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March 31, 2026

VIA ELECTRONIC FILING

Matthew L. Homsher, Secretary
Pennsylvania Public Utility Commission
400 North Street, Second Floor
Harrisburg, PA 17120

Re: Letter of Notification of Mid-Atlantic Interstate Transmission, LLC for Approval of the Ashtabula-Erie West 345 Kilovolt Transmission Line Rebuild Project in Springfield and Conneaut Townships, Erie County, Pennsylvania Docket No.

Dear Secretary Homsher:

Enclosed for filing on behalf of Mid-Atlantic Interstate Transmission, LLC ("MAIT") is a Letter of Notification ("LON"), requesting approval for the Ashtabula-Erie West 345 Kilovolt ("kV") Transmission Line Rebuild Project ("Project"). This LON is filed pursuant to the Pennsylvania Public Utility Commission's ("Commission") regulations at 52 Pa. Code § 57.72(d)(1). Copies of this LON have been served upon the parties as required by 52 Pa. Code § 57.74 and noted on the attached Certificate of Service.

Subject to the Commission's approval, the Project has a scheduled construction date of June 1, 2026, to meet an in-service date of March 15, 2027. To support this construction timeline, MAIT respectfully requests Commission's review and approval of the LON on or before the May 21, 2026 Public Meeting in order to allow construction to commence immediately thereafter.

REQUEST FOR CONFIDENTIAL TREATMENT OF PROPRIETY AND NON-PUBLIC INFORMATION

MAIT further notes that Attachment A included in this filing contains **CONFIDENTIAL AND PROPRIETARY,** non-public information: Attachment A is designated "**CONFIDENTIAL**" because it contains sensitive information, including commercially sensitive pricing information for certain Project components. In addition, Attachment A has been clearly marked as

"**CONFIDENTIAL**" and removed from the public version of the above-captioned Letter of Notification and associated materials and separately filed with the Commission. MAIT requests that Attachment A be given confidential treatment by the Commission, including its various offices and bureaus. That is, MAIT requests that Attachment A be excluded from the Commission's public document folder and that the confidential copies not be disclosed to the public. MAIT will provide copies of these materials to parties in this proceeding that have executed appropriate Non-Disclosure Certificates pursuant to a Stipulated Protective Agreement or Protective Order.

MAIT also requests that the Commission please enter the appearance of the following attorneys on behalf of MAIT in this proceeding:

Garrett P. Lent (ID #321566)
Megan Rulli (ID #331981)
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If you have any questions pertaining to this matter, please do not hesitate to contact me.

Respectfully submitted,

Garrett P. Lent

GPL/sll
Attachment

CC: Deb Backer – Bureau of Technical Utility Services (via email; w/attachment)
Jordan Van Order – Bureau of Technical Utility Services (via email; w/attachment)
Certificate of Service

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Letter of Notification has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 57.72(d)(3).

VIA CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Office of Small Business Advocate
555 Walnut Street
1st Floor, Forum Place
Harrisburg, PA 17101

Office of Consumer Advocate
555 Walnut Street
5th Floor, Forum Place
Harrisburg, PA 17101-1923

Pennsylvania Public Utility Commission
Bureau of Investigation and Enforcement
P.O. Box 3265
Harrisburg, PA 17105-3265

Ms. Andrea Lowery, Executive Director
Pennsylvania Historical & Museum Commission
300 North Street
Harrisburg, PA 17120-0024

Office of Chief Counsel
Real Property Division
Pennsylvania Department of Transportation
Commonwealth Keystone Building
400 North Street, 9th Floor
Harrisburg, PA 17120

Department of Conservation and Natural Resources
P.O. Box 8552
Harrisburg, PA 17015

Department of Environmental Protection
ATTN: Bureau of Waterways Engineering and Wetlands
400 Market Street
Harrisburg, PA 17101

Department of Environmental Protection
ATTN: Office of Chief Counsel
400 Market Street, 9th Floor
Harrisburg, PA 17105
CC: Secretary to PADEP Chief Counsel

Department of Environmental Protection
Northwest Regional Office
230 Chestnut Street
Meadville, PA 16335

Pennsylvania Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Drive
Bellefonte, PA 16823

Pennsylvania Game Commission
Bureau of Wildlife Management
Division of Environmental Review
2001 Elmerton Ave.
Harrisburg, PA 17110-9797

US Fish and Wildlife Service
Pennsylvania Field Office
110 Radnor Road, Suite 101
State College, PA 16801-4850

Ellen Schauerman
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140 W. 6th Street
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Thomas McClure, District Manager
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Anne Rericha, Esquire
American Transmission Systems, Inc.
341 White Pond Drive
Akron, OH 44320

Date: March 31, 2026

Garrett P. Lent

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

LETTER OF NOTIFICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FOR APPROVAL OF THE ASHTABULA-ERIE WEST 345 KILOVOLT TRANSMISSION LINE REBUILD PROJECT IN SPRINGFIELD AND CONNEAUT TOWNSHIPS, ERIE COUNTY, PENNSYLVANIA.	:	**Docket No. _____**

LETTER OF NOTIFICATION

TO THE PENNSYLVANIA PUBLIC UTILITY COMMISSION:

Pursuant to 52 Pa. Code § 57.72(d)(1)(i) and (d)(1)(v), Mid-Atlantic Interstate Transmission, LLC ("MAIT") submits this Letter of Notification requesting approval from the Pennsylvania Public Utility Commission ("Commission") for the Ashtabula-Erie West 345 Kilovolt ("kV") Transmission Line Rebuild Project ("Project") in Springfield and Conneaut Townships, Erie County, Pennsylvania.

The proposed Project was developed to rebuild the approximately 7.2- mile-long existing Pennsylvania section of the Ashtabula-Erie West 345 kV Transmission Line.[1] The Project will entail the removal of 29 existing structures, conductor, and associated transmission facilities, and the installation of 28 new structures, conductors, and associated transmission facilities. The Project will be constructed in Springfield and Conneaut Townships in Erie County, Pennsylvania. MAIT has provided information regarding this Project to all identified political subdivisions, and

[1] The total line mileage of the Ashtabula-Erie West 345 kV Transmission Line is approximately 22.2 miles, traversing Ohio and Pennsylvania.

none of them have objected to the Project. Subject to the Commission's approval, construction on the Project is scheduled to begin on or about June 1, 2026, to meet an in-service date of March 15, 2027. To support the construction timeline, MAIT respectfully requests that the Commission issue its final ruling by the Public Meeting scheduled for May 21, 2026.

In support thereof, MAIT submits as follows:

I. INTRODUCTION

1. MAIT is a public utility subject to the jurisdiction of the Commission over the siting and construction of transmission lines pursuant to Chapter 57, Subchapter G, of the Commission's regulations.

2. The address of MAIT's principal business office is:

Mid-Atlantic Interstate Transmission, LLC
341 White Pond Drive
Akron, OH 44320

3. The attorneys representing MAIT in this matter authorized to receive notices and communications on its behalf are:

Tori Giesler
Attorney ID #207742
FirstEnergy Service Company
341 White Pond Drive
Akron, OH 44320
(610) 921-6658
tgiesler@firstenergycorp.com

David B. MacGregor (ID #28804)
Garrett P. Lent (ID #321566)
Megan E. Rulli (ID # 331981)
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(717) 731-1970
dmacgregor@postschell.com
glent@postschell.com
mrulli@postschell.com

MAIT agrees to accept electronic service in this proceeding.

4. MAIT also requests that a copy of all notices and communications regarding this matter be sent to:

Michael DeSarro
Transmission Specialist II
FirstEnergy Service Company
341 White Pond Drive
Akron, OH 44320
(330)384-3721
madesarro@firstenergycorp.com

5. MAIT provides the following attached exhibits in support of this LON:

- **Exhibit 1:** A topographic map depicting the location of the proposed Project;
- **Exhibit 2:** An overview depicting the general layout of the Project;
- **Exhibit 3:** Photographic examples of existing line conditions;
- **Exhibit 4:** A depiction of the general configuration for a 345 kV single circuit tubular H-Frame steel structure suspension two pole;
- **Exhibit 5:** A depiction of the general configuration for a 345 kV single circuit tubular H-Frame steel structure suspension two pole;
- **Exhibit 6:** A depiction of the general configuration for a 345 kV single circuit tubular steel structure horizontal dead end three pole;
- **Exhibit 7:** A depiction of the general configuration for a 345 kV single circuit tubular H-frame steel structure strain two pole;
- **Exhibit 8:** A copy of the PJM Interconnection, LLC ("PJM") M3 Process Solution slides;
- **Exhibit 9:** A copy of the Wetland and Waterbody Delineation Report prepared by Jacobs Engineering Group Inc. ("Jacobs"), dated July 2025;
- **Exhibit 10:** A copy of the Pennsylvania Natural Diversity Inventory ("PNDI") review dated January 31, 2025, and related agency clearance correspondence;
- **Exhibit 11:** A copy of the correspondence with the Pennsylvania Department of Conservation and Natural Resources ("DCNR") dated September 17, 2025; and
- **Exhibit 12**: copies of the Pennsylvania State Historic Preservation Office ("SHPO") clearance letters dated August 12 and August 29, 2025.

6. This Letter of Notification and accompanying Exhibits, which are incorporated herein by reference, contain all the information required by 52 Pa. Code § 57.72(d)(4).

II. THE PROJECT

A. NEED FOR THE PROJECT

7. As explained in further detail below, the proposed Project is needed to rebuild the approximately 7.2-mile-long existing Ashtabula-Erie West 345 kV Transmission Line.

1. Existing System

8. The existing Ashtabula-Erie West 345 kV Transmission Line utilizes 1033 kcmil 54/7 aluminum conductor steel reinforced ("ACSR") bundled conductor (two per phase) and ½ inch galvanized extra high strength ("EHS") shield wire. The existing structures being removed range from 70 to 120 feet tall.

9. A map of the existing system configuration is provided as **Exhibit 2.**

2. Identification of Need

10. The Pennsylvania portion of the Ashtabula–Erie West 345 kV Transmission Line is owned by MAIT and is an approximately 7.2-mile-long single-circuit, double-bundled transmission line. The MAIT-owned section of the Ashtabula-Erie West 345 kV Transmission Line runs from the point of interconnection with the American Transmission Systems Incorporated-owned portion of the line at structure #13083 at the Ohio and Pennsylvania border to the Erie West Substation. In total, there are 40 MAIT-owned structures on this portion of the Ashtabula-Erie West 345 kV Transmission Line, consisting of 11 steel lattice tower structures, two two-pole steel structures, 22 two-pole steel H-frame structures, three three-pole steel structures, and two two-pole wood H-frame structures. The conductor on the MAIT portion of this transmission line is 1033 kcmil ACSR (54/7) twin conductor bundle and the static/shield wire is comprised of ½-inch galvanized EHS.

11. The Ashtabula–Erie West 345 kV Transmission Line was originally constructed in the mid-1960s, and all steel structures and hardware are original from the initial construction. The

only change made to the Ashtabula–Erie West 345 kV Transmission Line was the installation of two wood H-frame structures in 2012 to mitigate North American Electric Reliability Corporation clearance violations. There have been no major changes or upgrades to the Ashtabula–Erie 345 kV Transmission Line since it was placed in service, making all structures and hardware approximately 60 years old. The Ashtabula–Erie West 345 kV Transmission Line is a critical asset to the Company's system that provides an important link to the East Coast and serves approximately 230 megawatts of load in the Lake Erie area.

12. As part of the ongoing effort to maintain the extra-high voltage transmission system, in 2019 an assessment was conducted of the Ashtabula–Erie West 345kV Transmission Line to evaluate actions needed to ensure the future reliability of the transmission line. This assessment encompassed all structures, components, and hardware on the MAIT-owned portion of the Ashtabula–Erie West 345 kV Transmission Line and resulted in the identification of the scope for this Project.

13. The MAIT-owned portion of the Ashtabula–Erie West 345 kV Transmission Line has an assortment of structure types, as described above. Upon inspection, the lattice towers appeared to be adequately designed and, apart from the coating system degrading and hardware rusting, were determined to be functionally satisfactory. During the assessment in 2019, a few lattice towers were identified as needing repairs and were subsequently repaired the following year. After repair, the lattice towers on the MAIT portion of the Ashtabula–Erie West 345 kV Transmission Line were selected to remain and be incorporated into the scope of this Project, replacing only the hardware attachment points and insulators. Structure coating will take place during the regularly scheduled maintenance window for this transmission line.

14. For the steel pole structures with lateral guying, the structures' integrity is dependent on the guying functioning as designed. Failure of the guying or the guy anchors can

result in structural collapse and possible cascade-type failures. Cascade-type failures can occur because these structures are connected to the foundation through a pin, which cannot prevent pole collapse. The pinned base provides no horizontal rotational resistance, and the structure can rotate around its base and fall without transverse guying. Slack guy wires on standard structures are not usually a major maintenance concern but can create a scenario for a full structure collapse on the Ashtabula–Erie West 345 kV Transmission Line due to the design of the structures.

15. When assessing the need for the Project, it was determined that, due to these factors, if these steel pole structures were not included in a rebuild scope, all guying would need to be replaced and groundline inspections would need to be conducted annually to inspect the guying for slack to reduce the risk of a catastrophic structure failure on a critical transmission line. During a 2021 groundline inspection of this line, inspectors observed that 19 of the hinged H-frame structures had one or more slack guy wires.

16. Contributing to the risk presented by the unique structures is the lack of dead end structures on the MAIT-owned portion of the Ashtabula–Erie West 345 kV Transmission Line. Currently, only one dead end structure, existing structure 109, is installed on the 7.2 miles of the Ashtabula–Erie West 345 kV Transmission Line. New lines of similar voltage have an average of one dead end structure every four miles to minimize the number of structures that may need to be restored if one structure failure leads to the cascading of successive structures.

17. The assessment determined that during the more than 60 years of service, the steel pole structures have experienced failures of components that were repaired by using material on hand. The repaired components included materials necessary to support the structural guying. These individual repairs resulted in conditions with currently functional components; however, if a failure occurs, the subsequent condition of these structures will be unsafe or undesirable. In addition, the steel pole structures exhibit extensive coating system failure. The corrosion on the

structures may not be critical now but could become a structural issue in the future if the structures are not replaced or re-coated.

18. The condition of the steel pole structures on the Ashtabula-Erie West 345 kV Transmission Line described above led to the decision to replace these structures as part of this Project. Hinged bases and guying are not commonly seen on steel pole transmission structures, especially in this voltage class. A more conventional design using foundations that do not rely on guying was chosen as the best path forward to ensure the reliability of this critical infrastructure.

19. There are currently two wood pole H-frame structures on the MAIT portion of the Ashtabula–Erie West 345 kV Transmission Line. Both were installed in 2012 to mitigate National Electrical Safety Code ("NESC") clearance violations that were identified during LiDAR inspections. While wood poles are a valuable temporary repair option for damaged structures during a line outage because they are relatively easy to install and typically allow the line to be restored quickly, their use can increase risk and can reduce the resilience of the line in the long run. Therefore, MAIT chose to remove these structures and replace structure #42951 with a steel structure, which offers a longer asset life and creates a more resilient transmission line. The other structure, structure #42952, will be removed but not replaced under the new design.

20. The conductor on the Pennsylvania portion of the Ashtabula–Erie West 345 kV Transmission Line was installed in 1966 and consists of 42 spans of 1033.5 kcmil 54/7 ACSR bundled conductor, two per phase. Results of lab testing of four conductor samples showed signs of deterioration, including the following:

a. Evidence of arcing between aluminum strands (interstrand arching) due to poor or deteriorated terminal connections or splices has decreased conductor strength by 10%. The interstrand arcing occurs when current traveling through the conductor moves between strands that have a poor connection at the termination or splice to

strands that have a good connection. Over time, the aluminum strands will erode due to this arcing until failure occurs.

b. The aluminum strands on two samples showed compression marks on opposite sides of the strand from contact with other layers of strands, resulting in decreased tensile strength on one of the samples. This sample did not meet tensile strength minimums for the conductor and failed at the compression mark.

c. All four samples showed evidence of surface oxidation due to deterioration caused by age. The steel strands in one sample were also covered with the aluminum oxide residue.

21. The insulators on the MAIT-owned portion of the Ashtabula–Erie West 345 kV Transmission Line are porcelain and over 60 years old. While no specific testing was conducted on the insulators, the expected service life for porcelain insulators is 40 years, contingent on the original product quality and proper application of the units. The insulators and hardware are currently showing the effects of aging, including rust on the yoke plates, bells, and hardware attachment points. In addition, this transmission line was not designed with corona rings, devices typically installed at or above 230 kV, resulting in insulators being exposed to continuous corona discharge for their entire service life. Due to this exposure, the insulators and hardware have become corroded and need to be replaced.

22. MAIT uses FirstEnergy's Energizing the Future Methodology, which involves review and assessment of existing transmission facilities for equipment characteristics that are near or beyond their existing service life, contain components that are obsolete, or pose reliability risk to the system. To determine whether lines should be rehabilitated, rebuilt, or replaced based on their age, performance, system criticality, risk and condition-based assessment, the following global characteristics may be considered:

- Customer/contingency risk;
- Negative impact on equipment health and/or system reliability;
- Customer outage frequency and/or durations;
- Increasing negative trend in maintenance findings and/or costs;
- Failure risk, to the extent caused by asset design characteristics, or historical industry/company performance data;
- Operation, design, or installation limitations;
- Age/condition of wood pole transmission line structures; typically replacement is considered beginning at 40 years of average age for a line segment;
- Must pass a hammer sound test;
- Age/condition of steel tower or steel pole transmission line structures; typically replacement is considered beginning at 60 years of average age for a line segment;
- Age/condition of transmission line conductors and hardware; typically replacement is considered beginning at 40 years of average age for a line segment;
- System characteristics include lightning and grounding performance, galloping overlap, insulation coordination, structural capacity needs, and future needs (e.g., fiber path);
- Current design criteria, applicable codes, and industry best practices;
- Environmental factors; and
- Lack of resiliency or system-hardening attributes.

23. When evaluating the replacement of in-service transmission line assets, the review may also consider maintenance operating experience, manufacturer and accepted industry practices, and current engineering design standards.

24. Following the assessment of the MAIT-owned portion of the Ashtabula–Erie West 345 kV Transmission Line, an overall rehabilitation and reconductoring of the line was considered as an alternative to a rebuild. This alternative would have involved replacing all insulators, hardware, and attachment points, replacing the conductor and static wire, replacing all guying on all the steel pole guys' structures, and coating the structures. While this alternative would mitigate

most of the issues brought on by the hardware reaching its end of life, it would not mitigate the risk of the hinged steel pole structures' reliance on proper guying to support the structure under normal conditions. Even with the rehabilitation efforts mentioned above, the risk of these structures collapsing due to failed guy wires was not acceptable on a transmission line that has been identified as a critical asset. The failure risk becomes greater when considering the lack of dead end structures on the Pennsylvania portion of the Ashtabula–Erie West 345 kV Transmission Line, which could contribute to a large cascading failure. Therefore, MAIT determined that new structures built to current standards are necessary to ensure the reliability of the Ashtabula-Erie West 345 kV Transmission Line. Representative photographs of the conditions referenced in this section can be found in **Exhibit 3.**

B. THE PROPOSED PROJECT

25. This Project will involve removing a total of 29 existing structures and installing 28 proposed structures. The proposed new structures will be single-circuit steel H-frame structures on drilled shaft foundations ranging in height from approximately 88 to 118 feet above ground. The existing structures being removed range in height from approximately 70 to 120 feet above ground. Twenty-four 345 kV single-circuit tubular H-Frame suspension two-pole steel structures will be installed, as depicted in **Exhibit 4**. One 345 kV single-circuit tubular H-Frame steel angle structure will be installed, as depicted in **Exhibit 5**. Two 345 kV single-circuit tubular horizontal dead end three-pole steel structures will be installed, as depicted in **Exhibit 6**. One 345 kV single-circuit tubular H-frame steel strain two-pole structure will be installed, as depicted in **Exhibit 7**.

26. The existing Ashtabula-Erie West 345 kV Transmission Line is constructed with 1033 kcmil 54/7 ACSR conductor and ½ inch Galvanized EHS shield wire. The Project will require the installation of new 954 kcmil 54/7 aluminum conductor steel supported ("ACSS") "Cardinal" conductor and 7#6 Alumoweld shield wire.

27. The use of advanced transmission technologies was considered as part of this Project. ACSS conductor provides higher operating temperature capabilities and lower sag characteristics. The higher temperature/lower sag ("HTLS") conductor allows for higher ampacity to run through the conductor and provides more flexibility in terms of alleviating overloading and premature degradation. In addition, an HTLS conductor's ability for higher ampacity could allow additional load to be added to the line.

28. The Ashtabula-Erie West 345 kV Transmission Line is owned, operated, and maintained by MAIT. The estimated transmission line cost is approximately $51,403,000. This cost includes approximately $1,269,000 for engineering, $13,050,000 for materials, and $37,084,00 for construction.[2] **CONFIDENTIAL Attachment A** contains a detailed breakdown of these costs, all of which will be paid for by MAIT.

29. PJM is the regional transmission organization for Pennsylvania and 12 other states plus the District of Columbia. PJM functions as the regional planning coordinator, transmission planner, and transmission operator to preserve the reliability of the bulk electricity grid under its operational control. The PJM planning process culminates in a PJM Board-approved Regional Transmission Expansion Plan ("RTEP"), which identifies the need and timing of transmission system upgrades and enhancements to provide for the operational, economic, and reliability requirements of PJM customers. The RTEP consists of system upgrades produced from one or more of four planning processes: reliability planning; economic planning; interconnection planning; and local planning.

30. The proposed Project is a "Supplemental Project" or upgrade initiated by MAIT, the Transmission Owner ("TO"), as part of PJM's local planning process, which is governed by

[2] Related substation costs will total approximately $2,144,000, which includes $346,000 in engineering costs, $278,000 in materials costs, and $1,520,000 in construction costs. A detailed breakdown of these substation costs is also included in **CONFIDENTIAL Attachment A**.

Attachment M-3 of the PJM Open Access Transmission Tariff ("OATT"). In accordance with the Attachment M-3 process, the TO provides information regarding the criteria used to plan and identify Supplemental Projects at a PJM Assumptions Meeting. The process for developing Supplemental Projects requires the identification of a system "need" at a meeting of the PJM Subregional RTEP ("SRRTEP") Committee, which provides an opportunity for industry stakeholders to comment on the project need. Next, there is a "solutions" meeting where a proposed solution to the previously identified need is presented along with any alternatives that were considered. Stakeholders can provide comments on the proposed solution. Once PJM completes its do-no-harm analysis of the Project, PJM will assign the project a Supplemental Identifier beginning with an "s" followed by a four-digit number. Supplemental upgrades are part of the local planning process but are not mandated or directed by PJM; however, the upgrades are necessary in order to address planning functions not transferred to PJM (*e.g.*, asset management and customer interconnections).

31. In accordance with the PJM OATT, Attachment M-3, the proposed Project was presented at the PJM SRRTEP Western Need meeting on December 5, 2023, and at Solution meetings held on August 6, 2024, and August 5, 2025. The Company's PJM SRRTEP – Western Solution slides from the August 5, 2025, meeting are included as **Exhibit 8.**

32. Supplemental upgrades that have been reviewed through the Attachment M-3 process are identified with an "s" followed by a four-digit number. The Supplemental Number for the proposed Project is s3702.1. Supplemental upgrades are not mandated or directed by PJM; however, the upgrades are necessary to address planning functions not transferred to PJM (*e.g.*, asset management and customer interconnections). These projects reflect the PJM TO's obligation to serve its local service territory and are grounded in good utility practice.

III. HEALTH AND SAFETY

33. The proposed Project will not create any unreasonable risk of danger to public health or safety. The Project will be designed to meet or exceed all requirements of the latest revision of the NESC under all operating conditions, as well as MAIT's current design criteria. These criteria state that 345 kV transmission lines shall have a designed vertical conductor to ground clearance of 32.0 feet. This design value exceeds the NESC minimum of 24.7 feet by a margin of 7.3 feet. In general, MAIT clearance criteria exceed NESC minimums by various margins ranging from two feet to eight feet, dependent on the voltage and specific clearance measurement. The transmission line maximum operating temperature will be 392 degrees Fahrenheit.

34. The design, construction, and operation of the Project will meet or exceed all applicable safety standards established by the Occupational Safety and Health Administration ("OSHA"). Moreover, the Project will be constructed following MAIT standard construction practices to perform all work safely. All work will be done in accordance with NESC and OSHA standards, as well as all other applicable state and federal requirements.

IV. DESCRIPTION OF RIGHT OF WAY

35. The entirety of proposed Project will be located within the existing 250-foot-wide right-of-way ("ROW"). The existing easements allow for installation of the proposed structure replacements. The Project will not require new easements, guying outside the ROW, or ROW expansion.

36. The proposed structure changes will not have any impact on any new landowners. No new or additional structures will be placed on any of the impacted parcels.

V. LAND USE AND ENVIRONMENTAL EVALUATION

37. A field review of wetlands and streams in the Project Area was conducted by Jacobs in April and October 2024, and April and June 2025. **Exhibit 9** is a copy of the Wetland and Waterbody Delineation Report for the Project, dated July 2025. Thirty-three wetlands were identified within the delineation boundary, of which 28 were identified as palustrine emergent ("PEM") wetlands, two were identified as palustrine scrub-shrub ("PSS") wetlands, and three were identified as PEM/PSS wetland complexes. In addition, 14 streams were identified within the delineation boundary, of which one stream was identified as an ephemeral stream, seven were intermittent streams and six were perennial streams.

