Present? Yes ✘ **No** __

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Monroe, Allen County Sampling Date: 2025-7-14
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN11-02
Investigator(s): Amanda Larsen Section, Township, Range: 33-T29N-R15E
Landform (hillslope, terrace, etc): Knoll Local relief (concave, convex, none): Convex
Slope (%): 5 to 10 Lat: 40.927356 Long: -84.828194 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: R4SBC
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of all three parameters, this area is an upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Bromus inermis*	65	Yes	FACU
2. *Poa compressa*	35	Yes	FACU
3. *Smilax rotundifolia*	15	No	FAC
4. *Apocynum androsaemifolium*	10	No	UPL
5. *Phalaris arundinacea*	10	No	FACW
6. *Medicago lupulina*	5	No	FACU
7. *Plantago major*	5	No	FAC
8.			
9.			
10.			
	145	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	20	x 3 =	60
FACU species	105	x 4 =	420
UPL species	10	x 5 =	50
Column Totals:	145 (A)		550 (B)

Prevalence Index = B/A = 3.8

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 ✘

Remarks:
The criterion for hydrophytic vegetation is not met. Upland meadow.

SOIL Sampling Point: SP-AIN11-02

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 to 13	10YR 3/1	100					Clay Loam	
13 to 24	10YR 3/2	95	10YR 5/8	5	C	M	Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):
Type: _____
Depth (inches): _____

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

Remarks:
The criterion for hydric soil is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____
Water Table Present? Yes _____ No ✘ Depth (inches): _____
Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen -Maddox Creek City/County: Monroeville, Allen County Sampling Date: 2026-4-14
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN12-01
Investigator(s): Laura Giese Section, Township, Range: 34 29N 14E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): Concave
Slope (%): 0 to 1 Lat: 40.9264913 Long: -84.9336549 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No _____ (If no, explain in Remarks.)
Are Vegetation _____ , Soil _____ , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 _____	**Is the Sampled Area within a Wetland?** Yes ✘ No _____
Hydric Soil Present?	Yes ✘	No _____	
Wetland Hydrology Present?	Yes ✘	No _____	

Remarks:
Covertype is PFO. Based on the presence of all three parameters, this area is a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer saccharinum*	75	Yes	FACW
2.			
3.			
4.			
5.			
	75	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Galium aparine*	2	No	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	2	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	75	x 2 =	150
FAC species	0	x 3 =	0
FACU species	2	x 4 =	8
UPL species	0	x 5 =	0
Column Totals:	77 (A)		158 (B)

Prevalence Index = B/A = 2.1

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 _____

Remarks:
Palustrine forested plant community. The criterion for hydrophytic vegetation is met.

SOIL Sampling Point: SP-AIN12-01

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 to 4	10YR 3/1	100					Silty Clay Loam	
4 to 10	10YR 3/1	95	10YR 5/6	5	C	M	Clay Loam	
10 to 15	10YR 4/1	95	10YR 5/6	5	C	M	Clay	
15 to 20	10YR 5/1	95		5	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✘ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘	Depth (inches): ___
Water Table Present?	Yes ___	No ✘	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No ✘	Depth (inches): ___

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are within a normal range. The criterion for wetland hydrology is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - NW :



Plot Photo(s) - SE:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen -Maddox Creek City/County: Monroeville, Allen County Sampling Date: 2026-4-14
Applicant/Owner: AEP State: IN Sampling Point: SP-AIN12-02
Investigator(s): Laura Giese Section, Township, Range: 34 29N 14E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): Convex
Slope (%): 1 to 3 Lat: 40.9264293 Long: -84.9339353 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No ____ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of two of three parameters, this area is an upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tilia americana*	25	Yes	FACU
2. *Acer saccharum*	15	Yes	FACU
3.			
4.			
5.			
	40	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Acer saccharum*	25	Yes	FACU
2. *Lindera benzoin*	25	Yes	FACW
3.			
4.			
5.			
	50	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Floerkea proserpinacoides*	25	Yes	FACW
2. *Sanicula canadensis*	25	Yes	FACU
3. *Claytonia virginica*	10	No	FACU
4. *Cardamine concatenata*	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	65	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 6 (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	50	x 2 =	100
FAC species	0	x 3 =	0
FACU species	105	x 4 =	420
UPL species	0	x 5 =	0
Column Totals:	155 (A)		520 (B)

Prevalence Index = B/A = 3.4

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 ✘

Remarks:
The criterion for hydrophytic vegetation is not met. Upland woodland.

SOIL Sampling Point: SP-AIN12-02

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 to 5	10YR 2/2	98	7.5YR 4/4	2	C	M	Loam	
5 to 12	10YR 3/1	95	7.5YR 4/4	5	C	M	Clay Loam	
12 to 24	2.5Y 4/1	90	10YR 5/8	10	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are within a normal range. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - W :



Plot Photo(s) - E:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison Twnshp, Allen Cnty Sampling Date: 2024-12-19
Applicant/Owner: AEP State: IN Sampling Point: SP-AINUPL-01
Investigator(s): Danielle Anderson, Amanda Larsen Section, Township, Range: 20-T29N-R14E
Landform (hillslope, terrace, etc): Swale Local relief (concave, convex, none): Concave
Slope (%): 2 to 5 Lat: 40.959521 Long: -84.972242 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No ____ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of two of three parameters, this area is an upland. Circumstances are not normal due to mowing of vegetation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 feet linear)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Poa compressa*	35	Yes	FACU
2. *Elymus repens*	25	Yes	FACU
3. *Festuca rubra*	25	Yes	FACU
4. *Lolium perenne*	15	No	FACU
5. *Setaria pumila*	10	No	FAC
6. *Taraxacum officinale*	5	No	FACU
7. *Lamium amplexicaule*	3	No	UPL
8.			
9.			
10.			
	118	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (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	105	x 4 =	420
UPL species	3	x 5 =	15
Column Totals:	118 (A)		465 (B)

Prevalence Index = B/A = 3.9

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 ✘

Remarks:
Planted turf grass area. The criterion for hydrophytic vegetation is not met.

SOIL Sampling Point: SP-AINUPL-01

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 to 13	2.5Y 4/2	95	2.5Y 5/6	5	C	M	Silty Clay Loam	
13 to 19	2.5Y 5/2	90	2.5Y 5/6	10	C	M	Silty Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:
The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘	Depth (inches): ___	
Water Table Present?	Yes ___	No ✘	Depth (inches): ___	
Saturation Present? (includes capillary fringe)	Yes ___	No ✘	Depth (inches): ___	**Wetland Hydrology Present? Yes** ___ **No** ✘

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are within a normal range. Only one secondary indicator observed. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison Twnshp, Allen Cnty Sampling Date: 2024-12-19
Applicant/Owner: AEP State: IN Sampling Point: SP-AINUPL-02
Investigator(s): Amanda Larsen, Danielle Anderson Section, Township, Range: 32-T29N-R14E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): None
Slope (%): 0 to 1 Lat: 40.932909 Long: -84.972035 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No ____ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ____ , or Hydrology ✘ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Sample point taken to document wetland absence in an area identified during off-site hydrology review as potential wetland. Based on the absence of the wetland hydrology and hydric soil parameters, this area is an upland. Circumstances are not normal due to agricultural activities. Chapter 5 procedures were used for making the determination at this sample point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 0 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: % (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0

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 ____

Remarks:

No volunteer vegetation present. The unmanaged condition of vegetation could not be determined. Vegetation is significantly disturbed as a result of crop farming.

SOIL Sampling Point: SP-AINUPL-02

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 to 11	10YR 3/1	100					Clay	
11 to 15	10YR 3/1	95	10YR 5/6	5	C	M	Clay	
15 to 21	10YR 4/1	90	10YR 5/6	10	C	M	Clay	
21 to 24	10YR 5/1	80	10YR 5/8	20	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

The criterion for hydric soil is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are within a normal range. Hydrology is significantly disturbed due to the presence of drain tiles. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison Twnshp, Allen Cnty Sampling Date: 2024-12-19
Applicant/Owner: AEP State: IN Sampling Point: SP-AINUPL-03
Investigator(s): Danielle Anderson, Amanda Larsen Section, Township, Range: 32-T29N-R14E
Landform (hillslope, terrace, etc): Back slope Local relief (concave, convex, none): Convex
Slope (%): 2 to 5 Lat: 40.925896 Long: -84.971745 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✘ No ____ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of two of three parameters, this area is an upland. Circumstances are not normal due to agricultural activities. Chapter 5 procedures were used for making the determination at this sample point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 feet linear)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Stellaria media*	2	No	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	2	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 0 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	2	x 4 =	8
UPL species	0	x 5 =	0
Column Totals:	2 (A)		8 (B)

Prevalence Index = B/A = 4

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 ____

Remarks:
The unmanaged condition of vegetation could not be determined. Vegetation is significantly disturbed as a result of crop farming.

SOIL Sampling Point: SP-AINUPL-03

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 to 6	2.5Y 3/2	100					Clay Loam	
6 to 11	2.5Y 3/2	98	2.5Y 5/6	2	C	M	Clay Loam	
11 to 21	10YR 4/1	90	7.5YR 4/6	10	C	M	Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

The criterion for hydric soil is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘	Depth (inches): _____
Water Table Present?	Yes _____	No ✘	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✘	Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are within a normal range. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Madison, Allen County Sampling Date: 2025-7-16
Applicant/Owner: AEP State: IN Sampling Point: SP-AINUPL-04
Investigator(s): Nick Yuknis, Amanda Larsen Section, Township, Range: 34-T29N-R14E
Landform (hillslope, terrace, etc): Depression Local relief (concave, convex, none): Concave
Slope (%): 1 to 3 Lat: 40.926341 Long: -84.926583 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ____ , or Hydrology ✘ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of two of three parameters, this area is an upland. Ditches/drain tiles observed. Circumstances are not normal due to agricultural activities. Chapter 5 procedures were used for making the determination at this sample point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Echinochloa crus-galli*	35	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	35	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 1 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	35 (A)		70 (B)

Prevalence Index = B/A = 2

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 ____

Remarks:
Glycine max present at 50 percent. Barnyard grass at sample point has been sprayed with herbicide and is dead/dying. The criterion for hydrophytic vegetation is met. Vegetation is significantly disturbed as a result of crop farming.

SOIL

Sampling Point: SP-AINUPL-04

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 to 10	10YR 3/2	100					Silty Clay Loam	
10 to 20	10YR 2/1	90	10YR 3/6	10	C	M	Silty Clay	
20 to 24	10YR 3/1	80	10YR 5/8	20	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

The criterion for hydric soil is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. Only one secondary indicator observed. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Monroe, Allen County Sampling Date: 2025-7-15
Applicant/Owner: AEP State: IN Sampling Point: SP-AINUPL-05
Investigator(s): Amanda Larsen, Nick Yuknis Section, Township, Range: 32-T29N-R15E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): None
Slope (%): 1 to 3 Lat: 40.927605 Long: -84.845764 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ✘	No ____	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of the wetland hydrology parameter, this area is an upland. Circumstances are not normal due to agricultural activities. Chapter 5 procedures were used for making the determination at this sample point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 0 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: % (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0

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 ____

Remarks:
95% Zea mays coverage, no volunteer species.. The unmanaged condition of vegetation could not be determined. Vegetation is significantly disturbed as a result of crop farming.

SOIL Sampling Point: SP-AINUPL-05

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 to 6	10YR 3/2	100					Clay Loam	
6 to 11	10YR 3/2	90	10YR 4/6	10	C	M	Silty Clay	
11 to 24	10YR 4/1	80	10YR 4/6	20	C	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ 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 ✘ Depth (inches): ___

Water Table Present? Yes ___ No ✘ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✘ Depth (inches): ___

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Monroe, Allen County Sampling Date: 2025-7-14
Applicant/Owner: AEP State: IN Sampling Point: SP-AINUPL-06
Investigator(s): Nick Yuknis, Amanda Larsen Section, Township, Range: 33-T29N-R15E
Landform (hillslope, terrace, etc): Foot slope Local relief (concave, convex, none): Concave
Slope (%): 1 to 3 Lat: 40.927177 Long: -84.827074 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of all three parameters, this area is an upland. Circumstances are not normal due to agricultural activities. Chapter 5 procedures were used for making the determination at this sample point.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 0 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: % (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0

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 ✘

Remarks:
Based on vegetation at a nearby reference location, it is expected that this location would not support a predominantly hydrophytic plant community. Reference vegetation consisted of Schedonorus arundinaceus (FACU), Dactylis glomerata (FACU) and Rumex crispus (FAC). The criterion for hydrophytic vegetation is not met. Vegetation is significantly disturbed as a result of crop farming.

SOIL Sampling Point: SP-AINUPL-06

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 to 8	10YR 4/3	90	10YR 4/6	10	C	M	Clay Loam	
8 to 24	10YR 4/3	80	10YR 4/6	20	C	M	Silty Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):
Type: _____
Depth (inches): _____

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

Remarks:
The criterion for hydric soil is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘	Depth (inches): _____	
Water Table Present?	Yes _____	No ✘	Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes _____	No ✘	Depth (inches): _____	**Wetland Hydrology Present? Yes** _____ **No** ✘

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. Only one secondary indicator observed. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Monroe, Allen County Sampling Date: 2025-7-14
Applicant/Owner: AEP State: IN Sampling Point: SP-AINUPL-07
Investigator(s): Nick Yuknis Section, Township, Range: 34-T29N-R15E
Landform (hillslope, terrace, etc): Foot slope Local relief (concave, convex, none): None
Slope (%): 1 to 3 Lat: 40.927585 Long: -84.813651 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of all three parameters, this area is an upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Phalaris arundinacea*	55	Yes	FACW
2. *Schedonorus arundinaceus*	40	Yes	FACU
3. *Poa pratensis*	20	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	115	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	55	x 2 =	110
FAC species	20	x 3 =	60
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	115 (A)		330 (B)

Prevalence Index = B/A = 2.9

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 ✘

Remarks:
The criterion for hydrophytic vegetation is not met. Upland fallow field.

SOIL Sampling Point: SP-AINUPL-07

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 to 8	10YR 3/2	100					Silt Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: Not present

Depth (inches): ___

Hydric Soil Present? Yes ___ **No** ✘

Remarks:

Refusal at 8 inches due to compacted soil/fill. The criterion for hydric soil is not met in this shallow pit.

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 ✘ Depth (inches): ___

Water Table Present? Yes ___ No ✘ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✘ Depth (inches): ___

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

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Convoy, Van Wert County Sampling Date: 2025-7-14
Applicant/Owner: AEP State: OH Sampling Point: SP-AOHUPL-01
Investigator(s): Amanda Larsen Section, Township, Range: 29-T01S-R01E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): None
Slope (%): 1 to 3 Lat: 40.92842 Long: -84.765138 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ✘ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Hydric Soil Present?	Yes ____	No ✘	
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Based on the absence of all three parameters, this area is an upland. Ditches/drain tiles observed.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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: 0 (B)
Percent of Dominant Species That Are OBL, FACW, or FAC: % (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0

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 ✘

Remarks:

90% Glycine max coverage, no volunteer species present. Dominant reference vegetation consists of Schedonorus arundinaceus (FACU), Poa compressa (FACU), Amaranthus retroflexus (FACU), and Ambrosia artemisiifolia (FACU). Based on vegetation at a nearby reference location, it is expected that this location would not support a predominantly hydrophytic plant community. The criterion for hydrophytic vegetation is not met. Vegetation is significantly disturbed as a result of crop farming.

SOIL Sampling Point: SP-AOHUPL-01

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 to 9	10YR 3/1	100					Clay Loam	
9 to 13	10YR 3/1	98	10YR 5/8	2	C	M	Clay Loam	
13 to 19	10YR 3/1	85	10YR 5/8	10	C	M	Clay Loam	
13 to 19			10YR 4/1	5	C	M		
19 to 24	10YR 4/1	90	10YR 5/8	10	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):
Type: _____
Depth (inches): _____

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

Remarks:
The criterion for hydric soil is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____
Water Table Present? Yes _____ No ✘ Depth (inches): _____
Saturation Present? Yes _____ No ✘ Depth (inches): _____
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ **No** ✘

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. Hydrology is significantly disturbed due to the presence of drain tiles. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



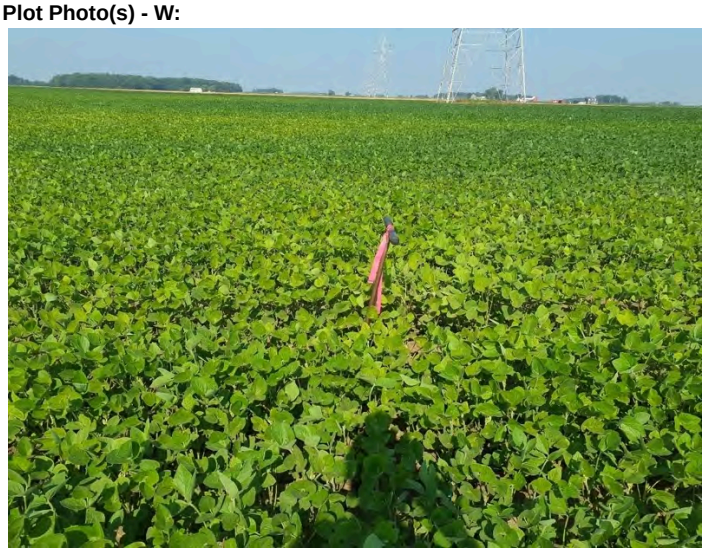
Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



Plot Photo(s) - Vegetation:







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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Convoy, Van Wert County Sampling Date: 2025-7-14
Applicant/Owner: AEP State: OH Sampling Point: SP-AOHUPL-02
Investigator(s): Amanda Larsen Section, Township, Range: 28-T01S-R01E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): None
Slope (%): 1 to 3 Lat: 40.928582 Long: -84.764663 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ✘ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ✘	
Hydric Soil Present?	Yes ____	No ✘	**Is the Sampled Area within a Wetland?** Yes ____ No ✘
Wetland Hydrology Present?	Yes ____	No ✘	

Remarks:
Covertype is UPL. Based on the absence of all three parameters, this area is an upland. Ditches/drain tiles observed.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	

Herb Stratum (Plot size: 5 ft radius)			
1. *Sorghum halepense*	5	Yes	FACU
2. *Echinochloa crus-galli*	5	Yes	FACW
3. *Setaria faberi*	5	Yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	15	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
	0	= 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	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	10	x 4 =	40
UPL species	0	x 5 =	0
Column Totals:	15 (A)		50 (B)

Prevalence Index = B/A = 3.3

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 ✘

Remarks:
90% Zea mays coverage. The criterion for hydrophytic vegetation is not met. Vegetation is significantly disturbed as a result of crop farming.

SOIL Sampling Point: SP-AOHUPL-02

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 to 13	10YR 3/1	100					Clay Loam	
13 to 17	10YR 3/1	75	10YR 4/1	15	D	M	Clay	
13 to 17			10YR 5/8	10	C	M		
17 to 24	10YR 4/1	90	10YR 5/8	10	C	M	Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated 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 Muck 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 present):

Type: _____

Depth (inches): _____

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

Remarks:

The criterion for hydric soil is not met.

HYDROLOGY

Wetland Hydrology Indicators:

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

- __ Surface Water (A1)
- __ High Water Table (A2)
- __ Saturation (A3)
- __ Water Marks (B1)
- __ Sediment Deposits (B2)
- __ Drift Deposits (B3)
- __ Algal Mat or Crust (B4)
- __ Iron Deposits (B5)
- __ Inundation Visible on Aerial Imagery (B7)
- __ Sparsely Vegetated Concave Surface (B8)
- __ Water-Stained Leaves (B9)
- __ Aquatic Fauna (B13)
- __ 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 ✘ Depth (inches): _____

Water Table Present? Yes _____ No ✘ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✘ Depth (inches): _____

Wetland Hydrology Present? Yes _____ **No** ✘

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

NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:

Based on the APT analysis, antecedent hydrologic conditions are drier than normal. Hydrology is significantly disturbed due to the presence of drain tiles. The criterion for wetland hydrology is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - S:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Convoy, Van Wert County Sampling Date: 2025-7-15
Applicant/Owner: AEP State: OH Sampling Point: SP-LOH01-01
Investigator(s): Riley Bolt Section, Township, Range: 25-T01S-R01E
Landform (hillslope, terrace, etc): Channel Local relief (concave, convex, none): Concave Slope (%): 1 to 10
Subregion (LRR or MLRA): MLRA 99 of LRR L Lat: 40.927567 Long: -84.68919 Datum: WGS84
Soil Map Unit Name: Hoytville silty clay, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✘ (If no, explain in Remarks.)
Are Vegetation ___ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ___
Hydric Soil Present? Yes ✘ No ___
Wetland Hydrology Present? Yes ✘ No ___

Is the Sampled Area within a Wetland? **Yes** ✘ **No** ___

If yes, optional Wetland Site ID: W-LOH-01

Remarks: (Explain alternative procedures here or in a separate report.)
Covertype is PEM. Based on the presence of all three parameters, this area is a wetland.

HYDROLOGY

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

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

Secondary Indicators (minimum of two required)

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

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

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is met.

VEGETATION ─ Use scientific names of plants. Sampling Point: SP-LOH01-01

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

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

Herb Stratum (Plot size: 5 ft radius)				
1.	*Typha angustifolia*	35	Yes	OBL
2.	*Schoenoplectus tabernaemontani*	25	Yes	OBL
3.	*Juncus torreyi*	15	Yes	FACW
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
		75	= Total Cover	

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	60	x 1 =	60
FACW species	15	x 2 =	30
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	75 (A)		90 (B)

Prevalence Index = B/A = 1.2

Hydrophytic Vegetation Indicators:

✘ 1 - Rapid Test for Hydrophytic Vegetation

✘ 2 - Dominance Test is >50%

✘ 3 - Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** ✘ **No** __

Remarks: (Include photo numbers here or on a separate sheet.)

Palustrine emergent plant community. The criterion for hydrophytic vegetation is met.

SOIL Sampling Point: SP-LOH01-01

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 to 3	10YR 3/2	100					Fibric Silt Loam	
3 to 9	10YR 5/1	75	10YR 4/4	25	C	M	Fibric Silt Loam	
9 to 18	10YR 5/1	70	10YR 4/4	30	C	M	Silt Loam	
18 to 24	10YR 5/1	70	10YR 5/6	30	C	M	Silt Loam	
							Clay Loam	Mixed

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ High Chroma Sands (S11) **(LRR K, L)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ✘ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR K, L)**
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:
The criterion for hydric soil is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:

Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Convoy, Van Wert County Sampling Date: 2025-7-15
Applicant/Owner: AEP State: OH Sampling Point: SP-LOH01-02
Investigator(s): Laura Giese, Riley Bolt Section, Township, Range: 25-T01S-R01E
Landform (hillslope, terrace, etc): Back slope Local relief (concave, convex, none): Convex Slope (%): 2 to 5
Subregion (LRR or MLRA): MLRA 99 of LRR L Lat: 40.927565 Long: -84.68931 Datum: WGS84
Soil Map Unit Name: Hoytville silty clay, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ✘
Hydric Soil Present? Yes ____ No ✘
Wetland Hydrology Present? Yes ____ No ✘

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

If yes, optional Wetland Site ID: NA

Remarks: (Explain alternative procedures here or in a separate report.)
Covertype is UPL. Based on the absence of all three parameters, this area is an upland.

HYDROLOGY

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

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

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

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

VEGETATION ─ Use scientific names of plants. Sampling Point: SP-LOH01-02

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

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

Herb Stratum (Plot size: 5 ft radius)				
1.	*Asclepias verticillata*	35	Yes	UPL
2.	*Poa pratensis*	35	Yes	FACU
3.	*Festuca rubra*	10	No	FACU
4.	*Cirsium arvense*	10	No	FACU
5.	*Apocynum cannabinum*	5	No	FAC
6.	*Melilotus officinalis*	5	No	FACU
7.				
8.				
9.				
10.				
11.				
12.				
		100	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
	0	= 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% (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	60	x 4 =	240
UPL species	35	x 5 =	175
Column Totals:	100 (A)		430 (B)

Prevalence Index = B/A = 4.3

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** __ **No** ✘

Remarks: (Include photo numbers here or on a separate sheet.)

The criterion for hydrophytic vegetation is not met. Upland old field.

SOIL Sampling Point: SP-LOH01-02

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 to 8	10YR 3/2	100					Clay Loam	Very dry
8 to 14	10YR 3/2	93	10YR 4/1	5	D	M	Clay Loam	Very dry
8 to 14			7.5YR 5/8	2	C	M		
14 to 20	10YR 4/1	95	7.5YR 5/8	5	C	M	Clay Loam	Very dry

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- __ Histosol (A1)
- __ Histic Epipedon (A2)
- __ Black Histic (A3)
- __ Hydrogen Sulfide (A4)
- __ Stratified Layers (A5)
- __ Depleted Below Dark Surface (A11)
- __ Thick Dark Surface (A12)
- __ Iron Monosulfide (A18)
- __ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- __ Sandy Mucky Mineral (S1)
- __ Sandy Gleyed Matrix (S4)
- __ Sandy Redox (S5)
- __ Stripped Matrix (S6)
- __ Dark Surface (S7)
- __ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- __ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- __ High Chroma Sands (S11) **(LRR K, L)**
- __ Loamy Mucky Mineral (F1) **(LRR K, L)**
- __ Loamy Gleyed Matrix (F2)
- __ Depleted Matrix (F3)
- __ Redox Dark Surface (F6)
- __ Depleted Dark Surface (F7)
- __ Redox Depressions (F8)
- __ Marl (F10) **(LRR K, L)**
- __ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

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

Remarks:
The criterion for hydric soil is not met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Convoy, Van Wert County Sampling Date: 2025-7-14
Applicant/Owner: AEP State: OH Sampling Point: SP-LOHUPL-01
Investigator(s): Laura Giese, Riley Bolt Section, Township, Range: 27-T01S-R01E
Landform (hillslope, terrace, etc): Foot slope Local relief (concave, convex, none): Concave Slope (%): 1 to 3
Subregion (LRR or MLRA): MLRA 99 of LRR L Lat: 40.928319 Long: -84.739918 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ____ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ✘
Hydric Soil Present? Yes ✘ No ____
Wetland Hydrology Present? Yes ____ No ✘

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

If yes, optional Wetland Site ID: NA

Remarks: (Explain alternative procedures here or in a separate report.)
Covertype is UPL. Based on the absence of two of three parameters, this area is an upland.

HYDROLOGY

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

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

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

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

VEGETATION ─ Use scientific names of plants. Sampling Point: SP-LOHUPL-01

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft radius)			
1. *Fraxinus pennsylvanica*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10	= Total Cover	
Herb Stratum (Plot size: 5 ft radius)			
1. *Dipsacus laciniatus*	55	Yes	FACU
2. *Euthamia graminifolia*	15	No	FAC
3. *Solidago canadensis*	10	No	FACU
4. *Juncus effusus*	5	No	OBL
5. *Scirpus atrovirens*	5	No	OBL
6. *Trifolium hybridum*	5	No	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	10	x 2 =	20
FAC species	15	x 3 =	45
FACU species	70	x 4 =	280
UPL species	0	x 5 =	0
Column Totals:	105 (A)		355 (B)

Prevalence Index = B/A = 3.4

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** __ **No** ✘

Remarks: (Include photo numbers here or on a separate sheet.)

The criterion for hydrophytic vegetation is not met. Upland old field.

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 to 4	10YR 3/2	88	10YR 4/4	2	C	M	Clay Loam	Soils very friable
0 to 4			10YR 5/1	10	D	M		
4 to 10	10YR 4/1	95	7.5YR 4/6	5	C	M	Clay	Soils very dry
10 to 16	10YR 4/2	98	7.5YR 4/6	2	C	M	Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ✘ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ High Chroma Sands (S11) **(LRR K, L)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ✘ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR K, L)**
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ✘ **No** ___

Remarks:
The criterion for hydric soil is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Convoy, Van Wert County Sampling Date: 2025-7-15
Applicant/Owner: AEP State: OH Sampling Point: SP-LOHUPL-02
Investigator(s): Riley Bolt Section, Township, Range: 27-T01S-R01E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): None Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 99 of LRR L Lat: 40.928125 Long: -84.732565 Datum: WGS84
Soil Map Unit Name: Pewamo silty clay loam, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✘ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ___ 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 ✘
Hydric Soil Present? Yes ✘ No ___
Wetland Hydrology Present? Yes ___ No ✘

Is the Sampled Area within a Wetland? **Yes** ___ **No** ✘

If yes, optional Wetland Site ID: U-RMB-01

Remarks: (Explain alternative procedures here or in a separate report.)
Covertype is UPL. Based on the absence of two of three parameters, this area is an upland. Sample point taken to document wetland absence in an area identified during off-site hydrology review as potential wetland. Ditches/drain tiles observed. Circumstances are not normal due to agricultural activities. Chapter 5 procedures were used for making the determination at this sample point.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. Only one secondary indicator observed. The criterion for wetland hydrology is not met.

VEGETATION ─ Use scientific names of plants. Sampling Point: SP-LOHUPL-02

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

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

Herb Stratum (Plot size: 5 ft radius)				
1.	*Setaria faberi*	25	Yes	FACU
2.	*Setaria pumila*	15	Yes	FAC
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
	40	= Total Cover		

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
	0	= 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% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	25	x 4 =	100
UPL species	0	x 5 =	0
Column Totals:	40 (A)		145 (B)

Prevalence Index = B/A = 3.6

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** __ **No** ✘

Remarks: (Include photo numbers here or on a separate sheet.)

Absent or stunted Zea mays in this area. The criterion for hydrophytic vegetation is not met. Vegetation is significantly disturbed as a result of crop farming.

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 to 5	10YR 3/2	98	10YR 5/6	2	C	M	Loam	
5 to 11	10YR 4/2	95	10YR 5/8	5	C	M	Clay Loam	
11 to 18	10YR 4/2	80	10YR 5/8	15	C	M	Clay Loam	
11 to 18			10YR 5/1	5	D	M	Clay Loam	
18 to 24	10YR 5/2	70	10YR 5/8	30	C	M	Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ✘ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ High Chroma Sands (S11) **(LRR K, L)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ✘ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR K, L)**
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type: ___
Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:
The criterion for hydric soil is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Union Twnshp, Van Wert Cnty Sampling Date: 2025-7-15
Applicant/Owner: AEP State: OH Sampling Point: SP-LOHUPL-03
Investigator(s): Laura Giese, Riley Bolt Section, Township, Range: 27-T01S R02E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): None Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 99 of LRR L Lat: 40.927155 Long: -84.612739 Datum: WGS84
Soil Map Unit Name: Hoytville silty clay, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____
Hydric Soil Present? Yes ✘ No ____
Wetland Hydrology Present? Yes ____ No ✘

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

If yes, optional Wetland Site ID: NA

Remarks: (Explain alternative procedures here or in a separate report.)
Covertype is UPL. Based on the absence of the wetland hydrology parameter, this area is an upland. Circumstances are not normal due to agricultural activities. Chapter 5 procedures were used for making the determination at this sample point.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met. check CSA.

VEGETATION ─ Use scientific names of plants. Sampling Point: SP-LOHUPL-03

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

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

Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
	0	= 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: 0 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** _____ **No** _____

Remarks: (Include photo numbers here or on a separate sheet.)

The unmanaged condition of vegetation could not be determined. Vegetation is significantly disturbed as a result of crop farming.

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 to 8	10YR 3/2	85	10YR 4/1	10	D	M	Clay	Very dry
0 to 8			10YR 5/8	5	C	M		
8 to 16	10YR 4/1	90	10YR 5/8	10	C	M	Clay	Very dry

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ✘ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ High Chroma Sands (S11) **(LRR K, L)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ✘ Depleted Matrix (F3)
- ✘ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR K, L)**
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✘ **No** ___

Remarks:

The criterion for hydric soil is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Union Twnshp, Van Wert Cnty Sampling Date: 2025-7-16
Applicant/Owner: AEP State: OH Sampling Point: SP-LOHUPL-04
Investigator(s): Laura Giese, Riley Bolt Section, Township, Range: 29-T01S-R02E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): None Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 99 of LRR L Lat: 40.927341 Long: -84.662975 Datum: WGS84
Soil Map Unit Name: Hoytville silty clay, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No ✘ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ____ , or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ 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 ____
Hydric Soil Present? Yes ✘ No ____
Wetland Hydrology Present? Yes ____ No ✘

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

If yes, optional Wetland Site ID: NA

Remarks: (Explain alternative procedures here or in a separate report.)
Covertype is UPL. Based on the absence of the wetland hydrology parameter, this area is an upland. Circumstances are not normal due to agricultural activities. Chapter 5 procedures were used for making the determination at this sample point.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

VEGETATION ─ Use scientific names of plants. Sampling Point: SP-LOHUPL-04

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

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

Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
	0	= 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: 0 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** _____ **No** _____

Remarks: (Include photo numbers here or on a separate sheet.)

The unmanaged condition of vegetation could not be determined. Vegetation is significantly disturbed as a result of crop farming.

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 to 2	10YR 3/1	100					Clay	
2 to 10	10YR 3/1	98	10YR 5/8	2	C	M	Clay	
10 to 18	10YR 3/1	96	10YR 5/1	2	D	M	Clay	
10 to 18			10YR 5/8	2	C	M		

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ High Chroma Sands (S11) **(LRR K, L)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✘ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR K, L)**
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ✘ **No** ___

Remarks:
The criterion for hydric soil is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



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

OMB Control #: 0710-0024, Exp: 09/30/2027
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Allen Maddox Creek 345 kV Transmission Rebuild City/County: Union Twnshp, Van Wert Cnty Sampling Date: 2025-7-16
Applicant/Owner: AEP State: OH Sampling Point: SP-LOHUPL-05
Investigator(s): Riley Bolt Section, Township, Range: 29-T01S-R02E
Landform (hillslope, terrace, etc): Plain Local relief (concave, convex, none): None Slope (%): 0 to 1
Subregion (LRR or MLRA): MLRA 99 of LRR L Lat: 40.927343 Long: -84.660454 Datum: WGS84
Soil Map Unit Name: Hoytville silty clay, 0 to 1 percent slopes NWI Classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ___ No ✘ (If no, explain in Remarks.)
Are Vegetation ✘ , Soil ___ , or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✘ 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 ___
Hydric Soil Present? Yes ✘ No ___
Wetland Hydrology Present? Yes ___ No ✘

Is the Sampled Area within a Wetland? **Yes** ___ **No** ✘

If yes, optional Wetland Site ID: U-RMB-01

Remarks: (Explain alternative procedures here or in a separate report.)
Covertype is UPL. Based on the absence of two of three parameters, this area is an upland. Sample point taken to document wetland absence in an area identified during off-site hydrology review as potential wetland. Circumstances are not normal due to agricultural activities. Chapter 5 procedures were used for making the determination at this sample point.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

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

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

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
NWI Map, USGS Topo map, contour map, soils map, NHD map, FEMA-100 floodplain map, APT analysis, aerial imagery

Remarks:
Based on the APT analysis, antecedent hydrologic conditions are drier than normal. The criterion for wetland hydrology is not met.

VEGETATION ─ Use scientific names of plants. Sampling Point: SP-LOHUPL-05

Tree Stratum (Plot size: 30 ft radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0	= Total Cover	

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

Herb Stratum (Plot size: 5 ft radius)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	0	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft radius)			
1.			
2.			
3.			
4.			
	0	= 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: 0 (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = 0

Hydrophytic Vegetation Indicators:

__ 1 - Rapid Test for Hydrophytic Vegetation

__ 2 - Dominance Test is >50%

__ 3 - Prevalence Index is ≤3.0[1]

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

__ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

Hydrophytic Vegetation Present? **Yes** _____ **No** _____

Remarks: (Include photo numbers here or on a separate sheet.)

80% soybeans, no signs of stress. No additional vegetation. The criterion for hydrophytic vegetation is not met. Vegetation is significantly disturbed as a result of crop farming.

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 to 8	10YR 3/1	98	10YR 4/4	2	C	M	Loam	
8 to 13	10YR 4/1	90	10YR 4/6	10	C	M	Loam	
13 to 19	10YR 4/1	85	10YR 4/6	15	C	M	Loam	
19 to 24	10YR 4/1	65	10YR 4/6	35	C	M	Clay Loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ✘ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Iron Monosulfide (A18)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ High Chroma Sands (S11) **(LRR K, L)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✘ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) **(LRR K, L)**
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):
Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ✘ **No** ___

Remarks:
The criterion for hydric soil is met.

SAMPLE PLOT PHOTOS

Plot Photo(s) - N :



Plot Photo(s) - E:



Plot Photo(s) - S:



Plot Photo(s) - W:



Appendix E:
ORAM Forms

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild | **Rater(s):** Nick Yuknis, Amanda Larsen | **Date:** 2025-07-16

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 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)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

2 (max 14 pts.) | 2 (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), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [x] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

10.5 (max 30 pts.) | 12.5 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

7 (max 20 pts.) | 19.5 (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)
- [x] Poor to fair (2)
- [ ] Poor (1)

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

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

Check all disturbances observed

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

19.5 subtotal this page

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Nick Yuknis, Amanda Larsen	**Date:** 2025-07-16

19.5
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 19.5 subtotal

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

2 max 20 pts. | 21.5 subtotal

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
- [ ] Other _____

6b. horizontal (plan view) Interspersion.
Select only one.

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

Invasive Species Present:
phragmites
reed canary grass

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

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [x] 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
- [1] Coarse woody debris >15cm (6in)
- [0] Standing dead >25cm (10in) dbh
- [1] Amphibian breeding pools

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

21.5

CATEGORY 1

End of Quantitative Rating. Complete Categorization Worksheets.

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Nick Yuknis, Amanda Larsen	**Date:** 2025-07-16

RESOURCE PHOTOS

North



South



Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** N. Yuknis, A. Larsen, L. Giese	**Date:** 2026-04-14

Metric 1. Wetland Area (size).

3 (max 6 pts.) | 3 (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)
- [x] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

4 (max 14 pts.) | 7 (subtotal)

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

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

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

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] LOW. Old field (>10 years), shrub land, 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.

14 (max 30 pts.) | 21 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

9.5 (max 20 pts.) | 30.5 (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)
- [x] Moderately good (4)
- [ ] Fair (3)
- [ ] Poor to fair (2)
- [ ] Poor (1)

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

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

Check all disturbances observed

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

30.5
subtotal this page

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** N. Yuknis, A. Larsen, L. Giese	**Date:** 2026-04-14

30.5
subtotal first page

0 | 30.5
max 10 pts. | subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

3 | 33.5
max 20 pts. | subtotal

Metric 6. Plant communities, interspersion, microtopography.

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

- 0 Aquatic Bed
- 2 Emergent
- 1 Shrub
- 1 Forest
- 0 Mudflats
- 0 Open water
- [ ] Other _____

6b. horizontal (plan view) Interspersion.
Select only one.

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

Invasive Species Present:
reed canary grass

6c. Coverage of invasive plants. Refer to 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.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

33.5

CATEGORY 1 OR 2

End of Quantitative Rating. Complete Categorization Worksheets.

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** N. Yuknis, A. Larsen, L. Giese	**Date:** 2026-04-14

RESOURCE PHOTOS

East



West



Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild | **Rater(s):** A. Larsen, D. Anderson, L. Giese | **Date:** 2026-04-14

Metric 1. Wetland Area (size).

2 (max 6 pts.) | 2 (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.

4 (max 14 pts.) | 6 (subtotal)

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

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

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

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] LOW. Old field (>10 years), shrub land, 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.

16.5 (max 30 pts.) | 22.5 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

9.5 (max 20 pts.) | 32 (subtotal)

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

- [x] 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)
- [x] Poor to fair (2)
- [ ] Poor (1)

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

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

Check all disturbances observed

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

32 (subtotal this page)

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** A. Larsen, D. Anderson, L. Giese	**Date:** 2026-04-14

32
subtotal first page

0 (max 10 pts.) | 32 (subtotal)

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

5 (max 20 pts.) | 37 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

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

- [0] Aquatic Bed
- [1] Emergent
- [1] Shrub
- [1] Forest
- [0] Mudflats
- [0] Open water
- [ ] Other _____

6b. horizontal (plan view) Interspersion.
Select only one.

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

Invasive Species Present:
phragmites
reed canary grass

6c. Coverage of invasive plants. Refer to 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
- [2] Coarse woody debris >15cm (6in)
- [1] 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 vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

37

MODIFIED CATEGORY 2

End of Quantitative Rating. Complete Categorization Worksheets.

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** A. Larsen, D. Anderson, L. Giese	**Date:** 2026-04-14

RESOURCE PHOTOS

North



East



South



West



Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild | **Rater(s):** Nick Yuknis, Amanda Larsen | **Date:** 2025-07-16

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 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)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

5 (max 14 pts.) | 5 (subtotal)

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

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

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

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] LOW. Old field (>10 years), shrub land, 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.

10 (max 30 pts.) | 15 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

5 (max 20 pts.) | 20 (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)
- [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	[ ] shrub/sapling removal
[ ] grazing	[ ] herbaceous/aquatic bed removal
[x] clearcutting	[ ] sedimentation
[ ] selective cutting	[ ] dredging
[ ] woody debris removal	[ ] farming
[ ] toxic pollutants	[ ] nutrient enrichment

20 (subtotal this page)

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Nick Yuknis, Amanda Larsen	**Date:** 2025-07-16

20
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 20 subtotal

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

3 max 20 pts. | 23 subtotal

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

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

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [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 vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

23

CATEGORY 1

End of Quantitative Rating. Complete Categorization Worksheets.

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Nick Yuknis, Amanda Larsen	**Date:** 2025-07-16

RESOURCE PHOTOS

East



North



Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild | **Rater(s):** Amanda Larsen, Nick Yuknis | **Date:** 2025-07-16

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 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)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

1 (max 14 pts.) | 1 (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), shrub land, 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 (max 30 pts.) | 6 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

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

- [ ] >0.7 m (>27.6 in) (3)
- [ ] 0.4 to 0.7 m (15.7 to 27.6 in) (2)
- [x] <0.4 m (<15.7 in) (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	[ ]	point source (nonstormwater)
[x]	tile	[ ]	filling/grading
[ ]	dike	[ ]	road bed/RR track
[ ]	weir	[ ]	dredging
[ ]	stormwater input	[x]	other: Tilling for ag

Metric 4. Habitat Alteration and Development.

3 (max 20 pts.) | 9 (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)
- [ ] Poor to fair (2)
- [x] 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

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

9 (subtotal this page)

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Amanda Larsen, Nick Yuknis	**Date:** 2025-07-16

9
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 9 subtotal

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

1 max 20 pts. | 10 subtotal

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

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

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [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 vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

10

CATEGORY 1

End of Quantitative Rating. Complete Categorization Worksheets.

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Amanda Larsen, Nick Yuknis	**Date:** 2025-07-16

RESOURCE PHOTOS

North



East



South



West



Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** N. Yuknis, A. Larsen, L. Giese	**Date:** 2026-04-15

2	2
max 6 pts.	subtotal

Metric 1. Wetland Area (size).

Select one size class and assign score.

- [ ] >50 acres (>20.2ha) (6 pts)
- [ ] 25 to <50 acres (10.1 to <20.2ha) (5 pts)
- [ ] 10 to <25 acres (4 to <10.1ha) (4 pts)
- [ ] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [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)

4	6
max 14 pts.	subtotal

Metric 2. Upland buffers and surrounding land use.

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

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

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

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] LOW. Old field (>10 years), shrub land, 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)

11.5	17.5
max 30 pts.	subtotal

Metric 3. Hydrology.

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 only one and assign score.

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

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

Check all disturbances observed

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

9.5	27
max 20 pts.	subtotal

Metric 4. Habitat Alteration and Development.

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

- [ ] None or none apparent (4)
- [ ] Recovered (3)
- [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)
- [x] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

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

27
subtotal this page

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** N. Yuknis, A. Larsen, L. Giese	**Date:** 2026-04-15

27
subtotal first page

0 max 10 pts. | 27 subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

5 max 20 pts. | 32 subtotal

Metric 6. Plant communities, interspersion, microtopography.

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

- 0 Aquatic Bed
- 2 Emergent
- 0 Shrub
- 1 Forest
- 0 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)

Invasive Species Present:
reed canary grass

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

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

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

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

32

CATEGORY 1 OR 2

End of Quantitative Rating. Complete Categorization Worksheets.

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** N. Yuknis, A. Larsen, L. Giese	**Date:** 2026-04-15

RESOURCE PHOTOS

North



South



Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild | **Rater(s):** A. Larsen, N. Yuknis , L. Giese | **Date:** 2026-04-15

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 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)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

7 (max 14 pts.) | 7 (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), shrub land, young second growth forest. (5)
- [x] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [ ] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

16 (max 30 pts.) | 23 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

10 (max 20 pts.) | 33 (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)
- [x] Recovered (6)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

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

33 subtotal this page

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** A. Larsen, N. Yuknis , L. Giese	**Date:** 2026-04-15

33
subtotal first page

0 | 33
max 10 pts. | subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

4 | 37
max 20 pts. | subtotal

Metric 6. Plant communities, interspersion, microtopography.

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

- 0 Aquatic Bed
- 1 Emergent
- 0 Shrub
- 1 Forest
- 0 Mudflats
- 0 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 to Table 1 ORAM long form for list. Add or deduct points for coverage

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

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

- 0 Vegetated hummucks/tussucks
- 1 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 vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

37

MODIFIED CATEGORY 2

End of Quantitative Rating. Complete Categorization Worksheets.

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** A. Larsen, N. Yuknis , L. Giese	**Date:** 2026-04-15

RESOURCE PHOTOS

W-AIN05 N



W-AIN05 S



W-AIN05A E



W-AIN05A W



Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Nick Yuknis, Amanda Larsen	**Date:** 2025-07-15

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 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)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

4 (max 14 pts.) | 4 (subtotal)

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

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

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

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [x] LOW. Old field (>10 years), shrub land, 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 (max 30 pts.) | 11 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

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

- [ ] >0.7 m (>27.6 in) (3)
- [ ] 0.4 to 0.7 m (15.7 to 27.6 in) (2)
- [x] <0.4 m (<15.7 in) (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	[ ] point source (nonstormwater)
[ ] tile	[ ] filling/grading
[ ] dike	[x] road bed/RR track
[ ] weir	[ ] dredging
[ ] stormwater input	[ ] other

Metric 4. Habitat Alteration and Development.

4 (max 20 pts.) | 15 (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)
- [ ] Recovering (3)
- [x] Recent or no recovery (1)

Check all disturbances observed

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

15 subtotal this page

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Nick Yuknis, Amanda Larsen	**Date:** 2025-07-15

15
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 15 subtotal

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

-1 max 20 pts. | 14 subtotal

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)
- [x] Low (1)
- [ ] None (0)

Invasive Species Present:
phragmites
reed canary grass

6c. Coverage of invasive plants. Refer to 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 vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

14

CATEGORY 1

End of Quantitative Rating. Complete Categorization Worksheets.

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Nick Yuknis, Amanda Larsen	**Date:** 2025-07-15

RESOURCE PHOTOS

North



East



Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Nick Yuknis, Amanda Larsen	**Date:** 2025-07-15

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 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)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

3 (max 14 pts.) | 3 (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)
- [x] LOW. Old field (>10 years), shrub land, young second growth forest. (5)
- [ ] MODERATELY HIGH. Residential, fenced pasture, park, conservation tillage, new fallow field. (3)
- [x] HIGH. Urban, industrial, open pasture, row cropping, mining, construction. (1)

Metric 3. Hydrology.

10 (max 30 pts.) | 13 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

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

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

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

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

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

7 (max 20 pts.) | 20 (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)
- [x] Fair (3)
- [ ] Poor to fair (2)
- [ ] Poor (1)

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

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

Check all disturbances observed

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

20 (subtotal this page)

TRC Environmental Corp.
781 Science Boulevard, Suite 200
Gahanna, Ohio 43230

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Nick Yuknis, Amanda Larsen	**Date:** 2025-07-15

20
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 20 subtotal

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

4 max 20 pts. | 24 subtotal

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

- [ ] Aquatic Bed
- [2] Emergent
- [ ] Shrub
- [ ] Forest
- [ ] Mudflats
- [ ] Open water
- [ ] Other _____

6b. horizontal (plan view) Interspersion.
Select only one.

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

Invasive Species Present:
reed canary grass

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

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

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

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

24

CATEGORY 1

End of Quantitative Rating. Complete Categorization Worksheets.

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Nick Yuknis, Amanda Larsen	**Date:** 2025-07-15

RESOURCE PHOTOS

North



West



Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Amanda Larsen, Nick Yuknis	**Date:** 2025-07-14

Metric 1. Wetland Area (size).

1 (max 6 pts.) | 1 (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.

1 (max 14 pts.) | 2 (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), shrub land, 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 (max 30 pts.) | 7 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

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

- [ ] >0.7 m (>27.6 in) (3)
- [ ] 0.4 to 0.7 m (15.7 to 27.6 in) (2)
- [x] <0.4 m (<15.7 in) (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	[x]	point source (nonstormwater)
[ ]	tile	[x]	filling/grading
[ ]	dike	[ ]	road bed/RR track
[ ]	weir	[ ]	dredging
[ ]	stormwater input	[ ]	other

Metric 4. Habitat Alteration and Development.

3 (max 20 pts.) | 10 (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)
- [ ] Poor to fair (2)
- [x] 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

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

10 (subtotal this page)

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Amanda Larsen, Nick Yuknis	**Date:** 2025-07-14

10
subtotal first page

Metric 5. Special Wetlands.

0 max 10 pts. | 10 subtotal

Check all that apply and score as indicated.

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

Metric 6. Plant communities, interspersion, microtopography.

2 max 20 pts. | 12 subtotal

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
- [ ] 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 to Table 1 ORAM long form for list. Add or deduct points for coverage

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [ ] Sparse 5-25% cover (-1)
- [ ] Nearly absent <5% cover (0)
- [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 vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

12

CATEGORY 1

End of Quantitative Rating. Complete Categorization Worksheets.

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Amanda Larsen, Nick Yuknis	**Date:** 2025-07-14

RESOURCE PHOTOS

North



East



South



West



Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Nick Yuknis, Amanda Larsen	**Date:** 2025-07-14

Metric 1. Wetland Area (size).

0 (max 6 pts.) | 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)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [x] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

4 (max 14 pts.) | 4 (subtotal)

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

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

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

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

Metric 3. Hydrology.

9 (max 30 pts.) | 13 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

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

- [ ] >0.7 m (>27.6 in) (3)
- [ ] 0.4 to 0.7 m (15.7 to 27.6 in) (2)
- [x] <0.4 m (<15.7 in) (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	[ ]	point source (nonstormwater)
[ ]	tile	[ ]	filling/grading
[ ]	dike	[ ]	road bed/RR track
[ ]	weir	[ ]	dredging
[ ]	stormwater input	[x]	other: Mowing

Metric 4. Habitat Alteration and Development.

3 (max 20 pts.) | 16 (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)
- [ ] Poor to fair (2)
- [x] 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	[x]	shrub/sapling removal
[ ]	grazing	[ ]	herbaceous/aquatic bed removal
[ ]	clearcutting	[ ]	sedimentation
[ ]	selective cutting	[ ]	dredging
[x]	woody debris removal	[ ]	farming
[ ]	toxic pollutants	[ ]	nutrient enrichment

16 (subtotal this page)

TRC Environmental Corp.
781 Science Boulevard, Suite 200
Gahanna, Ohio 43230

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Nick Yuknis, Amanda Larsen	**Date:** 2025-07-14

16
subtotal first page

0 | 16
max 10 pts. | subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-1 | 15
max 20 pts. | 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)
- [x] Low (1)
- [ ] None (0)

Invasive Species Present:
Lysimachia nummelaria
reed canary grass

6c. Coverage of invasive plants. Refer to 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.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

15

CATEGORY 1

End of Quantitative Rating. Complete Categorization Worksheets.

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Nick Yuknis, Amanda Larsen	**Date:** 2025-07-14

RESOURCE PHOTOS

North



East



Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Laura Giese, Laura Giese	**Date:** 2026-04-14

Metric 1. Wetland Area (size).

2	2
max 6 pts.	subtotal

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

2	4
max 14 pts.	subtotal

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

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

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

- [ ] VERY LOW. 2nd growth or older forest, prairie, savannah, wildlife area, etc. (7)
- [ ] LOW. Old field (>10 years), shrub land, 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.

12	16
max 30 pts.	subtotal

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

- [ ] High pH groundwater (5)
- [x] 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 only one and assign score.

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

Metric 4. Habitat Alteration and Development.

13	29
max 20 pts.	subtotal

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

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

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

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [x] Fair (3)
- [ ] Poor to fair (2)
- [ ] Poor (1)

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

- [x] 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

29
subtotal this page

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Laura Giese, Laura Giese	**Date:** 2026-04-14

29
subtotal first page

0 max 10 pts. | 29 subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

7 max 20 pts. | 36 subtotal

Metric 6. Plant communities, interspersion, microtopography.

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

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

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

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

- [1] Vegetated hummucks/tussucks
- [1] Coarse woody debris >15cm (6in)
- [1] 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 vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

36

MODIFIED CATEGORY 2

End of Quantitative Rating. Complete Categorization Worksheets.

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Laura Giese, Laura Giese	**Date:** 2026-04-14

RESOURCE PHOTOS





Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Laura Giese, Laura Giese	**Date:** 2025-07-16

Metric 1. Wetland Area (size).

3 (max 6 pts.) | 3 (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)
- [x] 3 to <10 acres (1.2 to <4ha) (3 pts)
- [ ] 0.3 to <3 acres (0.12 to <1.2ha) (2pts)
- [ ] 0.1 to <0.3 acres (0.04 to <0.12ha) (1 pt)
- [ ] <0.1 acres (0.04ha) (0 pts)

Metric 2. Upland buffers and surrounding land use.

1 (max 14 pts.) | 4 (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), shrub land, 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.

9 (max 30 pts.) | 13 (subtotal)

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

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

3b. Connectivity. Score all that apply.

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

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

- [ ] >0.7 m (>27.6 in) (3)
- [ ] 0.4 to 0.7 m (15.7 to 27.6 in) (2)
- [x] <0.4 m (<15.7 in) (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)
- [x] Recovered (7)
- [x] Recovering (3)
- [ ] Recent or no recovery (1)

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

10.5 (max 20 pts.) | 23.5 (subtotal)

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

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

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

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [x] Fair (3)
- [ ] Poor to fair (2)
- [ ] Poor (1)

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

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

Check all disturbances observed

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

23.5 subtotal this page

TRC Environmental Corp.
781 Science Boulevard, Suite 200
Gahanna, Ohio 43230

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Laura Giese, Laura Giese	**Date:** 2025-07-16

23.5
subtotal first page

0 | 23.5
max 10 pts. | subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

1 | 24.5
max 20 pts. | subtotal

Metric 6. Plant communities, interspersion, microtopography.

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

- 0 Aquatic Bed
- 2 Emergent
- 0 Shrub
- 0 Forest
- 0 Mudflats
- 0 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)

Invasive Species Present:
narrow-leaved cattail

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

- [ ] Extensive >75% cover (-5)
- [ ] Moderate 25-75% cover (-3)
- [x] 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 vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's vegetation and is of high quality

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

24.5

CATEGORY 1

End of Quantitative Rating. Complete Categorization Worksheets.