38. A Chapter 105 GP-11 permit application will be prepared and submitted to Pennsylvania Department of Environmental Protection ("PADEP") for approval to register the structure replacement within wetlands, temporary wetland impacts due to timber matting, and aerial crossings of streams.

39. Based on current engineering design, nine structure replacements will be installed within wetlands. Temporary wetland impacts associated with access and construction efforts were minimized to the greatest extent practicable through engineering design and access planning. Timber matting will be utilized to minimize potential impacts to wetlands and streams will be air-bridged for access to construction areas. Existing access roads will be used to the extent practicable, and non-existing access roads will be restored to original contours and vegetative cover following construction. Minor tree clearing may be required for access roads; however, no tree clearing will be carried out within wetlands.

40. An Individual National Pollutant Discharge Elimination System Permit for construction stormwater discharges will be prepared and submitted for approval to the Erie County Conservation District and the PADEP Regional Permit Coordination Office. MAIT assumes the

Project will be considered exempt or in compliance with the riparian buffer requirements in Section 102.14 of the Pennsylvania Code, 25 Pa. Code § 102.14.

41. Initial coordination with Pennsylvania state agencies regarding threatened and endangered species began in January 2025 with a PNDI review. The PNDI online tool indicated that further review with the Pennsylvania Department of Conservation and Natural Resources ("PA DCNR") was required due to the potential presence of plant species of special concern within the Project area. The PNDI indicated no known impacts to species regulated by the Pennsylvania Game Commission ("PGC"), Pennsylvania Fish and Boat Commission ("PFBC"), or the U.S. Fish and Wildlife services ("USFWS"). A copy of the PNDI receipt is attached as **Exhibit 10**.

42. On February 13, 2025, the PA DCNR identified 11 species of concern in the vicinity and requested that botanical surveys be carried out by a qualified botanist to ensure that construction activities would not impact existing populations. Jacobs' botanists conducted a rare plant survey within the Project area in June and August 2025. Eleven target plant species were the focus of the surveys conducted across Project area, with two target species—pumpkin ash (*Fraxinus profunda)* and northern water plantain (*Alisma triviale)* confirmed during field investigations. Based on the results of the rare plant survey, access roads and work areas were adjusted to avoid any impacts and create a buffer between the identified locations of the pumpkin ash and northern water and the construction limits. Erosion and sediment controls and other best management practices will also be installed between the identified locations of these specimens and the work areas to protect the species from any potential indirect impacts from the construction activities. Jacobs submitted the botanical survey report to PA DCNR on August 25, 2025. PA DCNR responded on September 17, 2025, stating that based on the avoidance of the identified species, no impact is likely and no further coordination is needed for this Project. The correspondence from PA DCNR is included as **Exhibit 11.**

43. Consultation with SHPO was initiated on July 28, 2025. On August 12, 2025, the SHPO stated that the proposed Project will have no effect on above-ground historic properties but requested further information, including a Phase IB archaeological survey report for the Project area. In anticipation of the request, Jacobs conducted the Phase 1B archaeological survey in July 2025. The survey did not identify any new archaeological resources. The report summarizing the results of the survey and recommending the Project proceed as designed was submitted to the SHPO on August 12, 2025. In a response dated August 29, 2025, the SHPO concurred with the survey's findings and recommendations and indicated that no further archaeological work is necessary for the Project. Correspondence from the SHPO is included as **Exhibit 12.**

VI. NOTICE

44. MAIT has provided information regarding the Project to representatives of Springfield and Conneaut Townships, Erie County. These entities have not objected to the proposed Project. Copies of the Letter of Notification will be served upon all state agencies, federal agencies, county agencies, municipalities, and landowners in accordance with 52 Pa. Code § 57.72(d)(3).

VII LETTER OF NOTIFICATION

45. MAIT is proceeding by means of a Letter of Notification, instead of a full Application, pursuant to the Commission's regulations at 52 Pa. Code § 57.72(d)(1)(i) and (d)(1)(v).

46. The proposed Project involves the removal of 29 existing structures and the replacement of 28 of those structures within an existing transmission line ROW. As such, the Project meets the parameters of 52 Pa. Code § 57.72(d)(1)(i) for a high voltage line proposed to be located entirely on existing transmission line ROW, as well as the parameters of § 57.72(d)(1)(v) for a high voltage line which is to be reconductored or reconstructed, so long as the

size, character, design or configuration of the proposed high-voltage line does not substantially alter the ROW.

47. This Letter of Notification is being filed on the date set forth below. As provided in 52 Pa. Code § 57.72(d)(5), the Commission will review and, by order, approve or disapprove this Letter of Notification. If the Commission approves this Letter of Notification, the proposed Project will be constructed as proposed herein without the formal application process set forth at 52 Pa. Code §§ 57.71, et seq.

WHEREFORE, Mid-Atlantic Interstate Transmission, LLC respectfully requests that the Commission review and approve the proposed Ashtabula-Erie West 345 Kilovolt Transmission Line Rebuild Project in Springfield and Conneaut Townships in Erie County, Pennsylvania, that is explained above and, in the Exhibits, attached hereto, on or before the Public Meeting scheduled for May 21, 2026.

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Email: tgiesler@firstenergycorp.com

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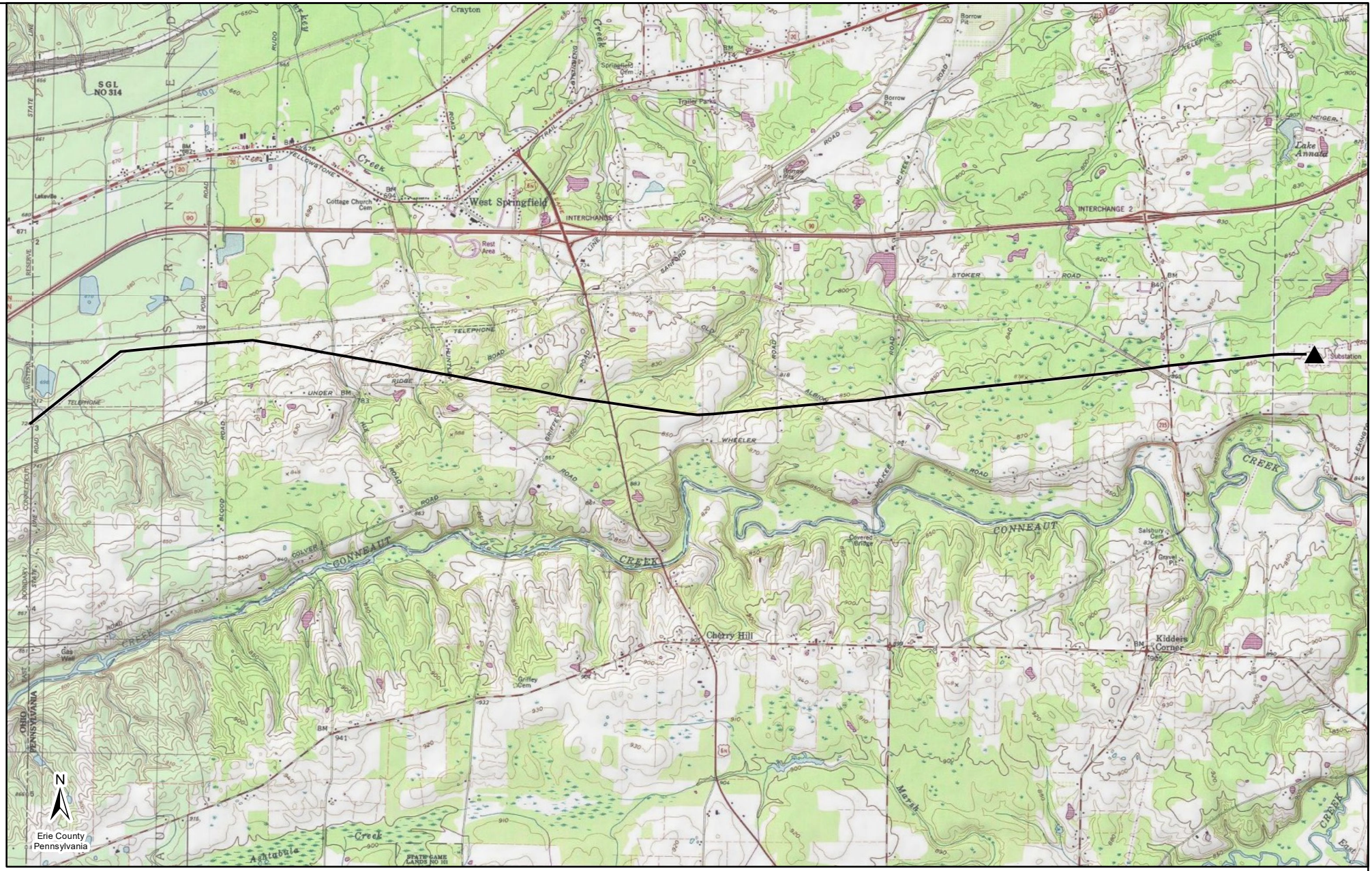
Fax: (717) 731-1985
E-mail: dmacgregor@postschell.com
E-mail: glent@postschell.com
Email: mrulli@postschell.com

Attorneys for Mid-Atlantic Interstate Transmission, LLC

Date: March 31, 2026

Exhibit 1



LEGEND:

▲ Erie West Substation

— Ashtabula-Erie West 345kV Transmission Line

0 1,900 3,800 7,600

Feet

Reference:
USGS Topographical Overlay; PennDOT, PADCNR PAMAP

Coordinate System:
NAD_1983_StatePlane_Pennsylvania_North_FIPS_3701_Feet
WKID: 2271 Authority: EPSG

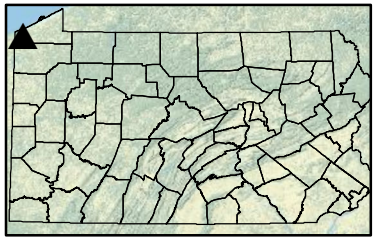


EXHIBIT 1

MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

Ashtabula-Erie West 345kV
Transmission Line Rebuild Project

Exhibit 2

I-90

RT 215

#128 TO #140
SHEET 4

SUB TO #117
SHEET 2

ERIE WEST
SUB

#140 TO #13083
SHEET 5

POINT OF INTERCONNECT
TWR # 13083

#117 TO #128
SHEET 3

ASHTABULA CO. OH

ERIE CO. PA

CONNEAUT RIVER

LEGEND

- 345kV TRANSMISSION LINE
- OTHER LINE NOT BEING REPLACED
- RAILROAD
- EXISTING TOWER
- SUBSTATION

ERIE CO. PA

PAPER SIZE: 17X11

Ashtabula - Erie West 345 kV Transmission Line Rebuild Project

MAIT Mid-Atlantic Interstate Transmission, LLC A FirstEnergy Company	ASSET/OP. CO.		SHEET	REV.
	MAIT	Exhibit 2	1/5	

HART PAUL D HART PENNY C

RT 215

250 R/W

638' R/W

A-FRAME SUBSTATION

ERIE WEST SUB

ERIE CO. PA

ASHTABULA SUB

#113

#112
(PREVIOUSLY #42951)

#111
(PREVIOUSLY #112)

#110
(PREVIOUSLY #111)

#109
(PREVIOUSLY #110)

#108
(PREVIOUSLY #109)

#107
(PREVIOUSLY #108)

MILLER DANIEL D
MILLER JOHN D

CORNELIUS EDWIN J

CORNELIUS EDWIN J

SITHE PENNSYLVANIA HOLDINGS LLC

OLESNANIK J A
OLESNANIK DEBR

ERIE CO. PA

ASHTABULA SUB

AW LUMBER LLC

250' R/W

ERIE WEST SUB

#117

#116

#115

#114

#113

BOOTHBY JAMES
BOOTHBY SAMUEL

LONG MELISSA

MILLER DANIEL D
MILLER JOHN D

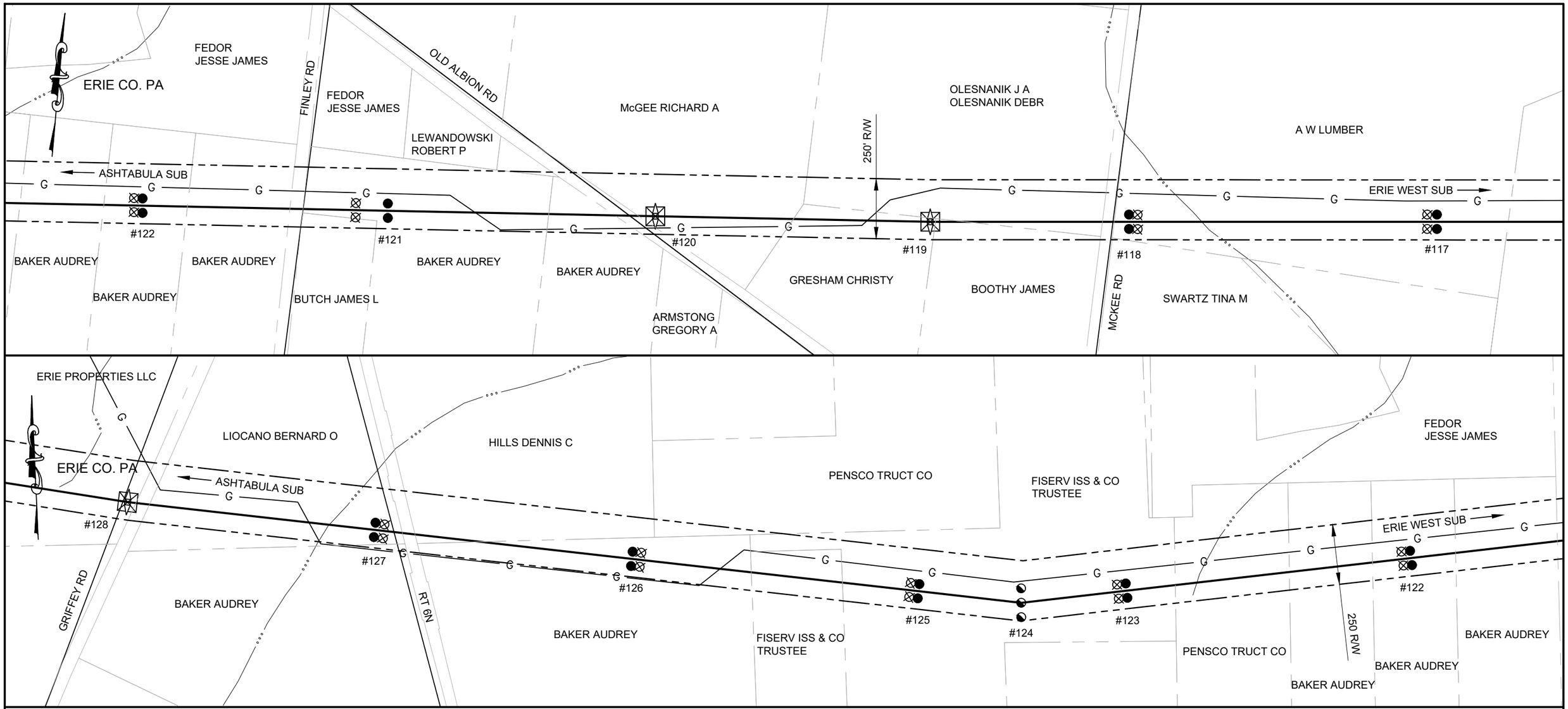
LEGEND

- 345kV TRANSMISSION LINE
- GAS LINE (APPROX.)
- RAILROAD
- PROPERTY LINE
- RIGHT OF WAY
- EXISTING TOWER
- NEW STRUCTURE
- EXISTING STR TO BE REMOVED
- A FRAME STRUCTURE
- SUBSTATION

PAPER SIZE: 17X11

Ashtabula - Erie West 345 kV
Transmission Line Rebuild Project

MAIT Mid-Atlantic Interstate Transmission, LLC	ASSET/OP. CO.	Exhibit 2	SHEET	REV.
	MAIT		2/5	



LEGEND

- 345kV TRANSMISSION LINE
- G - GAS LINE (APPROX.)
- RAILROAD
- PROPERTY LINE
- RIGHT OF WAY
- EXISTING TOWER
- NEW STRUCTURE
- EXISTING STR TO BE REMOVED
- NEW STR SAME LOCATION

PAPER SIZE: 17X11

Ashtabula - Erie West 345 kV
Transmission Line Rebuild Project

MAIT Mid-Atlantic Interstate Transmission, LLC A FirstEnergy Company	ASSET/OP. CO. MAIT	Exhibit 2	SHEET 3/5	REV.

ERIE CO. PA

REA RD

ASHTABULA SUB

YORK DENNIS C

TURKEY CREEK

HUNTLEY RD

SPAULDING SCOTT W

UNDERRIDGE RD

OBRIEN SHAWNR
OBRIEN SARAH M

ERIE PROPERTIES LLC

LIOCANO
BERNARD O

ERIE WEST SUB

G

#134 #133 #132 #131 #130 #129 #128

250' R/W

SAND RIDGE FARMS INC

SCHATZ JOHN S

REYDAK STEPHEN

DOHANIC JOHN
DOHANIC DARLENE

GRIFFEY RD

ERIE CO. PA

POND RD

G

SAND RIDGE FARMS INC

SAND RIDGE FARMS INC

REA RD

ERIE WEST SUB

ASHTABULA SUB

#138 #137 #136 #135 #42952 #134

250' R/W

#139

#140

BESSEMER & LAKE ERIE
RAILROAD CO

JARVI MATTHEW M

HOPKINS THOMAS W

SAND RIDGE FARMS INC

LEGEND

- 345kV TRANSMISSION LINE
- G - GAS LINE (APPROX.)
- RAILROAD
- PROPERTY LINE
- RIGHT OF WAY
- EXISTING TOWER
- NEW STRUCTURE
- EXISTING STR TO BE REMOVED
- NEW STR SAME LOCATION

PAPER SIZE: 17X11

Ashtabula - Erie West 345 kV
Transmission Line Rebuild Project

MAIT Mid-Atlantic Interstate Transmission, LLC A FirstEnergy Company	ASSET/OP. CO. MAIT	Exhibit 2	SHEET 4/5	REV.

ERIE CO. PA
ASHTABULA CO. OH

ASHTABULA CO. OH
ERIE CO. PA

250' R/W

G

ASHTABULA SUB

#144

#143

#142

#141

#140

ERIE WEST SUB

POND RD

BESSEMER & LAKE ERIE
RAILROAD CO

SAND RIDGE FARMS INC

ERIE CO. PA
ASHTABULA CO. OH

ASHTABULA SUB

POINT OF INTERCONNECT
BETWEEN ATSI & MAIT
TWR # 13083

#145

#144

250' R/W

ERIE WEST SUB

ASHTABULA CO. OH
ERIE CO. PA

BESSEMER & LAKE ERIE
RAILROAD CO

BESSEMER & LAKE ERIE
RAILROAD CO

LEGEND

- 345kV TRANSMISSION LINE
- G - GAS LINE (APPROX.)
- RAILROAD
- PROPERTY LINE
- RIGHT OF WAY
- EXISTING TOWER
- NEW STRUCTURE
- EXISTING STR TO BE REMOVED
- NEW STR SAME LOCATION

PAPER SIZE: 17X11

Ashtabula - Erie West 345 kV Transmission Line Rebuild Project

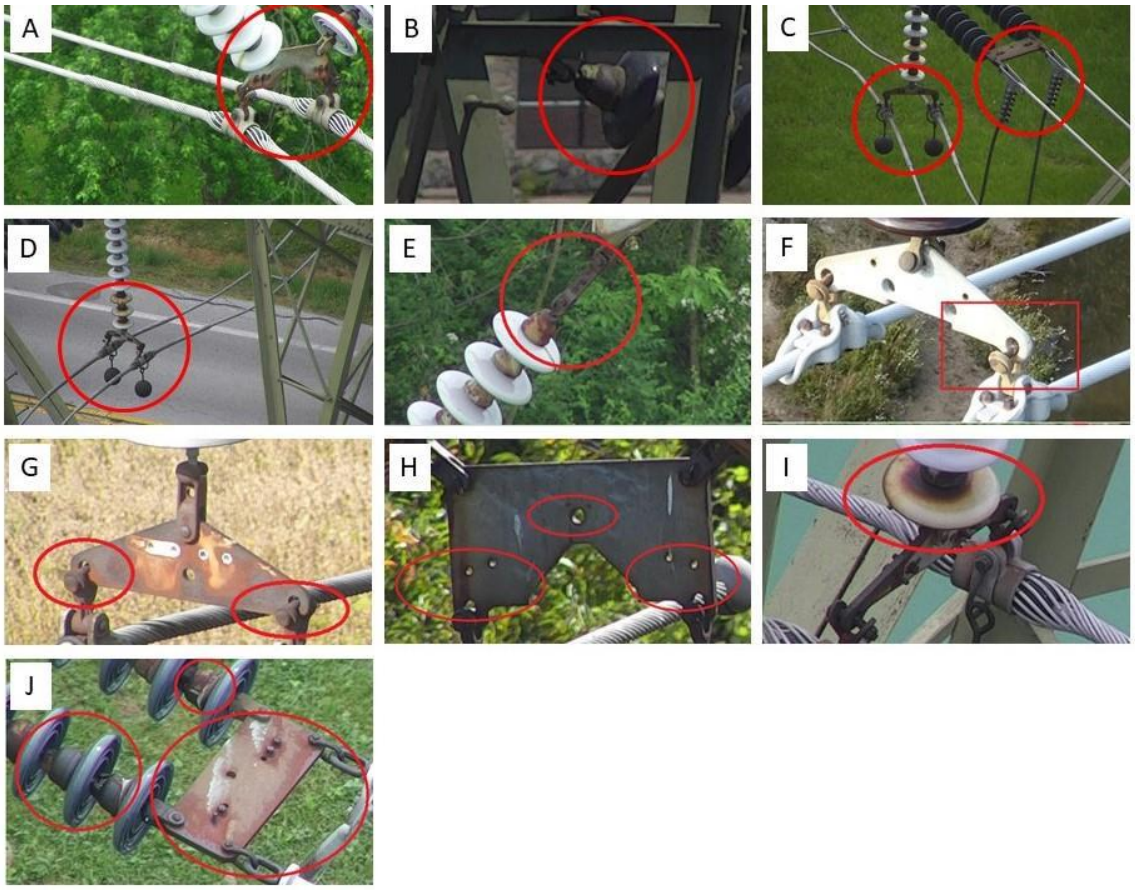
MAIT Mid-Atlantic Interstate Transmission, LLC	ASSET/OP. CO.		SHEET	REV.
	MAIT	Exhibit 2	5/5	

Exhibit 3

Picture Above: Pole leg foundation connection with a pin (Pin is not visible)

Picture Above: Distorted thimble with preformed guy hardware.

EXHIBIT 3

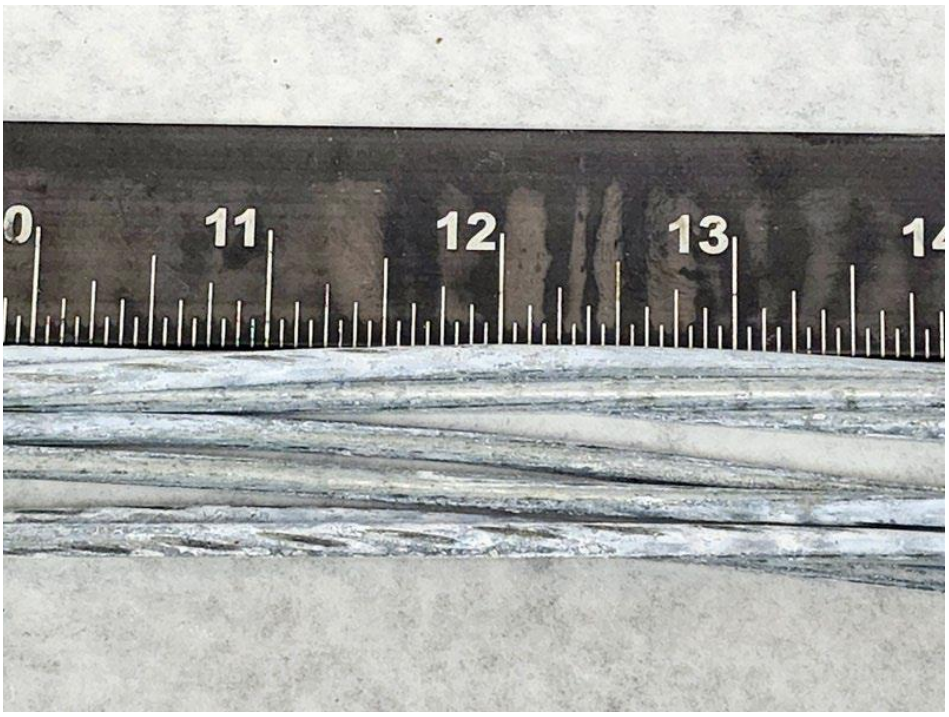


Group Picture — A: Insulator Rusted Hardware. B: Rusted Insulator Caps. C: Insulator Rusted Bells and Hardware. D: Insulator Rusted Bells and Hardware. E: Cotter Key in Top Bell Rusted Off. Rusted Hardware/Insulator Caps. F: Corona Damage. G: Insulator Rusted Hardware. H: Insulator Damaged Hardware. I: Insulator Rusted Bells and Hardware. K: Dead-end Insulator Rusted Hardware and Bells.

EXHIBIT 3

Picture Above: Hot end cotter pin backing out. Rusty hardware and insulators.