Site: AEP, Allen Maddox Creek 345 kV Transmission Rebuild	**Rater(s):** Laura Giese, Laura Giese	**Date:** 2025-07-16

RESOURCE PHOTOS

East



South



West



North



Appendix F:
Stream Forms (TRC Stream Forms, HHEI, QHEI)

STREAM AND WATERBODY INVENTORY

CLIENT: AEP **PROJECT:** ALLEN-MADDOX CREEK

S-AIN-01, Perennial

Dennis Ditch

PLOT OVERVIEW			
ID	S-AIN-01	**Classification**	Perennial
Waterbody Name	Dennis Ditch	**Date**	2024-12-18 10:16:53
Evaluators	Amanda Larsen, Danielle Anderson		
Address (Approx.)	11449 East Tillman Road Fort Wayne Allen County Indiana 46816 United States		
Location Description			
Lat. / Long. (WGS84)	41.0133935, -84.9764047		

STREAM / WATERBODY CHARACTERISTICS			
Flow Stage	Low	**Flow Direction**	NE
Average Depth (in.)	6	**Probed Stream Depth**	12 to 24 inches
Perceptible Flow	Yes	**Obstruction**	NA
Channel Substrate	Organic,Silt/Clay	**Channel Gradient**	< 2% (< 1 deg) Gentle
Is floodplain present?	No	**Bankfull Width (ft)**	NA
Existing Water Width (ft)	3.5	**Top of Bank (ft)**	28
Water Quality	Clear	**Presumed Regulatory Authority**	USACE and State
Ordinary High Water Mark (ft)	11	**Canopy Closure (Est.)**	70 to 80%
OHWM Indicators	Bed and Banks,Natural Line Impressed on Bank,Plant Community Change,Shelving,Soil Character Change		
Water Quality Comments	Appears turbid due to us walking in it		
Bank Substrate	Cobble/Gravel,Silt/Clay		
Aquatic Habitat	Aquatic Vegetation,Mud Bar,Overhanging Vegetation		
Observed Use	Drainage		
Observed Fauna	Frogs,Invertebrates,Waterfowl		
RTE Species & Evidence	None		
Notes			

	BANK HEIGHT (ft)	BANK SLOPE	BANK EROSION POTENTIAL
Left Bank	6	15 to 25% (9 to 14 deg) Steeply Sloping	Low
Right Bank	6	15 to 25% (9 to 14 deg) Steeply Sloping	Low

TRC Environmental Corp.
6737 W Washington Street, Suite 2100
West Allis, WI 53214

PHOTOS

Upstream Photo:



Downstream Photo:



Across Stream/Waterbody Photo:



Across Stream/Waterbody Photo:



STREAM AND WATERBODY INVENTORY

CLIENT: AEP **PROJECT:** ALLEN-MADDOX CREEK

S-AIN-02, Perennial

Hoffman Lopper Ditch

PLOT OVERVIEW			
ID	S-AIN-02	**Classification**	Perennial
Waterbody Name	Hoffman Lopper Ditch	**Date**	2024-12-18 12:37:48
Evaluators	Amanda Larsen, Danielle Anderson		
Address (Approx.)	11014 Franke Road Monroeville Allen County Indiana 46773 United States		
Location Description			
Lat. / Long. (WGS84)	40.9850252807, -84.9736545		

STREAM / WATERBODY CHARACTERISTICS			
Flow Stage	Low	**Flow Direction**	SE
Average Depth (in.)	18	**Probed Stream Depth**	12 to 24 inches
Perceptible Flow	Yes	**Obstruction**	NA
Channel Substrate	Organic,Silt/Clay	**Channel Gradient**	< 2% (< 1 deg) Gentle
Is floodplain present?	No	**Bankfull Width (ft)**	NA
Existing Water Width (ft)	8	**Top of Bank (ft)**	24
Water Quality	Slightly Turbid	**Presumed Regulatory Authority**	USACE and State
Ordinary High Water Mark (ft)	12	**Canopy Closure (Est.)**	0 to 10%
OHWM Indicators	Bed and Banks,Natural Line Impressed on Bank,Plant Community Change,Scour		
Water Quality Comments			
Bank Substrate	Cobble/Gravel,Sand,Silt/Clay		
Aquatic Habitat	Aquatic Vegetation,Overhanging Vegetation,Plunge Pools		
Observed Use	Drainage		
Observed Fauna	Invertebrates,Waterfowl		
RTE Species & Evidence	None		
Notes			

	BANK HEIGHT (ft)	BANK SLOPE	BANK EROSION POTENTIAL
Left Bank	7	25 to 35% (14 to 20 deg) Steep	Moderate
Right Bank	7	15 to 25% (9 to 14 deg) Steeply Sloping	Moderate

PHOTOS

Upstream Photo: W



Downstream Photo: SSE



Across Stream/Waterbody Photo:



Across Stream/Waterbody Photo:



STREAM AND WATERBODY INVENTORY

CLIENT: AEP **PROJECT:** ALLEN-MADDOX CREEK

S-AIN-03, Perennial

Renninger Ditch

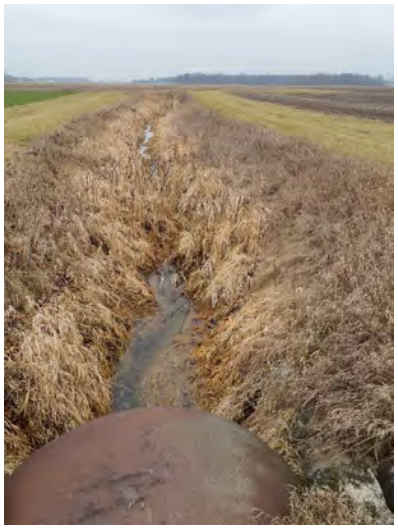
PLOT OVERVIEW			
ID	S-AIN-03	**Classification**	Perennial
Waterbody Name	Renninger Ditch	**Date**	2024-12-18 13:07:51
Evaluators	Amanda Larsen, Danielle Anderson		
Address (Approx.)	12500 Monroeville Road Monroeville Allen County Indiana 46773 United States		
Location Description			
Lat. / Long. (WGS84)	40.9805562807, -84.9733041		

STREAM / WATERBODY CHARACTERISTICS			
Flow Stage	Low	**Flow Direction**	E
Average Depth (in.)	15	**Probed Stream Depth**	12 to 24 inches
Perceptible Flow	Yes	**Obstruction**	NA
Channel Substrate	Organic,Sand,Silt/Clay	**Channel Gradient**	< 2% (< 1 deg) Gentle
Is floodplain present?	No	**Bankfull Width (ft)**	NA
Existing Water Width (ft)	4.5	**Top of Bank (ft)**	25
Water Quality	Clear	**Presumed Regulatory Authority**	USACE and State
Ordinary High Water Mark (ft)	9	**Canopy Closure (Est.)**	0 to 10%
OHWM Indicators	Natural Line Impressed on Bank,Plant Community Change,Shelving,Water Staining		
Water Quality Comments			
Bank Substrate	Cobble/Gravel,Sand,Silt/Clay		
Aquatic Habitat	Aquatic Vegetation,Overhanging Vegetation,Plunge Pools		
Observed Use	Drainage		
Observed Fauna	None		
RTE Species & Evidence	None		
Notes			

	BANK HEIGHT (ft)	BANK SLOPE	BANK EROSION POTENTIAL
Left Bank	7	15 to 25% (9 to 14 deg) Steeply Sloping	Low
Right Bank	7	15 to 25% (9 to 14 deg) Steeply Sloping	Low

PHOTOS

Upstream Photo:



Upstream Photo:



Downstream Photo:



Downstream Photo:



Across Stream/Waterbody Photo:



Across Stream/Waterbody Photo:



STREAM AND WATERBODY INVENTORY

CLIENT: AEP **PROJECT:** ALLEN-MADDOX CREEK

S-AIN-04, Perennial

Hoffman Ditch

PLOT OVERVIEW			
ID	S-AIN-04	**Classification**	Perennial
Waterbody Name	Hoffman Ditch	**Date**	2024-12-18 14:47:19
Evaluators	Amanda Larsen, Danielle Anderson		
Address (Approx.)	13204 Franke Road Hoagland Allen County Indiana 46745 United States		
Location Description			
Lat. / Long. (WGS84)	40.9638901807, -84.9725467		

STREAM / WATERBODY CHARACTERISTICS			
Flow Stage	Low	**Flow Direction**	N
Average Depth (in.)	9	**Probed Stream Depth**	12 to 24 inches
Perceptible Flow	No	**Obstruction**	NA
Channel Substrate	Organic,Sand,Silt/Clay	**Channel Gradient**	< 2% (< 1 deg) Gentle
Is floodplain present?	No	**Bankfull Width (ft)**	NA
Existing Water Width (ft)	5	**Top of Bank (ft)**	18
Water Quality	Clear	**Presumed Regulatory Authority**	USACE and State
Ordinary High Water Mark (ft)	7	**Canopy Closure (Est.)**	0 to 10%
OHWM Indicators	Natural Line Impressed on Bank,Plant Community Change,Shelving		
Water Quality Comments			
Bank Substrate	Cobble/Gravel,Organic,Sand,Silt/Clay		
Aquatic Habitat	Aquatic Vegetation,Overhanging Vegetation,Plunge Pools		
Observed Use	Drainage		
Observed Fauna	None		
RTE Species & Evidence	None		
Notes			

	BANK HEIGHT (ft)	BANK SLOPE	BANK EROSION POTENTIAL
Left Bank	5.5	8 to 15% (5 to 9 deg) Moderately Sloping	Low
Right Bank	5.5	8 to 15% (5 to 9 deg) Moderately Sloping	Low

PHOTOS

Upstream Photo: s



Upstream Photo: S



Downstream Photo: E



Across Stream/Waterbody Photo:



Across Stream/Waterbody Photo:



STREAM AND WATERBODY INVENTORY

CLIENT: AEP **PROJECT:** ALLEN-MADDOX CREEK

S-AIN-05, Perennial

Houk Ditch

PLOT OVERVIEW			
ID	S-AIN-05	**Classification**	Perennial
Waterbody Name	Houk Ditch	**Date**	2024-12-19 11:32:24
Evaluators	Danielle Anderson, Amanda Larsen		
Address (Approx.)	12800 Barkley Road Decatur Allen County Indiana 46733 United States		
Location Description			
Lat. / Long. (WGS84)	40.9331452, -84.972207		

STREAM / WATERBODY CHARACTERISTICS			
Flow Stage	Moderate	**Flow Direction**	E
Average Depth (in.)	8	**Probed Stream Depth**	6 to 12 inches
Perceptible Flow	No	**Obstruction**	NA
Channel Substrate	Silt/Clay	**Channel Gradient**	< 2% (< 1 deg) Gentle
Is floodplain present?	No	**Bankfull Width (ft)**	NA
Existing Water Width (ft)	5	**Top of Bank (ft)**	25
Water Quality	Clear	**Presumed Regulatory Authority**	USACE
Ordinary High Water Mark (ft)	7	**Canopy Closure (Est.)**	30 to 40%
OHWM Indicators	Bed and Banks,Matted, Bent, or Absent Vegetation,Natural Line Impressed on Bank,Plant Community Change		
Water Quality Comments			
Bank Substrate	Silt/Clay		
Aquatic Habitat	Aquatic Vegetation,Overhanging Vegetation		
Observed Use	Drainage		
Observed Fauna			
RTE Species & Evidence			
Notes			

	BANK HEIGHT (ft)	BANK SLOPE	BANK EROSION POTENTIAL
Left Bank	8	25 to 35% (14 to 20 deg) Steep	Moderate
Right Bank	8	25 to 35% (14 to 20 deg) Steep	Moderate

PHOTOS

Upstream Photo: West



Downstream Photo: East



Across Stream/Waterbody Photo: South



Photo: Substrate



STREAM AND WATERBODY INVENTORY

CLIENT: AEP **PROJECT:** ALLEN-MADDOX CREEK

S-AIN-06, Perennial

Bohnke Ditch

PLOT OVERVIEW			
ID	S-AIN-06	**Classification**	Perennial
Waterbody Name	Bohnke Ditch	**Date**	2025-07-16 07:55:57
Evaluators	Nick Yuknis, Amanda Larsen		
Address (Approx.)	17131 Grotrian Rd Monroeville Allen County IN 46773 US		
Location Description			
Lat. / Long. (WGS84)	40.926474325, -84.9187491342		

STREAM / WATERBODY CHARACTERISTICS			
Flow Stage	Moderate	**Flow Direction**	N
Average Depth (in.)	8	**Probed Stream Depth**	6 to 12 inches
Perceptible Flow	Yes	**Obstruction**	NA
Channel Substrate	Cobble/Gravel,Silt/Clay	**Channel Gradient**	< 2% (< 1 deg) Gentle
Is floodplain present?	No	**Bankfull Width (ft)**	NA
Existing Water Width (ft)	4	**Top of Bank (ft)**	28
Water Quality	Turbid	**Presumed Regulatory Authority**	USACE and State
Ordinary High Water Mark (ft)	8	**Canopy Closure (Est.)**	10 to 20%
OHWM Indicators	Bed and Banks,Plant Community Change,Soil Character Change,Terrestrial Vegetation Destroyed		
Water Quality Comments			
Bank Substrate	Silt/Clay		
Aquatic Habitat	Overhanging Vegetation		
Observed Use	Drainage		
Observed Fauna	Fish		
RTE Species & Evidence			
Notes			

	BANK HEIGHT (ft)	BANK SLOPE	BANK EROSION POTENTIAL
Left Bank	9	> 35% (> 20 deg) Very Steep	Moderate
Right Bank	9	> 35% (> 20 deg) Very Steep	Moderate

PHOTOS

Upstream Photo:



Downstream Photo:



Across Stream/Waterbody Photo:



Photo:



STREAM AND WATERBODY INVENTORY

CLIENT: AEP **PROJECT:** ALLEN-MADDOX CREEK

S-AIN-07, Intermittent

Brown Ditch

PLOT OVERVIEW			
ID	S-AIN-07	**Classification**	Intermittent
Waterbody Name	Brown Ditch	**Date**	2025-07-15 11:02:00
Evaluators	Nick Yuknis, Amanda Larsen		
Address (Approx.)	17332 Whittern Rd Monroeville Allen County IN 46773 US		
Location Description			
Lat. / Long. (WGS84)	40.9256863523, -84.882786342		

STREAM / WATERBODY CHARACTERISTICS			
Flow Stage	Low	**Flow Direction**	N
Average Depth (in.)	4	**Probed Stream Depth**	0 to 6 inches
Perceptible Flow	Yes	**Obstruction**	NA
Channel Substrate	Silt/Clay	**Channel Gradient**	< 2% (< 1 deg) Gentle
Is floodplain present?	No	**Bankfull Width (ft)**	NA
Existing Water Width (ft)	3	**Top of Bank (ft)**	20
Water Quality	Turbid	**Presumed Regulatory Authority**	USACE and State
Ordinary High Water Mark (ft)	6	**Canopy Closure (Est.)**	30 to 40%
OHWM Indicators	Bed and Banks,Matted, Bent, or Absent Vegetation,Natural Line Impressed on Bank,Plant Community Change,Soil Character Change		
Water Quality Comments	Algae present in slow moving stream		
Bank Substrate	Silt/Clay		
Aquatic Habitat	Overhanging Vegetation		
Observed Use	Drainage		
Observed Fauna	Fish		
RTE Species & Evidence			
Notes			

	BANK HEIGHT (ft)	BANK SLOPE	BANK EROSION POTENTIAL
Left Bank	7	> 35% (> 20 deg) Very Steep	Moderate
Right Bank	7	> 35% (> 20 deg) Very Steep	Moderate

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PHOTOS

Upstream Photo:



Downstream Photo:



Across Stream/Waterbody Photo:



STREAM AND WATERBODY INVENTORY

CLIENT: AEP **PROJECT:** ALLEN-MADDOX CREEK

S-AIN-08, Intermittent

Brown Ditch

PLOT OVERVIEW			
ID	S-AIN-08	**Classification**	Intermittent
Waterbody Name	Brown Ditch	**Date**	2025-07-15 09:17:04
Evaluators	Nick Yuknis, Amanda Larsen		
Address (Approx.)	Monroeville Allen County IN 46773 US		
Location Description			
Lat. / Long. (WGS84)	40.9274211615, -84.874527242		

STREAM / WATERBODY CHARACTERISTICS			
Flow Stage	Dry	**Flow Direction**	N
Average Depth (in.)	0	**Probed Stream Depth**	0 to 6 inches
Perceptible Flow	No	**Obstruction**	NA
Channel Substrate	Silt/Clay	**Channel Gradient**	< 2% (< 1 deg) Gentle
Is floodplain present?	Yes	**Bankfull Width (ft)**	22
Existing Water Width (ft)	0	**Top of Bank (ft)**	NA
Water Quality		**Presumed Regulatory Authority**	
Ordinary High Water Mark (ft)	6	**Canopy Closure (Est.)**	20 to 30%
OHWM Indicators	Bed and Banks,Matted, Bent, or Absent Vegetation,Plant Community Change,Soil Character Change,Terrestrial Vegetation Destroyed		
Water Quality Comments	No water observed		
Bank Substrate	Silt/Clay		
Aquatic Habitat			
Observed Use	Drainage		
Observed Fauna			
RTE Species & Evidence	Monarch butterfly adjacent to stream, milkweed in vicinity		
Notes			

	BANK HEIGHT (ft)	BANK SLOPE	BANK EROSION POTENTIAL
Left Bank	8	> 35% (> 20 deg) Very Steep	Moderate
Right Bank	8	> 35% (> 20 deg) Very Steep	Moderate

PHOTOS

Upstream Photo:



Downstream Photo:



Across Stream/Waterbody Photo:



Photo:



STREAM AND WATERBODY INVENTORY

CLIENT: AEP **PROJECT:** ALLEN-MADDOX CREEK

S-AIN-09, Perennial

Trib. to Flatrock Creek

PLOT OVERVIEW			
ID	S-AIN-09	**Classification**	Perennial
Waterbody Name	Trib. to Flatrock Creek	**Date**	2025-07-14 14:07:48
Evaluators	Amanda Larsen, Amanda Larsen		
Address (Approx.)	23834 Carrier Road Monroeville Allen County Indiana 46773 United States		
Location Description			
Lat. / Long. (WGS84)	40.927347, -84.82808		

STREAM / WATERBODY CHARACTERISTICS			
Flow Stage	Low	**Flow Direction**	S
Average Depth (in.)	10	**Probed Stream Depth**	12 to 24 inches
Perceptible Flow	No	**Obstruction**	NA
Channel Substrate	Organic,Silt/Clay	**Channel Gradient**	< 2% (< 1 deg) Gentle
Is floodplain present?	No	**Bankfull Width (ft)**	NA
Existing Water Width (ft)	3	**Top of Bank (ft)**	15
Water Quality	Clear	**Presumed Regulatory Authority**	USACE and State
Ordinary High Water Mark (ft)	6	**Canopy Closure (Est.)**	0 to 10%
OHWM Indicators	Bed and Banks,Natural Line Impressed on Bank,Shelving		
Water Quality Comments			
Bank Substrate	Organic,Silt/Clay		
Aquatic Habitat	Aquatic Vegetation,Mud Bar,Overhanging Vegetation		
Observed Use	Drainage		
Observed Fauna	Fish,Frogs,Invertebrates,Turtles,Waterfowl		
RTE Species & Evidence	None		
Notes			

	BANK HEIGHT (ft)	BANK SLOPE	BANK EROSION POTENTIAL
Left Bank	12	25 to 35% (14 to 20 deg) Steep	Moderate
Right Bank	14	> 35% (> 20 deg) Very Steep	Moderate

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PHOTOS

Upstream Photo: NW



Downstream Photo: Se



Across Stream/Waterbody Photo: n



STREAM AND WATERBODY INVENTORY

CLIENT: AEP **PROJECT:** ALLEN-MADDOX CREEK

S-AIN-10, Perennial

Flatrock Creek

PLOT OVERVIEW			
ID	S-AIN-10	**Classification**	Perennial
Waterbody Name	Flatrock Creek	**Date**	2025-07-14 12:33:55
Evaluators	Nick Yuknis, Amanda Larsen		
Address (Approx.)	Monroeville Allen County IN US		
Location Description			
Lat. / Long. (WGS84)	40.9272410202, -84.8135906232		

STREAM / WATERBODY CHARACTERISTICS			
Flow Stage	Low	**Flow Direction**	N
Average Depth (in.)	8	**Probed Stream Depth**	6 to 12 inches
Perceptible Flow	Yes	**Obstruction**	NA
Channel Substrate	Riprap,Silt/Clay	**Channel Gradient**	< 2% (< 1 deg) Gentle
Is floodplain present?	No	**Bankfull Width (ft)**	NA
Existing Water Width (ft)	10	**Top of Bank (ft)**	42
Water Quality	Turbid	**Presumed Regulatory Authority**	USACE and State
Ordinary High Water Mark (ft)	12	**Canopy Closure (Est.)**	0 to 10%
OHWM Indicators	Matted, Bent, or Absent Vegetation,Scour,Soil Character Change		
Water Quality Comments	Algal mats in stream, slow flow, turbid water		
Bank Substrate	Riprap,Silt/Clay		
Aquatic Habitat	Overhanging Vegetation,Riffle - Pool		
Observed Use	Drainage		
Observed Fauna	Fish,Muskrat,Mussels		
RTE Species & Evidence			
Notes			

	BANK HEIGHT (ft)	BANK SLOPE	BANK EROSION POTENTIAL
Left Bank	7	25 to 35% (14 to 20 deg) Steep	Moderate
Right Bank	10	> 35% (> 20 deg) Very Steep	High

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PHOTOS

Upstream Photo:



Downstream Photo:



Across Stream/Waterbody Photo:



STREAM AND WATERBODY INVENTORY

CLIENT: AEP **PROJECT:** ALLEN-MADDOX CREEK

WB-AIN-01, Pond

PLOT OVERVIEW

ID	WB-AIN-01	**Classification**	Pond
Waterbody Name		**Date**	2025-07-16 11:33:00
Evaluators	Nick Yuknis, Amanda Larsen		
Address (Approx.)	Heritage Snowmobile Trail Hoagland Allen County IN 46745 US		
Location Description			
Lat. / Long. (WGS84)	40.9429802527, -84.9720098844		

STREAM / WATERBODY CHARACTERISTICS

Flow Stage	Low	**Flow Direction**	
Average Depth (in.)	12	**Probed Stream Depth**	
Perceptible Flow	No	**Obstruction**	NA
Channel Substrate	Organic,Silt/Clay	**Channel Gradient**	
Is floodplain present?	No	**Bankfull Width (ft)**	NA
Existing Water Width (ft)	50	**Top of Bank (ft)**	70
Water Quality	Turbid	**Presumed Regulatory Authority**	
Ordinary High Water Mark (ft)	60	**Canopy Closure (Est.)**	0 to 10%
OHWM Indicators	Plant Community Change,Soil Character Change,Terrestrial Vegetation Destroyed		
Water Quality Comments			
Bank Substrate	Silt/Clay		
Aquatic Habitat	Aquatic Vegetation,Overhanging Vegetation		
Observed Use			
Observed Fauna	Frogs,Toads,Turtles		
RTE Species & Evidence			
Notes	Perennial pond in row,		

	BANK HEIGHT (ft)	BANK SLOPE	BANK EROSION POTENTIAL
Left Bank	2	8 to 15% (5 to 9 deg) Moderately Sloping	Low
Right Bank	2	8 to 15% (5 to 9 deg) Moderately Sloping	Low

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PHOTOS

Upstream Photo:



Downstream Photo:



Across Stream/Waterbody Photo:



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : **35**

SITE NAME/LOCATION S-LOH-01. AEP - Allen-Maddox Creek.

SITE NUMBER 01 RIVER CODE ____ RIVER BASIN ____ DRAINAGE AREA (mi^2) 0.88

LENGTH OF STREAM REACH (ft) ____ LAT. 40.9288817492 LONG. -84.7721746849 RIVER MILE ____

DATE 2025-07-14 SCORER LOH COMMENTS Vegetated wetland plants

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

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

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

TYPE		PERCENT	TYPE		PERCENT
☐ ☐	BLDR SLABS **[16 pts]**	0	☐ ☑	SILT **[3 pts]**	20
☐ ☐	BOULDER (>256 mm) **[16 pts]**	0	☐ ☐	LEAF PACK/WOODY DEBRIS **[3 pts]**	0
☐ ☐	BEDROCK **[16 pts]**	0	☐ ☐	FINE DETRITUS **[3 pts]**	0
☐ ☐	COBBLE (65-256 mm) **[12 pts]**	0	☑ ☐	CLAY or HARDPAN **[0 pts]**	80
☐ ☐	GRAVEL (2-64 mm) **[9 pts]**	0	☐ ☐	MUCK **[0 pts]**	0
☐ ☐	SAND (<2 mm) **[6 pts]**	0	☐ ☐	ARTIFICIAL **[3 pts]**	0

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 **(A)**

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3

(B) **TOTAL NUMBER OF SUBSTRATE TYPES:** 2

HHEI Metric Points

Substrate Max = 40

5

A + B

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

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

COMMENTS____ **MAXIMUM POOL DEPTH (centimeters):** 5

Pool Depth Max = 30

5

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

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

COMMENTS Incised stream **AVERAGE BANKFULL WIDTH (meters):** 3.5

Bankfull Width Max=30

25

This information must also be completed

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

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

COMMENTS ____

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

☐ Stream Flowing ☑ Moist Channel, isolated pools, no flow (Intermittent)

☐ Subsurface flow with isolated pools (Interstitial) ☐ Dry channel, no water (Ephemeral)

COMMENTS ____

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

☑ None ☐ 1.0 ☐ 2.0 ☐ 3.0

☐ 0.5 ☐ 1.5 ☐ 2.5 ☐ >3

STREAM GRADIENT ESTIMATE

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

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

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

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: ____ Distance from Evaluated Stream ____

☐ CWH Name: ____ Distance from Evaluated Stream ____

☐ EWH Name: ____ Distance from Evaluated Stream ____

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

USGS Quadrangle Name: ____ NRCS Soil Map Page: _ NRCS Soil Map Stream Order _

County: ____ Township / City: ____

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 2025-07-12 Quantity: 2

Photo-documentation Notes: ____

Elevated Turbidity? (Y/N): N Canopy (% open): 100

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _

Field Measures: Temp (°C) 77.4 Dissolved Oxygen (mg/l) _ pH (S.U.) 7.64 Conductivity (µmhos/cm) _

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

Additional comments/description of pollution impacts:

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) _ Species observed (if known): _

Frogs or Tadpoles Observed? (Y/N) _ Species observed (if known): _

Salamanders Observed? (Y/N) _ Species observed (if known): _

Aquatic Macroinvertebrates Observed? (Y/N) _ Species observed (if known): _

Comments Regarding Biology:

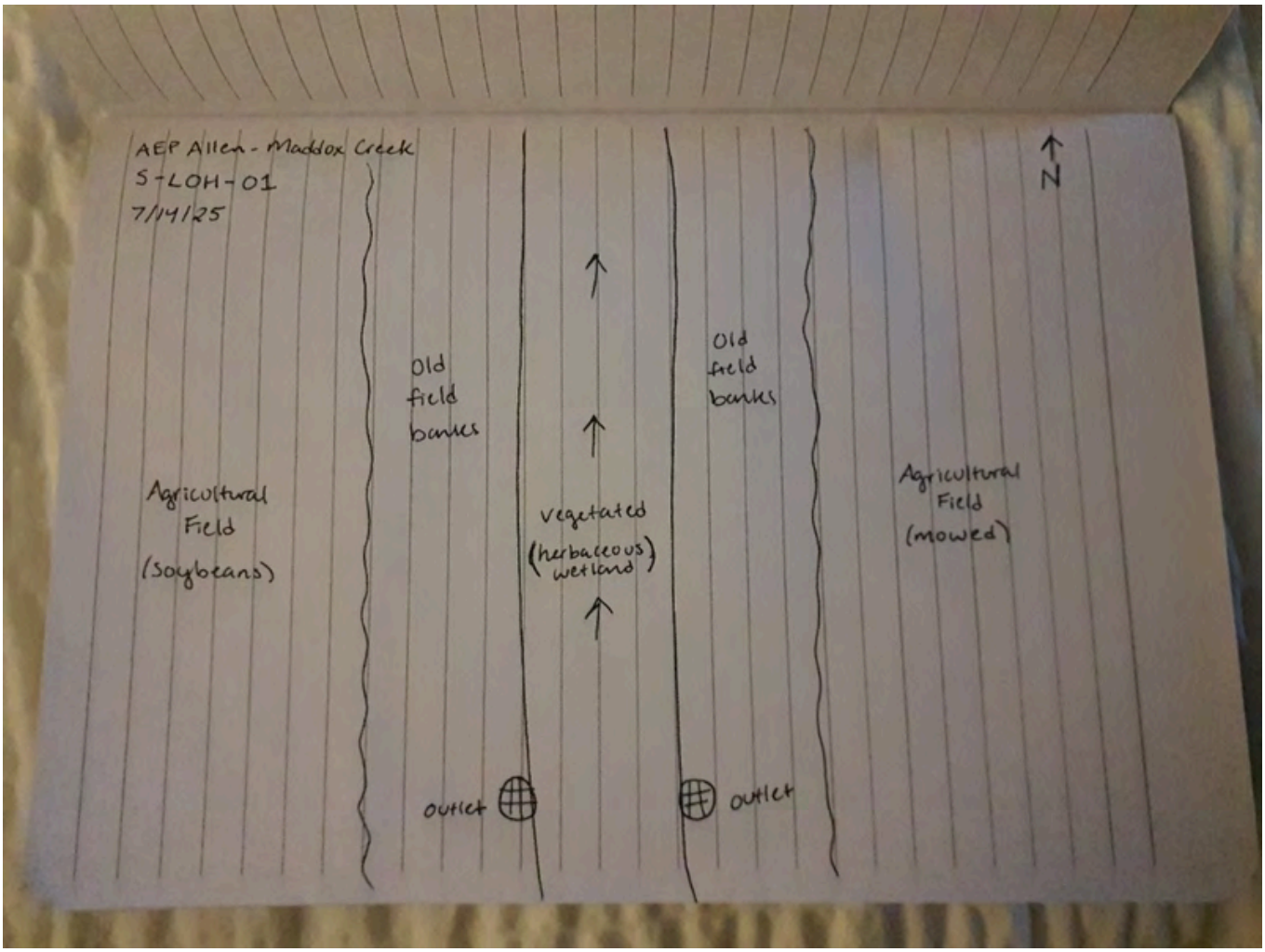
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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

FLOW →

SEE PAGE 3

SKETCH OF STREAM REACH: S-LOH-01



PHOTOLOG

Substrate: S-LOH-01



Upstream: S-LOH-01



Downstream: S-LOH-01



Left: S-LOH-01



Right: S-LOH-01



Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 31

Stream & Location: Blue Creek (S-LOH-02) **RM:** **Date:** 2025-07-29

Scorers Full Name & Affiliation: Riley Bolt, TRC

River Code: **STORET #:** **Lat./Long.:** (NAD83 - decimal) 40.928274 / -84.750534 **Office verified location** ☐

1] *SUBSTRATE* Check ***ONLY* Two** substrate *TYPE BOXES;* estimate % or note every type present

Check ONE (*Or 2 & average*)

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE	ORIGIN	QUALITY
☐☐BLDR/SLABS [10]			☒☐HARDPAN [4]	80	0	☐LIMESTONE [1]	☐HEAVY [-2]
☐☐BOULDER [9]			☐☐DETRITUS [3]			☐TILLS [1]	☐MODERATE [-1]
☐☐COBBLE [8]			☐☐MUCK [2]			☐WETLANDS [0]	☐NORMAL [0]
☐☐GRAVEL [7]			☐☒SILT [2]	20	0	☐HARDPAN [0]	☐FREE [1]
☐☐SAND [6]			☐☐ARTIFICIAL [0]			☐SANDSTONE [0]	
☐☐BEDROCK [5]						☐RIP/RAP [0]	

(Score natural substrates; ignore sludge from point-sources)

NUMBER OF BEST TYPES: ☐4 or more [2] ☐3 or less [0]

SILT

EMBEDDEDNESS

☐EXTENSIVE [-2]	
☐MODERATE [-1]	
☐NORMAL [0]	
☐NONE [1]	

Substrate **6** *Maximum 20*

Comments

2] *INSTREAM COVER* Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

0	UNDERCUT BANKS [1]	0	POOLS > 70CM [2]	0	OXBOWS, BACKWATERS [1]	☐EXTENSIVE >75% [11]	
2	OVERHANGING VEGETATION [1]	0	ROOTWADS [1]	0	AQUATIC MACROPHYTES [1]	☐MODERATE 25-75% [7]	
1	SHALLOWS (IN SLOW WATER) [1]	0	BOULDERS [1]	0	LOGS OR WOODY DEBRIS [1]	☒SPARSE 5-<25% [3]	
0	ROOTMATS [1]					☐NEARLY ABSENT <5% [1]	

AMOUNT Check ONE (*Or 2 & average*)

Cover Maximum 20 **5**

Comments

3] *CHANNEL MORPHOLOGY* Check ONE in each category (*Or 2 & average*)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐HIGH [4]	☐EXCELLENT [7]	☐NONE [6]	☒HIGH [3]
☐MODERATE [3]	☐GOOD [5]	☐RECOVERED [4]	☐MODERATE [2]
☐LOW [2]	☒FAIR [3]	☒RECOVERING [3]	☐LOW [1]
☒NONE [1]	☐POOR [1]	☐RECENT OR NO RECOVERY [1]	

Channel Maximum 20 **10**

Comments

4] *BANK EROSION AND RIPARIAN ZONE* Check ONE in each category for *EACH BANK* (*Or 2 per bank & average*)

River right looking downstream

EROSION L R	RIPARIAN WIDTH L R	FLOOD PLAIN QUALITY L R	
☒☒NONE / LITTLE [3]	☐☐WIDE > 50M [4]	☐☐FOREST, SWAMP [3]	☐☐CONSERVATION TILLAGE [1]
☐☐MODERATE [2]	☐☐MODERATE 10-50M [3]	☐☐SHRUB OR OLD FIELD [2]	☐☐URBAN OR INDUSTRIAL [0]
☐☐HEAVY / SEVERE [1]	☐☐NARROW 5-10M [2]	☐☐RESIDENTIAL, PARK, NEW FIELD [1]	☐☐MINING / CONSTRUCTION [0]
	☒☒VERY NARROW < 5M [1]	☐☐FENCED PASTURE [1]	
	☐☐NONE [0]	☒☒OPEN PASTURE, ROWCROP [0]	

Indicate predominant land use(s) past 100m riparian.

Riparian Maximum 10 **8**

Comments

5] *POOL / GLIDE AND RIFFLE / RUN QUALITY*

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

MAXIMUM DEPTH Check **ONE** (*ONLY!*)	CHANNEL WIDTH Check ONE (*Or 2 & average*)	CURRENT VELOCITY Check ALL that apply	
☐> 1M [6]	☐POOL WIDTH > RIFFLE WIDTH [2]	☐TORRENTIAL [-1]	☒SLOW [1]
☐0.7-<1M [4]	☒POOL WIDTH = RIFFLE WIDTH [1]	☐VERY FAST [1]	☐INTERSTITIAL [-1]
☐0.4-<0.7 [2]	☐POOL WIDTH < RIFFLE WIDTH [0]	☐FAST [1]	☐INTERMITTENT [-2]
☐0.2-<0.4M [1]		☐MODERATE [1]	☐EDDIES [1]
☒< 0.2M [0]		*Indicate for reach - pools and riffles.*	

Pool / Current Maximum 12 **2**

Comments

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (*Or 2 & average*).

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐BEST AREAS >10CM [2]	☐MAXIMUM > 50CM [2]	☐STABLE (E.G., COBBLE, BOULDER) [2]	☐NONE [2]
☐BEST AREAS 5-10CM [1]	☐MAXIMUM < 50CM [1]	☐MOD. STABLE (E.G., LARGE GRAVEL) [1]	☐LOW [1]
☐BEST AREAS <5CM [METRIC=0]		☐UNSTABLE (E.G., FINE GRAVEL, SAND) [0]	☐MODERATE [0] ☐EXTENSIVE [-1]

Riffle / Run Maximum 8 **0**

Comments

6] *GRADIENT* (ft/mi) **DRAINAGE AREA** (mi^2)

☐VERY LOW - LOW [2-4] ☐MODERATE [6-10] ☐HIGH - VERY HIGH [10-6]

%POOL: 10 **%GLIDE:** 0 **%RUN:** 80 **%RIFFLE:** 0

Gradient Maximum 10 **0**

A] SAMPLED REACH

Check ALL that apply

METHOD

- ☐ BOAT
- ☒ WADE
- ☐ L. LINE
- ☐ OTHER

STAGE (1st-sample pass-2nd)

- ☐ HIGH ☐
- ☐ UP ☐
- ☒ NORMAL ☐
- ☐ LOW ☐
- ☐ DRY ☐

Comment RE: Reach consistency/ Is reach typical of stream?, *Recreation/* Observed - Inferred, *Other/* Sampling observations, Concerns, Access directions, etc.

DISTANCE

- ☒ 0.5 Km
- ☐ 0.2 Km
- ☐ 0.15 Km
- ☐ 0.12 Km
- ☐ OTHER

_____ meters

CLARITY (1st --sample pass-- 2nd)

- ☒ < 20 CM ☐
- ☐ 20-<40 CM ☐
- ☐ 40-70 CM ☐
- ☐ > 70 CM/ CTB ☐
- ☐ SECCHI DEPTH ☐

1st _____ cm

pass

2nd _____ cm

CANOPY

- ☒ > 85%- OPEN
- ☐ 55-<85%
- ☐ 30-<55%
- ☐ 10-<30%
- ☐ <10%- CLOSED

B] AESTHETICS

- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOS/SSOS/OUTFALLS

C] RECREATION

AREA DEPTH

POOL: ☐ >100ft² ☐ >3ft

D] MAINTENANCE

Circle some & *COMMENT*

PUBLIC / PRIVATE / BOTH / NA
ACTIVE / HISTORIC / BOTH / NA
YOUNG-SUCCESSION- OLD
SPRAY / SNAG / REMOVED
MODIFIED / DIPPED OUT / NA
LEVEED / ONE-SIDED
RELOCATED / CUTOFFS
MOVING-BEDLOAD- STABLE
ARMOURED / SLUMPS
ISLANDS / SCOURED
IMPOUNDED / DESICCATED
FLOOD CONTROL / DRAINAGE

E] EJ ISSUES

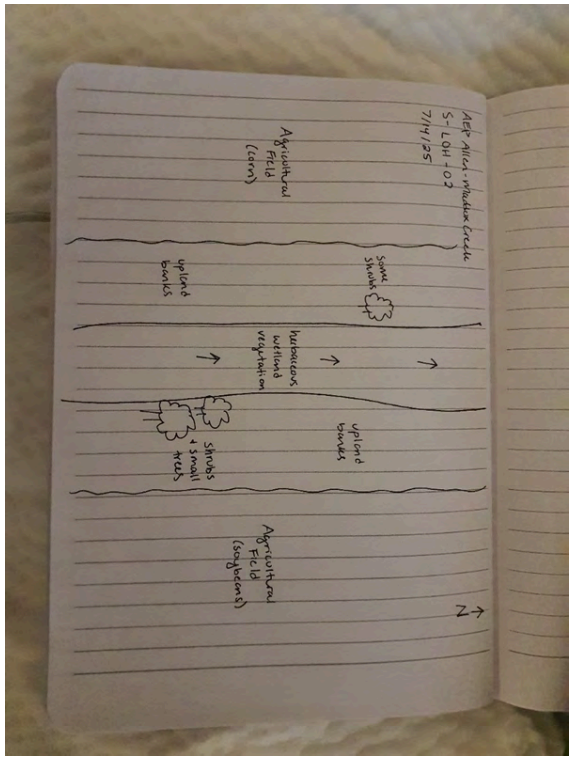
WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT & GRIM
CONTAMINATED / LANDFILL
BMPS-CONSTRUCTION- SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H_20 / TILE / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

- **$\bar{x}$ width** 2.7
- **$\bar{x}$ depth** 0.1
- **max. depth** 0.15
- **$\bar{x}$ bankfull width** 5
- **bankfull $\bar{x}$ depth** 4
- **W/D ratio** 27.000
- **bankfull max. depth** 5
- **floodprone x^2 width**
- **entrench. ratio**

Legacy Tree:

Stream Drawing:



PHOTOS: S-LOH-02





Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : 6

SITE NAME/LOCATION S-LOH-03. AEP - Allen-Maddox Creek.

SITE NUMBER ____ RIVER CODE ____ RIVER BASIN ____ DRAINAGE AREA (mi^2) 0.274

LENGTH OF STREAM REACH (ft) ____ LAT. 40.9280969 LONG. -84.7357067 RIVER MILE ____

DATE 2025-07-14 SCORER LOH COMMENTS Vegetated with hydrophytes, no flow

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

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

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

TYPE		PERCENT	TYPE		PERCENT
☐ ☐	BLDR SLABS **[16 pts]**	0	☐ ☐	SILT **[3 pts]**	0
☐ ☐	BOULDER (>256 mm) **[16 pts]**	0	☐ ☐	LEAF PACK/WOODY DEBRIS **[3 pts]**	0
☐ ☐	BEDROCK **[16 pts]**	0	☐ ☐	FINE DETRITUS **[3 pts]**	0
☐ ☐	COBBLE (65-256 mm) **[12 pts]**	0	☑ ☑	CLAY or HARDPAN **[0 pts]**	100
☐ ☐	GRAVEL (2-64 mm) **[9 pts]**	0	☐ ☐	MUCK **[0 pts]**	0
☐ ☐	SAND (<2 mm) **[6 pts]**	0	☐ ☐	ARTIFICIAL **[3 pts]**	0

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 **(A)**

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 0

(B) **TOTAL NUMBER OF SUBSTRATE TYPES:** 1

HHEI Metric Points

Substrate Max = 40

1

A + B

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

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

COMMENTS____

MAXIMUM POOL DEPTH (centimeters): 0

Pool Depth Max = 30

0

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

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

COMMENTS____

AVERAGE BANKFULL WIDTH (meters): 1

Bankfull Width Max=30

5

This information must also be completed

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

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

COMMENTS ____

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

☐ Stream Flowing ☑ Moist Channel, isolated pools, no flow (Intermittent)

☐ Subsurface flow with isolated pools (Interstitial) ☐ Dry channel, no water (Ephemeral)

COMMENTS Currently no flow

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

☑ None ☐ 1.0 ☐ 2.0 ☐ 3.0

☐ 0.5 ☐ 1.5 ☐ 2.5 ☐ >3

STREAM GRADIENT ESTIMATE

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

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

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

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: ____ Distance from Evaluated Stream ____

☐ CWH Name: ____ Distance from Evaluated Stream ____

☐ EWH Name: ____ Distance from Evaluated Stream ____

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

USGS Quadrangle Name: ____ NRCS Soil Map Page: _ NRCS Soil Map Stream Order _

County: ____ Township / City: ____

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 2025-07-12 Quantity: 00

Photo-documentation Notes: ____

Elevated Turbidity? (Y/N): N Canopy (% open): 95

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _

Field Measures: Temp (°C) 0 Dissolved Oxygen (mg/l) _ pH (S.U.) 0 Conductivity (µmhos/cm) _

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

Additional comments/description of pollution impacts:
No water for temp, pH

BIOLOGICAL OBSERVATIONS
(Record all observations below)

Fish Observed? (Y/N) _ Species observed (if known): _

Frogs or Tadpoles Observed? (Y/N) _ Species observed (if known): _

Salamanders Observed? (Y/N) _ Species observed (if known): _

Aquatic Macroinvertebrates Observed? (Y/N) _ Species observed (if known): _

Comments Regarding Biology:

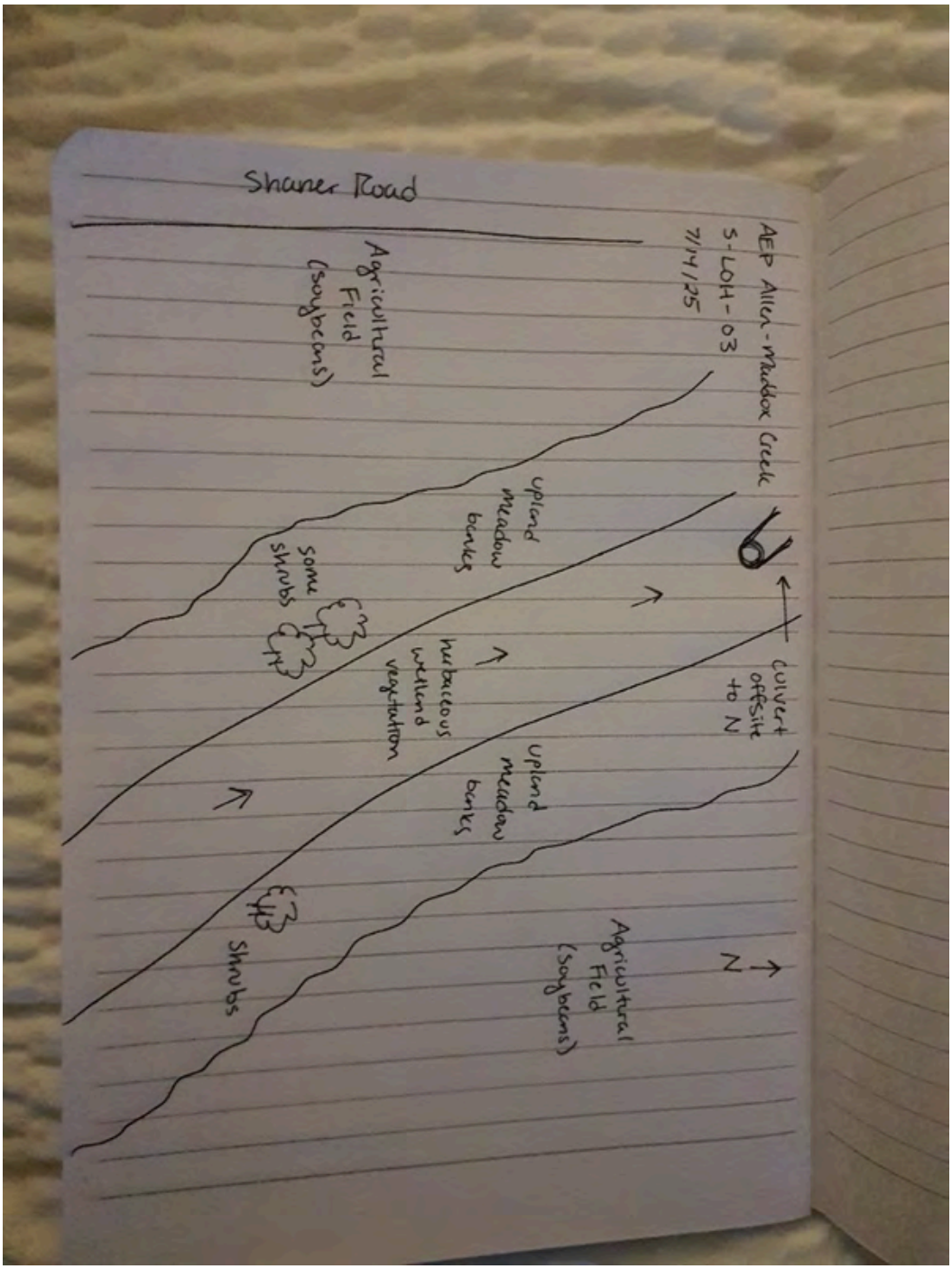
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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

FLOW →

SEE PAGE 3

SKETCH OF STREAM REACH: S-LOH-03



PHOTOLOG

Substrate: S-LOH-03



Upstream: S-LOH-03



Downstream: S-LOH-03



Left: S-LOH-03



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : **30**

SITE NAME/LOCATION S-LOH-04. AEP - Allen-Maddox Creek.

SITE NUMBER 04 RIVER CODE ____ RIVER BASIN ____ DRAINAGE AREA (mi^2) 0.585

LENGTH OF STREAM REACH (ft) ____ LAT. 40.9280152 LONG. -84.7197061 RIVER MILE ____

DATE 2025-07-15 SCORER LOH COMMENTS Vegetated with very narrow thalweg

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

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

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

TYPE		PERCENT	TYPE		PERCENT
☐ ☐	BLDR SLABS **[16 pts]**	0	☐ ☑	SILT **[3 pts]**	10
☐ ☐	BOULDER (>256 mm) **[16 pts]**	0	☐ ☐	LEAF PACK/WOODY DEBRIS **[3 pts]**	0
☐ ☐	BEDROCK **[16 pts]**	0	☐ ☐	FINE DETRITUS **[3 pts]**	0
☐ ☐	COBBLE (65-256 mm) **[12 pts]**	0	☑ ☐	CLAY or HARDPAN **[0 pts]**	90
☐ ☐	GRAVEL (2-64 mm) **[9 pts]**	0	☐ ☐	MUCK **[0 pts]**	0
☐ ☐	SAND (<2 mm) **[6 pts]**	0	☐ ☐	ARTIFICIAL **[3 pts]**	0

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 **(A)** **(B)**

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 **TOTAL NUMBER OF SUBSTRATE TYPES:** 2

HHEI Metric Points

Substrate Max = 40

5

A + B

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

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

COMMENTS No pools observed **MAXIMUM POOL DEPTH (centimeters):** 0

Pool Depth Max = 30

0

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

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

COMMENTS ____ **AVERAGE BANKFULL WIDTH (meters):** 4

Bankfull Width Max=30

25

This information must also be completed

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

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

COMMENTS Narrow herbaceous buffer strip

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

☐ Stream Flowing ☑ Moist Channel, isolated pools, no flow (Intermittent)

☐ Subsurface flow with isolated pools (Interstitial) ☐ Dry channel, no water (Ephemeral)

COMMENTS ____

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

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

STREAM GRADIENT ESTIMATE

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

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

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

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: ____ Distance from Evaluated Stream ____

☐ CWH Name: ____ Distance from Evaluated Stream ____

☐ EWH Name: ____ Distance from Evaluated Stream ____

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

USGS Quadrangle Name: ____ NRCS Soil Map Page: _ NRCS Soil Map Stream Order _

County: ____ Township / City: ____

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 2025-07-15 Quantity: 0

Photo-documentation Notes: ____

Elevated Turbidity? (Y/N): N Canopy (% open): 100

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _

Field Measures: Temp (°C) 0 Dissolved Oxygen (mg/l) _ pH (S.U.) 0 Conductivity (µmhos/cm) _

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

Additional comments/description of pollution impacts:

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) _ Species observed (if known): _

Frogs or Tadpoles Observed? (Y/N) _ Species observed (if known): _

Salamanders Observed? (Y/N) _ Species observed (if known): _

Aquatic Macroinvertebrates Observed? (Y/N) _ Species observed (if known): _

Comments Regarding Biology:

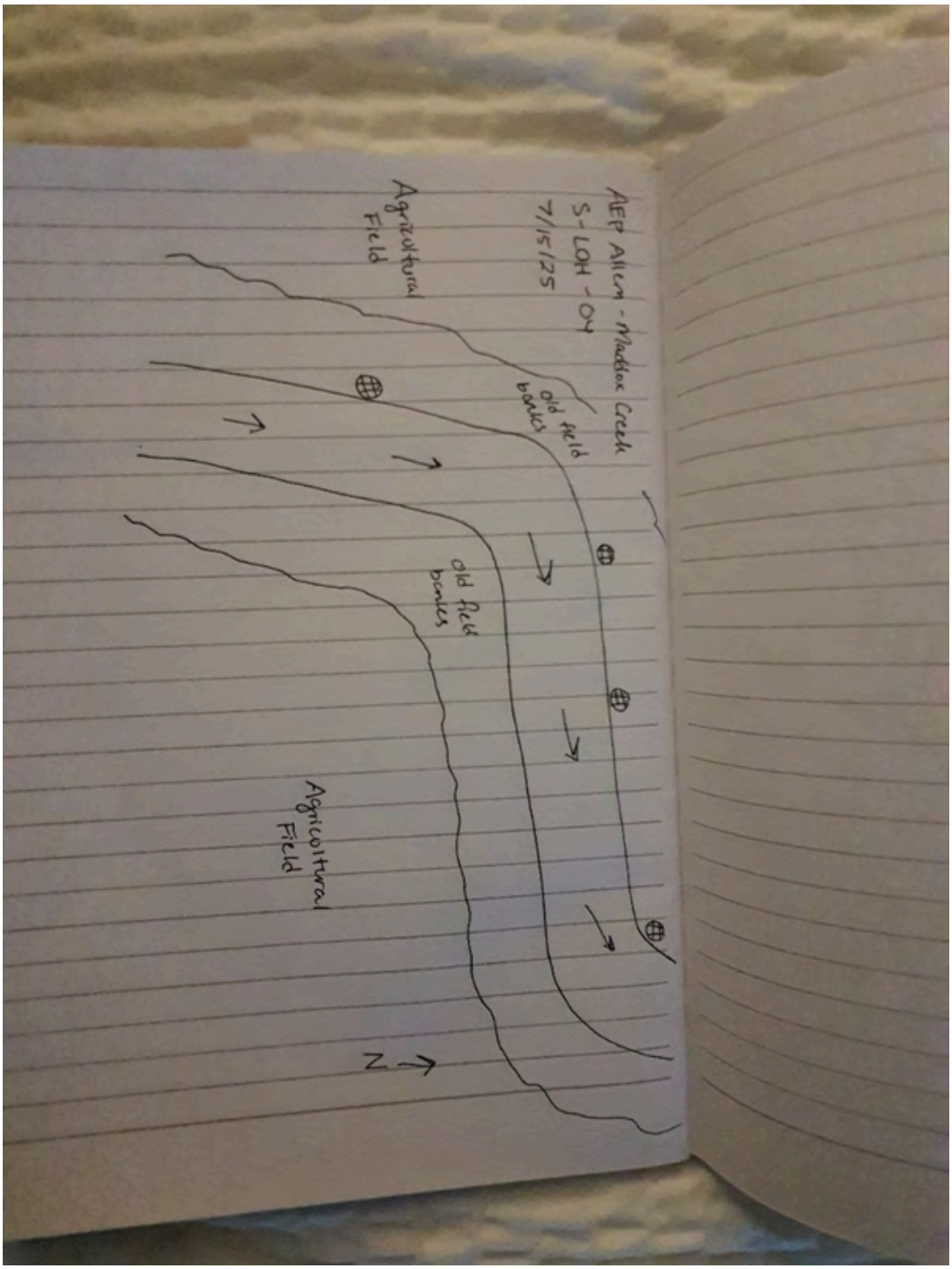
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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

FLOW →

SEE PAGE 3

SKETCH OF STREAM REACH: S-LOH-04



PHOTOLOG

Substrate: S-LOH-04



Upstream: S-LOH-04



Downstream: S-LOH-04



Left: S-LOH-04



Right: S-LOH-04



Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 29

Stream & Location: North Creek (S-LOH-05, S-LOH-06, S-LOH-07) **RM:** _____ **Date:** 2025-07-29

Scorers Full Name & Affiliation: Riley Bolt, TRC

River Code: **STORET #:** **Lat./Long.:** (NAD83 - decimal) 40.927076 / -84.698673 **Office verified location** ☐

1] *SUBSTRATE* Check ***ONLY* Two** substrate *TYPE BOXES;* estimate % or note every type present

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE
☐☐ BLDR/SLABS [10]			☒☐ HARDPAN [4]	60	0
☐☐ BOULDER [9]			☐☐ DETRITUS [3]		
☐☐ COBBLE [8]			☐☐ MUCK [2]		
☐☐ GRAVEL [7]			☐☒ SILT [2]	40	0
☐☐ SAND [6]			☐☐ ARTIFICIAL [0]		
☐☐ BEDROCK [5]					

(Score natural substrates; ignore sludge from point-sources)

NUMBER OF BEST TYPES: ☐ 4 or more [2] ☐ 3 or less [0]

Check ONE (*Or 2 & average*)

ORIGIN
- ☐ LIMESTONE [1]
- ☐ TILLS [1]
- ☐ WETLANDS [0]
- ☐ HARDPAN [0]
- ☐ SANDSTONE [0]
- ☐ RIP/RAP [0]
- ☐ LACUSTRINE [0]
- ☐ SHALE [-1]
- ☐ COAL FINES [-2]

QUALITY

SILT
- ☐ HEAVY [-2]
- ☐ MODERATE [-1]
- ☐ NORMAL [0]
- ☐ FREE [1]

EMBEDDEDNESS
- ☐ EXTENSIVE [-2]
- ☐ MODERATE [-1]
- ☐ NORMAL [0]
- ☐ NONE [1]

Substrate **6** *Maximum 20*

Comments

2] *INSTREAM COVER* Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

0	UNDERCUT BANKS [1]	0	POOLS > 70CM [2]	0	OXBOWS, BACKWATERS [1]
1	OVERHANGING VEGETATION [1]	0	ROOTWADS [1]	0	AQUATIC MACROPHYTES [1]
0	SHALLOWS (IN SLOW WATER) [1]	0	BOULDERS [1]	0	LOGS OR WOODY DEBRIS [1]
0	ROOTMATS [1]				

AMOUNT Check ONE (*Or 2 & average*)
- ☐ EXTENSIVE >75% [11]
- ☐ MODERATE 25-75% [7]
- ☐ SPARSE 5-<25% [3]
- ☒ NEARLY ABSENT <5% [1]

Comments

Cover Maximum 20 **2**

3] *CHANNEL MORPHOLOGY* Check ONE in each category (*Or 2 & average*)

SINUOSITY
- ☐ HIGH [4]
- ☐ MODERATE [3]
- ☒ LOW [2]
- ☐ NONE [1]

DEVELOPMENT
- ☐ EXCELLENT [7]
- ☐ GOOD [5]
- ☒ FAIR [3]
- ☐ POOR [1]

CHANNELIZATION
- ☐ NONE [6]
- ☐ RECOVERED [4]
- ☒ RECOVERING [3]
- ☐ RECENT OR NO RECOVERY [1]

STABILITY
- ☒ HIGH [3]
- ☐ MODERATE [2]
- ☐ LOW [1]

Comments

Channel Maximum 20 **11**

4] *BANK EROSION AND RIPARIAN ZONE* Check ONE in each category for *EACH BANK* (*Or 2 per bank & average*)

River right looking downstream

EROSION

L	R	
☒	☒	NONE / LITTLE [3]
☐	☐	MODERATE [2]
☐	☐	HEAVY / SEVERE [1]

RIPARIAN WIDTH

L	R	
☐	☐	WIDE > 50M [4]
☐	☐	MODERATE 10-50M [3]
☐	☐	NARROW 5-10M [2]
☒	☒	VERY NARROW < 5M [1]
☐	☐	NONE [0]

FLOOD PLAIN QUALITY

L	R	
☐	☐	FOREST, SWAMP [3]
☐	☐	SHRUB OR OLD FIELD [2]
☐	☐	RESIDENTIAL, PARK, NEW FIELD [1]
☐	☐	FENCED PASTURE [1]
☒	☒	OPEN PASTURE, ROWCROP [0]

L	R	
☐	☐	CONSERVATION TILLAGE [1]
☐	☐	URBAN OR INDUSTRIAL [0]
☐	☐	MINING / CONSTRUCTION [0]

Indicate predominant land use(s) past 100m riparian.