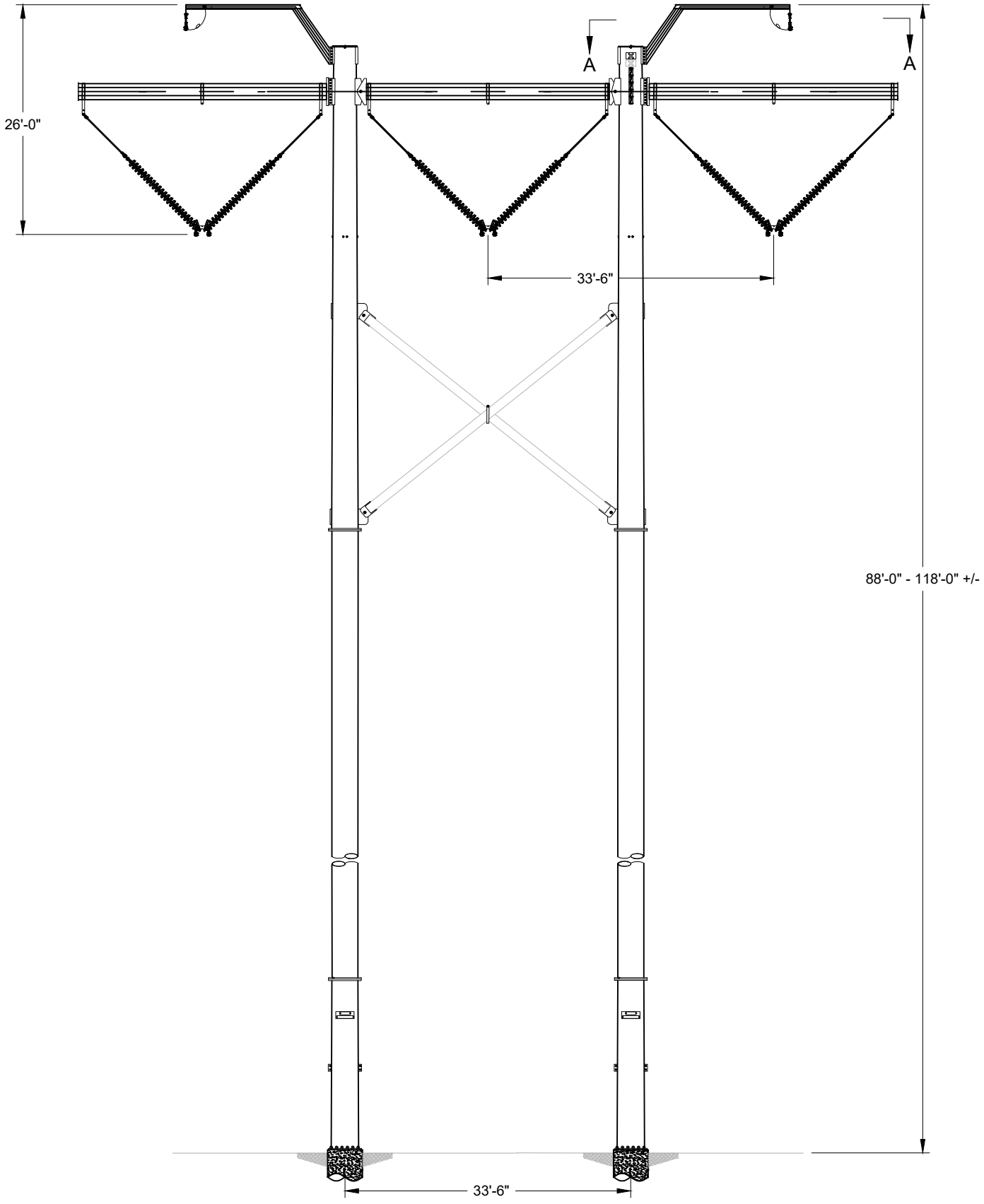
Picture Above: Photo taken during an Aerial CVI capturing a broken insulator. Photo also shows the extent of rust on the structures, hardware, and insulator bells.



Picture Above: View of the aluminum oxide found on the steel strands of the conductor.

Picture Above: View of the aluminum oxide found on the aluminum strands and compression marks from contact with other layer of strands. Minor scale divisions are 1/16th inch.

Exhibit 4



MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

Ashtabula - Erie West 345 kV
Transmission Line Rebuild Project

345kV SINGLE CIRCUIT TUBULAR H-FRAME STEEL STRUCTURE
SUSPENSION TWO POLE ANGLES 0° TO 2°

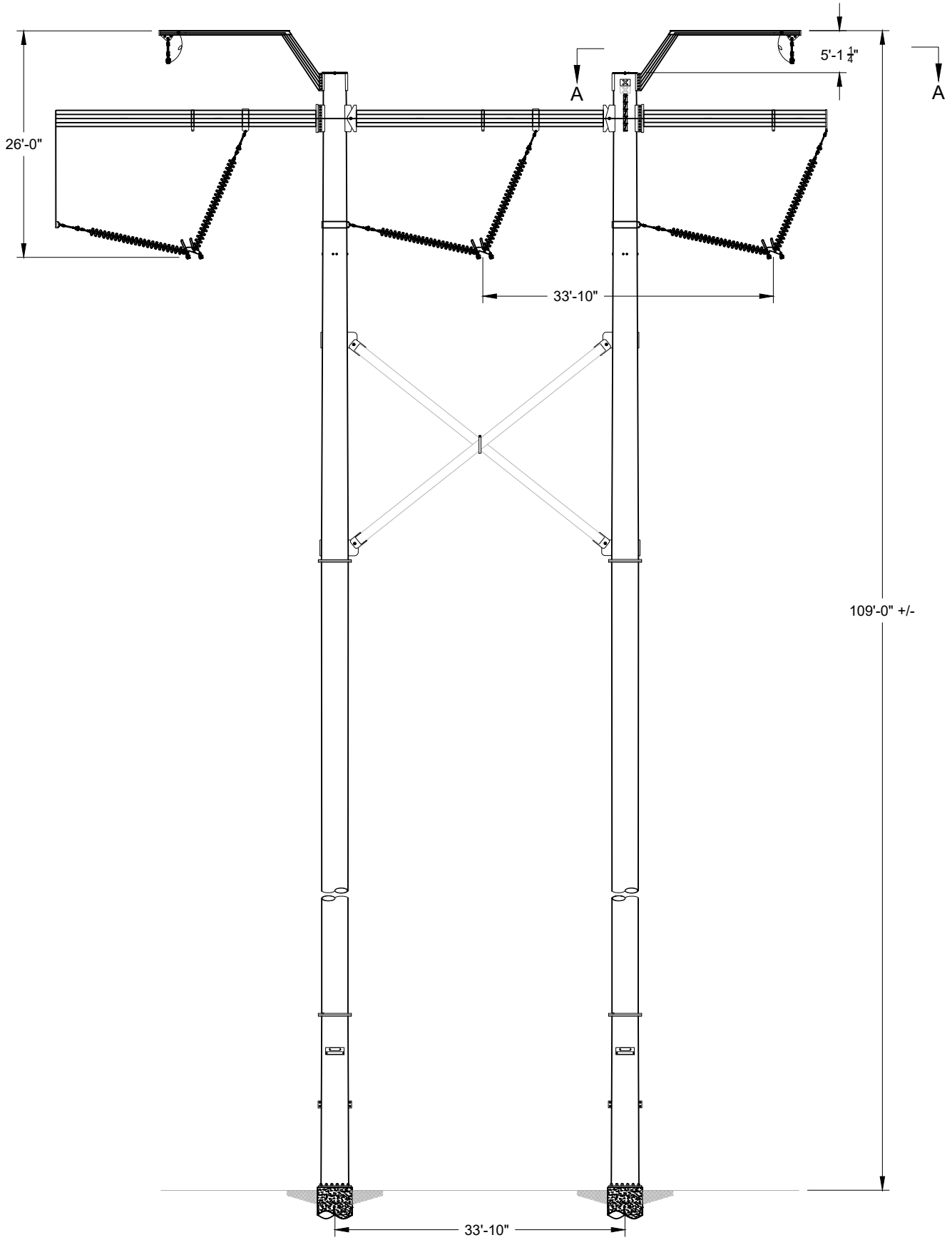
Exhibit 4

PAPER SIZE: 8.5X11

SCALE: NTS

CE-22-135-PN

Exhibit 5



MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

Ashtabula - Erie West 345 kV
Transmission Line Rebuild Project

345kV SINGLE CIRCUIT TUBULAR H–FRAME STEEL STRUCTURE
SUSPENSION TWO POLE ANGLES 10° TO 30°

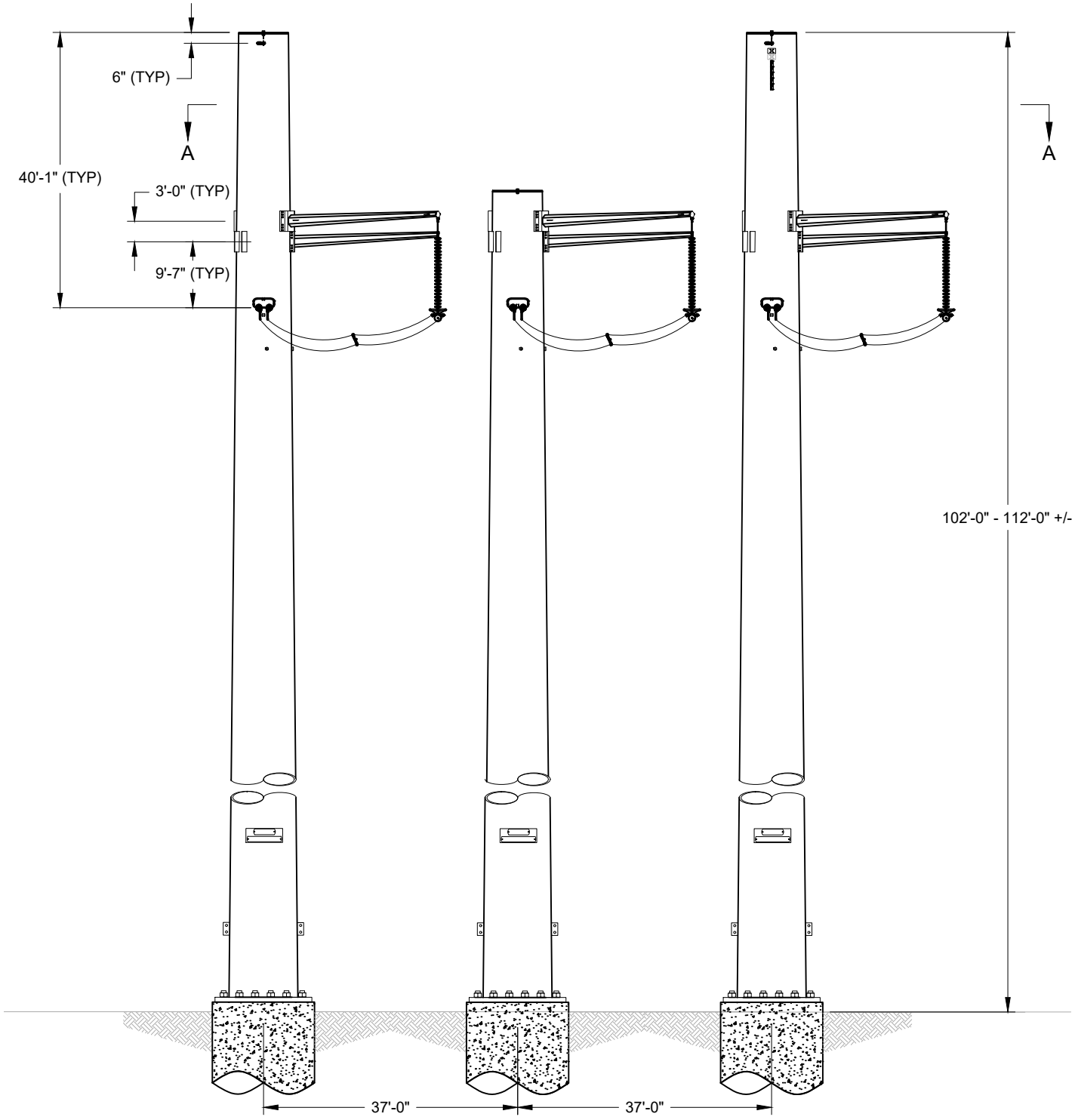
Exhibit 5

SCALE: NTS

PAPER SIZE: 8.5X11

CE–22–135–PN

Exhibit 6



MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

Ashtabula - Erie West 345 kV
Transmission Line Rebuild Project

345kV SINGLE CIRCUIT TUBULAR STEEL STRUCTURE
HORIZONTAL DEAD END THREE POLE ANGLES 0° TO 50°

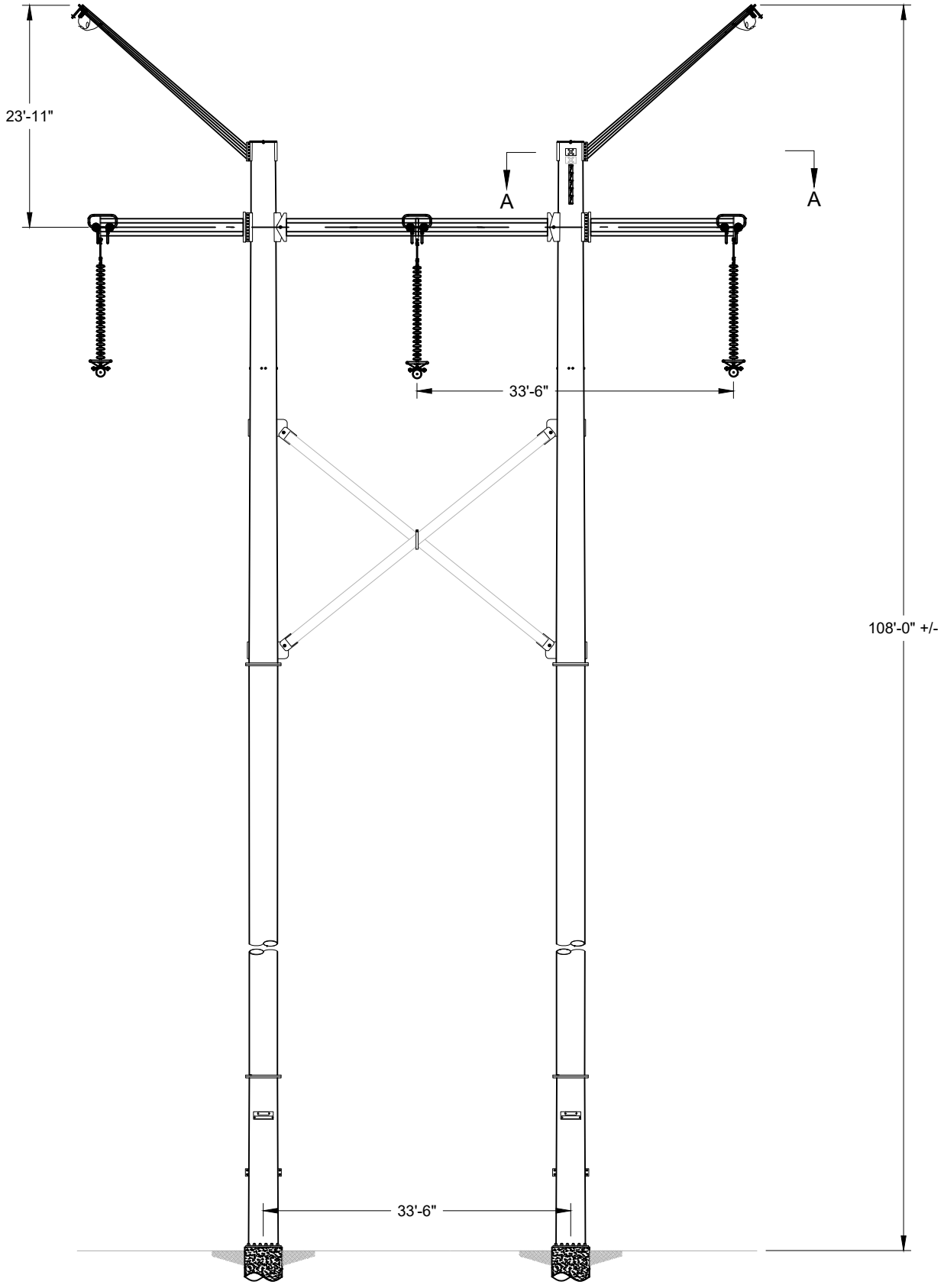
Exhibit 6

PAPER SIZE: 8.5X11

SCALE: NTS

CE-22-135-PN

Exhibit 7



MAIT™
Mid-Atlantic Interstate Transmission, LLC
A FirstEnergy Company

Ashtabula - Erie West 345 kV
Transmission Line Rebuild Project

345kV SINGLE CIRCUIT TUBULAR H-FRAME STEEL STRUCTURE
STRAIN TWO POLE ANGLES 0° TO 30°

Exhibit 7

PAPER SIZE: 8.5X11

SCALE: NTS

CE-22-135-PN

Exhibit 8

Exhibit 8

Transmission Expansion Advisory Committee
FirstEnergy Supplemental Projects

August 5, 2025

Solutions

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

Penelec Transmission Zone M-3 Process
Perry – Ashtabula – Erie West 345 kV Line

Need Number: PN-2023-029

Process Stage: Re-present Solution – 08/05/2025 (Changes in Red)

Previously Presented:

- Previous Solution Meeting – 08/06/2024
- Need Meeting – 12/05/2023

Supplemental Project Driver(s):

System Condition, System Performance

Specific Assumption Reference(s):

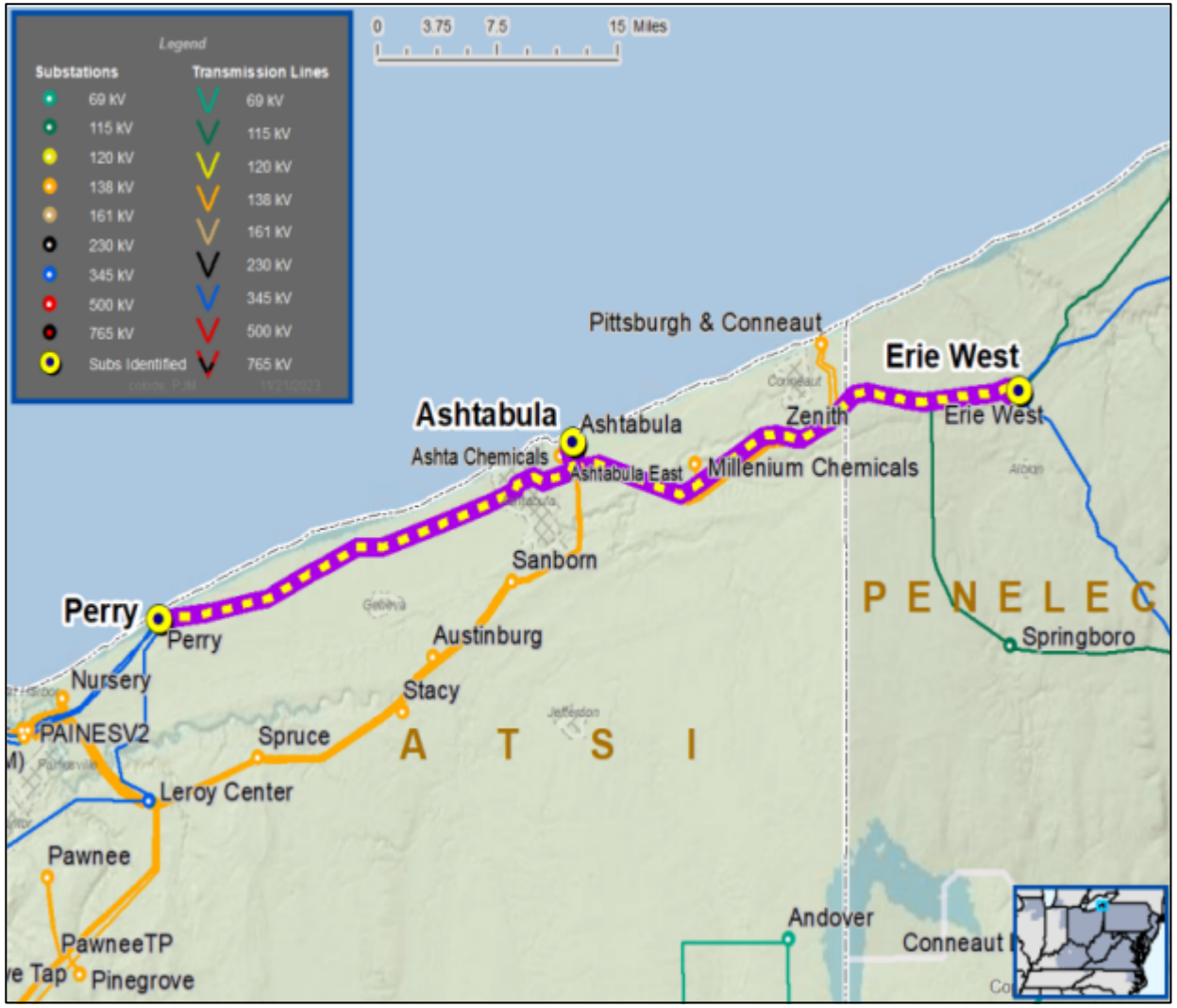
FE Global Factors

- Past system reliability/performance
- Substation/Line Equipment Limits

Line Condition Rebuild/Replacement

- Transmission Steel Tower, Wood & Steel Poles
- Transmission Line Hardware

Continued on next slide…



Penelec Transmission Zone M-3 Process
Perry – Ashtabula – Erie West 345 kV Line

Need Number: PN-2023-029

Process Stage: Re-present Solution – 08/05/2025 (Changes in Red)

Previously Presented:

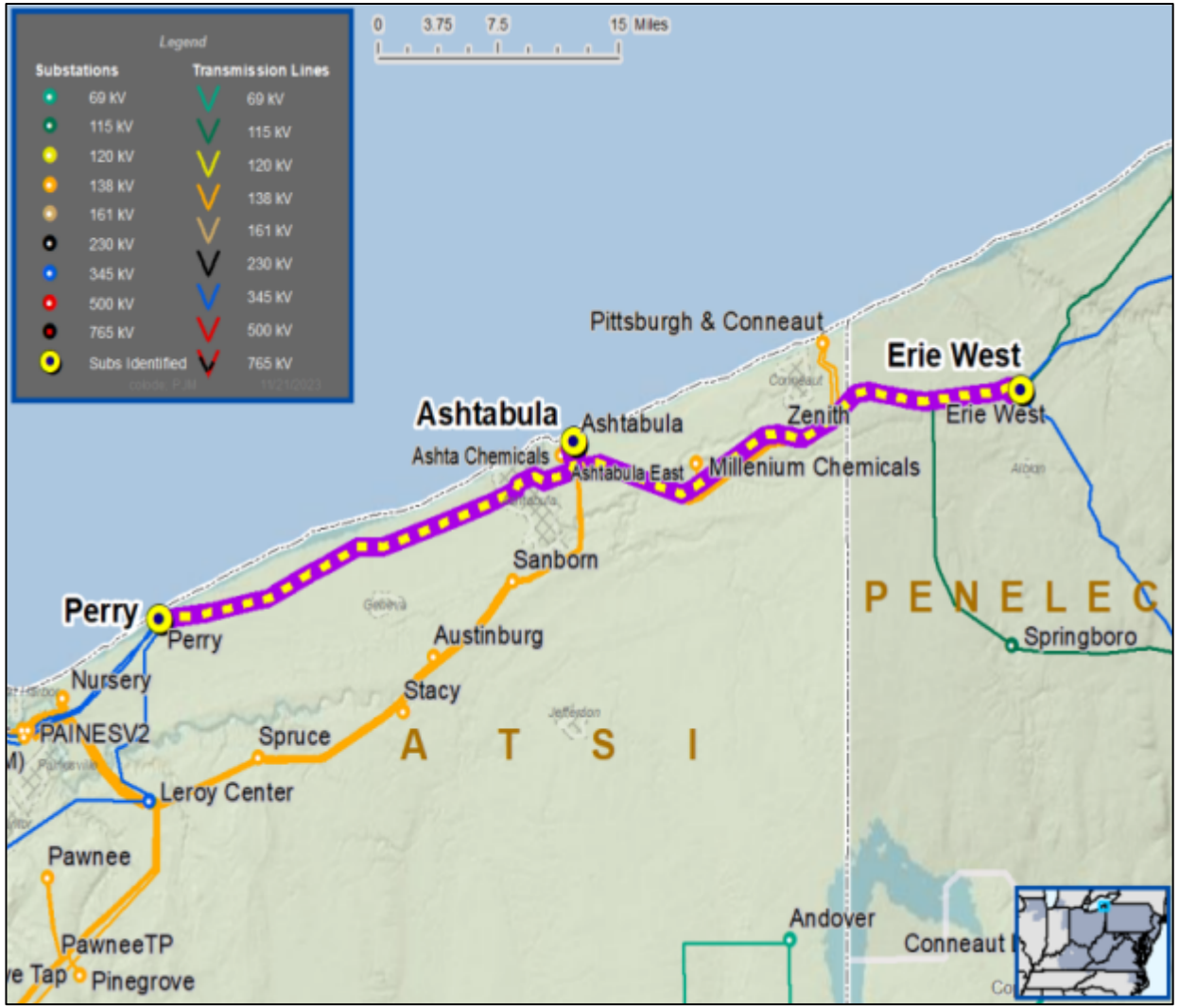
- Previous Solution Meeting – 08/06/2024
- Need Meeting – 12/05/2023

Problem Statement:

- The Perry-Ashtabula-Erie West 345 kV Line was constructed approximately 60 years ago. It is a critical east-to-west power transfer interface.
- The Ashtabula – Erie West 345 kV Line is approximately 20 miles long with 7.2 miles in the Penelec territory in Pennsylvania.
- The insulators and related hardware are severely corroded and reaching end of life.

Below information is only for the Penelec section of the line (7.2 miles).