Comments

Riparian Maximum 10 **8**

5] *POOL / GLIDE AND RIFFLE / RUN QUALITY*

MAXIMUM DEPTH Check **ONE** (*ONLY!*)
- ☐ > 1M [6]
- ☐ 0.7-<1M [4]
- ☐ 0.4-<0.7 [2]
- ☐ 0.2-<0.4M [1]
- ☒ < 0.2M [0]

CHANNEL WIDTH Check ONE (*Or 2 & average*)
- ☐ POOL WIDTH > RIFFLE WIDTH [2]
- ☒ POOL WIDTH = RIFFLE WIDTH [1]
- ☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY Check ALL that apply
- ☐ TORRENTIAL [-1]
- ☐ VERY FAST [1]
- ☐ FAST [1]
- ☐ MODERATE [1]
- ☒ SLOW [1]
- ☐ INTERSTITIAL [-1]
- ☐ INTERMITTENT [-2]
- ☐ EDDIES [1]

Indicate for reach - pools and riffles.

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

Comments

Pool / Current Maximum 12 **2**

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (*Or 2 & average*).

RIFFLE DEPTH
- ☐ BEST AREAS >10CM [2]
- ☐ BEST AREAS 5-10CM [1]
- ☐ BEST AREAS <5CM [METRIC=0]

RUN DEPTH
- ☐ MAXIMUM > 50CM [2]
- ☐ MAXIMUM < 50CM [1]

RIFFLE / RUN SUBSTRATE
- ☐ STABLE (E.G., COBBLE, BOULDER) [2]
- ☐ MOD. STABLE (E.G., LARGE GRAVEL) [1]
- ☐ UNSTABLE (E.G., FINE GRAVEL, SAND) [0]

RIFFLE / RUN EMBEDDEDNESS
- ☐ NONE [2]
- ☐ LOW [1]
- ☐ MODERATE [0]
- ☐ EXTENSIVE [-1]

Comments

Riffle / Run Maximum 8 **0**

6] *GRADIENT* (ft/mi) **DRAINAGE AREA** (mi^2)
- ☐ VERY LOW - LOW [2-4]
- ☐ MODERATE [6-10]
- ☐ HIGH - VERY HIGH [10-6]

%POOL: 10 **%GLIDE:** 0 **%RUN:** 90 **%RIFFLE:** 0

Gradient Maximum 10 **0**

A] SAMPLED REACH

Check ALL that apply

Comment RE: Reach consistency/ Is reach typical of stream?, *Recreation/* Observed - Inferred, *Other/* Sampling observations, Concerns, Access directions, etc.

METHOD

- ☐ BOAT
- ☒ WADE
- ☐ L. LINE
- ☐ OTHER

STAGE

1st-sample	pass-2nd
☐ HIGH	☐
☐ UP	☐
☒ NORMAL	☐
☐ LOW	☐
☐ DRY	☐

DISTANCE

- ☒ 0.5 Km
- ☐ 0.2 Km
- ☐ 0.15 Km
- ☐ 0.12 Km
- ☐ OTHER

_____ meters

CLARITY

1st --sample pass--	2nd
☒ < 20 CM	☐
☐ 20-<40 CM	☐
☐ 40-70 CM	☐
☐ > 70 CM/ CTB	☐
☐ SECCHI DEPTH	☐

1st _____ cm

pass

2nd _____ cm

CANOPY

- ☒ > 85%- OPEN
- ☐ 55-<85%
- ☐ 30-<55%
- ☐ 10-<30%
- ☐ <10%- CLOSED

B] AESTHETICS

- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOS/SSOS/OUTFALLS

C] RECREATION

AREA DEPTH

POOL: ☐ >100ft² ☐ >3ft

D] MAINTENANCE

Circle some & *COMMENT*

PUBLIC / PRIVATE / BOTH / NA
ACTIVE / HISTORIC / BOTH / NA
YOUNG-SUCCESSION- OLD
SPRAY / SNAG / REMOVED
MODIFIED / DIPPED OUT / NA
LEVEED / ONE-SIDED
RELOCATED / CUTOFFS
MOVING-BEDLOAD- STABLE
ARMOURED / SLUMPS
ISLANDS / SCOURED
IMPOUNDED / DESICCATED
FLOOD CONTROL / DRAINAGE

E] EJ ISSUES

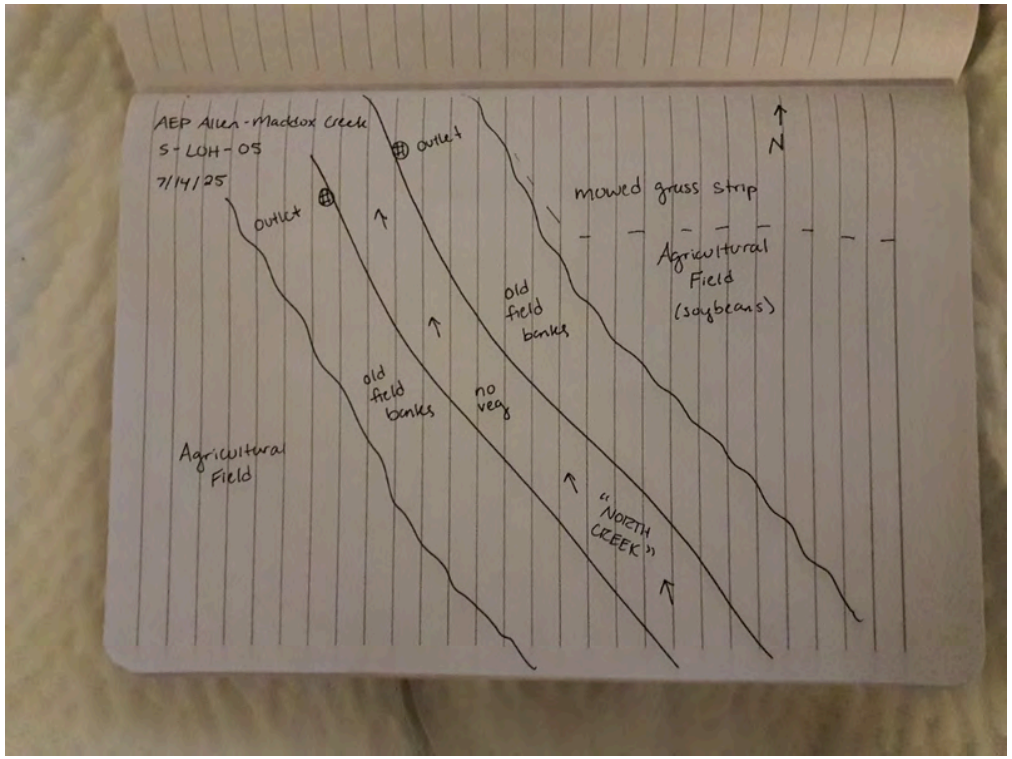
WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT & GRIM
CONTAMINATED / LANDFILL
BMPS-CONSTRUCTION- SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H_20 / TILE / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

- $\bar{x}$ **width** 3.5
- $\bar{x}$ **depth** 0.05
- **max. depth** 0.1
- $\bar{x}$ **bankfull width** 3
- **bankfull** $\bar{x}$ **depth** 1.8
- **W/D ratio** 70.000
- **bankfull max. depth** 2
- **floodprone** x^2 **width**
- **entrench. ratio**

Legacy Tree:

Stream Drawing:



PHOTOS: S-LOH-05, S-LOH-06, S-LOH-07





Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : **45**

SITE NAME/LOCATION S-LOH-08. AEP - Allen-Maddox Creek.

SITE NUMBER 08 RIVER CODE ____ RIVER BASIN ____ DRAINAGE AREA (mi^2) 0.607

LENGTH OF STREAM REACH (ft) ____ LAT. 40.9273621 LONG. -84.6677453 RIVER MILE ____

DATE 2025-07-15 SCORER LOH COMMENTS Narrow, shallow thalweg bordered by hydrophytes

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

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

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

TYPE		PERCENT	TYPE		PERCENT
☐ ☐	BLDR SLABS **[16 pts]**	0	☑ ☐	SILT **[3 pts]**	50
☐ ☐	BOULDER (>256 mm) **[16 pts]**	0	☐ ☐	LEAF PACK/WOODY DEBRIS **[3 pts]**	0
☐ ☐	BEDROCK **[16 pts]**	0	☐ ☐	FINE DETRITUS **[3 pts]**	0
☐ ☐	COBBLE (65-256 mm) **[12 pts]**	0	☐ ☑	CLAY or HARDPAN **[0 pts]**	50
☐ ☐	GRAVEL (2-64 mm) **[9 pts]**	0	☐ ☐	MUCK **[0 pts]**	0
☐ ☐	SAND (<2 mm) **[6 pts]**	0	☐ ☐	ARTIFICIAL **[3 pts]**	0

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 **(A)**

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3

(B) **TOTAL NUMBER OF SUBSTRATE TYPES:** 2

HHEI Metric Points

Substrate Max = 40

5

A + B

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

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

COMMENTS____

MAXIMUM POOL DEPTH (centimeters): 7.5

Pool Depth Max = 30

15

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

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

COMMENTS____

AVERAGE BANKFULL WIDTH (meters): 4

Bankfull Width Max=30

25

This information must also be completed

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

RIPARIAN WIDTH (Per Bank)

L	R	
☐	☐	Wide >10m
☐	☐	Moderate 5-10m
☑	☐	Narrow <5m
☐	☑	None

COMMENTS ____

FLOODPLAIN QUALITY (Most Predominant per Bank)

L	R	
☐	☐	Mature Forest, Wetland
☐	☐	Immature Forest, Shrub or Old Field
☐	☐	Residential, Park, New Field
☐	☐	Fenced Pasture

L	R	
☐	☐	Conservation Tillage
☐	☑	Urban or Industrial
☑	☐	Open Pasture, Row Crop
☐	☐	Mining or Construction

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

☑ Stream Flowing ☐ Moist Channel, isolated pools, no flow (Intermittent)

☐ Subsurface flow with isolated pools (Interstitial) ☐ Dry channel, no water (Ephemeral)

COMMENTS ____

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

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

STREAM GRADIENT ESTIMATE

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

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

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

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: ____ Distance from Evaluated Stream ____

☐ CWH Name: ____ Distance from Evaluated Stream ____

☐ EWH Name: ____ Distance from Evaluated Stream ____

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

USGS Quadrangle Name: ____ NRCS Soil Map Page: _ NRCS Soil Map Stream Order _

County: ____ Township / City: ____

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 2025-07-12 Quantity: 0

Photo-documentation Notes: ____

Elevated Turbidity? (Y/N): N Canopy (% open): 100

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _

Field Measures: Temp (°C) 95.7 Dissolved Oxygen (mg/l) _ pH (S.U.) 8.27 Conductivity (µmhos/cm) _

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

Additional comments/description of pollution impacts:

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) _ Species observed (if known): _

Frogs or Tadpoles Observed? (Y/N) _ Species observed (if known): _

Salamanders Observed? (Y/N) _ Species observed (if known): _

Aquatic Macroinvertebrates Observed? (Y/N) _ Species observed (if known): _

Comments Regarding Biology:

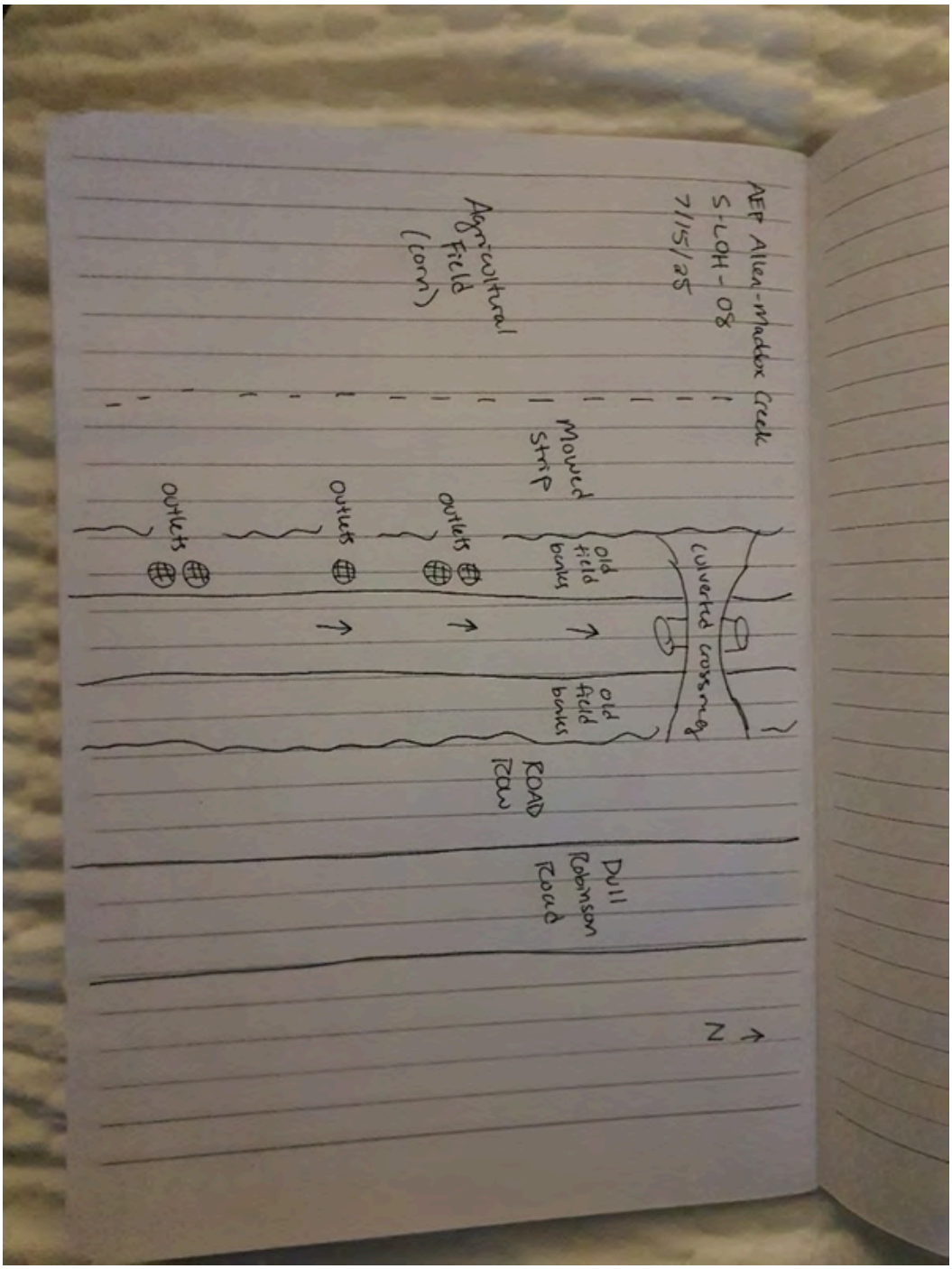
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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

FLOW →

SEE PAGE 3

SKETCH OF STREAM REACH: S-LOH-08



PHOTOLOG

Substrate: S-LOH-08



Upstream: S-LOH-08



Downstream: S-LOH-08



Left: S-LOH-08



Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 50

Stream & Location: Hoaglin Creek (S-LOH-09) **RM:** **Date:** 2025-07-16

Scorers Full Name & Affiliation: Riley Bolt, TRC

River Code: **STORET #:** **Lat./Long.:** (NAD83 - decimal) 40.927596 / -84.592290 **Office verified location** ☐

1] *SUBSTRATE* Check ***ONLY* Two** substrate *TYPE BOXES;* estimate % or note every type present

Check ONE (*Or 2 & average*)

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE	ORIGIN	QUALITY
☐☐ BLDR/SLABS [10]			☒☐ HARDPAN [4]	60	0	☐ LIMESTONE [1]	☐ HEAVY [-2]
☐☐ BOULDER [9]			☐☐ DETRITUS [3]			☒ TILLS [1]	☒ MODERATE [-1]
☐☒ COBBLE [8]	10	30	☐☐ MUCK [2]			☐ WETLANDS [0]	☐ NORMAL [0]
☐☐ GRAVEL [7]			☐☐ SILT [2]			☐ HARDPAN [0]	☐ FREE [1]
☐☐ SAND [6]			☐☐ ARTIFICIAL [0]			☐ SANDSTONE [0]	SILT
☐☐ BEDROCK [5]			(Score natural substrates; ignore sludge from point-sources)			☐ RIP/RAP [0]	☐ EXTENSIVE [-2]
						☐ LACUSTRINE [0]	☒ MODERATE [-1]
						☐ SHALE [-1]	☐ NORMAL [0]
						☐ COAL FINES [-2]	☐ NONE [1]

EMBEDDEDNESS

NUMBER OF BEST TYPES: ☐ 4 or more [2] ☒ 3 or less [0]

Substrate **11** *Maximum 20*

Comments

2] *INSTREAM COVER* Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

0	UNDERCUT BANKS [1]	1	POOLS > 70CM [2]	0	OXBOWS, BACKWATERS [1]	**AMOUNT** Check ONE (*Or 2 & average*)	
2	OVERHANGING VEGETATION [1]	0	ROOTWADS [1]	0	AQUATIC MACROPHYTES [1]	☐ EXTENSIVE >75% [11]	
0	SHALLOWS (IN SLOW WATER) [1]	0	BOULDERS [1]	0	LOGS OR WOODY DEBRIS [1]	☐ MODERATE 25-75% [7]	
0	ROOTMATS [1]					☒ SPARSE 5-<25% [3]	
						☐ NEARLY ABSENT <5% [1]	

Comments

Cover Maximum 20 **6**

3] *CHANNEL MORPHOLOGY* Check ONE in each category (*Or 2 & average*)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐ HIGH [4]	☐ EXCELLENT [7]	☐ NONE [6]	☒ HIGH [3]
☐ MODERATE [3]	☒ GOOD [5]	☒ RECOVERED [4]	☐ MODERATE [2]
☒ LOW [2]	☐ FAIR [3]	☐ RECOVERING [3]	☐ LOW [1]
☐ NONE [1]	☐ POOR [1]	☐ RECENT OR NO RECOVERY [1]	

Comments

Channel Maximum 20 **14**

4] *BANK EROSION AND RIPARIAN ZONE* Check ONE in each category for *EACH BANK* (*Or 2 per bank & average*)

River right looking downstream

L R EROSION	L R RIPARIAN WIDTH	L R FLOOD PLAIN QUALITY	L R
☒☒ NONE / LITTLE [3]	☐☐ WIDE > 50M [4]	☐☒ FOREST, SWAMP [3]	☐☒ CONSERVATION TILLAGE [1]
☐☐ MODERATE [2]	☐☐ MODERATE 10-50M [3]	☐☐ SHRUB OR OLD FIELD [2]	☐☐ URBAN OR INDUSTRIAL [0]
☐☐ HEAVY / SEVERE [1]	☒☒ NARROW 5-10M [2]	☐☐ RESIDENTIAL, PARK, NEW FIELD [1]	☐☐ MINING / CONSTRUCTION [0]
	☐☐ VERY NARROW < 5M [1]	☐☐ FENCED PASTURE [1]	
	☐☐ NONE [0]	☒☐ OPEN PASTURE, ROWCROP [0]	

Indicate predominant land use(s) past 100m riparian.

Comments

Riparian Maximum 10 **10**

5] *POOL / GLIDE AND RIFFLE / RUN QUALITY*

MAXIMUM DEPTH Check **ONE** (*ONLY!*)	CHANNEL WIDTH Check ONE (*Or 2 & average*)	CURRENT VELOCITY Check ALL that apply	
☐ > 1M [6]	☐ POOL WIDTH > RIFFLE WIDTH [2]	☐ TORRENTIAL [-1]	☒ SLOW [1]
☐ 0.7-<1M [4]	☒ POOL WIDTH = RIFFLE WIDTH [1]	☐ VERY FAST [1]	☐ INTERSTITIAL [-1]
☒ 0.4-<0.7 [2]	☐ POOL WIDTH < RIFFLE WIDTH [0]	☐ FAST [1]	☐ INTERMITTENT [-2]
☐ 0.2-<0.4M [1]		☐ MODERATE [1]	☐ EDDIES [1]
☐ < 0.2M [0]		*Indicate for reach - pools and riffles.*	

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

Comments

Pool / Current Maximum 12 **4**

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (*Or 2 & average*).

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐ BEST AREAS >10CM [2]	☒ MAXIMUM > 50CM [2]	☒ STABLE (E.G., COBBLE, BOULDER) [2]	☐ NONE [2]
☒ BEST AREAS 5-10CM [1]	☐ MAXIMUM < 50CM [1]	☐ MOD. STABLE (E.G., LARGE GRAVEL) [1]	☐ LOW [1]
☐ BEST AREAS <5CM [METRIC=0]		☐ UNSTABLE (E.G., FINE GRAVEL, SAND) [0]	☒ MODERATE [0]
			☐ EXTENSIVE [-1]

Comments

Riffle / Run Maximum 8 **5**

6] *GRADIENT* (ft/mi) **DRAINAGE AREA** (mi^2)

☐ VERY LOW - LOW [2-4] ☐ MODERATE [6-10] ☐ HIGH - VERY HIGH [10-6]

%POOL: 10 **%GLIDE:** 0 **%RUN:** 80 **%RIFFLE:** 10

Gradient Maximum 10 **0**

A] SAMPLED REACH

Check ALL that apply

Comment RE: Reach consistency/ Is reach typical of stream?, *Recreation/* Observed - Inferred, *Other/* Sampling observations, Concerns, Access directions, etc.

METHOD

- ☐ BOAT
- ☒ WADE
- ☐ L. LINE
- ☐ OTHER

STAGE

1st-sample pass-2nd

- ☐ HIGH ☐
- ☐ UP ☐
- ☒ NORMAL ☐
- ☐ LOW ☐
- ☐ DRY ☐

DISTANCE

- ☒ 0.5 Km
- ☐ 0.2 Km
- ☐ 0.15 Km
- ☐ 0.12 Km
- ☐ OTHER

_____ meters

CLARITY

1st --sample pass-- 2nd

- ☒ < 20 CM ☐
- ☐ 20-<40 CM ☐
- ☐ 40-70 CM ☐
- ☐ > 70 CM/ CTB ☐
- ☐ SECCHI DEPTH ☐

pass

1st _____ cm

2nd _____ cm

CANOPY

- ☐ > 85%- OPEN
- ☒ 55-<85%
- ☐ 30-<55%
- ☐ 10-<30%
- ☐ <10%- CLOSED

B] AESTHETICS

- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOS/SSOS/OUTFALLS

C] RECREATION

AREA DEPTH

POOL: ☐ >100ft² ☐ >3ft

D] MAINTENANCE

Circle some & *COMMENT*

PUBLIC / PRIVATE / BOTH / (NA)
ACTIVE / HISTORIC / BOTH / NA
YOUNG-SUCCESSION- OLD
SPRAY / SNAG / REMOVED
MODIFIED / DIPPED OUT / NA
LEVEED / ONE-SIDED
RELOCATED / CUTOFFS
MOVING-BEDLOAD- STABLE
ARMOURED / SLUMPS
ISLANDS / SCOURED
IMPOUNDED / DESICCATED
FLOOD CONTROL / DRAINAGE

E] EJ ISSUES

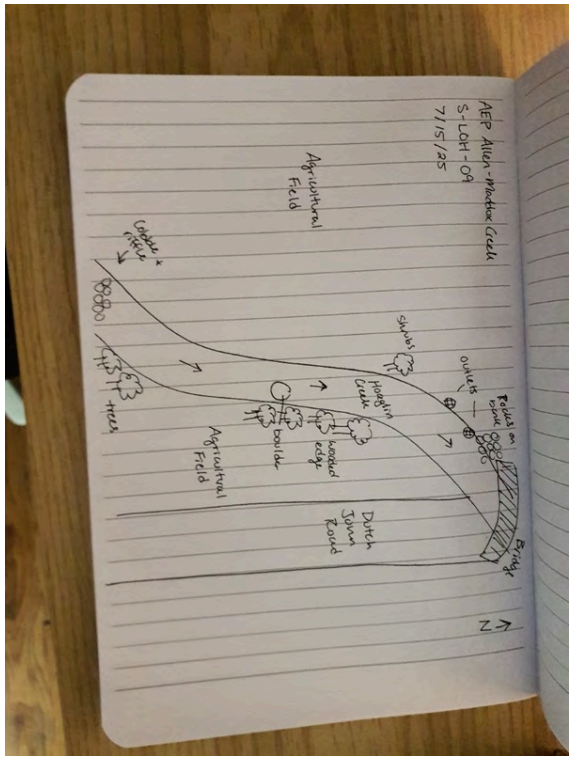
WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT & GRIM
CONTAMINATED / LANDFILL
BMPS-CONSTRUCTION- SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H_20 / TILE / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

- **x̄ width** 7.3
- **x̄ depth** 0.3
- **max. depth** 0.5
- **x̄ bankfull width** 11.5
- **bankfull x̄ depth** 5
- **W/D ratio** 24.333
- **bankfull max. depth** 6
- **floodprone x^2 width**
- **entrench. ratio**

Legacy Tree:

Stream Drawing:



PHOTOS: S-LOH-09







Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 24

Stream & Location: (S-LOH-10) **RM:** **Date:** 2025-07-29

Scorers Full Name & Affiliation: Riley Bolt, TRC

River Code: **STORET #:** **Lat./Long.:** (NAD83 - decimal) 40.927527 / -84.591258 **Office verified location** ☐

1] *SUBSTRATE* Check ***ONLY* Two** substrate *TYPE BOXES;* estimate % or note every type present

Check ONE (*Or 2 & average*)

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE	ORIGIN	QUALITY
☐☐BLDR/SLABS [10]			☐☒HARDPAN [4]	50	0	☐LIMESTONE [1]	☐HEAVY [-2]
☐☐BOULDER [9]			☐☐DETRITUS [3]			☐TILLS [1]	☐MODERATE [-1]
☐☐COBBLE [8]			☐☐MUCK [2]			☐WETLANDS [0]	☐NORMAL [0]
☐☐GRAVEL [7]			☒☐SILT [2]	50	0	☐HARDPAN [0]	☐FREE [1]
☐☐SAND [6]			☐☐ARTIFICIAL [0]			☐SANDSTONE [0]	
☐☐BEDROCK [5]						☐RIP/RAP [0]	

SILT

EMBEDDEDNESS

	☐EXTENSIVE [-2]
	☐MODERATE [-1]
	☐NORMAL [0]
	☐NONE [1]

(Score natural substrates; ignore sludge from point-sources)

NUMBER OF BEST TYPES: ☐4 or more [2] ☐3 or less [0]

Substrate Maximum 20 **6**

Comments

2] *INSTREAM COVER* Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

0	UNDERCUT BANKS [1]	0	POOLS > 70CM [2]	0	OXBOWS, BACKWATERS [1]	**AMOUNT** Check ONE (*Or 2 & average*)	
1	OVERHANGING VEGETATION [1]	0	ROOTWADS [1]	0	AQUATIC MACROPHYTES [1]	☐EXTENSIVE >75% [11]	
0	SHALLOWS (IN SLOW WATER) [1]	0	BOULDERS [1]	0	LOGS OR WOODY DEBRIS [1]	☐MODERATE 25-75% [7]	
0	ROOTMATS [1]					☐SPARSE 5-<25% [3]	
						☐NEARLY ABSENT <5% [1]	

Comments

Cover Maximum 20 **1**

3] *CHANNEL MORPHOLOGY* Check ONE in each category (*Or 2 & average*)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐HIGH [4]	☐EXCELLENT [7]	☐NONE [6]	☐HIGH [3]
☐MODERATE [3]	☐GOOD [5]	☐RECOVERED [4]	☒MODERATE [2]
☐LOW [2]	☒FAIR [3]	☒RECOVERING [3]	☐LOW [1]
☒NONE [1]	☐POOR [1]	☐RECENT OR NO RECOVERY [1]	

Comments

Channel Maximum 20 **9**

4] *BANK EROSION AND RIPARIAN ZONE* Check ONE in each category for *EACH BANK* (*Or 2 per bank & average*)

River right looking downstream

EROSION (L R)	RIPARIAN WIDTH (L R)	FLOOD PLAIN QUALITY (L R)	(L R)
☒☒NONE / LITTLE [3]	☐☐WIDE > 50M [4]	☐☐FOREST, SWAMP [3]	☐☐CONSERVATION TILLAGE [1]
☐☐MODERATE [2]	☐☐MODERATE 10-50M [3]	☐☐SHRUB OR OLD FIELD [2]	☒☐URBAN OR INDUSTRIAL [0]
☐☐HEAVY / SEVERE [1]	☐☐NARROW 5-10M [2]	☐☐RESIDENTIAL, PARK, NEW FIELD [1]	☐☐MINING / CONSTRUCTION [0]
	☒☒VERY NARROW < 5M [1]	☐☐FENCED PASTURE [1]	
	☐☐NONE [0]	☐☒OPEN PASTURE, ROWCROP [0]	

Indicate predominant land use(s) past 100m riparian.