- The 27 of 39 structures in Pennsylvania are H-frame steel-pole structures which are exhibiting extensive coating failure resulting in ongoing corrosion.
- The steel pole structures have hinged bases and use guying for keeping vertical. The guying system at 19 of the 27 steel pole structures is severely deteriorated.
- Many of the original double rod attachments for supporting the crossarms to the steel poles have failed and have been replaced with wire supports.
- Since 2014, the line has had seven scheduled repair outages and four protection-operated outages due to failure of line equipment.



Penelec Transmission Zone M-3 Process
Perry – Ashtabula – Erie West 345 kV Line

Need Number: PN-2023-029

Process Stage: Re-present Solution – 08/05/2025 (Changes in Red)

Previously Presented:

- Previous Solution Meeting – 08/06/2024
- Need Meeting – 12/05/2023

Proposed Solution:

- Rebuild the 7.2 mile, Penelec section of the Ashtabula – Erie West 345 kV Line

At Erie West:

- Replace disconnect switches.

At Ashtabula:

- Revise relay settings

Alternatives Considered:

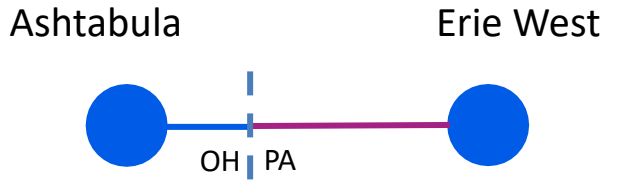
Maintain existing configuration with elevated risk of failure due to deteriorated structures.

Estimated Project Cost: ~~$38.7M~~ $52.4 M

Projected In-Service: ~~04/09/2027~~ 5/31/2027

Status: Conceptual

Model: ~~2023 Series 2028 RTEP Case Summer (50/50)~~ 2024 RTEP model for 2029 Summer (50/50)



Legend	
500 kV	
345 kV	
230 kV	
138 kV	
115 kV	
69 kV	
46 kV	
34.5 kV	
23 kV	
New	

Revision History

7/25/2025– V1 – Original version posted to pjm.com

Exhibit 9

Exhibit 9

Wetland and Waterbody Delineation Report

Ashtabula-Erie West 345 kV Rebuild Project Erie County, Pennsylvania

Prepared for

MAIT
Mid-Atlantic Interstate Transmission, LLC
A Transource Company

July 2025

Jacobs

Jacobs Engineering Group Inc.
2 Crowne Point Court, Suite 100
Cincinnati, OH 45241

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2.2 Drainage Basins 2-2
2.3 Traditional Navigable Waters 2-2

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4.1 Wetlands 4-1
4.2 Streams 4-2
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Tables

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2-2 Subwatersheds Crossed by the Project
3-1 Soil Map Units
3-2 Mapped National Wetland Inventory Features
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4-2 Delineated Streams
4-3 Delineated Ponds

Appendices

A Figures
1 Overview Map
2-1 to 2-17 Soils, NHD, NWI, FEMA Map
3-1 to 3-17 Delineated Features Map
B USACE Wetland Determination Field Data Forms
C Jacobs Stream Data Forms
D Jacobs Open Water/Pond Data Forms

Acronyms and Abbreviations

MAIT	Mid-Atlantic Interstate Transmission, LLC
EPA	Environmental Protection Agency
ESB	environmental survey boundary
FAC	facultative
FACU	facultative upland
FACW	facultative wetland
FEMA	Federal Emergency Management Agency
GNSS	global navigation satellite system
HUC	Hydrologic Unit Code
Jacobs	Jacobs Engineering Group Inc.
kV	kilovolt
NHD	National Hydrography Dataset
NRCS	Natural Resource Conservation Service
NWI	National Wetland Inventory
OBL	obligate wetland
OHWM	ordinary high water mark
PA DEP	Pennsylvania Department of Environmental Protection
PEM	palustrine emergent
PSS	palustrine scrub-shrub
Project	Ashtabula-Erie West 345 kV Rebuild Project
Report	wetland and waterbody delineation report
ROW	right-of-way
TNW	traditionally navigable water
UPL	upland
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1 Introduction

This wetland and waterbody delineation report (Report) summarizes the results of the wetland and waterbody delineation surveys conducted on the Ashtabula-Erie West 345 kilovolt (kV) Rebuild Project (Project) in Erie County, Pennsylvania by Jacobs Engineering Group Inc. (Jacobs), for Mid-Atlantic Interstate Transmission, LLC (MAIT), a wholly owned subsidiary of FirstEnergy Corporation. MAIT is proposing to rebuild 7.2 miles of existing 345 kV transmission line. This Project is part of the larger Perry-Ashtabula-Erie West 345 kV Rebuild project, which continues west into Ohio. The environmental survey boundary (ESB) included the existing 345kV transmission line 150-foot right-of-way (ROW), work pads, access roads, and laydown yards. This Report contains the following components:

- Figure 1 in Appendix A provides an overview map of the ESB overlain on ArcGIS Online USA topographic maps.
- Figures 2-1 to 2-17 in Appendix A show U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) soil map units, the location of National Wetland Inventory (NWI) polygons, national hydrography dataset (NHD) streams, and Federal Emergency Management Agency (FEMA) 100-year floodplain and floodway information. Table 2-1 summarizes recent precipitation data and Table 2-2 lists the subwatersheds crossed by the Project. Table 3-1 lists the soil map units identified within the ESB and Table 3-2 lists the NWI features identified within the ESB.
- Figures 3-1 to 3-17 in Appendix A provide the location of all features mapped during the delineation by Jacobs biologists. This includes all wetlands, data points, and waterbodies. Tables 4-1 (wetlands), 4-2 (streams), and 4-3 (ponds) provide detailed information for all delineated features within the ESB.
- U.S. Army Corps of Engineers (USACE) wetland determination field data forms are in Appendix B.
- Jacobs Stream Data Forms are in Appendix C.
- Jacobs Open Water/Pond Data Forms are in Appendix D.

2 Background Information

The Project crosses the townships of Springfield and Conneaut, in Erie County, Pennsylvania (Figure 1). The ESB begins at the Erie West Substation and extends west to the Ohio-Pennsylvania state line to connect to Structure 13083.

Review of the U.S. Geological Service (USGS) 7.5-minute topographic maps crossed by the ESB (Conneaut, OH and East Springfield, PA) indicates that the primary waterways that drain the ESB include Raccoon Creek and unnamed tributaries to Conneaut Creek, Turkey Creek, Raccoon Creek, and Crooked Creek. Topographic relief is generally flat but moderately increases heading east, with a few sloped areas associated with waterbodies. The project area ranges from 702 to 876 feet above sea level (Figure 1).

Land use and natural communities observed within the ESB include old field, scrub/shrub, agricultural, grassland, forested, impervious surface, and maintained lawn.

2.1 Annual Precipitation

Precipitation history for Erie, Pennsylvania was reviewed prior to completing environmental surveys to determine if climatic conditions were normal at the time of the surveys. Rainfall recorded in Erie ranged from below average to above average prior to and during the surveys conducted in April 2024, October 2024, and April 2025 (Table 2-1; USDA, 2025), suggesting that climatic conditions were approximately normal for the region and time of year. This was taken into consideration during the delineation.

TABLE 2-1: Recent Precipitation Data *Ashtabula-Erie West 345 kV Rebuild Project*

Precipitation Data	Monthly Sum[1,3]	Normal Precipitation[2,3]	Monthly Climatic Condition
Feb 2024	1.30	1.61 - 2.70	Below average
Mar 2024	1.92	2.34 - 3.66	Below average
Apr 2024	4.14	2.60 - 3.92	Above average
First Survey Summary	**7.36**	**6.55 - 10.28**	**Average**
Aug 2024	2.90	2.87 - 5.02	Average
Sep 2024	1.70	3.32 - 5.61	Below average
Oct 2024	2.53	2.96 - 4.57	Below average
Second Survey Summary	**7.13**	**9.15 - 15.20**	**Below average**
Feb 2025	2.38	1.61 - 2.70	Average
Mar 2025	2.47	2.34 - 3.66	Average
Apr 2025	3.34	2.60 - 3.92	Average
Third Survey Summary	**8.19**	**6.55 - 10.28**	**Average**
Grand Total	**22.68**	**22.25 - 35.76**	**Average**

[1]Monthly weather summary from weather station ERIE INTL AP
[2]USDA WETS Station Climate Data 1971-2000 (USDA 2025)
[3]Displayed in inches

2.2 Drainage Basins

The Project is within the Chautauqua-Conneaut Subbasin, corresponding to 8-digit Hydrologic Unit Code (HUC) 04120101. More specifically it crosses the three subwatersheds outlined in Table 2-2 (USGS, 2025).

TABLE 2-2: Subwatersheds Crossed by the Project
Ashtabula-Erie West 345 kV Rebuild Project

HUC 12-Digit Code	Subwatershed Name
04120101 06 05	Marsh Run-Conneaut Creek
04120101 07 02	Turkey Creek-Frontal Lake Erie
04120101 07 01	Crooked Creek

Source: USGS 2025

2.3 Traditional Navigable Waters

The U.S. Environmental Protection Agency (EPA) and USACE assert jurisdiction over “all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce including all waters which are subject to the ebb and flow of the tide” (USACE and EPA, 2008). These waters are considered traditionally navigable waters (TNW). No TNW directly cross the ESB.

3 Wetland and Waterbody Delineation

3.1 Desktop Review

Prior to conducting the field investigations, Jacobs reviewed the following resources to identify the potential for wetlands within the ESB:

- Aerial photo-based maps (ESRI, 2025)
- Topographic maps (USGS, 2023)
- NRCS Web Soil Survey (USDA-NRCS, 2024)
- NWI shapefile (USFWS, 2024)
- National Hydrography Dataset (NHD) (USGS, 2025)

According to the NRCS soil survey of Erie County (USDA-NRCS, 2024), the ESB consists of 39 soil map units (Figures 2-1 to 2-17). Of these, 21 units are listed as nonhydric, ten are predominantly nonhydric, and eight are predominantly hydric (Table 3-1). Hydric or predominantly hydric soils comprise 18 percent of the ESB.

Generally, hydric soils are those soils that indicate through their color and structure that they have experienced dominantly reducing (i.e., oxygen-poor) conditions. Oxygen-poor conditions result from inundation and/or saturation by water. Partially hydric soils have both hydric and non-hydric soil components identified in the soil map unit.

TABLE 3-1: Soil Map Units

Ashtabula-Erie West 345 kV Rebuild Project

Soil type	Soil type description	Hydric status	Acres within ESB
AdA	Alden mucky silt loam, 0 to 2 percent slopes	Predominantly Hydric	1.00
Cm	Carlisle muck	Predominantly Hydric	0.33
CnC	Chenango gravelly silt loam, 8 to 15 percent slopes	Not Hydric	0.82
CsB	Colonie loamy fine sand, 3 to 8 percent slopes	Not Hydric	4.45
CsC	Colonie loamy fine sand, 8 to 15 percent slopes	Not Hydric	0.21
CsD	Colonie loamy fine sand, 15 to 25 percent slopes	Not Hydric	0.82
CtA	Conneaut silt loam, 0 to 2 percent slopes	Predominantly Hydric	2.99
CtA	Conneaut silt loam, 0 to 2 percent slopes	Not Hydric	0.28
EnA	Elnora fine sandy loam, 0 to 3 percent slopes	Not Hydric	0.35
EnB	Elnora fine sandy loam, 3 to 8 percent slopes	Not Hydric	2.95
FcA	Fitchville silt loam, 0 to 2 percent slopes	Predominantly Non-Hydric	4.49
FcB	Fitchville silt loam, 2 to 6 percent slopes	Predominantly Non-Hydric	1.27
GaF	Gageville silt loam, 18 to 50 percent slopes	Not Hydric	0.01
Ge	Getzville silt loam	Predominantly Hydric	3.21
GfB	Glenford silt loam, 2 to 6 percent slopes	Not Hydric	2.97
GfC	Glenford silt loam, 6 to 12 percent slopes	Not Hydric	0.13
HaA	Harbor fine sandy loam, 0 to 3 percent slopes	Not Hydric	0.10
HbA	Harbor fine sandy loam, 0 to 2 percent slopes	Not Hydric	0.88
HbB	Harbor fine sandy loam, 2 to 6 percent slopes	Not Hydric	0.79
HnA	Hornell silt loam, 0 to 2 percent slopes	Not Hydric	1.38
HoA	Hornell silt loam, 0 to 2 percent slopes	Not Hydric	1.29

La	Lamson silt loam	Predominantly Hydric	0.33
Mh	Mill silt loam, 0 to 2 percent slopes	Predominantly Hydric	15.38
MnA	Minoa fine sandy loam, 0 to 3 percent slopes	Predominantly Non-Hydric	5.49
PaA	Painesville fine sandy loam, 0 to 2 percent slopes	Predominantly Non-Hydric	0.59
PeB	Pierpont silt loam, 2 to 6 percent slopes	Not Hydric	9.33
PeC	Pierpont silt loam, 6 to 12 percent slopes	Not Hydric	2.26
PeD	Pierpont silt loam, 12 to 18 percent slopes	Not Hydric	0.05
PlA	Platea silt loam, 0 to 2 percent slopes	Predominantly Non-Hydric	1.40
PlB	Platea silt loam, 2 to 6 percent slopes	Predominantly Non-Hydric	49.23
PlC	Platea silt loam, 6 to 12 percent slopes	Predominantly Non-Hydric	19.38
PtB	Pompton silt loam, 3 to 8 percent slopes	Predominantly Non-Hydric	0.19
RhA	Red Hook silt loam, 0 to 3 percent slopes	Predominantly Non-Hydric	0.06
RhB	Red Hook silt loam, 3 to 8 percent slopes	Predominantly Non-Hydric	2.23
Se	Sebring silt loam, 0 to 2 percent slopes	Predominantly Hydric	2.91
TxF	Tyner and Harborcreek soils, 25 to 60 percent slopes	Not Hydric	0.01
Ue	Urban land	Not Hydric	7.78
W	Water	Not Hydric	0.12
Wc	Wick silt loam	Predominantly Hydric	1.06

NWI data were obtained from the U.S. Fish and Wildlife Service (USFWS) for review of potential wetlands that may occur within the ESB. The NWI data (USFWS, 2024) identify the type of wetland or open water present at a location using the USFWS classification system (Cowardin et al., 1979). The NWI data indicated that there are 19 NWI features within the ESB (Figure 2-1 to 2-17; USFWS, 2024). This included palustrine emergent, forested, scrub-shrub, and scrub-shrub/forested complex NWI wetland types (Table 3-2). The presence of an NWI feature is not a definitive indicator that a wetland or waterbody is present. The information on NWI maps is obtained largely from aerial interpretation, may be outdated, and is only sporadically field-checked.

TABLE 3-2: Mapped National Wetland Inventory
Features *Ashtabula-Erie West 345 kV Rebuild Project*

Wetland Type	Description	Count of Mapped Features	Acres within ESB
PEM1/SS1A	Palustrine emergent, persistent; palustrine scrub-shrub, broad-leaved deciduous, temporarily flooded	1	<0.01
PEM1/SS1D	Palustrine emergent, persistent; palustrine scrub-shrub, broad-leaved deciduous, continuously saturated	2	3.16
PEM1/SS1E	Palustrine emergent, persistent; palustrine scrub-shrub, broad-leaved deciduous, seasonally flooded/saturated	1	0.04
PEM1A	Palustrine emergent, persistent, temporarily flooded	8	4.20
PEM1D	Palustrine emergent, persistent, continuously saturated	11	5.82
PEM1E	Palustrine emergent, persistent, seasonally flooded/saturated	5	3.62
PEM1F	Palustrine emergent, persistent, semipermanently flooded	4	4.42
PFO1/4D	Palustrine forested, broad-leaved deciduous and needle-leaved evergreen, continuously saturated	1	0.03
PFO1A	Palustrine forested, broad-leaved deciduous, temporarily flooded	7	0.35
PFO1B	Palustrine forested, broad-leaved deciduous, seasonally saturated	1	0.05
PFO1C	Palustrine forested, broad-leaved deciduous, seasonally flooded	1	0.07
PFO1D	Palustrine forested, broad-leaved deciduous, continuously saturated	12	1.08
PFO1E	Palustrine forested, broad-leaved deciduous, seasonally flooded/saturated	10	0.80

PFO4/1D	Palustrine forested, needle-leaved evergreen and broad-leaved deciduous, continuously saturated	1	0.02
PSS1/FO1A	Palustrine scrub/shrub, broad-leaved deciduous; palustrine forested, broad-leaved deciduous, temporarily flooded	1	0.13
PSS1A	Palustrine scrub-shrub, broad-leaved deciduous, persistent, temporarily flooded	1	0.04
PSS1C	Palustrine scrub/shrub, broad-leaved deciduous, seasonally flooded	2	0.42
PSS1D	Palustrine scrub/shrub, broad-leaved deciduous, continuously saturated	1	0.31
PSS1E	Palustrine scrub/shrub, broad-leaved deciduous, seasonally flooded/saturated	3	0.45

As shown on the FEMA floodplain panels (Figures 2-1 to 2-17), there are no mapped floodplains within the ESB (FEMA, 2014).

3.2 Field Survey Methodology

In April 2024, October 2024, April 2025, and June 2025, Jacobs' biologists surveyed the ESB by walking the area and evaluating for wetlands and other waters of the U.S. The boundaries of each wetland and waterbody within the ESB were delineated and recorded using handheld global navigation satellite system (GNSS) receivers. For waterbodies identified within the Project area, the ordinary high-water mark (OHWM) was used as the jurisdictional boundary.

Wetland data were recorded on USACE Northcentral and Northeast Regional Supplement wetland determination data forms, stream data were recorded on Jacobs Stream forms, and pond data were recorded on Jacobs pond/open water forms. All other land use, habitat, and other supplemental data were collected in a digital geodatabase during the environmental survey.

3.2.1 Wetland Delineation

Wetland boundaries were field-delineated according to using the routine onsite methodology described in the Technical Report Y-87-1 *Corps of Engineers Wetlands Delineation Manual* and subsequent guidance documents (Environmental Laboratory, 1987) and according to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0) (USACE, 2012). Wetland delineation data were recorded on the USACE Regional Supplement wetland determination data forms. Representative wetland and upland data points were recorded during the wetland delineation to determine the presence/absence of wetlands and/or to document upland conditions within the Project area. Upland data points were determined not to be within wetlands because they did not have positive indicators of one or more of the three wetland criteria: hydrophytic vegetation, wetland hydrology, and hydric soils.

3.2.1.1 Soils

Jacobs biologists examined soils using a shovel to extract soil cores, which were examined for hydric soil characteristics. A *Munsell Soil Color Chart* (Munsell Color, 2012) was used to identify the hue, value, and chroma of the matrix and concentrations/depletions of the soils. Generally, mottled soils with a matrix chroma of two or less, or unmottled soils with a matrix chroma of one or less are considered to exhibit hydric soil characteristics (Environmental Laboratory, 1987). In sandy soils, mottled soils with a matrix chroma of three or less, or unmottled soils with a matrix chroma of two or less are hydric soils.

3.2.1.2 Hydrology

The *1987 Manual* requires that an area be inundated or saturated to the surface for an absolute minimum of five percent of the growing season. Areas saturated between five percent and 12.5 percent of the growing season may or may not be wetlands, while areas saturated over 12.5 percent of the growing season fulfill the hydrology requirements for wetlands. The *Regional Supplement* states that the growing season dates are determined through onsite observations of the following

indicators of biological activity in a given year; (1) above-ground growth and development of vascular plants, and/or (2) soil temperature (12-in. depth is 41 degrees Fahrenheit or higher) as an indicator of soil microbial activity. Therefore, the beginning of the growing season in a given year is indicated by whichever condition occurs earlier, and the end of the growing season by whichever persists later.

The soils and ground surface were examined by Jacobs biologists for evidence of wetland hydrology in lieu of detailed hydrological data. This is an acceptable approach according to the *1987 Manual* and the *Regional Supplement*. Evidence indicating wetland hydrology typically includes primary indicators such as surface water, saturation, water marks, drift deposits, water-stained leaves, sediment deposits, and oxidized rhizospheres on living roots; and secondary indicators such as drainage patterns, geomorphic position, microtopographic relief, and a positive Facultative (FAC)-neutral test (USACE, 2012).

3.2.1.3 Vegetation

Dominant vegetation was visually assessed for each stratum (tree, sapling/shrub, herb, and woody vine) and an indicator status (obligate wetland [OBL], facultative wetland [FACW], facultative [FAC], facultative upland [FACU], upland [UPL]) was assigned to each plant species based on the 2020 National Wetland Plant List. Under normal circumstances, an area is determined to have hydrophytic vegetation when any of the following are true: all dominant species are OBL or FACW; more than 50 percent of the dominant species are OBL, FACW or FAC; or the average total cover of plants, when weighted based on indicator status, calculates to a prevalence index of less than or equal to three.

3.2.2 Stream Assessment

Jurisdictional streams were identified as those waters that possessed a continuously defined bed and bank, OHWM indicators, and lacked a dominance of upland vegetation in the channel. Per USACE guidance, the OHWM is defined as the "line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (USACE, 2005). Channels that parallel a roadway or railroad were identified as upland drainage features and were not considered to be jurisdictional unless they had an identifiable OHWM, were identified on the USGS topographic map, or represented a presumed relocation of a natural channel.

4 Field Survey Results

Jacobs' biologists surveyed the area by walking the ESB and evaluating for wetlands and other waters of the U.S. A total of 33 wetlands, 14 streams, and three ponds were delineated within the ESB; these features are displayed and identified on the Wetlands and Waterbodies Delineation Map (Figures 3-1 to 3-17). Jacobs defaults to the USACE and Pennsylvania Department of Environmental Protection (PA DEP) for the final determination of hydrologic connectivity and jurisdiction.

4.1 Wetlands

Thirty-three wetlands were delineated, ranging in size from 0.05 to 9.01 acres, within the ESB. Twenty-eight of the wetlands were identified as palustrine emergent (PEM) wetlands, two were identified as palustrine scrub-shrub (PSS) wetlands, and three were identified as PEM/PSS wetland complexes (Figures 3-1 to 3-17). The reported wetland acreage only corresponds to areas delineated within the ESB, as some wetlands extended beyond the survey boundary.

Completed USACE wetland and upland determination forms are provided in Appendix B; representative photographs were taken of each wetland during the field survey and are appended to each USACE wetland and upland form. Detailed information for each delineated wetland within the ESB is provided in Table 4-1.

TABLE 4-1: Delineated Wetlands *Ashtabula-Erie West 345 kV Rebuild Project*

Wetland ID	Location		Wetland Type[1]	Acres within ESB[2]
	Latitude	Longitude		
Wetland AEW-01	41.93414	-80.38771	PEM	2.93
Wetland AEW-02E	41.93360	-80.39509	PEM	5.99
Wetland AEW-02S	41.93334	-80.39785	PSS	0.48
Wetland AEW-03	41.93308	-80.40036	PEM	1.00
Wetland AEW-04E	41.93282	-80.40442	PEM	1.01
Wetland AEW-04S	41.93293	-80.40461	PSS	0.07
Wetland AEW-05	41.93208	-80.41251	PEM	0.53
Wetland AEW-06	41.93185	-80.41400	PEM	0.31
Wetland AEW-07	41.93140	-80.41901	PEM	2.12
Wetland AEW-08	41.93109	-80.42209	PEM	0.28
Wetland AEW-09	41.93071	-80.42709	PEM	1.20
Wetland AEW-10	41.93054	-80.42874	PEM	0.13
Wetland AEW-11	41.93033	-80.43104	PEM	0.14
Wetland AEW-12	41.93046	-80.43157	PSS	0.05
Wetland AEW-13	41.93025	-80.43158	PEM	0.06
Wetland AEW-14E	41.92987	-80.43746	PEM	1.98
Wetland AEW-14S	41.93003	-80.43677	PSS	0.25
Wetland AEW-15	41.92958	-80.44265	PEM	0.51
Wetland AEW-16	41.92911	-80.44640	PEM	0.23
Wetland AEW-17	41.92934	-80.45114	PEM	0.45
Wetland AEW-18	41.92951	-80.45301	PEM	0.50

TABLE 4-1: Delineated Wetlands *Ashtabula-Erie West 345 kV Rebuild Project*

Wetland ID	Location		Wetland Type[1]	Acres within ESB[2]
	Latitude	Longitude		
Wetland AEW-19	41.92952	-80.45529	PEM	1.18
Wetland AEW-20	41.92970	-80.45781	PEM	0.29
Wetland AEW-21	41.92991	-80.45914	PEM	0.84
Wetland AEW-22	41.93020	-80.46118	PEM	0.28
Wetland AEW-23	41.93024	-80.46221	PEM	0.31
Wetland AEW-24	41.93037	-80.46339	PEM	1.44
Wetland AEW-25	41.93067	-80.46637	PEM	0.05
Wetland AEW-26	41.93148	-80.47186	PEM	0.31
Wetland AEW-27	41.93221	-80.47764	PEM	0.10
Wetland AEW-28	41.93350	-80.48728	PEM	0.15
Wetland AEW-29	41.93435	-80.49812	PEM	3.73
Wetland AEW-30	41.93287	-80.50969	PEM	9.01
Wetland AEW-31	41.92763	-80.51939	PEM	2.54
Wetland AEW-33	41.92742	-80.51475	PSS	0.17
Wetland AEW-34	41.93232	-80.40083	PEM	0.26
Total: 33				**40.87**

[1]Cowardin et al. 1979.
[2]Numbers have been rounded for presentation purposes. Thus, the total may not reflect the exact sum of the addends.

4.2 Streams

Fourteen streams were identified within the ESB, totaling 2,358 linear feet. Of the 14 streams, one was identified as an ephemeral stream, seven were intermittent streams, and six were perennial streams.

Several of the streams were identified with a PADEP Chapter 93 designated classification of cold water fish (CWF), migratory fish (MF), and high quality (HQ) waters (Commonwealth of Pennsylvania, 2018a). The stream use designations for each stream are provided in Table 4-2.

Completed Jacobs Stream data forms are provided in Appendix C. Representative photographs were taken of each stream during the field survey and are appended to each form. Detailed information for each delineated stream within the ESB is provided in Table 4-2.

TABLE 4-2: Delineated Streams *Ashtabula-Erie West 345 kV Rebuild Project*

Stream ID	Location		Flow Regime[1]	Length (feet) within ESB[2]	Average OHWM Width (feet)	PA Stream Use Designations
	Latitude	Longitude				
Stream AEW-01	41.93303	-80.40157	Intermittent	248	5	HQ-CWF, MF
Stream AEW-02	41.92982	-80.43867	Intermittent	162	1	CWF, MF
Stream AEW-03	41.92924	-80.44630	Perennial	153	3	CWF, MF
Stream AEW-04 (Racoon Creek)	41.93000	-80.45969	Intermittent	171	3	CWF, MF
Stream AEW-05	41.93040	-80.46371	Perennial	176	4	CWF, MF
Stream AEW-06 (Turkey Creek)	41.93221	-80.47765	Perennial	157	3	CWF, MF

TABLE 4-2: Delineated Streams *Ashtabula-Erie West 345 kV Rebuild Project*

Stream ID	Location		Flow Regime[1]	Length (feet) within ESB[2]	Average OHWM Width (feet)	PA Stream Use Designations
	Latitude	Longitude				
Stream AEW-07	41.93345	-80.48726	Perennial	178	4	CWF, MF
Stream AEW-08	41.93354	-80.49148	Ephemeral	152	3	CWF, MF
Stream AEW-09	41.93377	-80.50677	Intermittent	182	4	CWF, MF
Stream AEW-10	41.93287	-80.51075	Intermittent	171	6	CWF, MF
Stream AEW-11	41.93082	-80.51424	Perennial	190	5	CWF, MF
Stream AEW-12	41.92861	-80.51783	Perennial	378	4	HQ-CWF, MF
Stream AEW-13	41.93408	-80.39664	Intermittent	10	5	CWF, MF
Stream AEW-14	41.92843	-80.44752	Intermittent	29	1	CWF, MF
Total: 14				**2,358**		

[1]Flow regime estimated based on analysis of drainage area, gradient, and observations at the time of survey

[2]Numbers have been rounded for presentation purposes. Thus, the total may not reflect the exact sum of the addends.

4.3 Ponds/Open Water

Three ponds were identified within the ESB and can be found on Figures 3-1 to 3-17. Detailed information for each delineated pond within the ESB is provided in Table 4-3. Representative photographs and more detailed information on pond conditions can be found in Appendix D.

TABLE 4-3: Delineated Ponds *Ashtabula-Erie West 345 kV Rebuild Project*

Pond ID	Location		Acres within ESB
	Latitude	Longitude	
Pond AEW-01	41.93256	-80.40667	1.37
Pond AEW-02	41.93194	-80.47690	0.15
Pond AEW-03	41.93212	-80.47800	0.10

5 Conclusion

Jacobs conducted ecological surveys of the Ashtabula-Erie West 345 kV Rebuild Project in April and October 2024 and April and June 2025. Thirty-three wetlands, 14 streams, and three ponds were delineated within the environmental survey boundary. The 33 wetlands totaled 40.87 acres within the ESB and were identified as 28 PEM wetlands, two PSS wetlands, and three PEM/PSS wetland complexes. The 14 streams totaled 2,358 linear feet within the ESB and included one ephemeral stream, seven intermittent streams, and six perennial streams. Additionally, three ponds were identified totaling 1.62 acres within the ESB.

The jurisdiction of all assessed features will be determined by the USACE and state-established water quality standards based on hydrologic connectivity. Further coordination with the USACE and state regulating agency is recommended prior to the submittal of any permit or construction activities.

The results of the wetland and waterbody field survey described in this Report conducted by Jacobs are limited to what was identified within the ESB. The information contained in this Report is for a study area that may be much larger than the actual Project limits-of-disturbance for construction; therefore, lengths and acreages listed in this Report may likely not constitute the actual impacts of the Project at the time of construction. If permits are determined to be necessary, actual impacted lengths and/or acreages will be submitted in subsequent permit applications.

The ecological field survey results presented within this Report apply to the site conditions at the time of our assessment. Changes within the environmental survey boundary that may occur with time due to natural processes or human impacts at the project site or on adjacent properties, could invalidate the findings of this Report, especially if Jacobs is unaware and has not had the opportunity to revisit the Project. Additionally, changes in applicable standards and regulations may also occur as a result of legislation or the expansion of scientific research over time. Therefore, the findings of this Report may be invalidated, wholly or in part, by changes that are beyond the control of Jacobs.

6 References

Cowardin, L. M., V. Carter, F. C. Golet, E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C.

Esri. 2025. World Imagery [basemap]. https://www.arcgis.com/home/item.html?id=226d23f076da478bba4589e7eae95952. Accessed May 2025.

Federal Emergency Management Agency (FEMA). 2014. Flood Map Service Center. https://msc.fema.gov/portal/search#searchresultsanchor. Accessed May 2025.

Munsell Color. 2012. Munsell Soil-color Charts: With Genuine Munsell Color Chips. Grand Rapids, MI.

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

Pennsylvania Department of Environmental Protection (PADEP). Chapter 93: Water Quality Standards. https://gis.dep.pa.gov/emappa/ Accessed July 2025

U.S. Army Corps of Engineers (USACE). 2005. Regulatory Guidance Letter No. 05-05: Ordinary High Water Mark Identification. http://www.nap.usace.army.mil/Portals/39/docs/regulatory/rgls/rgl05-05.pdf.

U.S. Army Corps of Engineers (USACE). 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Version 2.0). Vicksburg, Mississippi. U.S. Army Engineer Research and Development Center. ERDC/EL TR-12-1.

U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (USEPA). 2008. Memorandum "Revised Guidance on Clean Water Act Jurisdiction Following the Supreme Court Decision in Rapanos v. U.S. and Carabell v. U.S."

U.S. Department of Agriculture (USDA). 2025. USDA Field Office Climate Data: ERIE INTL AP WETS Station, 1971-2000. https://agacis.rcc-acis.org/?fips=42049. Accessed May 2025.

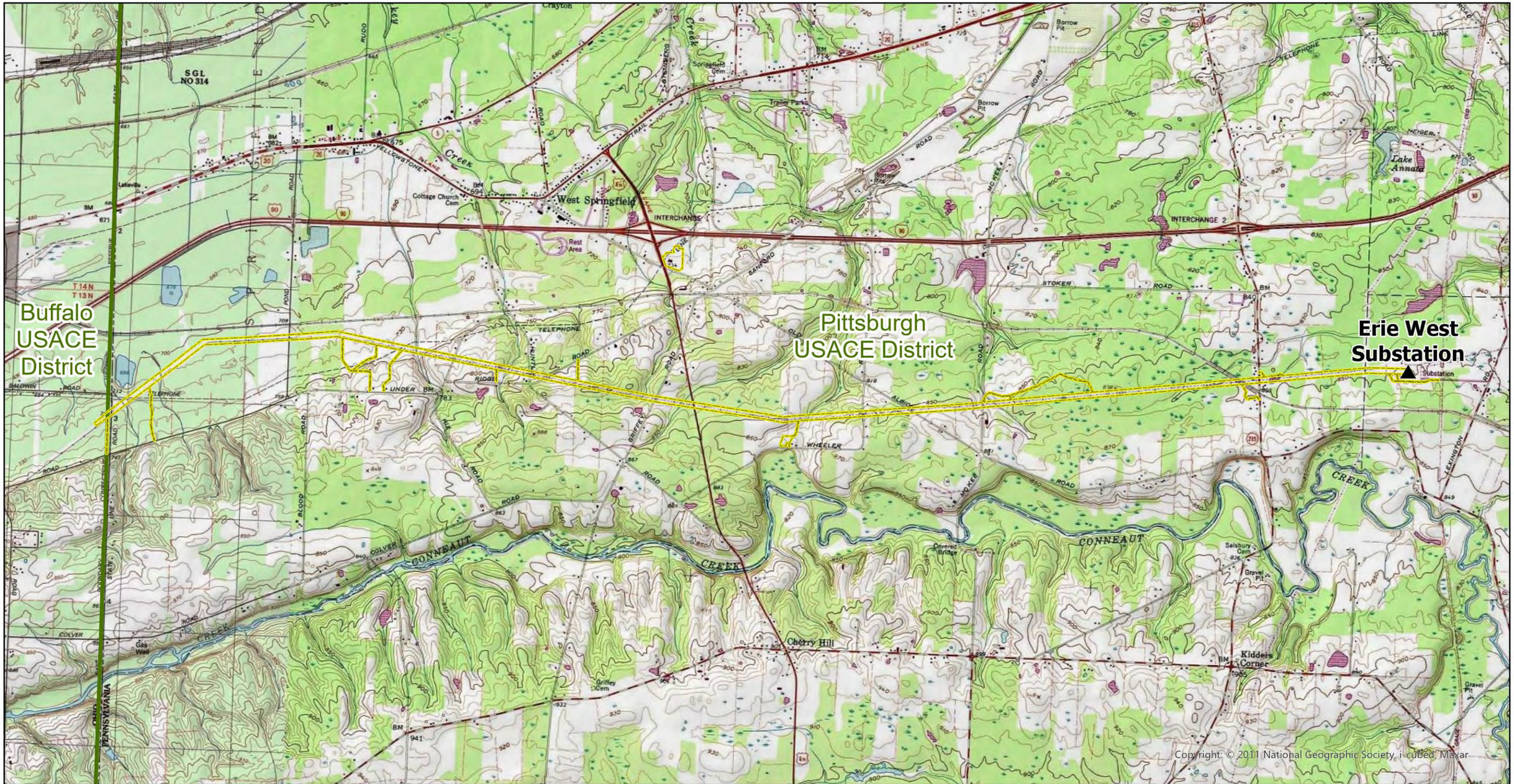
U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2024. Soil Survey Geographic (SSURGO) database for Erie County, Pennsylvania. http://SoilDataMart.nrcs.usda.gov/. Accessed May 2025.

U.S. Fish and Wildlife Service (USFWS). 2024. National Wetlands Inventory. https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper. Accessed May 2025.

U.S. Geological Survey (USGS). 2023. US Topo 7.5-Minute Series, East Springfield Quadrangle and Conneaut Quadrangle. https://ngmdb.usgs.gov/topoview/. Accessed May 2025.

U.S. Geological Survey (USGS). 2025. National Hydrography Dataset, Pennsylvania. http://nhd.usgs.gov/data.html. Accessed May 2025.

Appendix A
Figures



LEGEND

- Substation
- Environmental Survey Boundary
- USACE District Boundary

BASE MAP SOURCE:
USGS Topographic Map

Topographic Quadrangles:
Conneaut, East Springfield

N

0 0.25 0.5 1
Miles

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FIGURE 1
OVERVIEW MAP

PN: D3830200	Date: 7/16/2025
CREATED BY: RD	Jacobs
REVIEWED BY: BO	

LEGEND:

- Substation
- Existing Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
Esri World Imagery

0 200 400
FEET

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FIGURE 2-1
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

Jacobs

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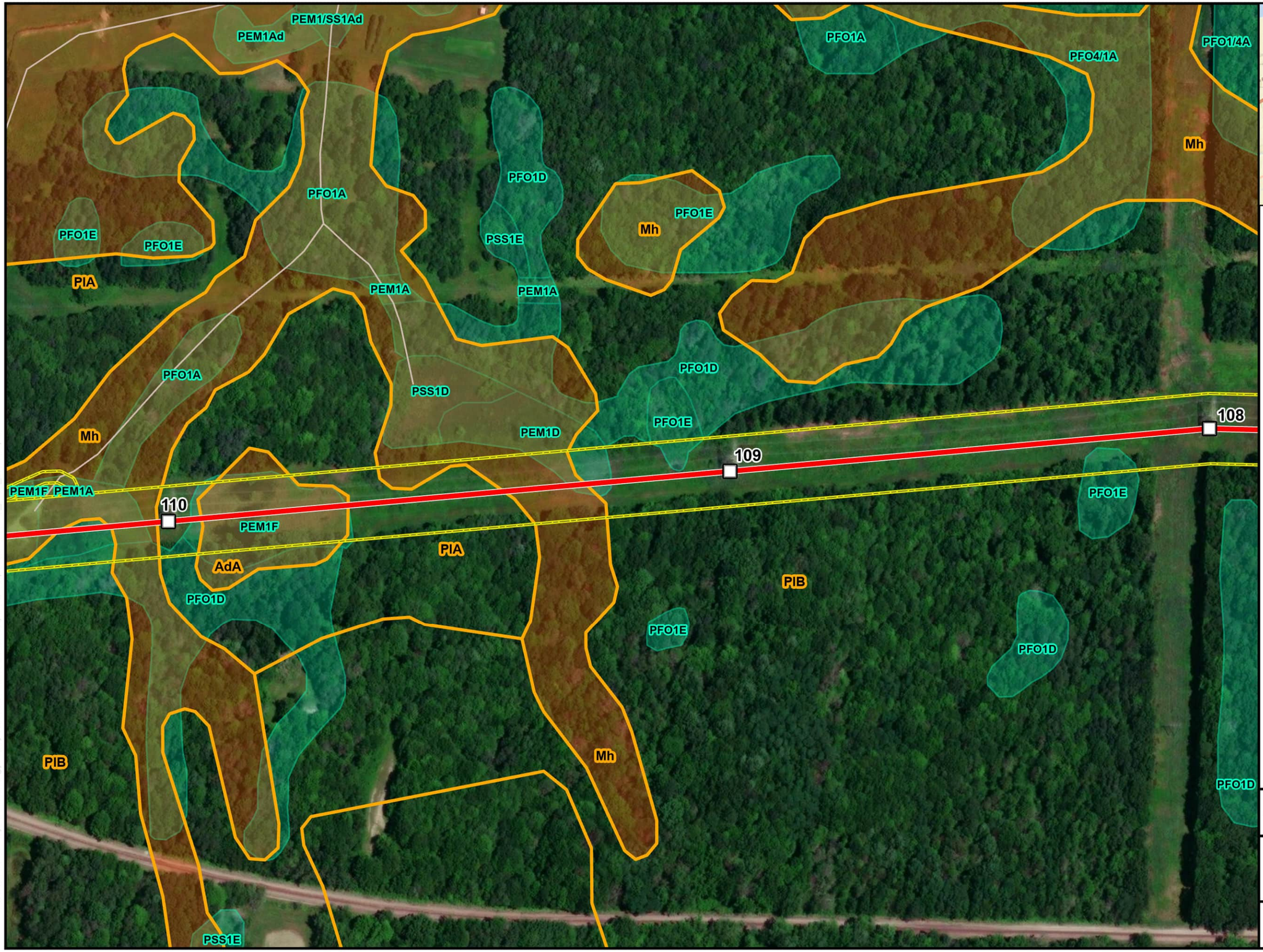

LEGEND:

- Existing Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
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FIGURE 2-2
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

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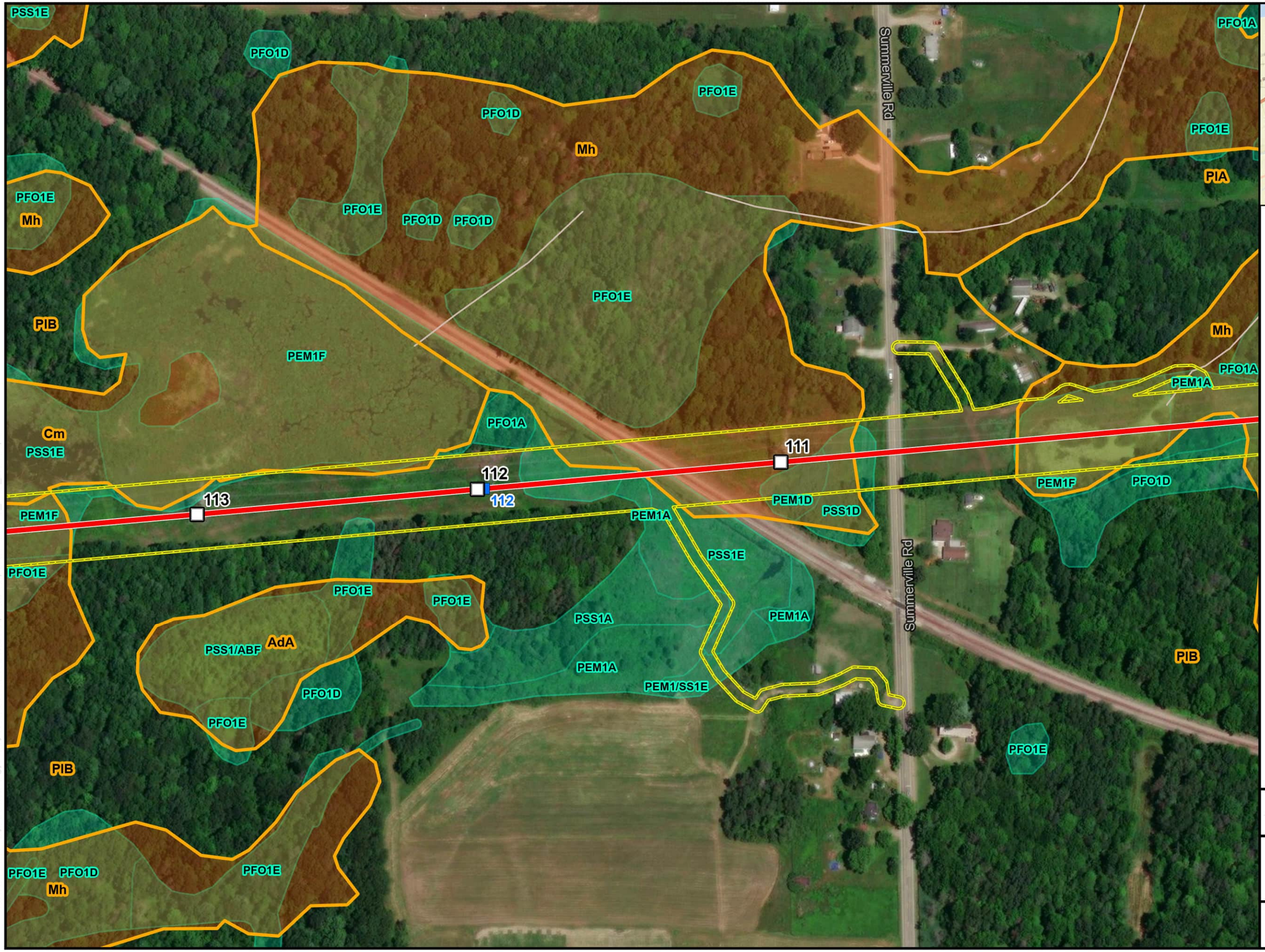

LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
Esri World Imagery

0 200 400
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FIGURE 2-3
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

Jacobs

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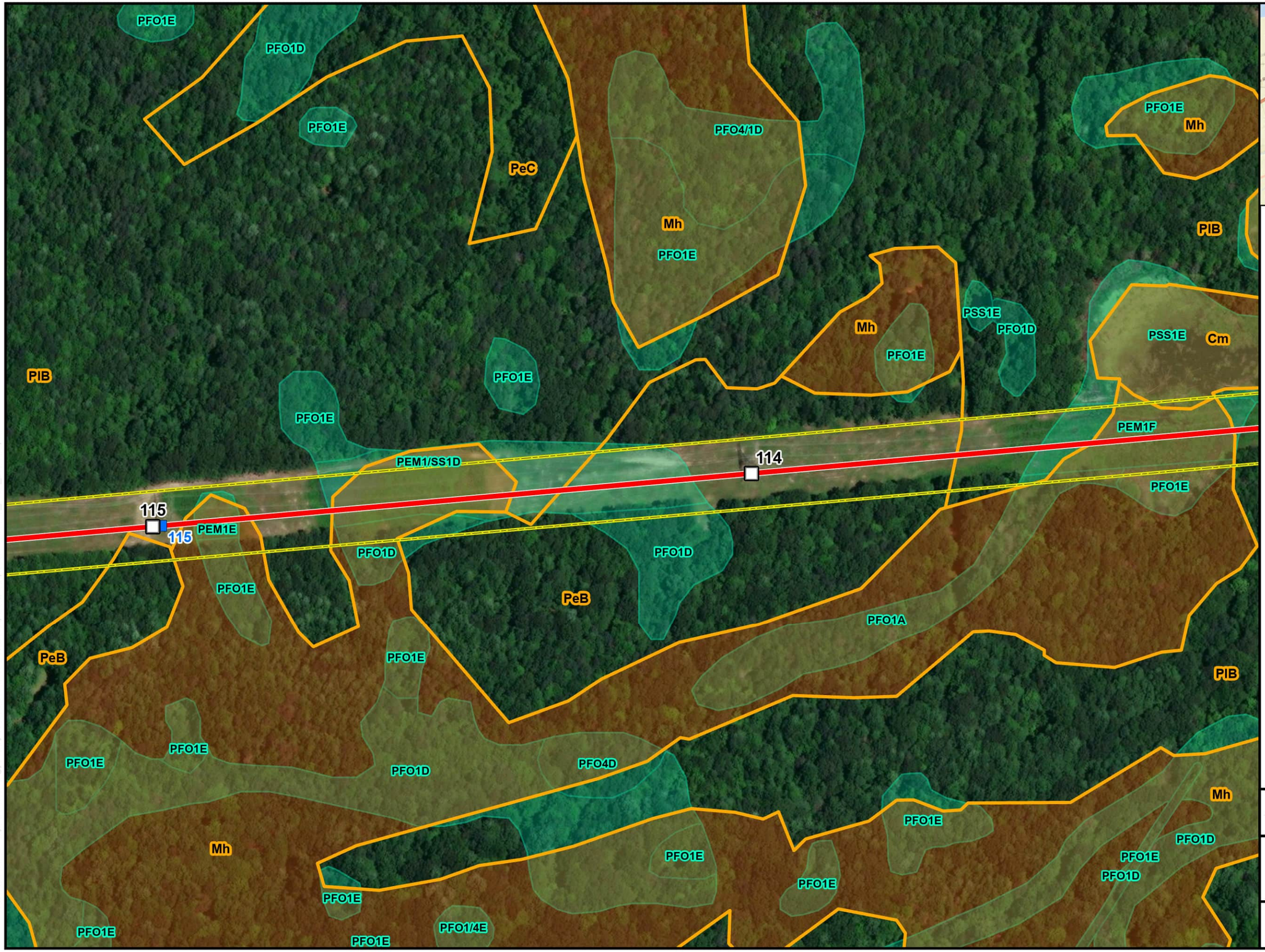

LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
Esri World Imagery

0 200 400
FEET

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FIGURE 2-4
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

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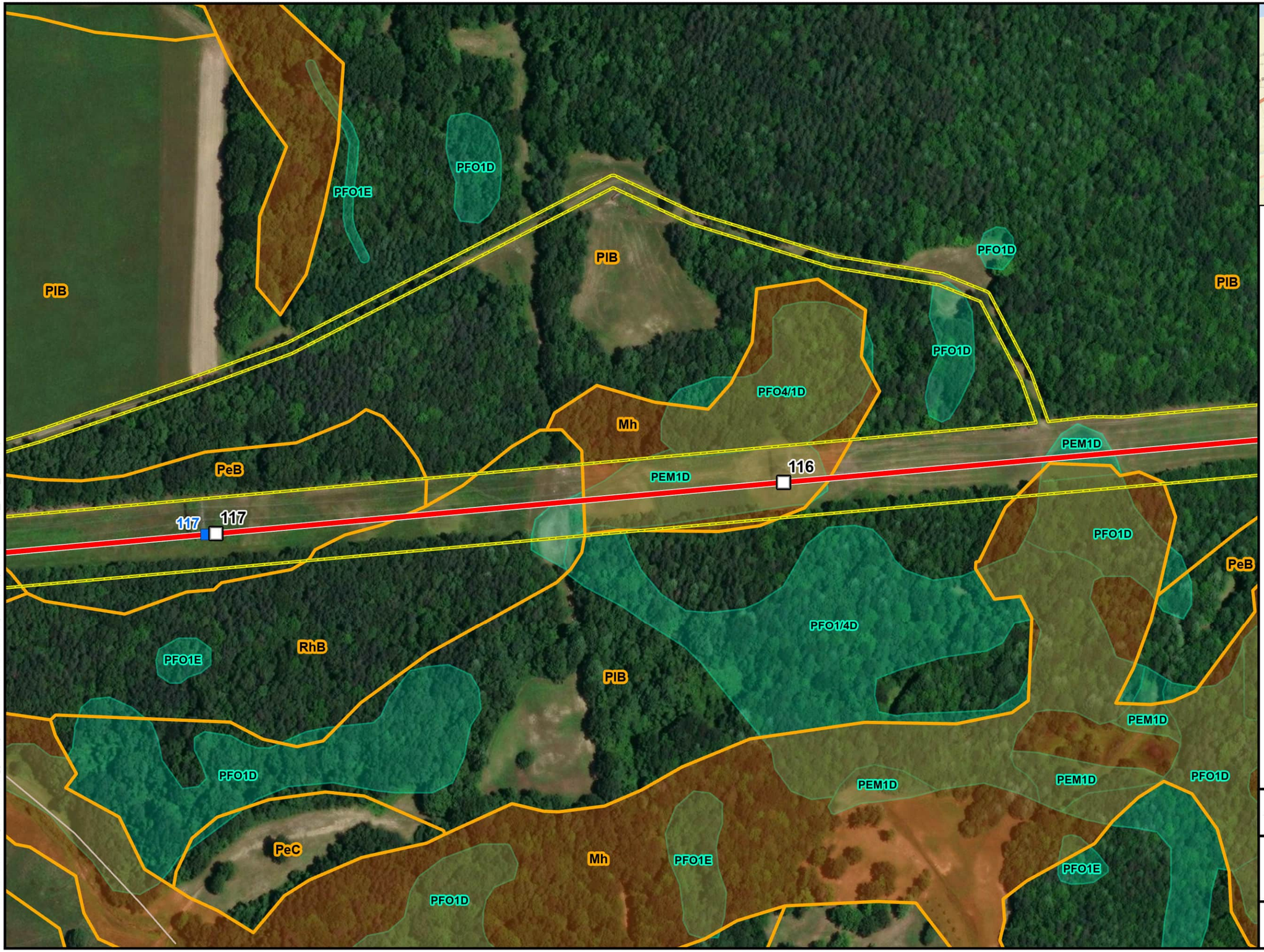

LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
Esri World Imagery

0 200 400
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FIGURE 2-5
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

Jacobs

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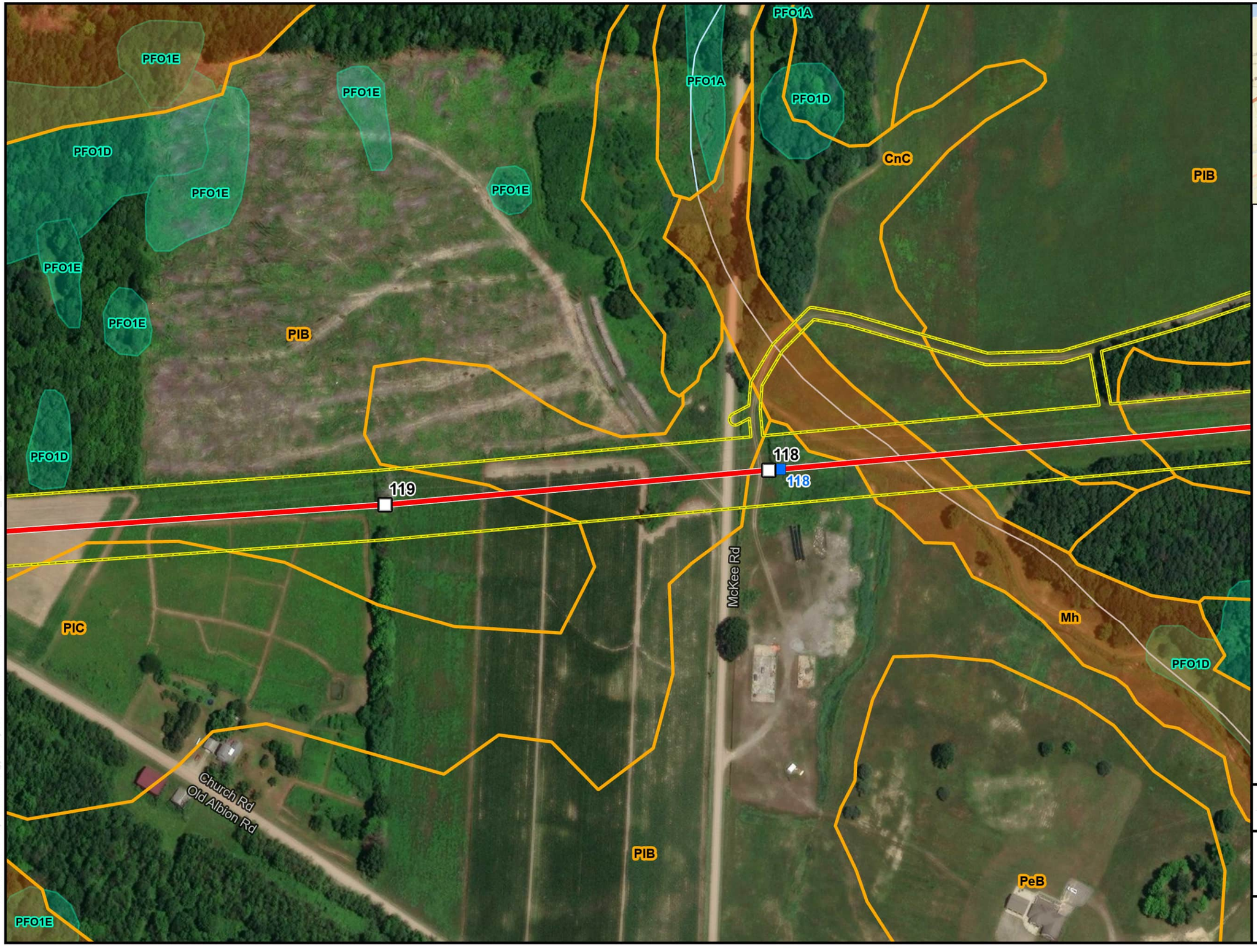

LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
Esri World Imagery

0 200 400
FEET

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FIGURE 2-6
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

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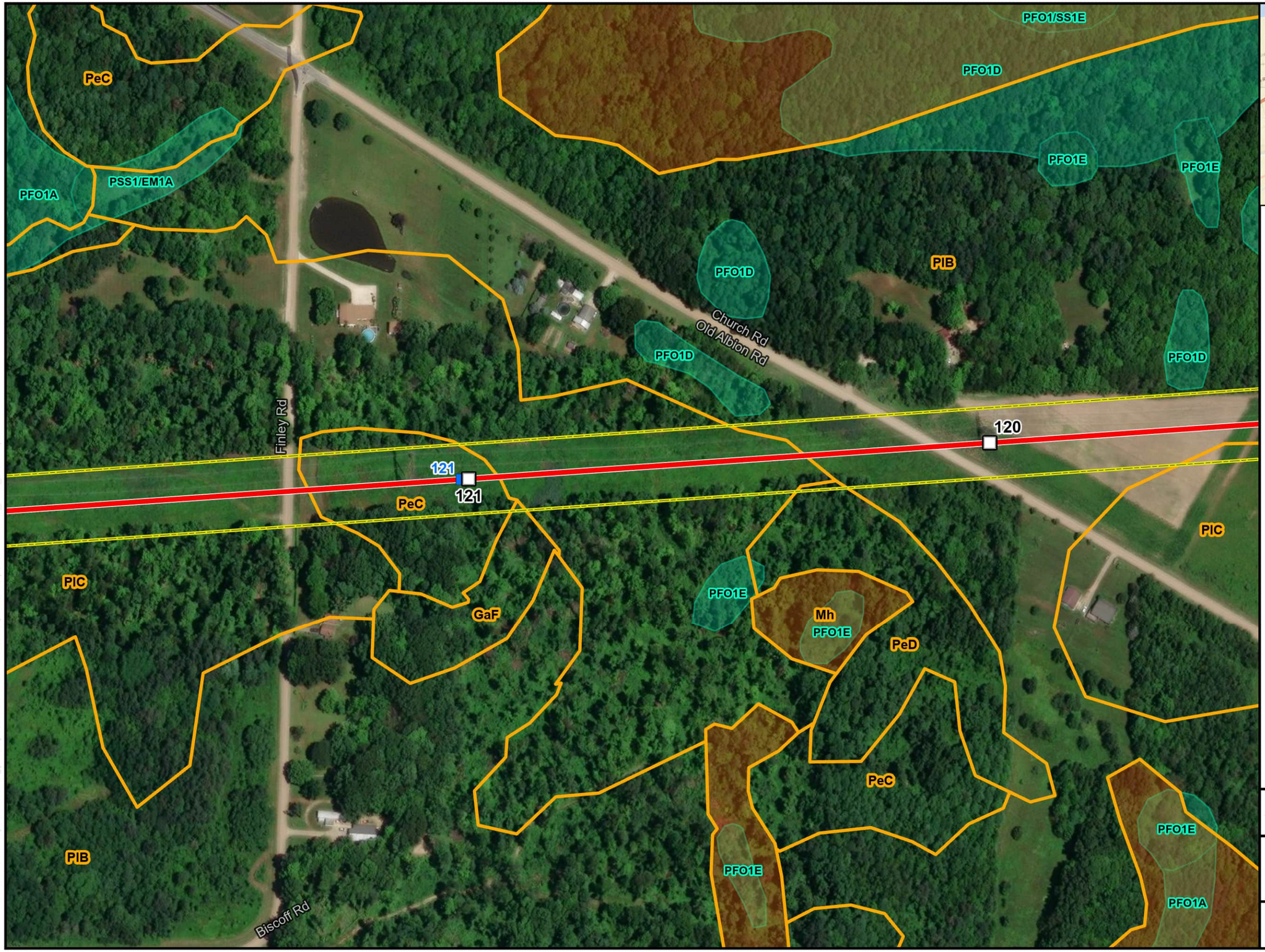

LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
Esri World Imagery

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FIGURE 2-7
SOILS, NHD, NWI, FEMA MAP

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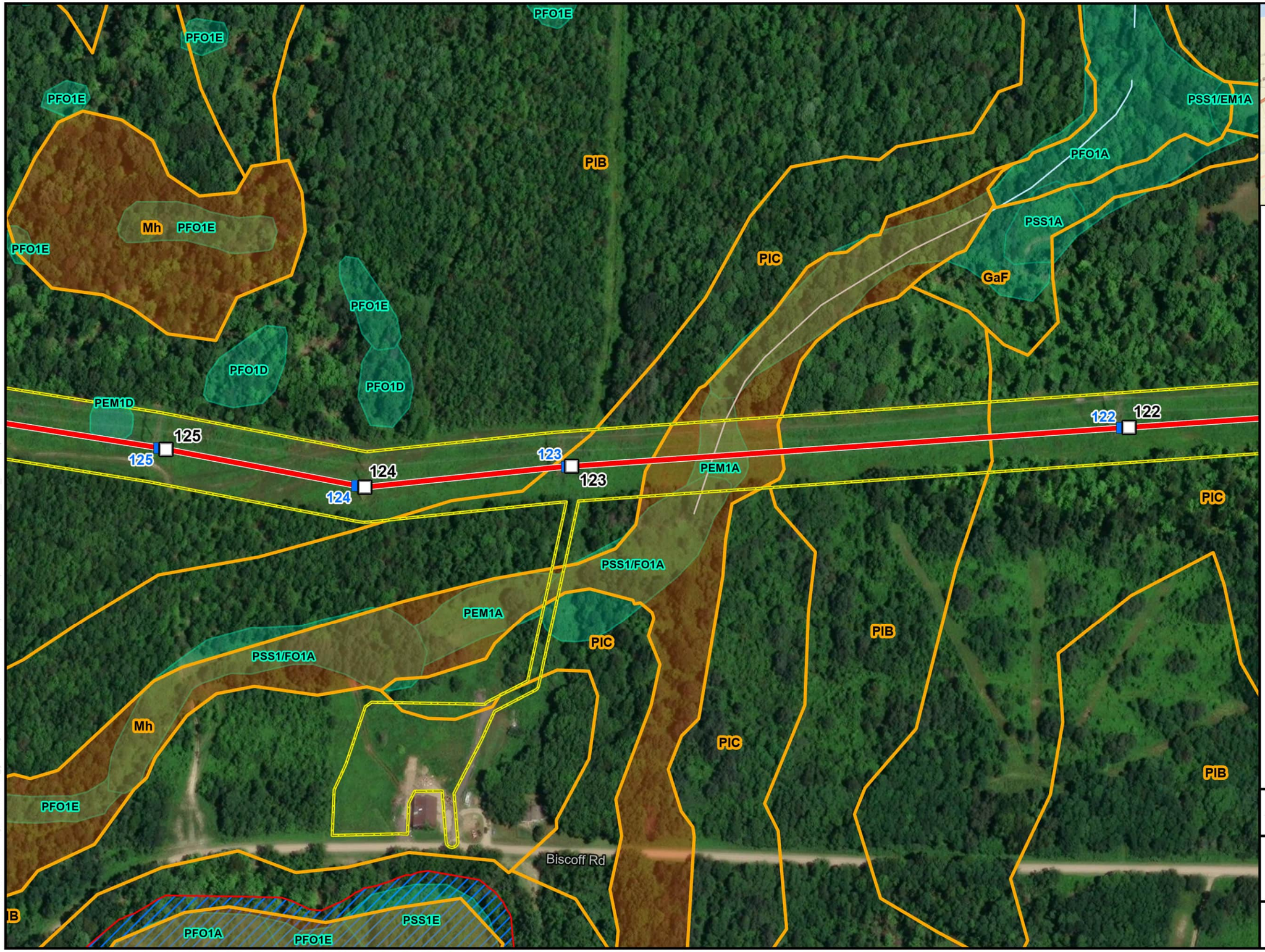

LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland
- FEMA 100 Year Floodplain

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
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FIGURE 2-8
SOILS, NHD, NWI, FEMA MAP

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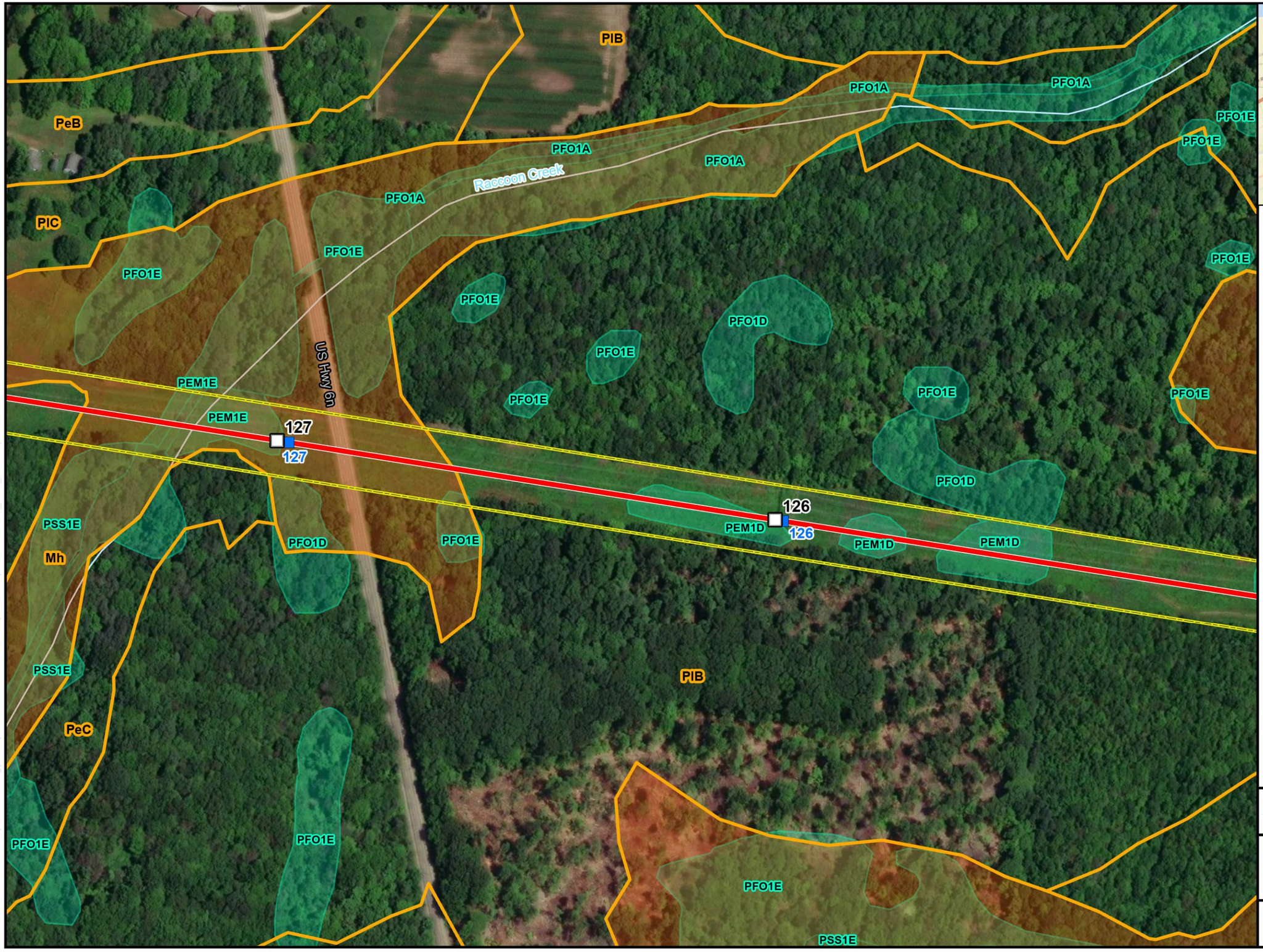

LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
Esri World Imagery

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FIGURE 2-9
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

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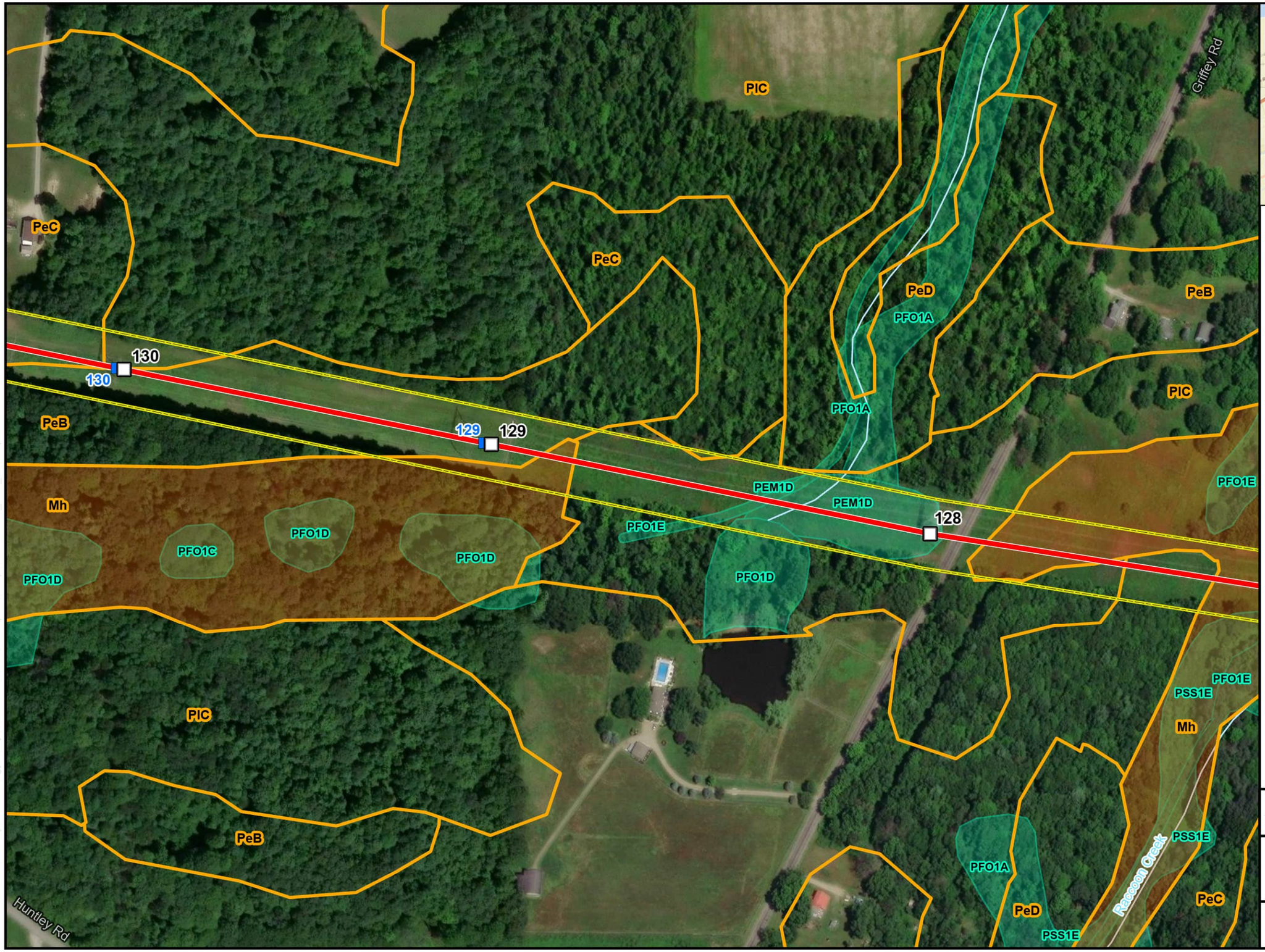

LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

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Esri World Imagery

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FIGURE 2-10
SOILS, NHD, NWI, FEMA MAP

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PSS1/EM1A
PFO1C
PSS1/EM1A
PtB
GaF
GaF
Ax
PeD
Turkey Creek
PFO1E
PFO1E
PIB
PFO1D
PeD
133
133
PSS1C
PFO1A
PIB
PFO1A
W
132
132
PeC
131
131
Underridge Rd
PIC
PFO1A
PEM1D
PFO1A
PSS1D
PFO1D
PIC
PFO1E
Huntley Rd
PeB
PFO1C
GaF
PFO1D
Mh
PFO1D

LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
Esri World Imagery

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FIGURE 2-11
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

Jacobs

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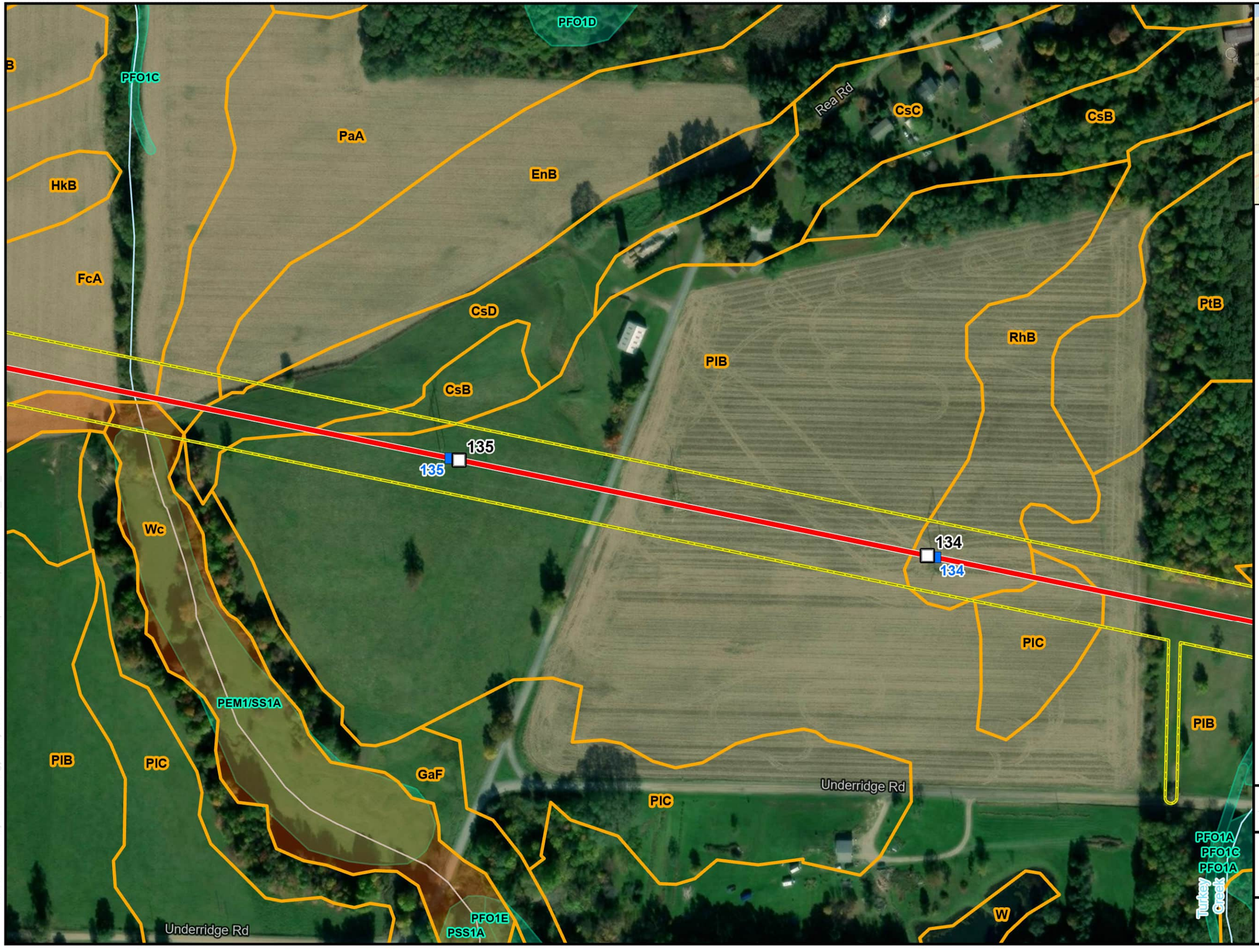

LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
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345 kV Rehab Project