Comments

Riparian Maximum 10 **8**

5] *POOL / GLIDE AND RIFFLE / RUN QUALITY*

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

MAXIMUM DEPTH Check **ONE** (*ONLY!*)	CHANNEL WIDTH Check ONE (*Or 2 & average*)	CURRENT VELOCITY Check ALL that apply	
☐> 1M [6]	☐POOL WIDTH > RIFFLE WIDTH [2]	☐TORRENTIAL [-1]	☐SLOW [1]
☐0.7-<1M [4]	☒POOL WIDTH = RIFFLE WIDTH [1]	☐VERY FAST [1]	☒INTERSTITIAL [-1]
☐0.4-<0.7 [2]	☐POOL WIDTH < RIFFLE WIDTH [0]	☐FAST [1]	☐INTERMITTENT [-2]
☐0.2-<0.4M [1]		☐MODERATE [1]	☐EDDIES [1]
☒< 0.2M [0]		*Indicate for reach - pools and riffles.*	

Comments

Pool / Current Maximum 12 **0**

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (*Or 2 & average*).

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐BEST AREAS >10CM [2]	☐MAXIMUM > 50CM [2]	☐STABLE (E.G., COBBLE, BOULDER) [2]	☐NONE [2]
☐BEST AREAS 5-10CM [1]	☐MAXIMUM < 50CM [1]	☐MOD. STABLE (E.G., LARGE GRAVEL) [1]	☐LOW [1]
☐BEST AREAS <5CM [METRIC=0]		☐UNSTABLE (E.G., FINE GRAVEL, SAND) [0]	☐MODERATE [0] ☐EXTENSIVE [-1]

Comments

Riffle / Run Maximum 8 **0**

6] *GRADIENT* (ft/mi) **DRAINAGE AREA** (mi^2)

☐VERY LOW - LOW [2-4] ☐MODERATE [6-10] ☐HIGH - VERY HIGH [10-6]

%POOL: 5 **%GLIDE:** 0 **%RUN:** 95 **%RIFFLE:** 0

Gradient Maximum 10 **0**

A] SAMPLED REACH

Check ALL that apply

Comment RE: Reach consistency/ Is reach typical of stream?, *Recreation/* Observed - Inferred, *Other/* Sampling observations, Concerns, Access directions, etc.

METHOD

- ☐ BOAT
- ☒ WADE
- ☐ L. LINE
- ☐ OTHER

STAGE

1st-sample pass-2nd

- ☐ HIGH ☐
- ☐ UP ☐
- ☒ NORMAL ☐
- ☐ LOW ☐
- ☐ DRY ☐

DISTANCE

- ☒ 0.5 Km
- ☐ 0.2 Km
- ☐ 0.15 Km
- ☐ 0.12 Km
- ☐ OTHER

_____ meters

CLARITY

1st --sample pass-- 2nd

- ☒ < 20 CM ☐
- ☐ 20-<40 CM ☐
- ☐ 40-70 CM ☐
- ☐ > 70 CM/ CTB ☐
- ☐ SECCHI DEPTH ☐

pass

1st _____ cm

2nd _____ cm

CANOPY

- ☒ > 85%- OPEN
- ☐ 55-<85%
- ☐ 30-<55%
- ☐ 10-<30%
- ☐ <10%- CLOSED

B] AESTHETICS

- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOS/SSOS/OUTFALLS

C] RECREATION

AREA DEPTH

POOL: ☐ >100ft² ☐ >3ft

D] MAINTENANCE

Circle some & *COMMENT*

PUBLIC / PRIVATE / BOTH / NA
ACTIVE / HISTORIC / BOTH / NA
YOUNG-SUCCESSION- OLD
SPRAY / SNAG / REMOVED
MODIFIED / DIPPED OUT / NA
LEVEED / ONE-SIDED
RELOCATED / CUTOFFS
MOVING-BEDLOAD- STABLE
ARMOURED / SLUMPS
ISLANDS / SCOURED
IMPOUNDED / DESICCATED
FLOOD CONTROL / DRAINAGE

E] EJ ISSUES

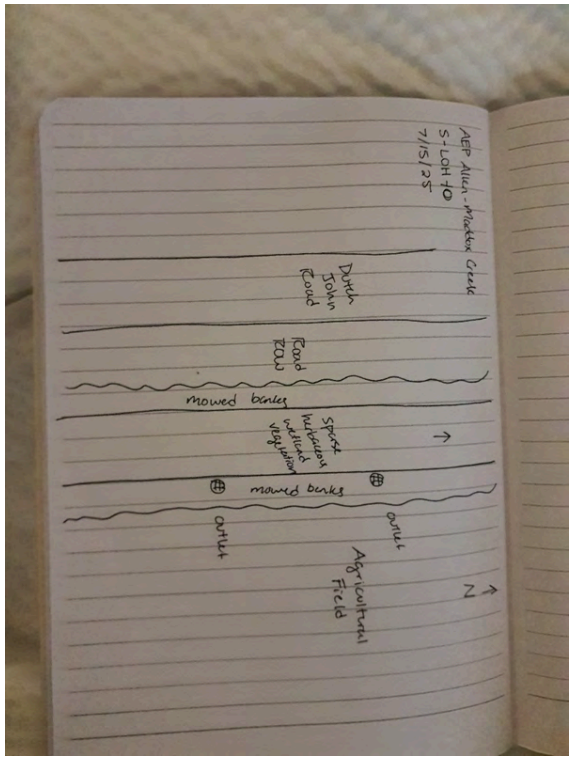
WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT & GRIM
CONTAMINATED / LANDFILL
BMPS-CONSTRUCTION- SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H_20 / TILE / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

- **$\bar{x}$ width** 0.9
- **$\bar{x}$ depth** 0.05
- **max. depth** 0.07
- **$\bar{x}$ bankfull width** 1.5
- **bankfull $\bar{x}$ depth** 1.2
- **W/D ratio** 18.000
- **bankfull max. depth** 1.5
- **floodprone x^2 width**
- **entrench. ratio**

Legacy Tree:

Stream Drawing:



PHOTOS: S-LOH-10









Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : **30**

SITE NAME/LOCATION S-LOH-11. AEP - Allen-Maddox Creek.

SITE NUMBER 11 RIVER CODE ____ RIVER BASIN ____ DRAINAGE AREA (mi^2) 0.07

LENGTH OF STREAM REACH (ft) ____ LAT. 40.9274468745 LONG. -84.6581399957 RIVER MILE ____

DATE 2025-07-16 SCORER LOH COMMENTS ____

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

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

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

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS **[16 pts]**	0	☑	SILT **[3 pts]**	50
☐	BOULDER (>256 mm) **[16 pts]**	0	☐	LEAF PACK/WOODY DEBRIS **[3 pts]**	0
☐	BEDROCK **[16 pts]**	0	☐	FINE DETRITUS **[3 pts]**	0
☐	COBBLE (65-256 mm) **[12 pts]**	0	☑	CLAY or HARDPAN **[0 pts]**	50
☐	GRAVEL (2-64 mm) **[9 pts]**	0	☐	MUCK **[0 pts]**	0
☐	SAND (<2 mm) **[6 pts]**	0	☐	ARTIFICIAL **[3 pts]**	0

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 **(A)**

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3

(B) **TOTAL NUMBER OF SUBSTRATE TYPES:** 2

HHEI Metric Points

Substrate Max = 40

5

A + B

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

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

COMMENTS No pools observed

MAXIMUM POOL DEPTH (centimeters): 0

Pool Depth Max = 30

0

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

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

COMMENTS ____

AVERAGE BANKFULL WIDTH (meters): 4

Bankfull Width Max=30

25

This information must also be completed

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

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

COMMENTS ____

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

☐ Stream Flowing ☑ Moist Channel, isolated pools, no flow (Intermittent)

☐ Subsurface flow with isolated pools (Interstitial) ☐ Dry channel, no water (Ephemeral)

COMMENTS ____

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

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

STREAM GRADIENT ESTIMATE

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

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

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

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: ____ Distance from Evaluated Stream ____

☐ CWH Name: ____ Distance from Evaluated Stream ____

☐ EWH Name: ____ Distance from Evaluated Stream ____

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

USGS Quadrangle Name: ____ NRCS Soil Map Page: _ NRCS Soil Map Stream Order _

County: ____ Township / City: ____

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 2025-07-15 Quantity: 0

Photo-documentation Notes: ____

Elevated Turbidity? (Y/N): N Canopy (% open): 100

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _

Field Measures: Temp (°C) 0 Dissolved Oxygen (mg/l) _ pH (S.U.) 0 Conductivity (µmhos/cm) _

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

Additional comments/description of pollution impacts:

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) _ Species observed (if known): _

Frogs or Tadpoles Observed? (Y/N) _ Species observed (if known): _

Salamanders Observed? (Y/N) _ Species observed (if known): _

Aquatic Macroinvertebrates Observed? (Y/N) _ Species observed (if known): _

Comments Regarding Biology:

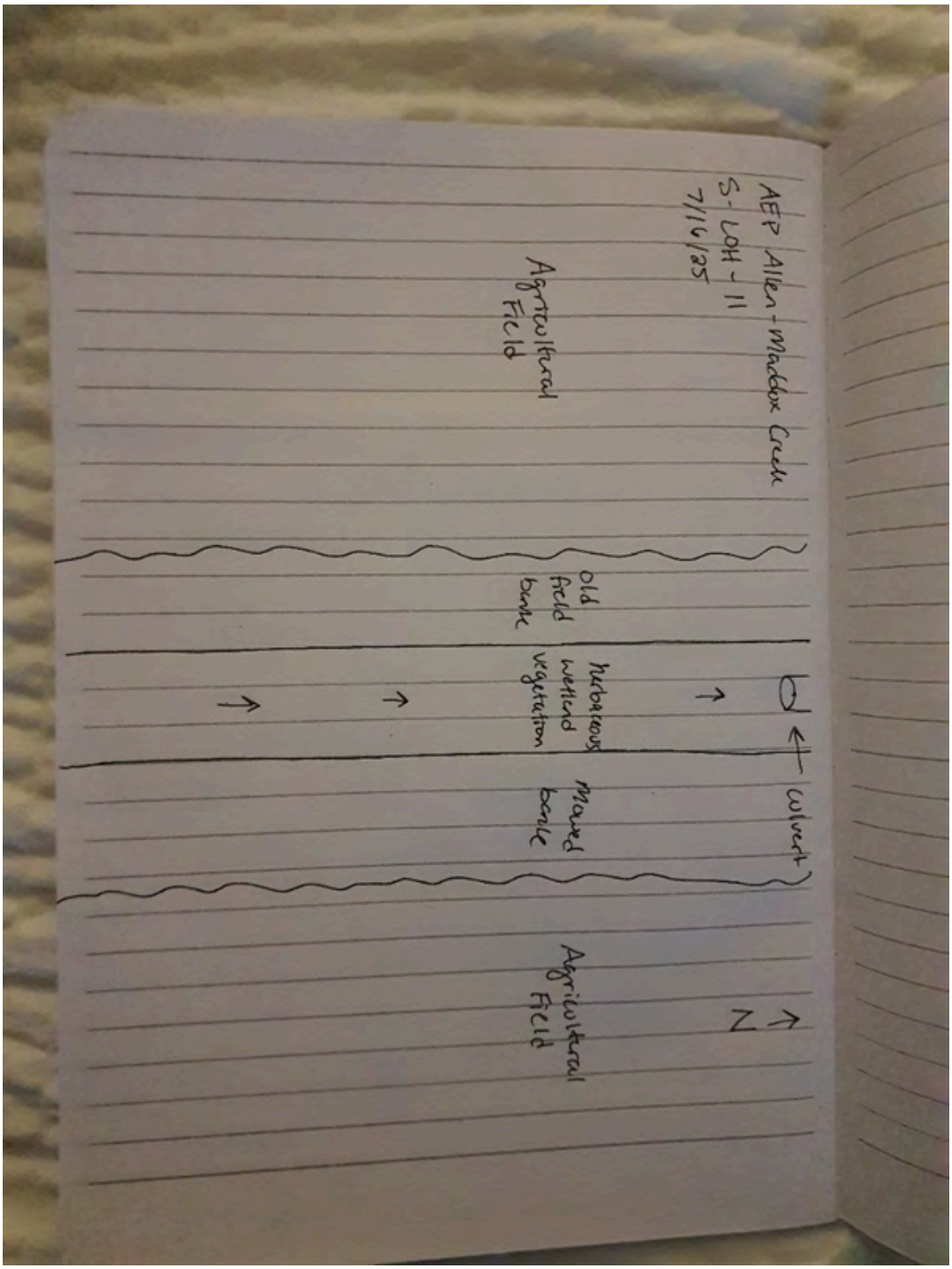
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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

FLOW →

SEE PAGE 3

SKETCH OF STREAM REACH: S-LOH-11



PHOTOLOG

Substrate: S-LOH-11



Upstream: S-LOH-11



Downstream: S-LOH-11



Left: S-LOH-11



Right: S-LOH-11



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : **20**

SITE NAME/LOCATION S-LOH-12. AEP - Allen-Maddox Creek.

SITE NUMBER 12 RIVER CODE ____ RIVER BASIN ____ DRAINAGE AREA (mi^2) 0.399

LENGTH OF STREAM REACH (ft) ____ LAT. 40.9257197625 LONG. -84.6489259636 RIVER MILE ____

DATE 2025-07-16 SCORER LOH COMMENTS No water, herbaceous wetland veg and unvegetaed areas in stream. West bank was mowed rece

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

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

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

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS **[16 pts]**	0	☑	SILT **[3 pts]**	50
☐	BOULDER (>256 mm) **[16 pts]**	0	☐	LEAF PACK/WOODY DEBRIS **[3 pts]**	0
☐	BEDROCK **[16 pts]**	0	☐	FINE DETRITUS **[3 pts]**	0
☐	COBBLE (65-256 mm) **[12 pts]**	0	☑	CLAY or HARDPAN **[0 pts]**	50
☐	GRAVEL (2-64 mm) **[9 pts]**	0	☐	MUCK **[0 pts]**	0
☐	SAND (<2 mm) **[6 pts]**	0	☐	ARTIFICIAL **[3 pts]**	0

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 **(A)**

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3

(B) **TOTAL NUMBER OF SUBSTRATE TYPES:** 2

HHEI Metric Points

Substrate Max = 40

5

A + B

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

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

COMMENTS No pools observed at time

MAXIMUM POOL DEPTH (centimeters): 0

Pool Depth Max = 30

0

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

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

COMMENTS ____

AVERAGE BANKFULL WIDTH (meters): 1.5

Bankfull Width Max=30

15

This information must also be completed

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

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

COMMENTS Right is road ROW, mowed

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

☐ Stream Flowing ☑ Moist Channel, isolated pools, no flow (Intermittent)

☐ Subsurface flow with isolated pools (Interstitial) ☐ Dry channel, no water (Ephemeral)

COMMENTS ____

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

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

STREAM GRADIENT ESTIMATE

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

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

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

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: ____ Distance from Evaluated Stream ____

☐ CWH Name: ____ Distance from Evaluated Stream ____

☐ EWH Name: ____ Distance from Evaluated Stream ____

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

USGS Quadrangle Name: ____ NRCS Soil Map Page: _ NRCS Soil Map Stream Order _

County: ____ Township / City: ____

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 2025-07-15 Quantity: 0

Photo-documentation Notes: ____

Elevated Turbidity? (Y/N): N Canopy (% open): 100

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _

Field Measures: Temp (° C) 0 Dissolved Oxygen (mg/l) _ pH (S.U.) 0 Conductivity (µmhos/cm) _

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

Additional comments/description of pollution impacts:

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) _ Species observed (if known): _

Frogs or Tadpoles Observed? (Y/N) _ Species observed (if known): _

Salamanders Observed? (Y/N) _ Species observed (if known): _

Aquatic Macroinvertebrates Observed? (Y/N) _ Species observed (if known): _

Comments Regarding Biology:

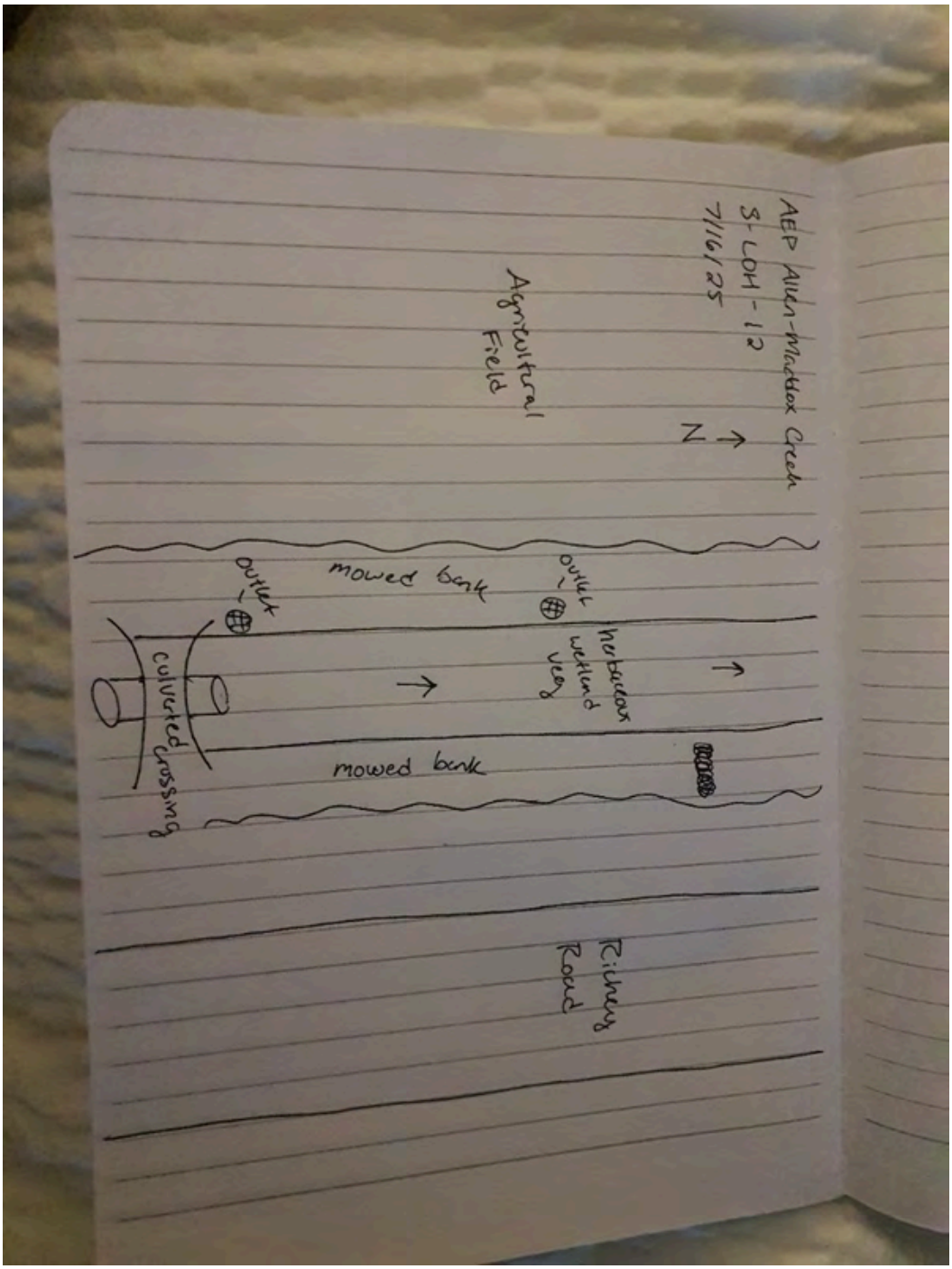
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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

FLOW →

SEE PAGE 3

SKETCH OF STREAM REACH: S-LOH-12



PHOTOLOG

Substrate: S-LOH-12





Upstream: S-LOH-12



Downstream: S-LOH-12



Left: S-LOH-12



Right: S-LOH-12



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : **30**

SITE NAME/LOCATION S-LOH-13. AEP - Allen-Maddox Creek.

SITE NUMBER 13 RIVER CODE ____ RIVER BASIN ____ DRAINAGE AREA (mi^2) 0.16

LENGTH OF STREAM REACH (ft) ____ LAT. 40.9270989 LONG. -84.6378122 RIVER MILE ____

DATE 2025-07-16 SCORER LOH COMMENTS Moist channel bordered by hydrophytes

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

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

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

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS **[16 pts]**	0	☑	SILT **[3 pts]**	50
☐	BOULDER (>256 mm) **[16 pts]**	0	☐	LEAF PACK/WOODY DEBRIS **[3 pts]**	0
☐	BEDROCK **[16 pts]**	0	☐	FINE DETRITUS **[3 pts]**	0
☐	COBBLE (65-256 mm) **[12 pts]**	0	☑	CLAY or HARDPAN **[0 pts]**	50
☐	GRAVEL (2-64 mm) **[9 pts]**	0	☐	MUCK **[0 pts]**	0
☐	SAND (<2 mm) **[6 pts]**	0	☐	ARTIFICIAL **[3 pts]**	0

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 **(A)**

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3

(B) **TOTAL NUMBER OF SUBSTRATE TYPES:** 2

HHEI Metric Points

Substrate Max = 40

5

A + B

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

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

COMMENTS No water

MAXIMUM POOL DEPTH (centimeters): 0

Pool Depth Max = 30

0

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

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

COMMENTS ____

AVERAGE BANKFULL WIDTH (meters): 4

Bankfull Width Max=30

25

This information must also be completed

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

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

COMMENTS ____

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

☐ Stream Flowing ☑ Moist Channel, isolated pools, no flow (Intermittent)

☐ Subsurface flow with isolated pools (Interstitial) ☐ Dry channel, no water (Ephemeral)

COMMENTS ____

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

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

STREAM GRADIENT ESTIMATE

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

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

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

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: ____ Distance from Evaluated Stream ____

☐ CWH Name: ____ Distance from Evaluated Stream ____

☐ EWH Name: ____ Distance from Evaluated Stream ____

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

USGS Quadrangle Name: ____ NRCS Soil Map Page: _ NRCS Soil Map Stream Order _

County: ____ Township / City: ____

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 2025-07-15 Quantity: 0

Photo-documentation Notes: ____

Elevated Turbidity? (Y/N): N Canopy (% open): 100

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _

Field Measures: Temp (°C) 0 Dissolved Oxygen (mg/l) _ pH (S.U.) 0 Conductivity (µmhos/cm) _

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

Additional comments/description of pollution impacts:

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) _ Species observed (if known): _

Frogs or Tadpoles Observed? (Y/N) _ Species observed (if known): _

Salamanders Observed? (Y/N) _ Species observed (if known): _

Aquatic Macroinvertebrates Observed? (Y/N) _ Species observed (if known): _

Comments Regarding Biology:

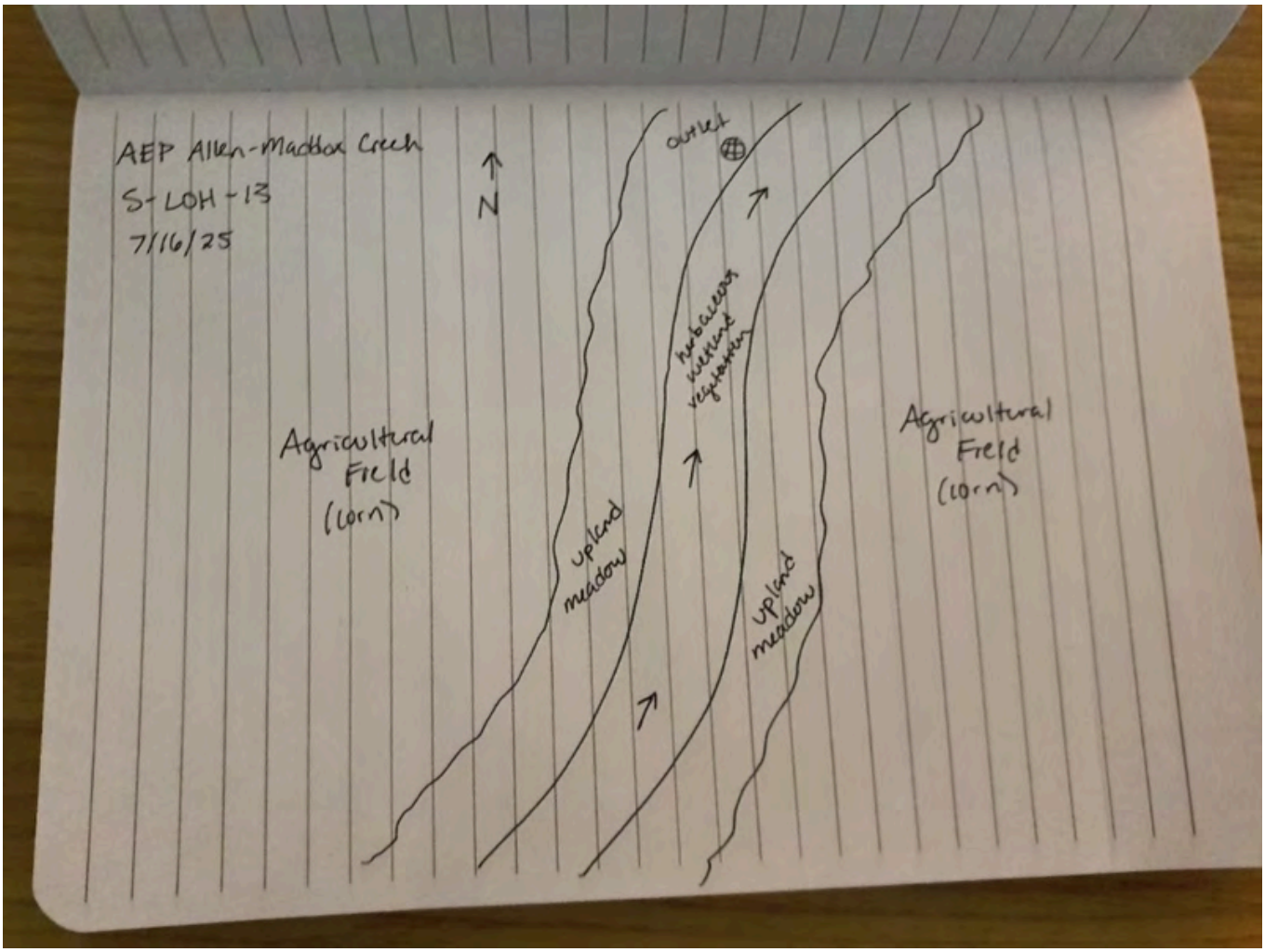
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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

FLOW →

SEE PAGE 3

SKETCH OF STREAM REACH: S-LOH-13



PHOTOLOG

Substrate: S-LOH-13



Upstream: S-LOH-13



Downstream: S-LOH-13



Left: S-LOH-13



Right: S-LOH-13



Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : **35**

SITE NAME/LOCATION S-LOH-14. AEP - Allen-Maddox Creek.

SITE NUMBER 14 RIVER CODE ____ RIVER BASIN ____ DRAINAGE AREA (mi^2) 0.28

LENGTH OF STREAM REACH (ft) ____ LAT. 40.9272308578 LONG. -84.6230904769 RIVER MILE ____

DATE 2025-07-16 SCORER LOH COMMENTS Herbaceous wetland veg in stream, couple of willows overhanging on stream edge

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

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

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

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS **[16 pts]**	0	☑	SILT **[3 pts]**	50
☐	BOULDER (>256 mm) **[16 pts]**	0	☐	LEAF PACK/WOODY DEBRIS **[3 pts]**	0
☐	BEDROCK **[16 pts]**	0	☐	FINE DETRITUS **[3 pts]**	0
☐	COBBLE (65-256 mm) **[12 pts]**	0	☑	CLAY or HARDPAN **[0 pts]**	50
☐	GRAVEL (2-64 mm) **[9 pts]**	0	☐	MUCK **[0 pts]**	0
☐	SAND (<2 mm) **[6 pts]**	0	☐	ARTIFICIAL **[3 pts]**	0

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 **(A)**

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3

(B) **TOTAL NUMBER OF SUBSTRATE TYPES:** 2

HHEI Metric Points

Substrate Max = 40

5

A + B

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

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

COMMENTS no pools observed

MAXIMUM POOL DEPTH (centimeters): 0

Pool Depth Max = 30

0

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

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

COMMENTS ____

AVERAGE BANKFULL WIDTH (meters): 5.2

Bankfull Width Max=30

30

This information must also be completed

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

RIPARIAN WIDTH (Per Bank)

L	R	
☐	☐	Wide >10m
☐	☐	Moderate 5-10m
☑	☑	Narrow <5m
☐	☐	None

FLOODPLAIN QUALITY (Most Predominant per Bank)

L	R	
☐	☐	Mature Forest, Wetland
☐	☐	Immature Forest, Shrub or Old Field
☐	☐	Residential, Park, New Field
☐	☐	Fenced Pasture

L	R	
☐	☐	Conservation Tillage
☐	☐	Urban or Industrial
☑	☑	Open Pasture, Row Crop
☐	☐	Mining or Construction

COMMENTS ____

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

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

COMMENTS ____

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

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

STREAM GRADIENT ESTIMATE

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

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

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

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: ____ Distance from Evaluated Stream ____

☐ CWH Name: ____ Distance from Evaluated Stream ____

☐ EWH Name: ____ Distance from Evaluated Stream ____

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

USGS Quadrangle Name: ____ NRCS Soil Map Page: _ NRCS Soil Map Stream Order _

County: ____ Township / City: ____

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 2025-07-15 Quantity: 0

Photo-documentation Notes: ____

Elevated Turbidity? (Y/N): N Canopy (% open): 85

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _

Field Measures: Temp (°C) 0 Dissolved Oxygen (mg/l) _ pH (S.U.) 0 Conductivity (µmhos/cm) _

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

Additional comments/description of pollution impacts:

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) _ Species observed (if known): _

Frogs or Tadpoles Observed? (Y/N) _ Species observed (if known): _

Salamanders Observed? (Y/N) _ Species observed (if known): _

Aquatic Macroinvertebrates Observed? (Y/N) _ Species observed (if known): _

Comments Regarding Biology:

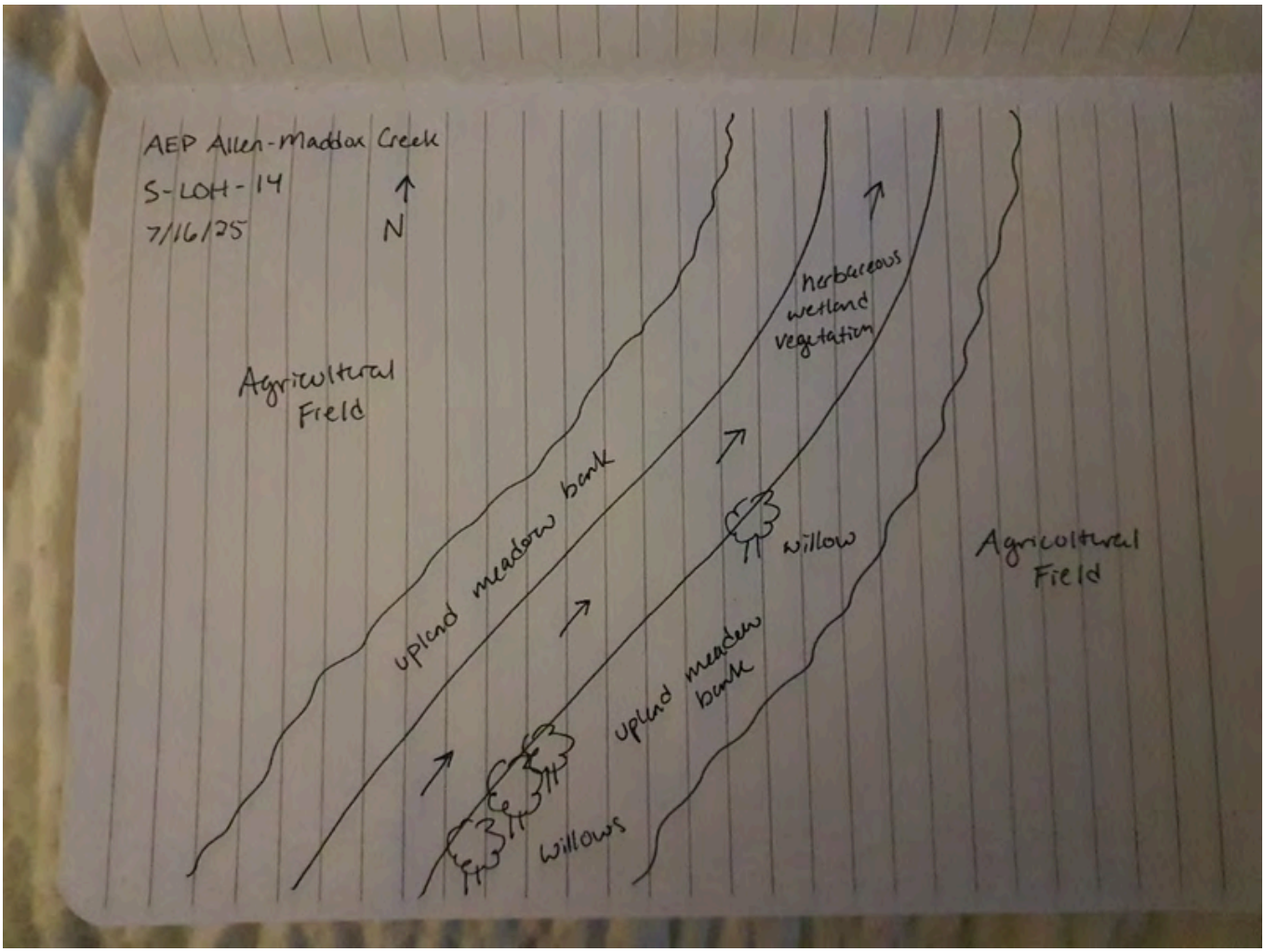
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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

FLOW →

SEE PAGE 3

SKETCH OF STREAM REACH: S-LOH-14



PHOTOLOG

Substrate: S-LOH-14





Upstream: S-LOH-14



Downstream: S-LOH-14



Left: S-LOH-14



Right: S-LOH-14



Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 19

Stream & Location: Unnamed tributary to Upper Prairie Creek (S-LOH-15) **RM:** _____ **Date:** 2026-04-16

Scorers Full Name & Affiliation: Danielle Anderson, TRC

River Code: **STORET #:** **Lat./Long.:** (NAD83 - decimal) 40.928366 / -84.718004 **Office verified location** ☑

1] *SUBSTRATE* Check ***ONLY* Two** substrate *TYPE BOXES;* estimate % or note every type present

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE
☐☐BLDR/SLABS [10]			☐☒HARDPAN [4]	30	0
☐☐BOULDER [9]			☐☐DETRITUS [3]		
☐☐COBBLE [8]			☐☐MUCK [2]	20	0
☐☐GRAVEL [7]			☒☐SILT [2]	50	0
☐☐SAND [6]			☐☐ARTIFICIAL [0]		
☐☐BEDROCK [5]					

NUMBER OF BEST TYPES: ☐4 or more [2] ☒3 or less [0]

(Score natural substrates; ignore sludge from point-sources)

Check ONE (*Or 2 & average*)

ORIGIN
- ☐LIMESTONE [1]
- ☒TILLS [1]
- ☐WETLANDS [0]
- ☐HARDPAN [0]
- ☐SANDSTONE [0]
- ☐RIP/RAP [0]
- ☐LACUSTRINE [0]
- ☐SHALE [-1]
- ☐COAL FINES [-2]

QUALITY

SILT
- ☒HEAVY [-2]
- ☐MODERATE [-1]
- ☐NORMAL [0]
- ☐FREE [1]

EMBEDDEDNESS
- ☐EXTENSIVE [-2]
- ☐MODERATE [-1]
- ☒NORMAL [0]
- ☐NONE [1]

Substrate **5** *Maximum 20*

Comments

2] *INSTREAM COVER* Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

0	UNDERCUT BANKS [1]	0	POOLS > 70CM [2]	0	OXBOWS, BACKWATERS [1]
1	OVERHANGING VEGETATION [1]	0	ROOTWADS [1]	1	AQUATIC MACROPHYTES [1]
0	SHALLOWS (IN SLOW WATER) [1]	0	BOULDERS [1]	0	LOGS OR WOODY DEBRIS [1]
0	ROOTMATS [1]				

AMOUNT Check ONE (*Or 2 & average*)
- ☐EXTENSIVE >75% [11]
- ☐MODERATE 25-75% [7]
- ☐SPARSE 5-<25% [3]
- ☒NEARLY ABSENT <5% [1]

Comments

Cover Maximum 20 **3**

3] *CHANNEL MORPHOLOGY* Check ONE in each category (*Or 2 & average*)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐HIGH [4]	☐EXCELLENT [7]	☐NONE [6]	☐HIGH [3]
☐MODERATE [3]	☐GOOD [5]	☐RECOVERED [4]	☒MODERATE [2]
☐LOW [2]	☐FAIR [3]	☒RECOVERING [3]	☐LOW [1]
☒NONE [1]	☒POOR [1]	☐RECENT OR NO RECOVERY [1]	

Comments

Channel Maximum 20 **7**

4] *BANK EROSION AND RIPARIAN ZONE* Check ONE in each category for *EACH BANK* (*Or 2 per bank & average*)

River right looking downstream

EROSION (L R)	RIPARIAN WIDTH (L R)	FLOOD PLAIN QUALITY (L R)	
☒☒NONE / LITTLE [3]	☐☐WIDE > 50M [4]	☒☐FOREST, SWAMP [3]	☐☐CONSERVATION TILLAGE [1]
☐☐MODERATE [2]	☐☐MODERATE 10-50M [3]	☐☐SHRUB OR OLD FIELD [2]	☐☐URBAN OR INDUSTRIAL [0]
☐☐HEAVY / SEVERE [1]	☒☐NARROW 5-10M [2]	☒☐RESIDENTIAL, PARK, NEW FIELD [1]	☐☐MINING / CONSTRUCTION [0]
	☐☐VERY NARROW < 5M [1]	☐☐FENCED PASTURE [1]	
	☐☒NONE [0]	☐☒OPEN PASTURE, ROWCROP [0]	

Indicate predominant land use(s) past 100m riparian.

Comments

Riparian Maximum 10 **5**

5] *POOL / GLIDE AND RIFFLE / RUN QUALITY*

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

MAXIMUM DEPTH Check **ONE** (*ONLY!*)
- ☐> 1M [6]
- ☐0.7-<1M [4]
- ☐0.4-<0.7 [2]
- ☐0.2-<0.4M [1]
- ☒< 0.2M [0]

CHANNEL WIDTH Check ONE (*Or 2 & average*)
- ☐POOL WIDTH > RIFFLE WIDTH [2]
- ☐POOL WIDTH = RIFFLE WIDTH [1]
- ☐POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY Check ALL that apply
- ☐TORRENTIAL [-1]
- ☐VERY FAST [1]
- ☐FAST [1]
- ☐MODERATE [1]
- ☐SLOW [1]
- ☒INTERSTITIAL [-1]
- ☐INTERMITTENT [-2]
- ☐EDDIES [1]

Indicate for reach - pools and riffles.

Comments *No riffles present.*

Pool / Current Maximum 12 **-1**

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (*Or 2 & average*).

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐BEST AREAS >10CM [2]	☐MAXIMUM > 50CM [2]	☐STABLE (E.G., COBBLE, BOULDER) [2]	☐NONE [2]
☐BEST AREAS 5-10CM [1]	☐MAXIMUM < 50CM [1]	☐MOD. STABLE (E.G., LARGE GRAVEL) [1]	☐LOW [1]
☐BEST AREAS <5CM [METRIC=0]		☐UNSTABLE (E.G., FINE GRAVEL, SAND) [0]	☐MODERATE [0] ☐EXTENSIVE [-1]

Comments

Riffle / Run Maximum 8 **0**

6] *GRADIENT* (ft/mi)
DRAINAGE AREA (1.55 mi^2)

- ☐VERY LOW - LOW [2-4]
- ☐MODERATE [6-10]
- ☐HIGH - VERY HIGH [10-6]

%POOL: 20 %GLIDE: 80
%RUN: 0 %RIFFLE: 0

Gradient Maximum 10 **0**

A] SAMPLED REACH
Check ALL that apply

Comment RE: Reach consistency/ Is reach typical of stream?, *Recreation/* Observed - Inferred, *Other/* Sampling observations, Concerns, Access directions, etc.

Within 8-12 foot incised ditch banks

METHOD
- ☐ BOAT
- ☐ WADE
- ☐ L. LINE
- ☐ OTHER

STAGE (1st-sample pass-2nd)
- ☐ HIGH ☐
- ☐ UP ☐
- ☐ NORMAL ☐
- ☐ LOW ☐
- ☐ DRY ☐

DISTANCE
- ☐ 0.5 Km
- ☐ 0.2 Km
- ☐ 0.15 Km
- ☐ 0.12 Km
- OTHER _____ meters

CLARITY (1st --sample pass-- 2nd)
- ☐ < 20 CM ☐
- ☐ 20-<40 CM ☐
- ☐ 40-70 CM ☐
- ☐ > 70 CM/ CTB ☐
- ☐ SECCHI DEPTH ☐

pass
1st _____ cm
2nd _____ cm

CANOPY
- ☒ > 85%- OPEN
- ☐ 55-<85%
- ☐ 30-<55%
- ☐ 10-<30%
- ☐ <10%- CLOSED

B] AESTHETICS
- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOS/SSOS/OUTFALLS

C] RECREATION
AREA DEPTH
POOL: ☐ >100ft² ☐ >3ft

D] MAINTENANCE
Circle some & *COMMENT*

PUBLIC / PRIVATE / BOTH / NA
ACTIVE / HISTORIC / BOTH / NA
YOUNG-SUCCESSION- OLD
SPRAY / SNAG / REMOVED
MODIFIED / DIPPED OUT / NA
LEVEED / ONE-SIDED
RELOCATED / CUTOFFS
MOVING-BEDLOAD- STABLE
ARMOURED / SLUMPS
ISLANDS / SCOURED
IMPOUNDED / DESICCATED
FLOOD CONTROL / DRAINAGE

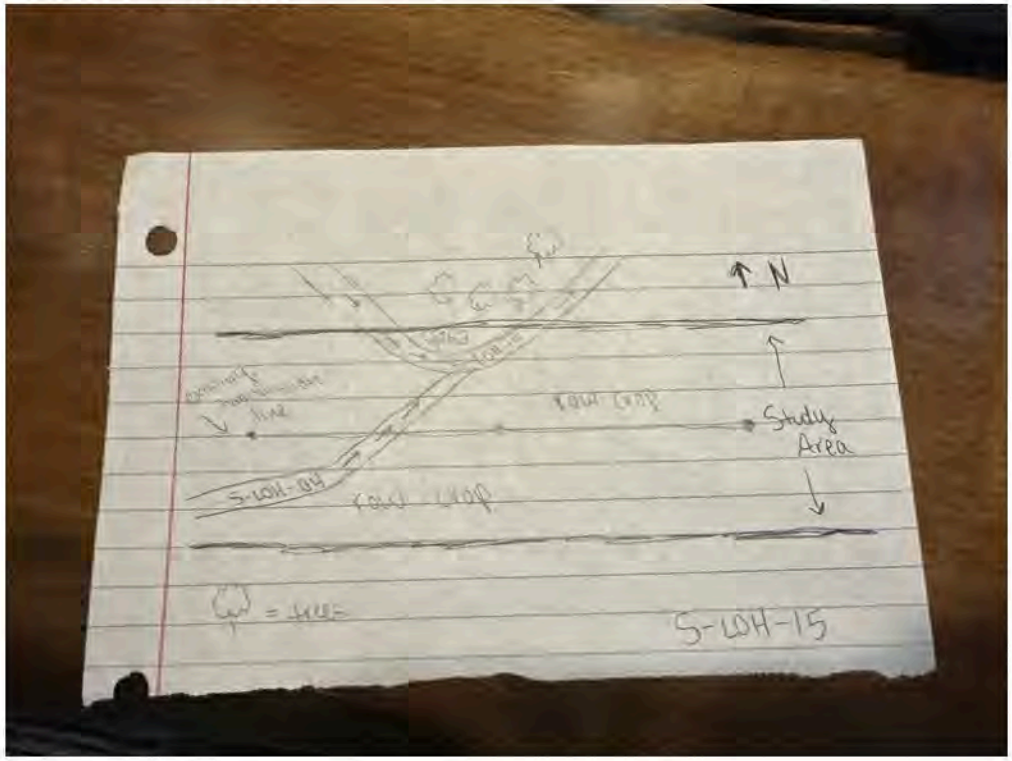
E] EJ ISSUES

WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT & GRIM
CONTAMINATED / LANDFILL
BMPS-CONSTRUCTION- SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H_20 / TILE / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

$\bar{x}$ width 1.5 m
$\bar{x}$ depth 0.3 m
max. depth NA
$\bar{x}$ bankfull width 1.5 m
bankfull $\bar{x}$ depth 1 m
W/D ratio 5.000
bankfull max. depth NA
floodprone x^2 width NA
entrench. ratio NA
Legacy Tree:

Stream Drawing:



Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 28.75

Stream & Location: Unnamed tributary to Hagerman Creek (S-LOH-16) **RM:** _____ **Date:** 2026-04-16

Scorers Full Name & Affiliation: Danielle Anderson, Laura Giese, TRC

River Code: **STORET #:** **Lat./Long.:** (NAD83 - decimal) 40.926987 / -84.685010 **Office verified location** ☐

1] SUBSTRATE Check ONLY Two substrate TYPE BOXES; estimate % or note every type present

Check ONE (Or 2 & average)

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE	ORIGIN	QUALITY
☐☐BLDR/SLABS [10]			☐☒HARDPAN [4]	40	0	☐LIMESTONE [1]	☒HEAVY [-2]
☐☐BOULDER [9]			☐☐DETRITUS [3]			☒TILLS [1]	☐MODERATE [-1]
☐☐COBBLE [8]	10		☐☐MUCK [2]			☐WETLANDS [0]	☐NORMAL [0]
☐☐GRAVEL [7]			☒☐SILT [2]	50	0	☐HARDPAN [0]	☐FREE [1]
☐☐SAND [6]			☐☐ARTIFICIAL [0]			☐SANDSTONE [0]	☐EXTENSIVE [-2]
☐☐BEDROCK [5]			(Score natural substrates; ignore sludge from point-sources)			☐RIP/RAP [0]	☐MODERATE [-1]
						☐LACUSTRINE [0]	☒NORMAL [0]
						☐SHALE [-1]	☐NONE [1]
						☐COAL FINES [-2]	

SILT / EMBEDDEDNESS

NUMBER OF BEST TYPES: ☐4 or more [2] ☒3 or less [0]

Substrate Maximum 20: **5**

Comments

2] INSTREAM COVER Indicate presence 0 to 3: 0-Absent; 1-Very small amounts or if more common of marginal quality; 2-Moderate amounts, but not of highest quality or in small amounts of highest quality; 3-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

0	UNDERCUT BANKS [1]	0	POOLS > 70CM [2]	0	OXBOWS, BACKWATERS [1]	AMOUNT (Check ONE (Or 2 & average))	
0	OVERHANGING VEGETATION [1]	0	ROOTWADS [1]	1	AQUATIC MACROPHYTES [1]	☐EXTENSIVE >75% [11]	
0	SHALLOWS (IN SLOW WATER) [1]	0	BOULDERS [1]	1	LOGS OR WOODY DEBRIS [1]	☐MODERATE 25-75% [7]	
0	ROOTMATS [1]					☒SPARSE 5-<25% [3]	
						☐NEARLY ABSENT <5% [1]	

Cover Maximum 20: **5**

Comments

3] CHANNEL MORPHOLOGY Check ONE in each category (Or 2 & average)

SINUOSITY	DEVELOPMENT	CHANNELIZATION	STABILITY
☐HIGH [4]	☐EXCELLENT [7]	☐NONE [6]	☐HIGH [3]
☐MODERATE [3]	☒GOOD [5]	☐RECOVERED [4]	☒MODERATE [2]
☐LOW [2]	☐FAIR [3]	☒RECOVERING [3]	☐LOW [1]
☒NONE [1]	☐POOR [1]	☐RECENT OR NO RECOVERY [1]	

Channel Maximum 20: **11**

Comments

4] BANK EROSION AND RIPARIAN ZONE Check ONE in each category for EACH BANK (Or 2 per bank & average)

River right looking downstream

EROSION (L R)	RIPARIAN WIDTH (L R)	FLOOD PLAIN QUALITY (L R)	(L R)
☒☒NONE / LITTLE [3]	☐☐WIDE > 50M [4]	☐☐FOREST, SWAMP [3]	☐☐CONSERVATION TILLAGE [1]
☐☒MODERATE [2]	☐☐MODERATE 10-50M [3]	☒☐SHRUB OR OLD FIELD [2]	☐☐URBAN OR INDUSTRIAL [0]
☐☐HEAVY / SEVERE [1]	☐☒NARROW 5-10M [2]	☐☒RESIDENTIAL, PARK, NEW FIELD [1]	☐☐MINING / CONSTRUCTION [0]
	☒☐VERY NARROW < 5M [1]	☐☐FENCED PASTURE [1]	
	☐☐NONE [0]	☐☐OPEN PASTURE, ROWCROP [0]	

Indicate predominant land use(s) past 100m riparian.

Riparian Maximum 10: **5.75**

Comments

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

MAXIMUM DEPTH (Check ONE (ONLY!))	CHANNEL WIDTH (Check ONE (Or 2 & average))	CURRENT VELOCITY (Check ALL that apply)	
☐> 1M [6]	☐POOL WIDTH > RIFFLE WIDTH [2]	☐TORRENTIAL [-1]	☐SLOW [1]
☐0.7-<1M [4]	☐POOL WIDTH = RIFFLE WIDTH [1]	☐VERY FAST [1]	☐INTERSTITIAL [-1]
☐0.4-<0.7 [2]	☐POOL WIDTH < RIFFLE WIDTH [0]	☐FAST [1]	☐INTERMITTENT [-2]
☒0.2-<0.4M [1]		☒MODERATE [1]	☐EDDIES [1]
☐< 0.2M [0]		Indicate for reach - pools and riffles.	

Pool / Current Maximum 12: **2**

Comments *No riffles present.*

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (Or 2 & average).

RIFFLE DEPTH	RUN DEPTH	RIFFLE / RUN SUBSTRATE	RIFFLE / RUN EMBEDDEDNESS
☐BEST AREAS >10CM [2]	☐MAXIMUM > 50CM [2]	☐STABLE (E.G., COBBLE, BOULDER) [2]	☐NONE [2]
☐BEST AREAS 5-10CM [1]	☐MAXIMUM < 50CM [1]	☐MOD. STABLE (E.G., LARGE GRAVEL) [1]	☐LOW [1]
☐BEST AREAS <5CM [METRIC=0]		☐UNSTABLE (E.G., FINE GRAVEL, SAND) [0]	☐MODERATE [0]
			☐EXTENSIVE [-1]

Riffle / Run Maximum 8: **0**

Comments

6] GRADIENT (ft/mi)

DRAINAGE AREA (2.77 mi^2)

☒VERY LOW - LOW [2-4]
☐MODERATE [6-10]
☐HIGH - VERY HIGH [10-6]

%POOL: 0 %GLIDE: 0
%RUN: 100 %RIFFLE: 0

Gradient Maximum 10: **0**

A] SAMPLED REACH
Check ALL that apply

Comment RE: Reach consistency/ Is reach typical of stream?, *Recreation/* Observed - Inferred, *Other/* Sampling observations, Concerns, Access directions, etc.