FIGURE 2-12
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

Jacobs

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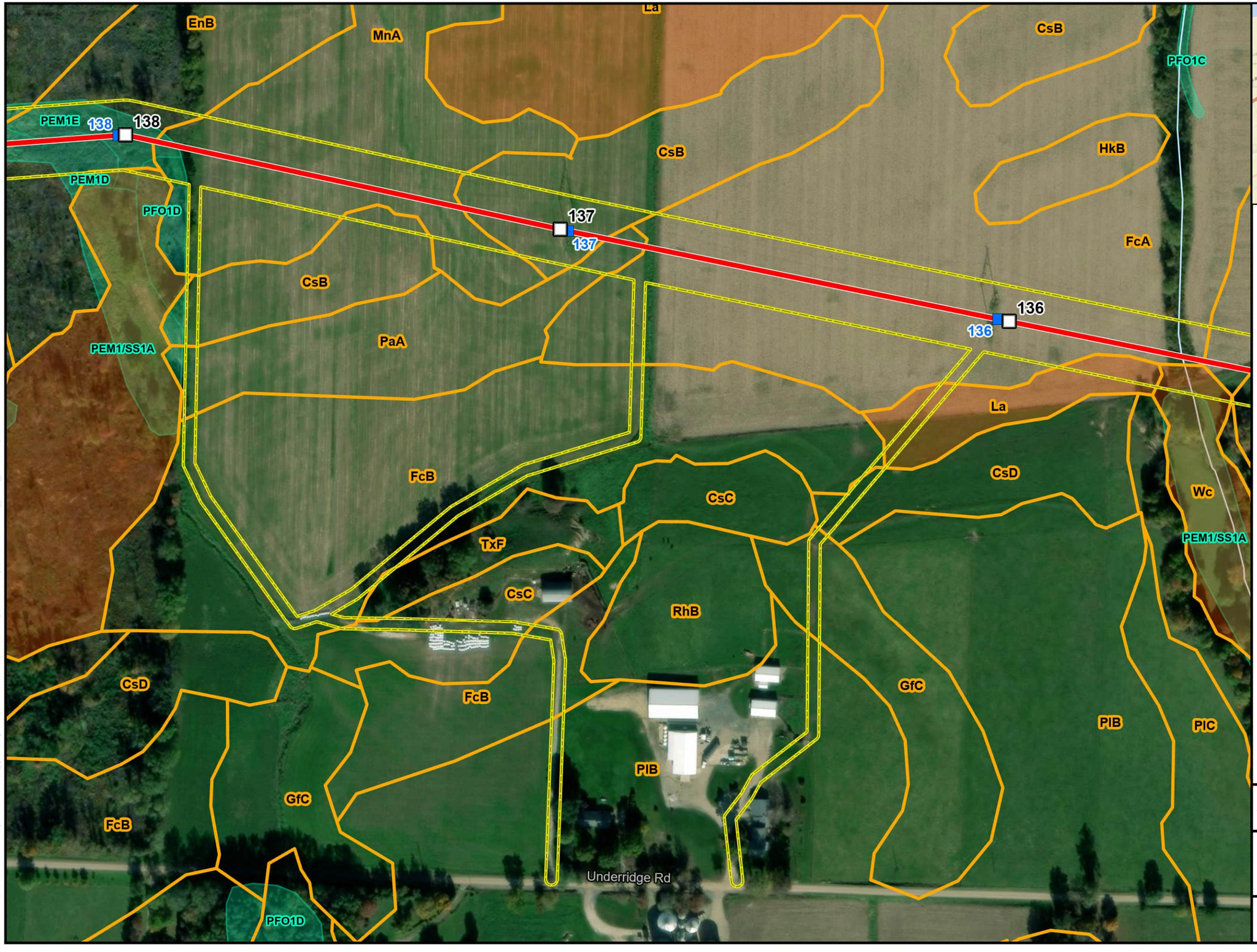

LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 2-13
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

Jacobs

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LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
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FIGURE 2-14
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

Jacobs

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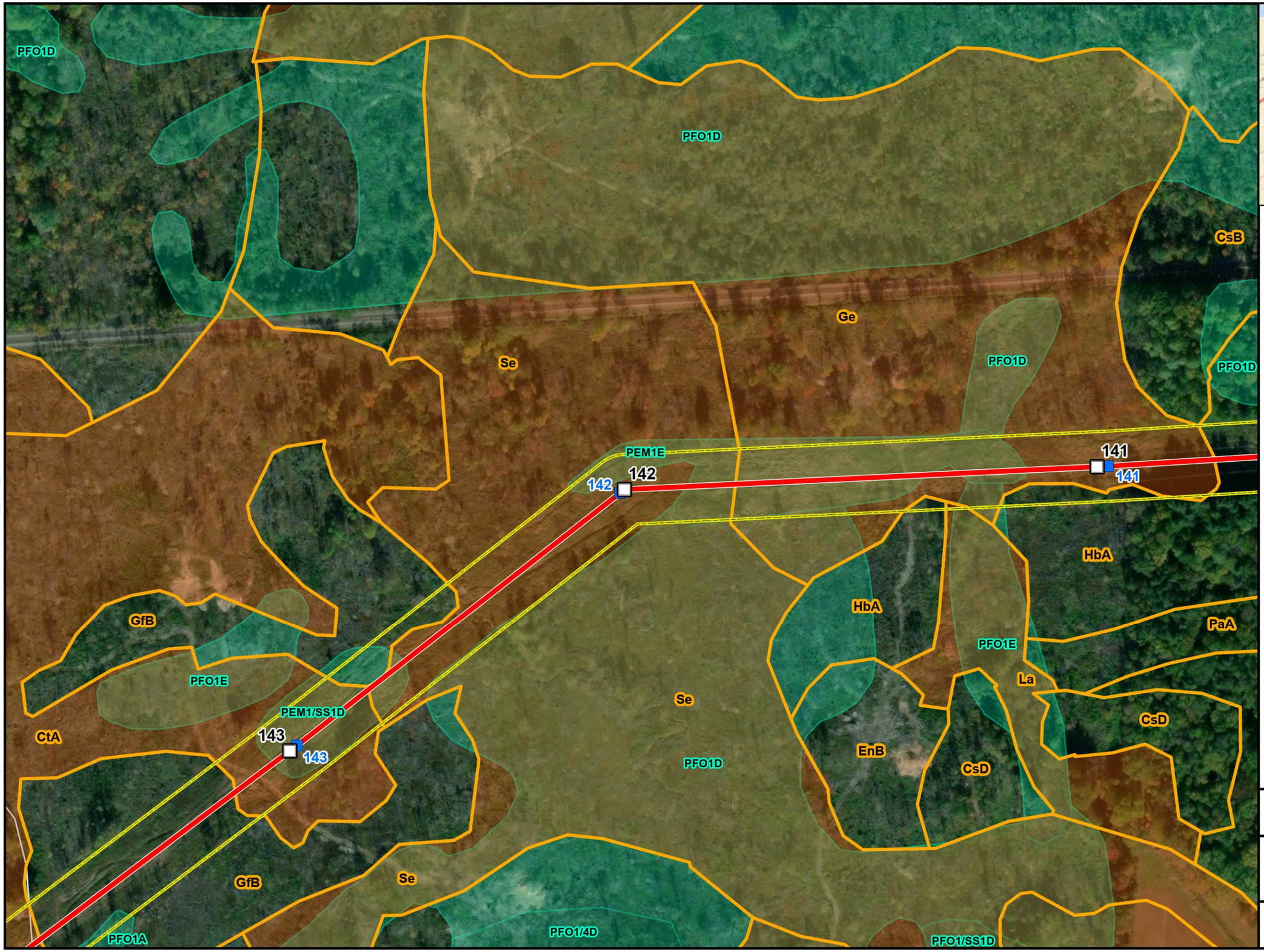

LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
Esri World Imagery

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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 2-15
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

Jacobs

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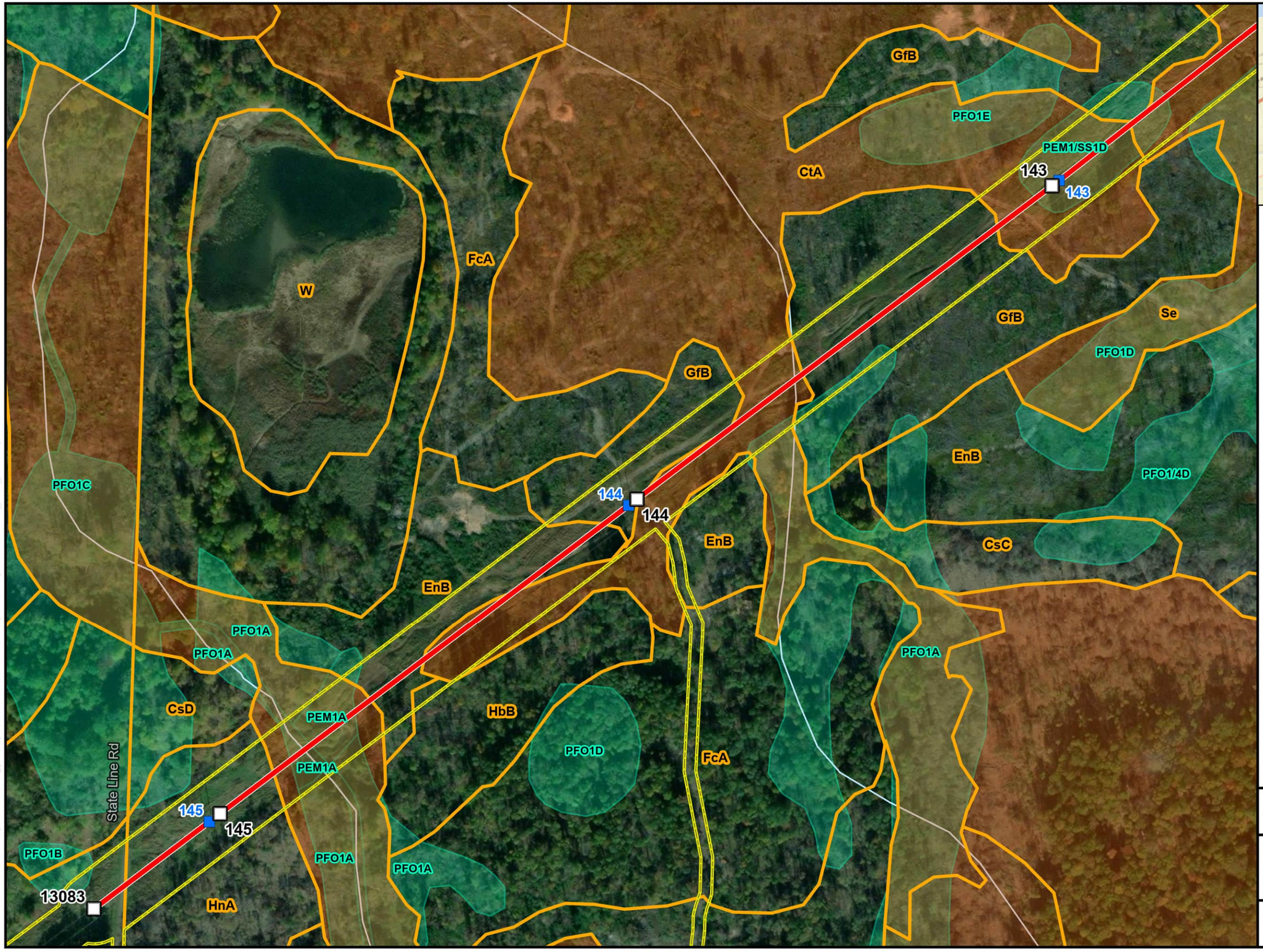

LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
Esri World Imagery

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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 2-16
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

Jacobs

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LEGEND:

- Existing Structure
- Proposed Structure
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
Esri World Imagery

0 200 400
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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 2-17
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

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LEGEND:

- Existing Structure
- Environmental Survey Boundary
- NHD Stream
- NWI Wetland
- FEMA 100 Year Floodplain

Soil Map Unit

- Hydric & Predominantly Hydric Soils
- Other Soils

N

BASE MAP SOURCE:
Esri World Imagery

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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 2-18
SOILS, NHD, NWI, FEMA MAP

DATE: 7/16/2025

Jacobs

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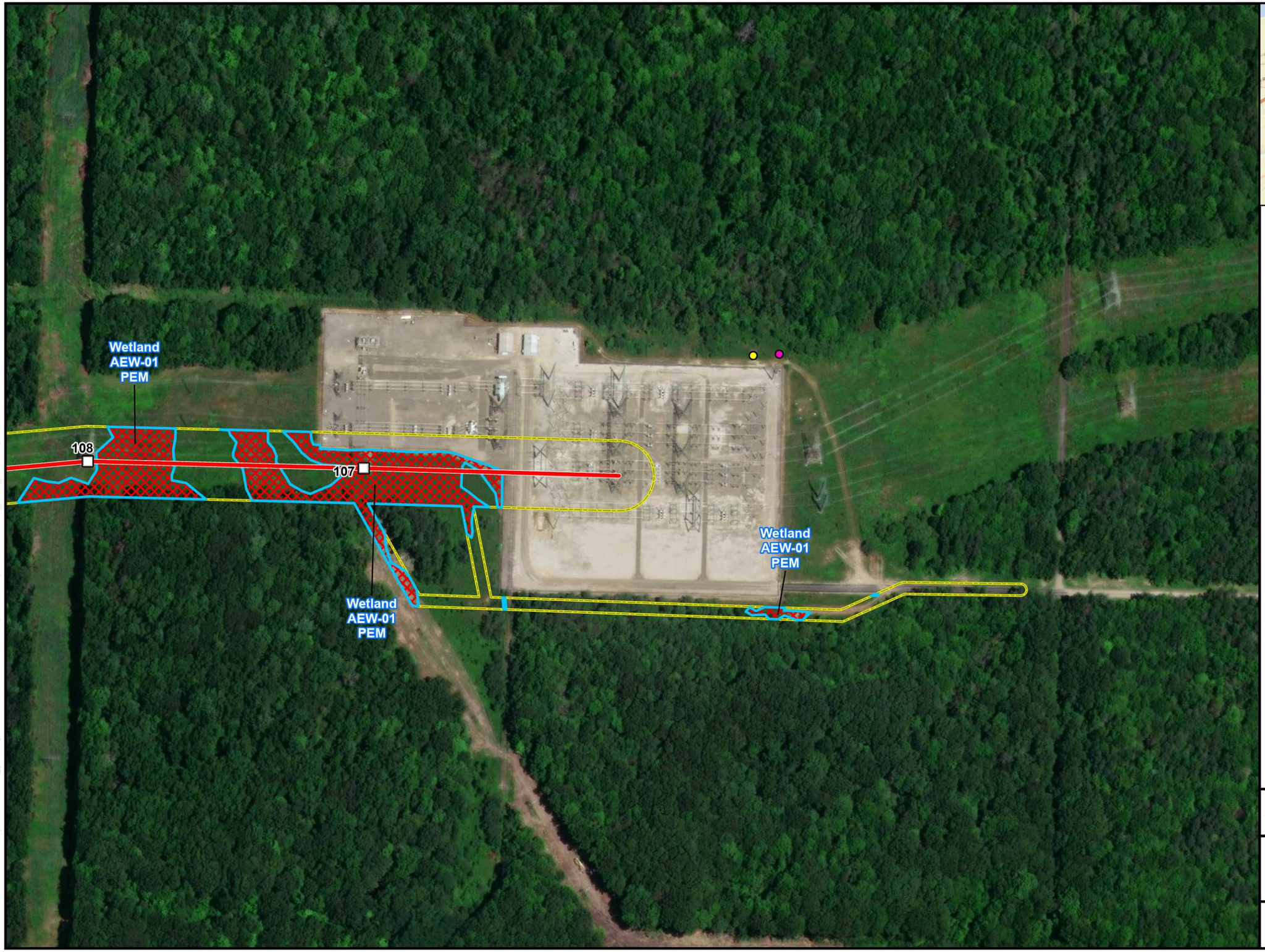

LEGEND:

- Existing Structure
- Upland Data Point
- Wetland Data Point
- PEM Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
Esri World Imagery

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Ashtabula-Erie West
345 kV Rehab Project

FIGURE 3-1
DELINEATED FEATURES MAP

DATE: 7/16/2025

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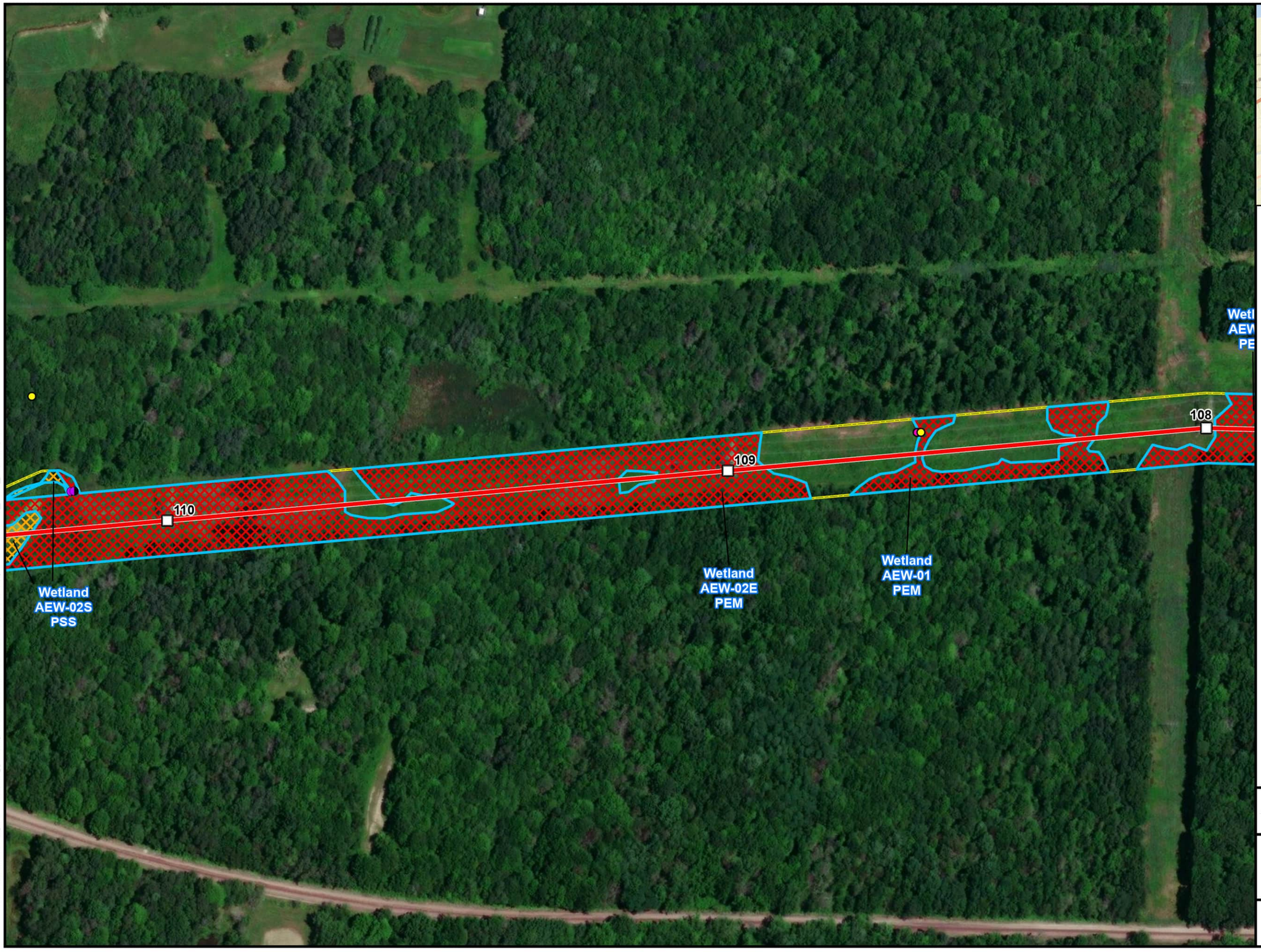

LEGEND:

- Existing Structure
- Upland Data Point
- Wetland Data Point
- Culvert
- Stream
- PEM Wetland
- PSS Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
Esri World Imagery

0 200 400
FEET

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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-2
DELINEATED FEATURES MAP

DATE: 7/16/2025

Jacobs

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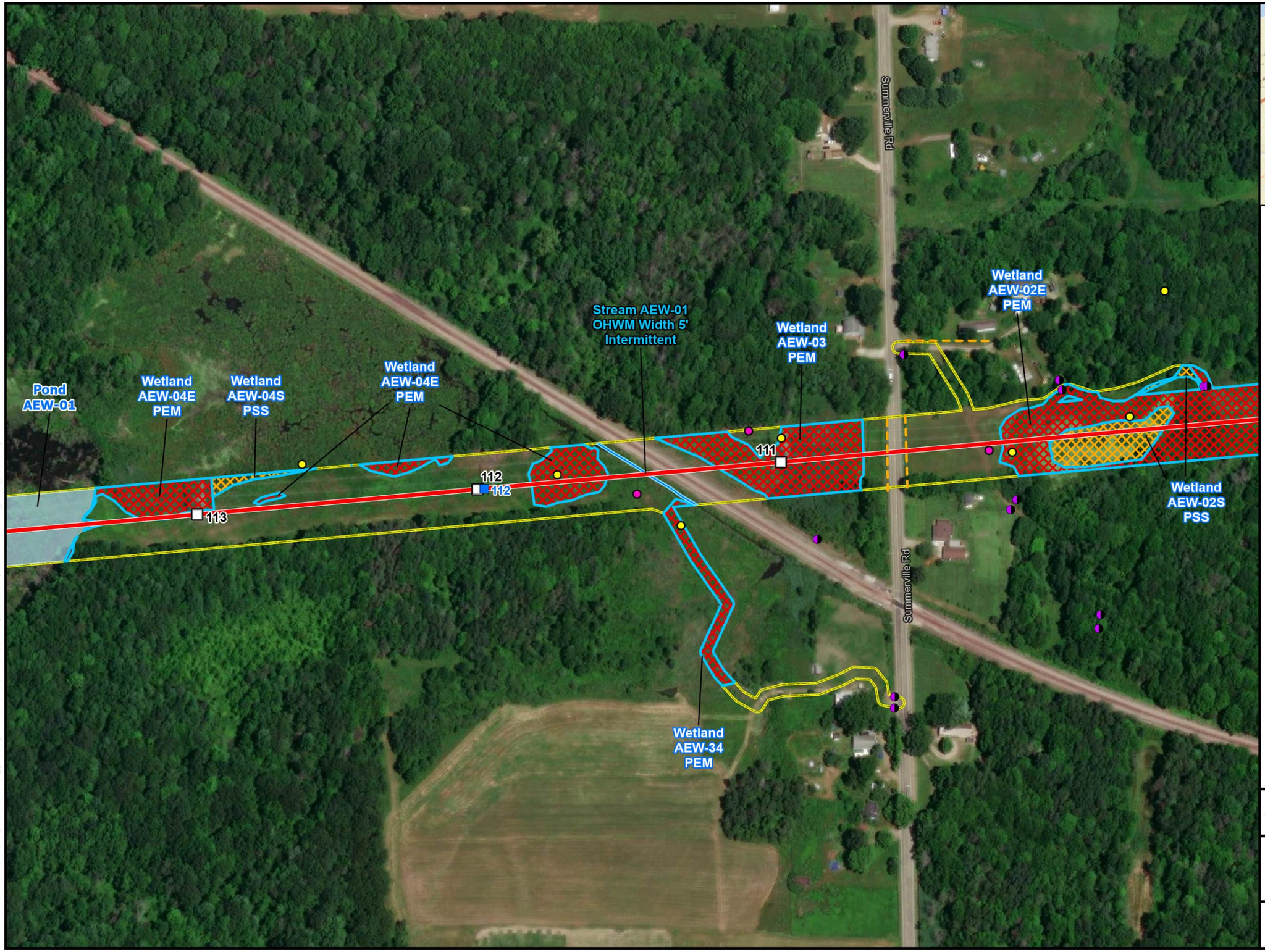

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Culvert
- Upland Drainage Line
- Stream
- PEM Wetland
- PSS Wetland
- Pond
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
Esri World Imagery

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FEET

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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-3
DELINEATED FEATURES MAP

DATE: 7/16/2025

Jacobs

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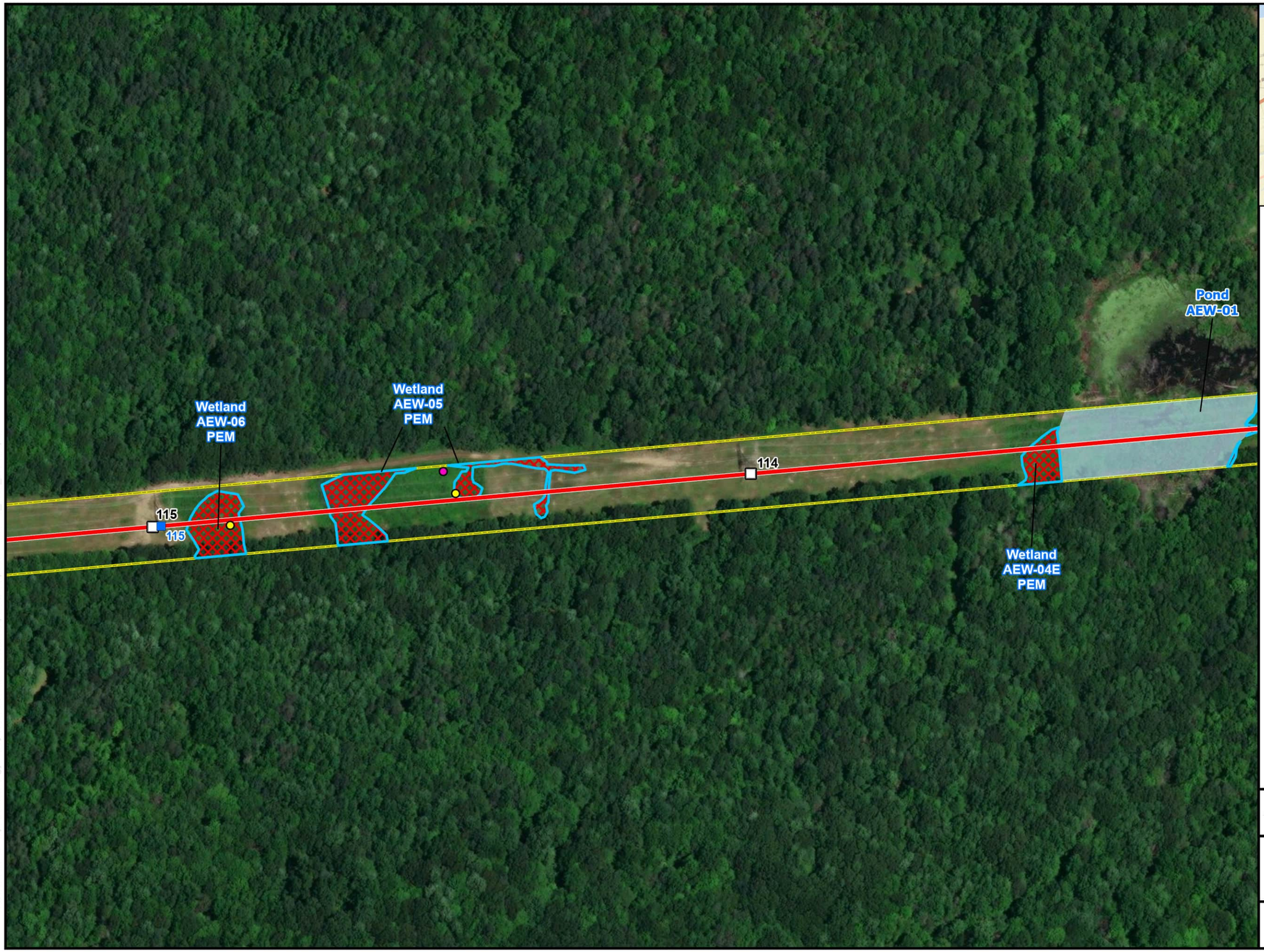