8.83 PH, 71.4F temperature

METHOD
- ☐ BOAT
- ☐ WADE
- ☐ L. LINE
- ☐ OTHER

STAGE
1st-sample pass-2nd

☐	HIGH	☐
☐	UP	☐
☐	NORMAL	☐
☐	LOW	☐
☐	DRY	☐

DISTANCE
- ☐ 0.5 Km
- ☐ 0.2 Km
- ☐ 0.15 Km
- ☐ 0.12 Km
- OTHER

_____ meters

CLARITY
1st --sample pass-- 2nd

☐	< 20 CM	☐
☐	20-<40 CM	☐
☐	40-70 CM	☐
☐	> 70 CM/ CTB	☐
☐	SECCHI DEPTH	☐

pass
1st _____ cm
2nd _____ cm

CANOPY
- ☐ > 85%- OPEN
- ☐ 55-<85%
- ☐ 30-<55%
- ☒ 10-<30%
- ☐ <10%- CLOSED

B] AESTHETICS
- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOS/SSOS/OUTFALLS

C] RECREATION
AREA DEPTH
POOL: ☐ >100ft² ☐ >3ft

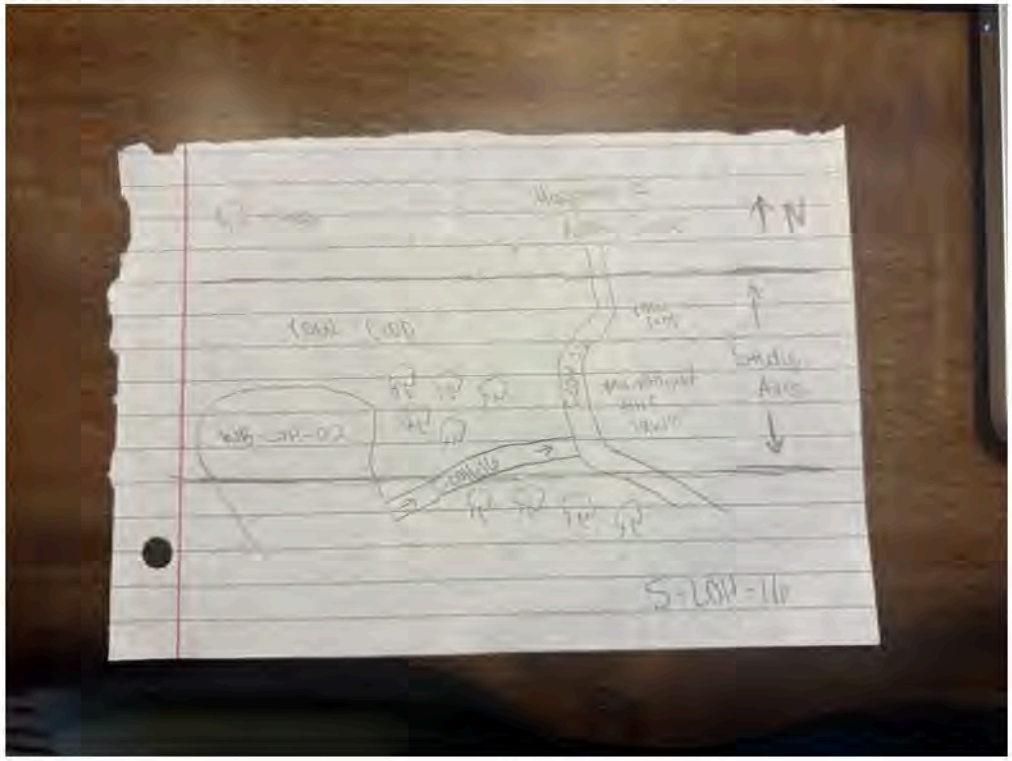
D] MAINTENANCE
Circle some & *COMMENT*

PUBLIC / PRIVATE / BOTH / NA
ACTIVE / HISTORIC / BOTH / NA
YOUNG-SUCCESSION- OLD
SPRAY / SNAG / REMOVED
MODIFIED / DIPPED OUT / NA
LEVEED / ONE-SIDED
RELOCATED / CUTOFFS
MOVING-BEDLOAD- STABLE
ARMOURED / SLUMPS
ISLANDS / SCOURED
IMPOUNDED / DESICCATED
FLOOD CONTROL / DRAINAGE

E] EJ ISSUES
WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT & GRIM
CONTAMINATED / LANDFILL
BMPS-CONSTRUCTION- SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H_20 / TILE / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS
$\bar{x}$ width 2 m
$\bar{x}$ depth 0.25 m
max. depth NA
$\bar{x}$ bankfull width 2.5 m
bankfull $\bar{x}$ depth 0.5 m
W/D ratio 8.000
bankfull max. depth NA
floodprone x^2 width NA
entrench. ratio NA
Legacy Tree:

Stream Drawing:



Ohio EPA Primary Headwater Habitat Evaluation Form

HHEI Score (sum of metrics 1, 2, 3) : **27**

SITE NAME/LOCATION S-LOH-17, AEP - Allen Maddox Creek 345 kV Transmission Rebuild, Unnamed tributary to Hagermann Creek

SITE NUMBER ___ RIVER CODE ___ RIVER BASIN ___ DRAINAGE AREA (mi^2) 0.06

LENGTH OF STREAM REACH (ft) 104 LAT. 40.927096 LONG. -84.6725196 RIVER MILE ___

DATE 2026-04-16 SCORER LOH COMMENTS ___

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

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

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

TYPE		PERCENT	TYPE		PERCENT
☐ ☐	BLDR SLABS **[16 pts]**	___	☐ ☐	SILT **[3 pts]**	10
☐ ☐	BOULDER (>256 mm) **[16 pts]**	___	☐ ☑	LEAF PACK/WOODY DEBRIS **[3 pts]**	30
☐ ☐	BEDROCK **[16 pts]**	___	☐ ☐	FINE DETRITUS **[3 pts]**	___
☐ ☐	COBBLE (65-256 mm) **[12 pts]**	___	☑ ☐	CLAY or HARDPAN **[0 pts]**	40
☐ ☐	GRAVEL (2-64 mm) **[9 pts]**	___	☐ ☐	MUCK **[0 pts]**	___
☐ ☐	SAND (<2 mm) **[6 pts]**	20	☐ ☐	ARTIFICIAL **[3 pts]**	___

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock 0 **(A)** **(B)**

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: 3 **TOTAL NUMBER OF SUBSTRATE TYPES:** 4

HHEI Metric Points

Substrate Max = 40

7

A + B

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

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

COMMENTS___ **MAXIMUM POOL DEPTH (centimeters):** 10

Pool Depth Max = 30

15

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

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

COMMENTS___ **AVERAGE BANKFULL WIDTH (meters):** 1

Bankfull Width Max=30

5

This information must also be completed

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

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

COMMENTS ___

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

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

COMMENTS ___

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

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

STREAM GRADIENT ESTIMATE

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

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

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

DOWNSTREAM DESIGNATED USE(S)

☐ WWH Name: ____ Distance from Evaluated Stream ____

☐ CWH Name: ____ Distance from Evaluated Stream ____

☐ EWH Name: ____ Distance from Evaluated Stream ____

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

USGS Quadrangle Name: ____ NRCS Soil Map Page: _ NRCS Soil Map Stream Order _

County: ____ Township / City: ____

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 2026-04-15 Quantity: 0.37

Photo-documentation Notes: ____

Elevated Turbidity? (Y/N): N Canopy (% open): 70

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _

Field Measures: Temp (°C) 67.1 Dissolved Oxygen (mg/l) _ pH (S.U.) 6.41 Conductivity (µmhos/cm) _

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

Additional comments/description of pollution impacts:

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) _ Species observed (if known): _

Frogs or Tadpoles Observed? (Y/N) _ Species observed (if known): _

Salamanders Observed? (Y/N) _ Species observed (if known): _

Aquatic Macroinvertebrates Observed? (Y/N) _ Species observed (if known): _

Comments Regarding Biology:

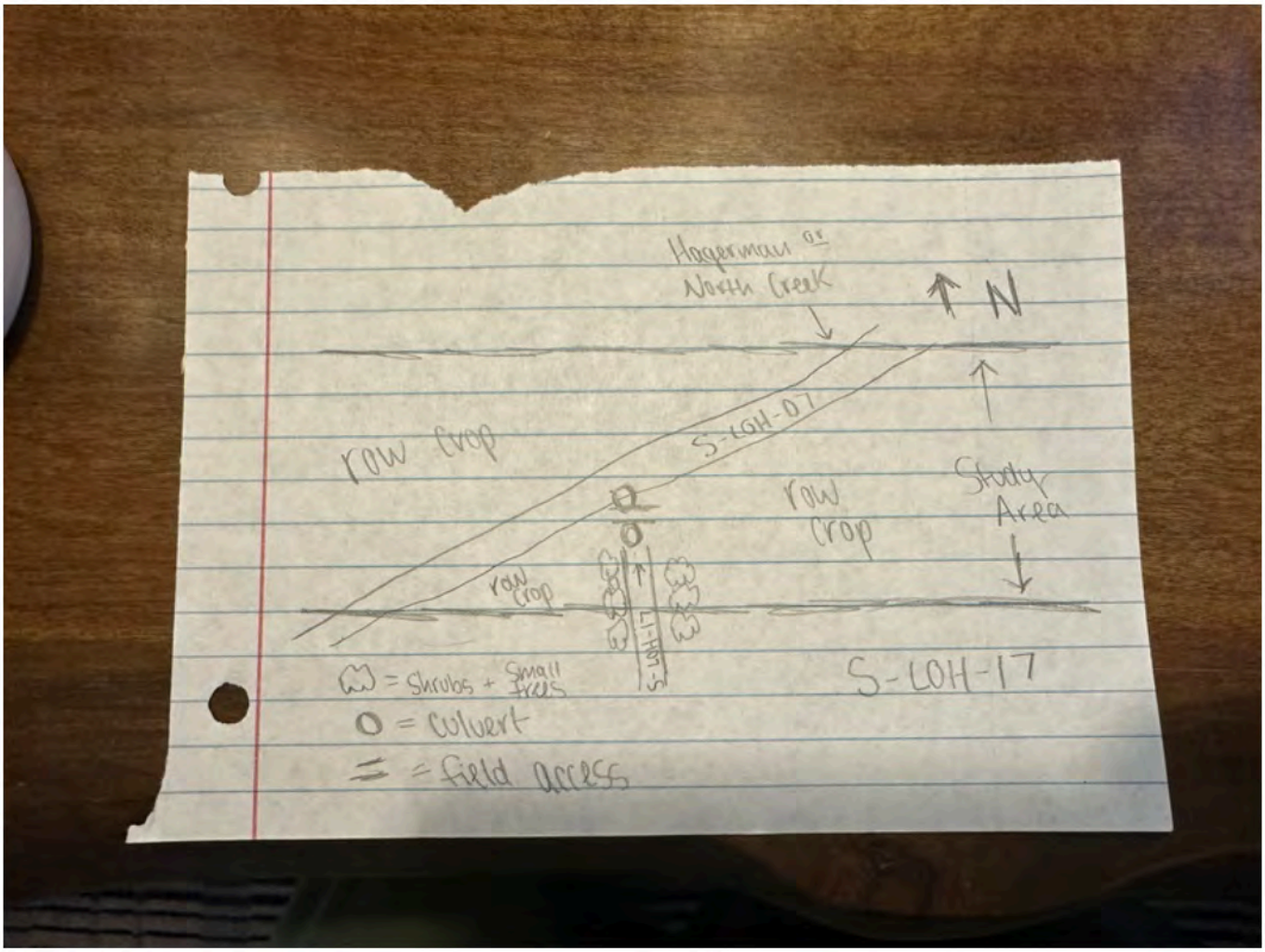
DRAWING AND NARRATIVE DESCRIPTION OF STREAM REACH (This must be completed):

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

FLOW →

SEE PAGE 3

SKETCH OF STREAM REACH: S-LOH-17



PHOTOLOG

Substrate: S-LOH-17



Upstream: S-LOH-17



Downstream: S-LOH-17



Appendix G:
Threatened and Endangered Species Data

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
Phone: (812) 334-4261 Fax: (812) 334-4273

In Reply Refer To: 04/30/2026 11:03:32 UTC
Project Code: 2026-0024202
Project Name: Allen - RP Mone (IN) 345 kV Transmission Rebuild Project

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

To Whom It May Concern:

The purpose of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.), is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Act.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. You can complete this verification formally or informally or request an updated list by visiting the IPaC website at regular intervals during project planning and implementation.

Please use the species list provided and visit the U.S. Fish and Wildlife Service's Region 3 Section 7 Technical Assistance website at Midwest Section 7 Technical Assistance | U.S. Fish & Wildlife Service. This website contains step-by-step instructions to help you determine if your project will have an adverse effect on listed species and to lead you through the Section 7 process.?

We appreciate your concern for threatened and endangered species. Federal agencies should include conservation of threatened and endangered species into their project planning to further

the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Other Trust Resources and Activities?

Bald and Golden Eagles?- Although the bald eagle has been removed from the endangered species list, this species and the golden eagle are protected by the Bald and Golden Eagle Act and the Migratory Bird Treaty Act. It is the responsibility of the project proponent to survey the area for any migratory bird nests. If there is an eagle nest on-site while work is on-going, eagles may be disturbed. We recommend avoiding and minimizing disturbance to eagles whenever practicable. If you cannot avoid eagle disturbance, you may seek a?permit. A?nest take permit?is always required for removal, relocation, or obstruction of an eagle nest. For communication and wind energy projects, please refer to additional guidelines below.?

Migratory Birds?- The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Service. The Service has the responsibility under the MBTA to proactively prevent the mortality of migratory birds whenever possible and we encourage implementation of?recommendations that minimize potential impacts to migratory birds. Such measures include clearing forested habitat outside the nesting season (generally March 1 to August 31) or conducting nest surveys prior to clearing to avoid injury to eggs or nestlings.?

Communication Towers?- Construction of new communications towers (including radio, television, cellular, and microwave) creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. However, the Service has developed? voluntary guidelines for minimizing impacts.?

Transmission Lines?- Migratory birds, especially large species with long wingspans, heavy bodies, and poor maneuverability can also collide with power lines. In addition, mortality can occur when birds, particularly hawks, eagles, kites, falcons, and owls, attempt to perch on uninsulated or unguarded power poles. To minimize these risks, please?refer to?guidelines? developed by the Avian Power Line Interaction Committee and the Service. Implementation of these measures is especially important along sections of lines adjacent to wetlands or other areas that support large numbers of raptors and migratory birds.?

Wind Energy?- To minimize impacts to migratory birds and bats, wind energy projects should follow the Service's?Wind Energy Guidelines. In addition, please refer to the Service's?Eagle Conservation Plan Guidance, which provides guidance for conserving bald and golden eagles in the course of siting, constructing, and operating wind energy facilities.

Note: IPaC has provided all available attachments because this project is in multiple field office jurisdictions.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles

- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

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

This species list is provided by:

Indiana Ecological Services Field Office
620 South Walker Street
Bloomington, IN 47403-2121
(812) 334-4261

This project's location is within the jurisdiction of multiple offices. However, only one species list document will be provided for all offices. The species and critical habitats in this document reflect the aggregation of those that fall in each of the affiliated office's jurisdiction. Other offices affiliated with the project:

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

PROJECT SUMMARY

Project Code: 2026-0024202

Project Name: Allen - RP Mone (IN) 345 kV Transmission Rebuild Project

Project Type: Transmission Line - Maintenance/Modification - Above Ground

Project Description: AEP will be rebuilding approximately 15 miles of 345 kV overhead transmission line and structures in Allen County, Indiana. The majority of the rebuild will be on existing centerline within the existing right-of-way (ROW) with the exception of segments along the east-west portion of the Project. Anticipated activities include replacing existing structures to support a new 345 kV double circuit transmission line with work occurring primarily in the existing ROW, proposed access roads and limited off-ROW workspace areas.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.9686949,-84.97239306561195,14z



Counties: Indiana and Ohio

ENDANGERED SPECIES ACT SPECIES

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

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

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

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

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

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

BIRDS

NAME	STATUS
Whooping Crane *Grus americana* Population: Eastern Migratory NEP - U.S.A. (AL, AR, FL, GA, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, OH, SC, TN, VA, WI, WV) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non-Essential

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

---

1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

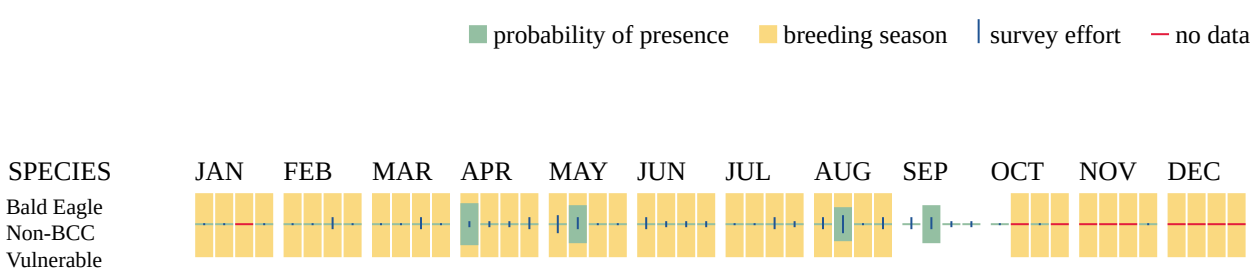
Probability of Presence (▪)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (▪)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds

- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10

NAME	BREEDING SEASON
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

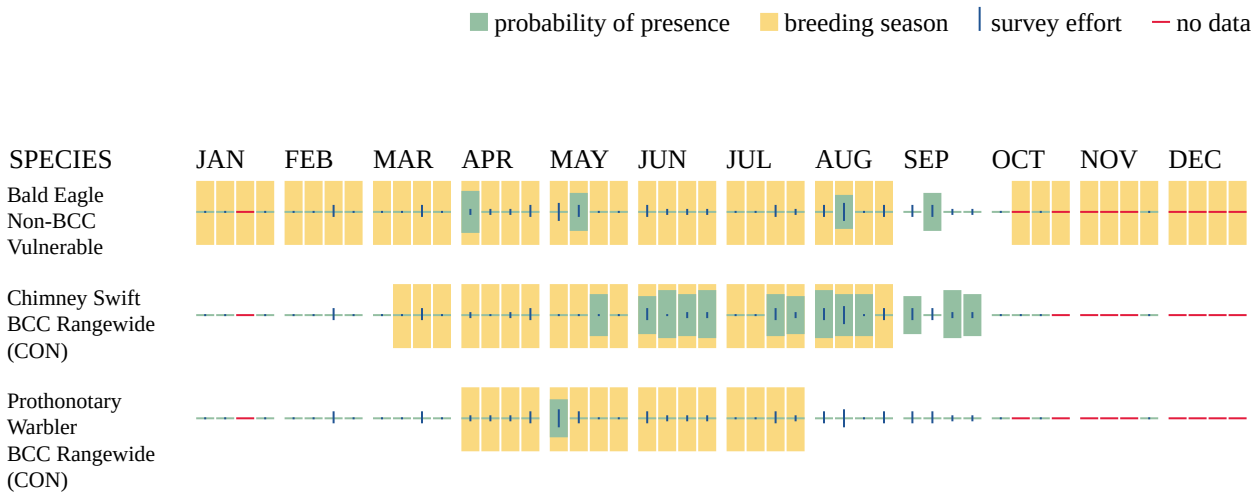
Probability of Presence (■)

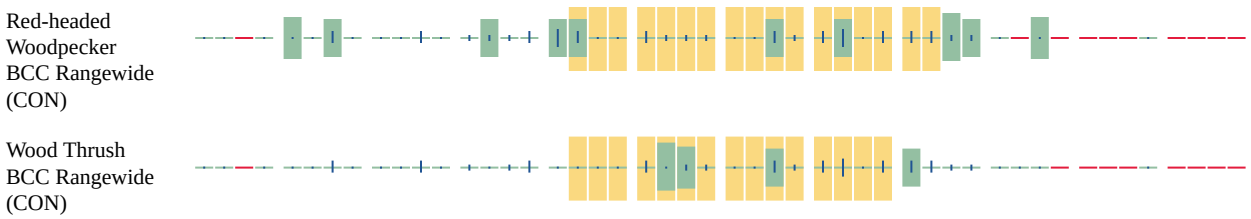
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.





Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- PEM1C

RIVERINE

- R4SBC
- R5UBH
- R2UBHx

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1A
- PFO1A

IPAC USER CONTACT INFORMATION

Agency: TRC Environmental
Name: Nicholas Yuknis
Address: 6737 W Washington St, Suite 3460
City: West Allis
State: WI
Zip: 53214
Email nyuknis@trccompanies.com
Phone: 2623955994

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army Corps of Engineers
Name: TBD TBD
Email: lre_reg_michiana@usace.army.mil
Phone: 5742321952

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

May 27, 2026

Project Code: 2026-0051040

Dear Ms. Slabe:

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

Federally Threatened and Endangered Species: The endangered Indiana bat (*Myotis sodalis*) and 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. Bridges and culverts have also been used as roosts. Additionally, northern long-eared bats have been observed roosting in other human-made structures, such as buildings, barns, and bat houses; therefore, these structures should also be considered potential summer habitat. In the winter, Indiana bats and northern long-eared bats hibernate in caves, rock crevices and abandoned mines.

Seasonal Restrictions 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. If bridges or culverts will be impacted, we recommend reviewing Appendix K in the most recent "Range-Wide Indiana Bat & Northern Long-Eared Bat Survey Guidelines" to determine if the bridge/culvert may be suitable roost habitat. We recommend impacts to suitable bridges and culverts only occur from October 1 and March 31. These seasonal restrictions are recommended to avoid adverse effects to Indiana bats and northern long-eared bats. Please note that, because Indiana bat and/or northern long-eared

bat presence has already been confirmed in the project vicinity, any additional summer surveys would not constitute presence/absence surveys for these species.

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.

On December 12, 2024 the Service proposed to list the monarch butterfly (*Danaus plexippus plexippus*) as threatened under the ESA. Monarch butterflies are found throughout Ohio and some populations migrate vast distances across multiple generations each year. Many monarchs fly between the U.S., Mexico and Canada – a journey of over 3,000 miles. Monarch populations have declined significantly in recent years. Threats include habitat loss – particularly the loss of milkweed, the monarch caterpillar's sole food source – and mortality resulting from pesticide use. The Service recommends the following actions to maintain habitat and avoid impacts to monarchs in Ohio: revegetate disturbed areas with native plant species including nectar-producing plants and milkweed endemic to the area; limit mowing monarch habitat from March 15 to August 31 when monarchs are breeding and from September 1 to October 31 when large numbers of monarchs are migrating; and avoid the use of pesticides and herbicides in and near monarch habitat.

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.

Bald Eagle: The project is in the range of the bald eagle (*Haliaeetus leucocephalus*), which is protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d). We recommend that you visit https://ohiodnr.gov/discover-and-learn/animals/birds/bald-eagle to determine if the project is within 0.5 mile of a documented eagle nest. Additionally, because not all eagle nests in the state have been mapped, we recommend that an on-site examination be conducted to determine if any large stick nests are visible from project area. If the project is within 0.5 mile of a documented eagle nest or the on-site examination reveals the presence of a potential eagle nest, we recommend visiting https://www.fws.gov/story/do-i-need-eagle-take-permit to determine if an eagle take permit is required.

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

United States Department of the Interior

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

In Reply Refer To: 05/15/2026 18:56:40 UTC
Project Code: 2026-0051040
Project Name: Allen-Maddox Creek 345 kV Transmission Rebuild Project

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

To Whom It May Concern:

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

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

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

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

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

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

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

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

It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see https://www.fws.gov/library/collections/threats-birds.

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

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Requests for additional technical assistance or consultation from the Ohio Field Office should be submitted following guidance on the following page https://www.fws.gov/office/ohio-ecological-services/request-project-review. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

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

PROJECT SUMMARY

Project Code: 2026-0051040
Project Name: Allen-Maddox Creek 345 kV Transmission Rebuild Project
Project Type: Transmission Line - Maintenance/Modification - Above Ground
Project Description: The proposed Project involves the rebuild of approximately 27.7 miles of 345kV overhead electric transmission line and pole structures within Allen County, Indiana and Van Wert County, Ohio. Approximately 623.53 acres of the proposed Project is located in Van Wert County, Ohio (Ohio Project Study Area). The transmission line will be rebuilt on the existing centerline with sections of the Project being offset from the existing centerline in order to safely complete work while the existing transmission line is still energized and to accommodate outage constraints.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.92829495,-84.73747248209911,14z



Counties: Van Wert County, Ohio

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Whooping Crane *Grus americana* Population: Eastern Migratory NEP - U.S.A. (AL, AR, FL, GA, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, OH, SC, TN, VA, WI, WV) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non-Essential

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Private Entity
Name: Jenna Slabe
Address: 1382 West 9th Street Suite 400
City: Cleveland
State: OH
Zip: 44113
Email jslabe@trccompanies.com
Phone: 3309980481

Division of Nature Preserves
402 W. Washington St., Rm W267
Indianapolis, IN 46204-2739

January 28, 2025

Amanda Larsen
TRC Environmental Corporation
6737 W Washington Street, Suite 2100
West Allis, WI 53214

Dear Amanda Larsen:

I am responding to your request for information on the threatened or endangered (T&E) species, high quality natural communities, and natural areas for the AEP Allen to Maddox 345 kV Rebuild Project located within Allen County, Indiana. The Indiana Natural Heritage Data Center has been checked and there are no T&E species or significant areas documented within a 0.5 mile of the project site.

If you need a general environmental review of the project from DNR, you can submit the project information (description, location map, and copy of this letter) to the DNR Division of Fish and Wildlife Environmental Coordinator, at environmentalreview@dnr.in.gov (preferred), or send to the street address below.

Department of Natural Resources
Environmental Review
Division of Fish and Wildlife
402 W. Washington Street, Room W273
Indianapolis, IN 46204

The information I am providing does not preclude the requirement for further consultation with the U.S. Fish and Wildlife Service as required under Section 7 of the Endangered Species Act of 1973. If you have concerns about potential Endangered Species Act issues you should contact the Service at their Bloomington, Indiana office.

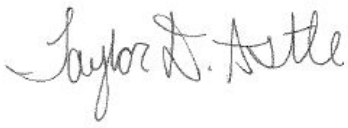
U.S. Fish and Wildlife Service
620 South Walker Street
Bloomington, Indiana 47403-2121
(812)334-4261

Please note that the Indiana Natural Heritage Data Center relies on the observations of many individuals for our data. In most cases, the information is not the result of comprehensive field surveys conducted at particular sites. Therefore, our statement that there are no documented significant natural features at a site should not be interpreted to mean that the site does not support special plants or animals.

Due to the dynamic nature and sensitivity of the data, this information should not be used for any project other than that for which it was originally intended. It may be necessary for you to request updated material from us in order to base your planning decisions on the most current information.

Thank you for contacting the Indiana Natural Heritage Data Center. You may reach me at (317)233-2558 if you have any questions or need additional information.

Sincerely,



Taylor Davis Astle
Indiana Natural Heritage Data Center

Enclosure: Invoice

Department of Natural Resources
ohiodnr.gov

Mike DeWine, *Governor*
Jim Tressel, *Lt. Governor*
Mary Mertz, *Director*

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

June 18, 2026

Jenna Slabe
TRC Companies, Inc.
1382 West 9th Street, Suite 400
Cleveland, Ohio 44113

Re: 26-0852_Allen-Maddox Creek 345kV Rebuild

Project: The proposed project involves the rebuild of approximately 27.7 miles of 345kV overhead electric transmission line and pole structures within Allen County, Indiana and Van Wert County, Ohio.

Location: The proposed project is located in Hoaglin, Union, and Tully townships,, Van Wert County, Ohio.

Center Coordinates: (40.9277, -84.6686)

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 state endangered bat species has been established in the area, summer tree clearing is not recommended, and additional summer surveys would not constitute presence/absence in the area. However, limited summer tree clearing 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 clusters of dead leaves on tree limbs. However, these species are also dependent on the forest structure surrounding roost trees. The DOW recommends tree and/or tree limb clearing 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 a Diameter Breast Height (DBH) ≥ 20" if possible.

For every project, the DOW also recommends that a winter bat habitat assessment is conducted to determine if potential hibernacula are present within the project area. This is to limit possible disturbances that seasonal tree clearing and/or subsurface work (e.g., trenching, blasting, etc.) may cause to hibernating bats. Potential hibernacula include rocky outcroppings, caves, and underground mines. Direction on how to conduct winter habitat assessments can be found in the joint guidance OHIO DIVISION OF WILDLIFE AND U.S. FISH AND WILDLIFE SERVICE (OH-FIELD OFFICE) JOINT GUIDANCE FOR BAT SURVEYS. If a potential or known hibernaculum is found, the DOW recommends a 0.25-mile permanent tree clearing buffer around the hibernaculum entrance. Limited summer or winter tree clearing may be acceptable after consultation with the DOW. If a habitat assessment for projects involving subsurface disturbance finds that a potential hibernaculum is present within 5 miles of the project area, please consult with Eileen Wyza for project recommendations. If no tree clearing or subsurface impacts to a hibernaculum are proposed, this project is not likely to impact these species.

This project must not have an impact on native mussels. This applies to both listed and non-listed species, as all species of mussel are protected in Ohio. Per the Ohio Mussel Survey Protocol (2025), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 5 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site.

Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. If there is no in-water work proposed, impacts to mussels are not likely.

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

Due to the potential for 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 not conducted a project specific review and/or comments, however, the guidance provided below should be reviewed by the Environmental Review applicant for applicability on this project and subsequent compliance.

If the subject project is in a floodplain regulated by the Federal Emergency Management Agency (FEMA), the 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.

Ohio Revised Code (ORC) Section 1521.16 mandates that any owner of a property or a facility that has the capacity of withdrawing 100,000 gallons per day (gpd) of water from groundwater, surface water, or both must register with the Division of Water Resources' Water Withdrawal Facilities Registration (WWFR) Program and report their withdrawals annually.

Additional coordination may be required depending on the location of the withdrawal and consumptive use. Permitting may be required for:

- New or increased consumptive use of water averaging 2 million gallons per day (mgd) within 30 days within the Ohio River basin.
- New or increased withdrawal and consumptive water use in the Lake Erie watershed averaging 1 million gallons per day (mgd) or more in 90 days.
- New or increased water withdrawal directly from Lake Erie averaging 2.5 million gallons per day (mgd) or more in 90 days.
- Diversion or movement of water across the Ohio River and Lake Erie basin divide.

If the project does not involve activities that are subject to water withdrawal regulatory requirements as described above, then no further action is required. For more information, visit the Water Inventory & Planning website.

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.*