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- PEM Wetland
- Pond
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
Esri World Imagery

0 200 400
FEET

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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-4
DELINEATED FEATURES MAP

DATE: 7/16/2025

Jacobs

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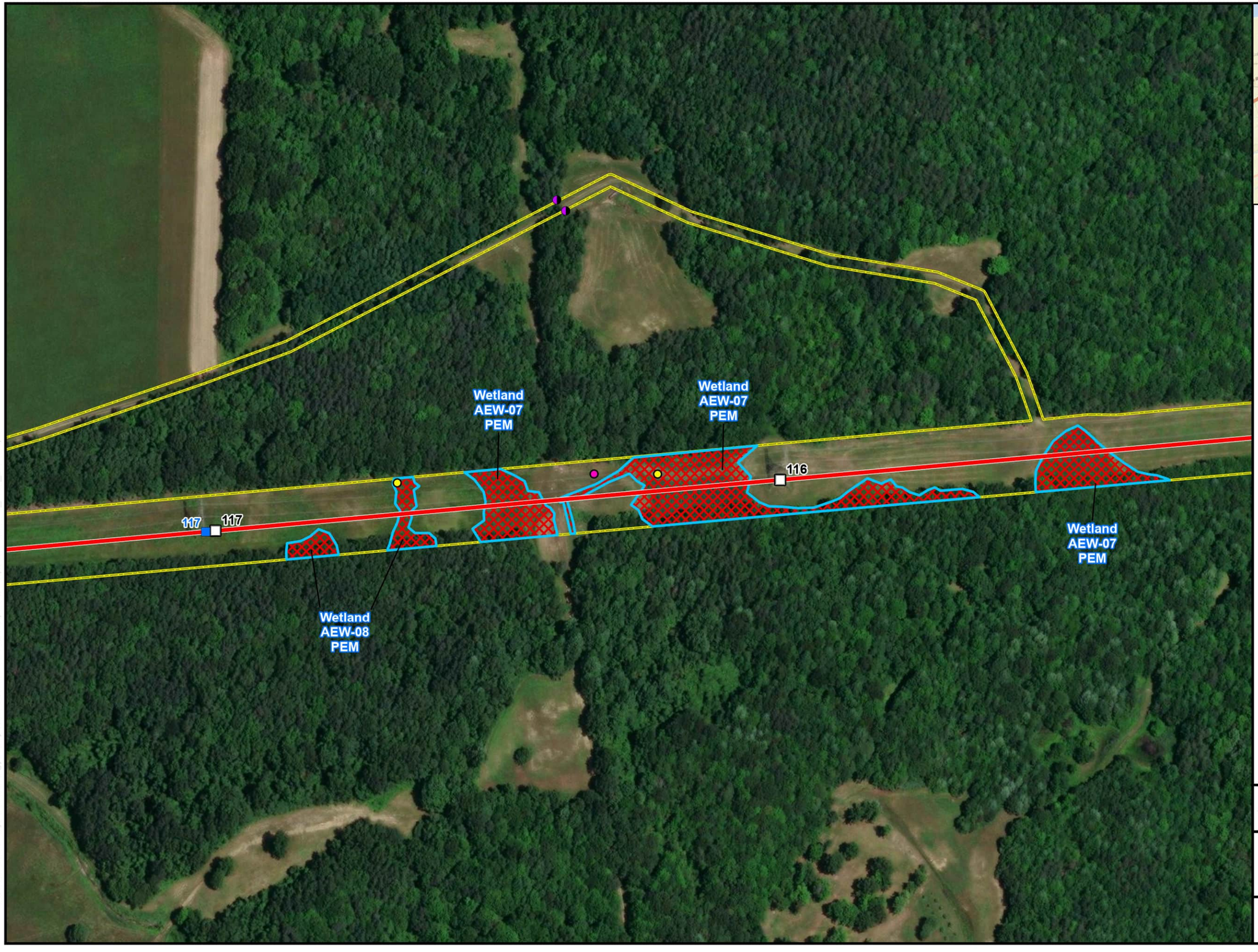

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Culvert
- PEM Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
Esri World Imagery

0 200 400
FEET

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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-5
DELINEATED FEATURES MAP

DATE: 7/16/2025

Jacobs

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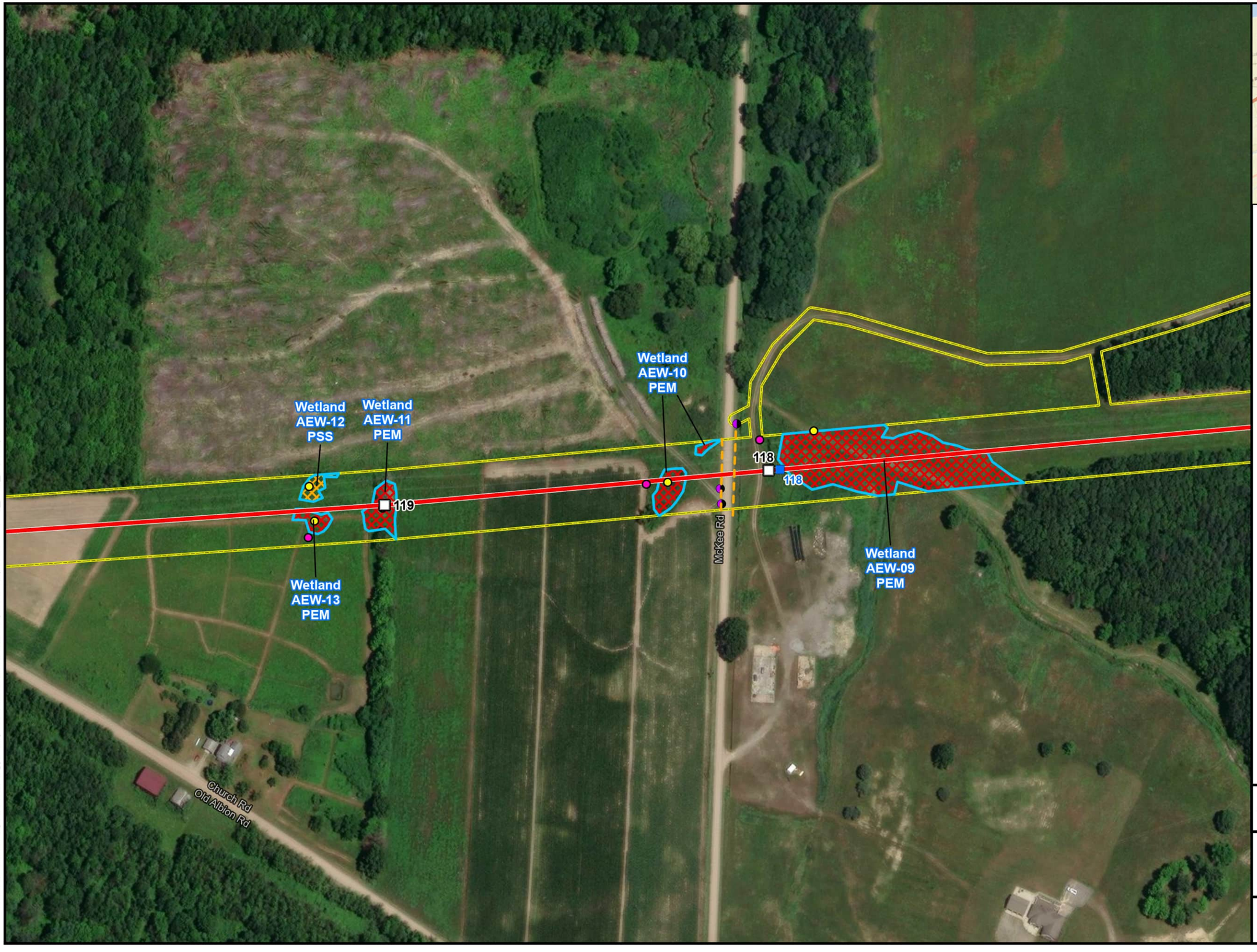

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Culvert
- Upland Drainage Line
- PEM Wetland
- PSS Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
Esri World Imagery

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FIGURE 3-6
DELINEATED FEATURES MAP

DATE: 7/16/2025

Jacobs

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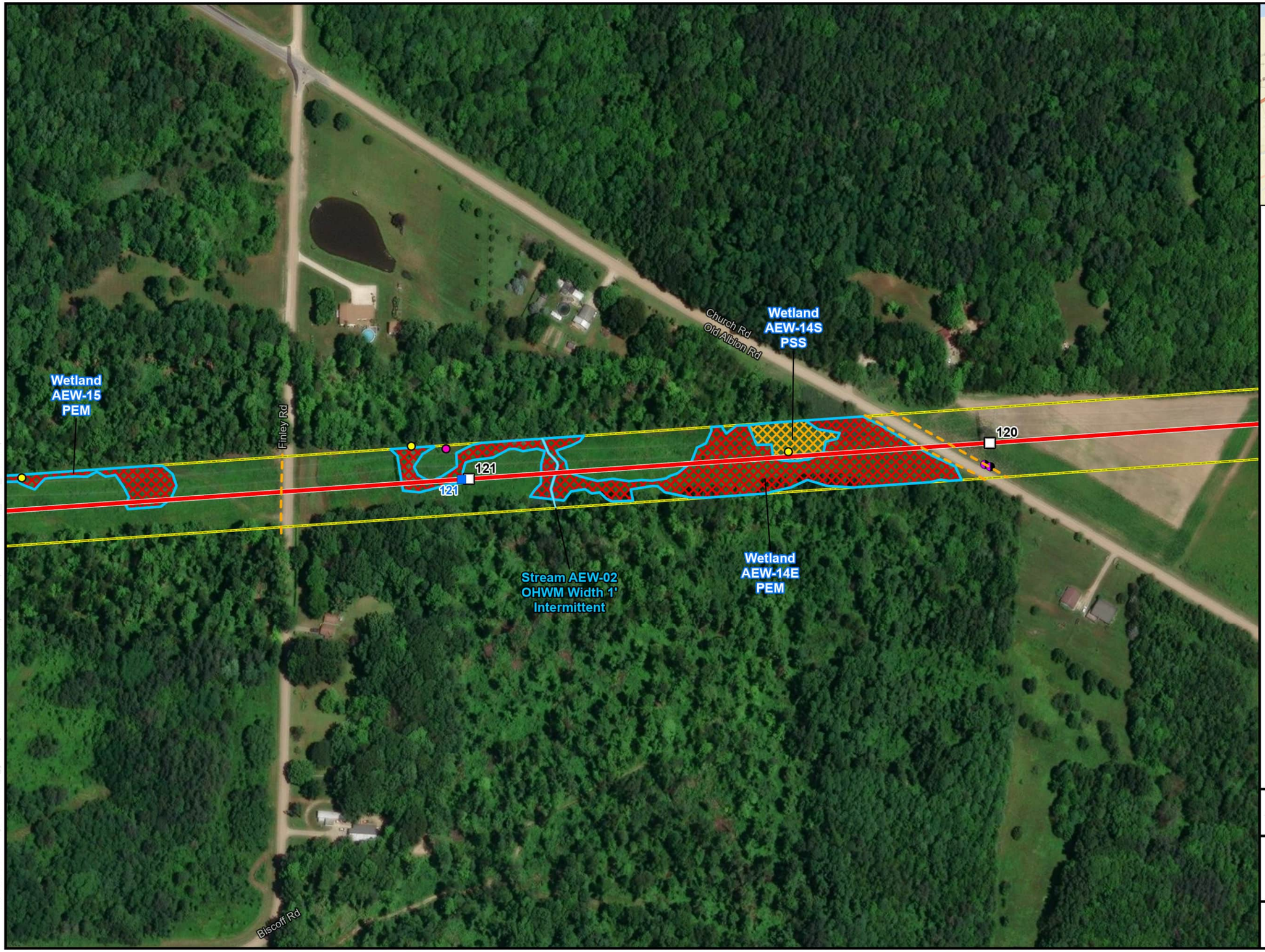

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Culvert
- Upland Drainage Line
- Stream
- PEM Wetland
- PSS Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-7
DELINEATED FEATURES MAP

DATE: 7/16/2025

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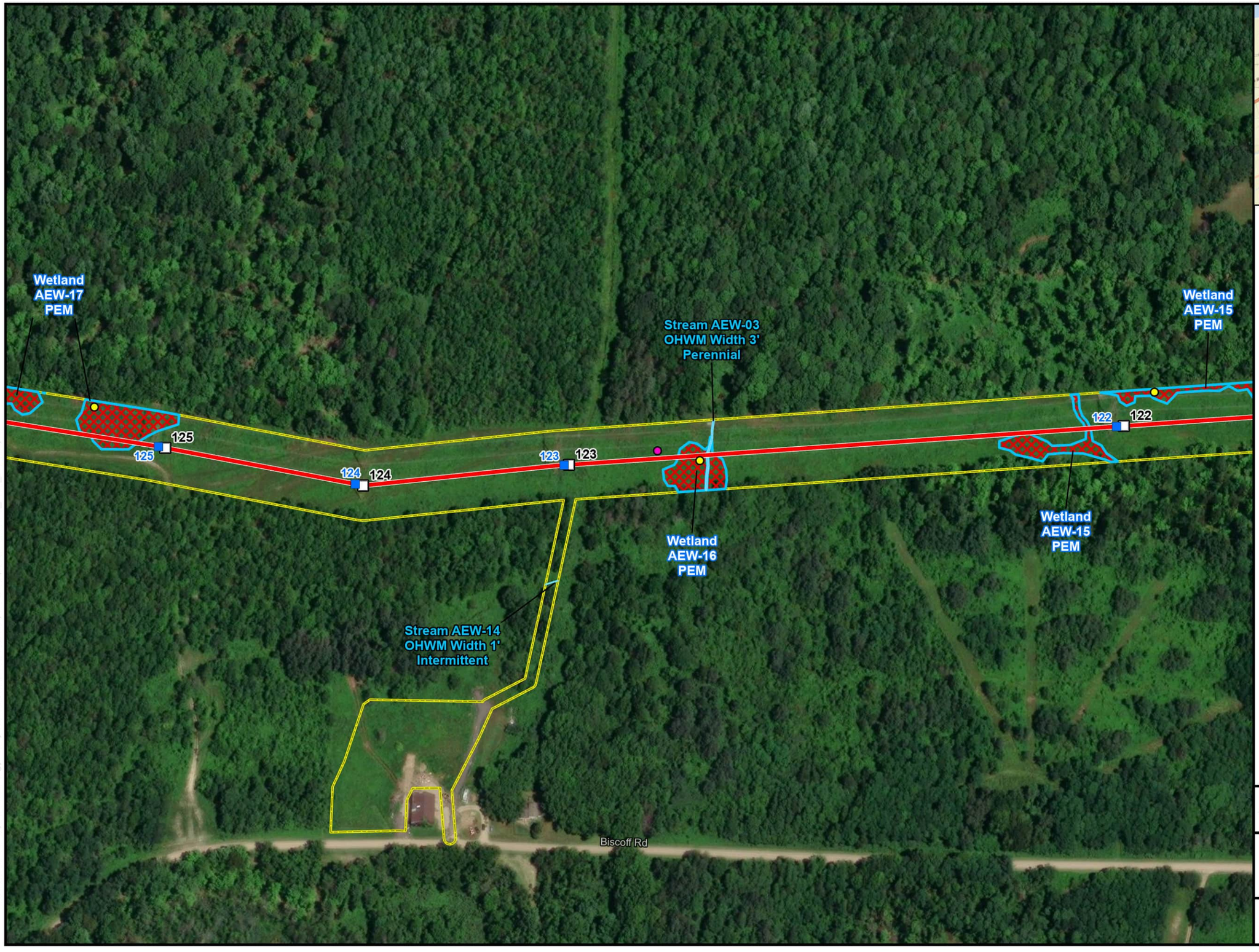

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Stream
- PEM Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
Esri World Imagery

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FEET

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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-8
DELINEATED FEATURES MAP

DATE: 7/16/2025

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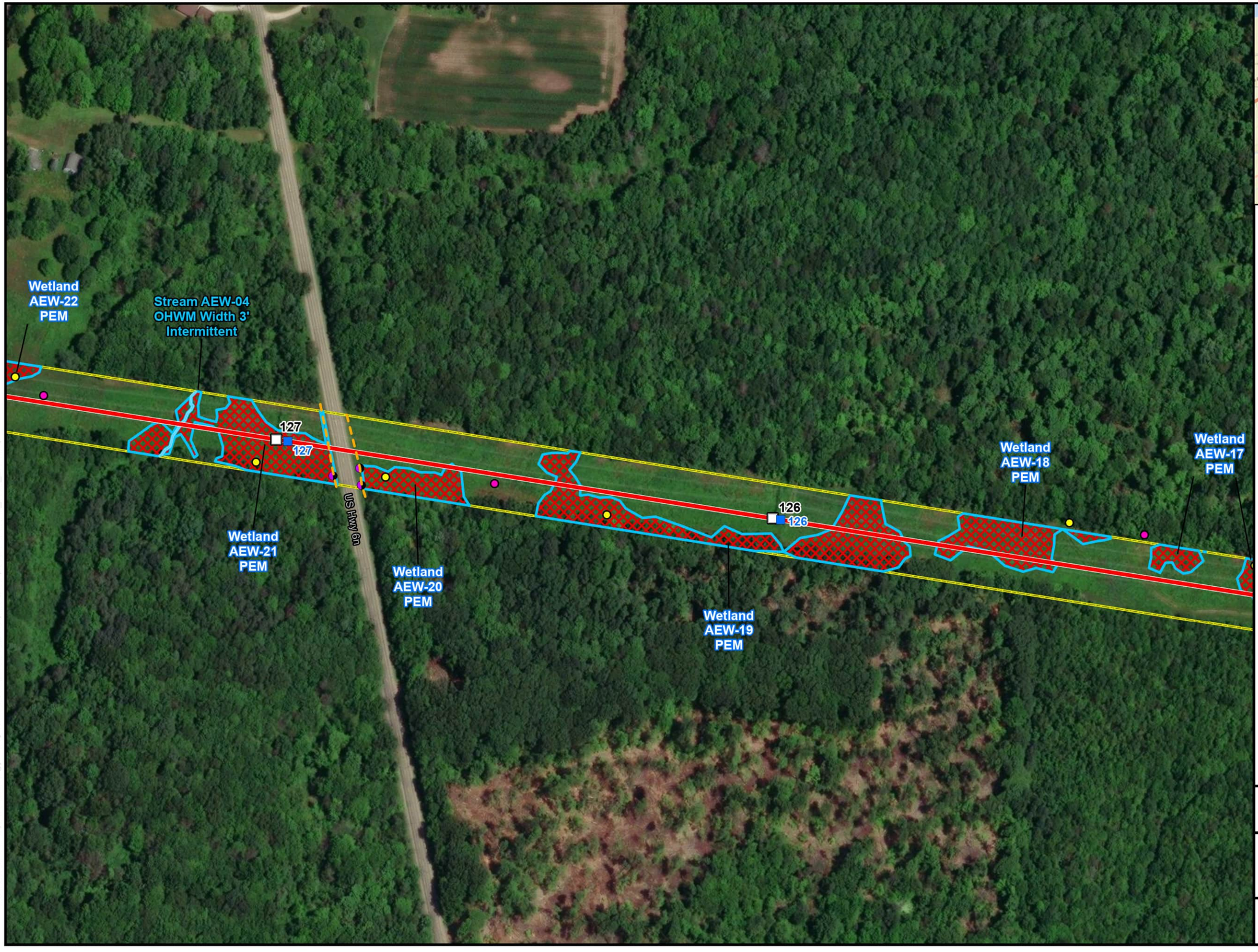

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Culvert
- Upland Drainage Line
- Stream
- PEM Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
Esri World Imagery

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FEET

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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-9
DELINEATED FEATURES MAP

DATE: 7/16/2025

Jacobs

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LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Culvert
- Upland Drainage Line
- Stream
- PEM Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
Esri World Imagery

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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-10
DELINEATED FEATURES MAP

DATE: 7/16/2025

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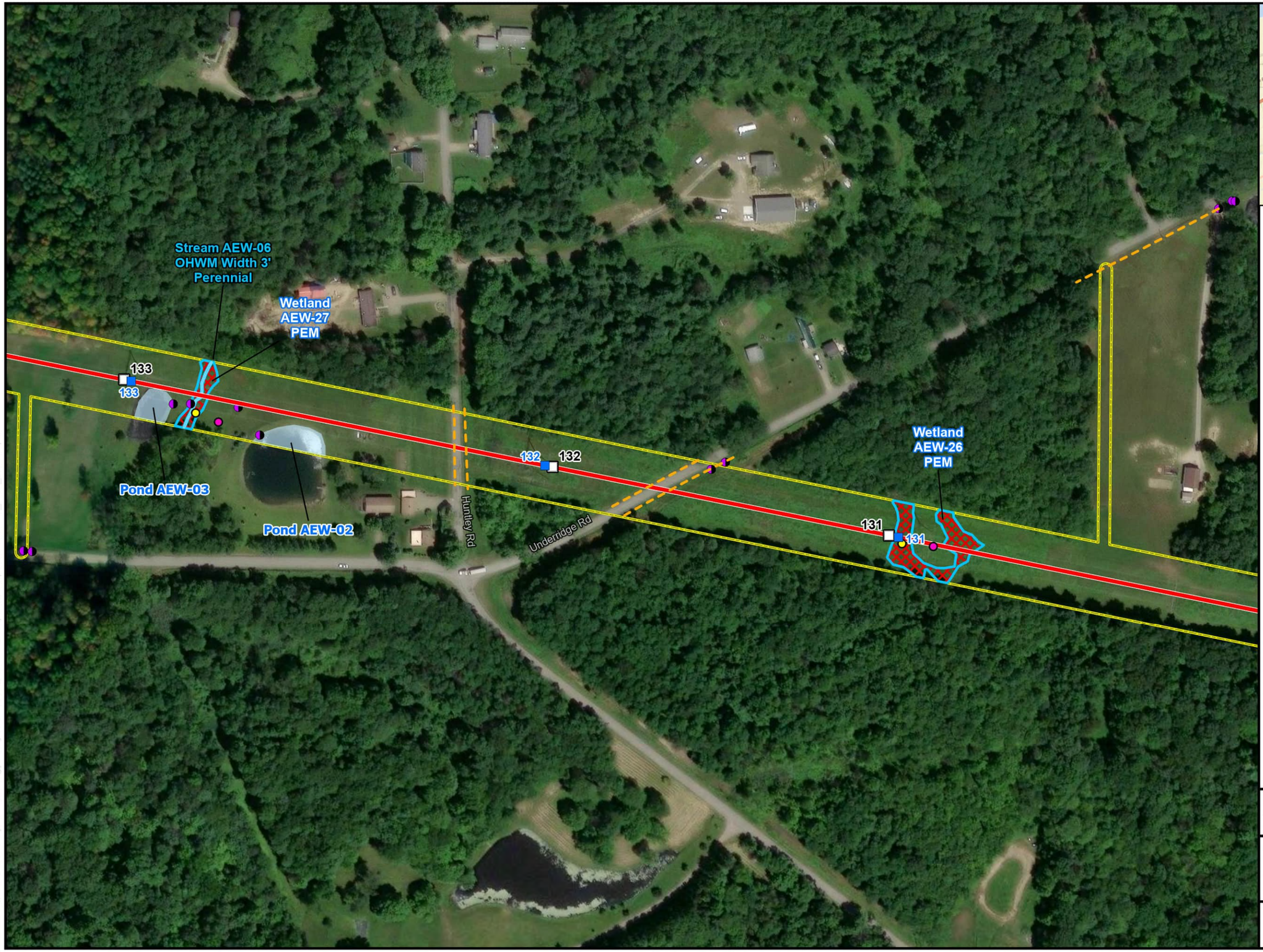

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Culvert
- Upland Drainage Line
- Stream
- PEM Wetland
- Pond
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-11
DELINEATED FEATURES MAP

DATE: 7/16/2025

Jacobs

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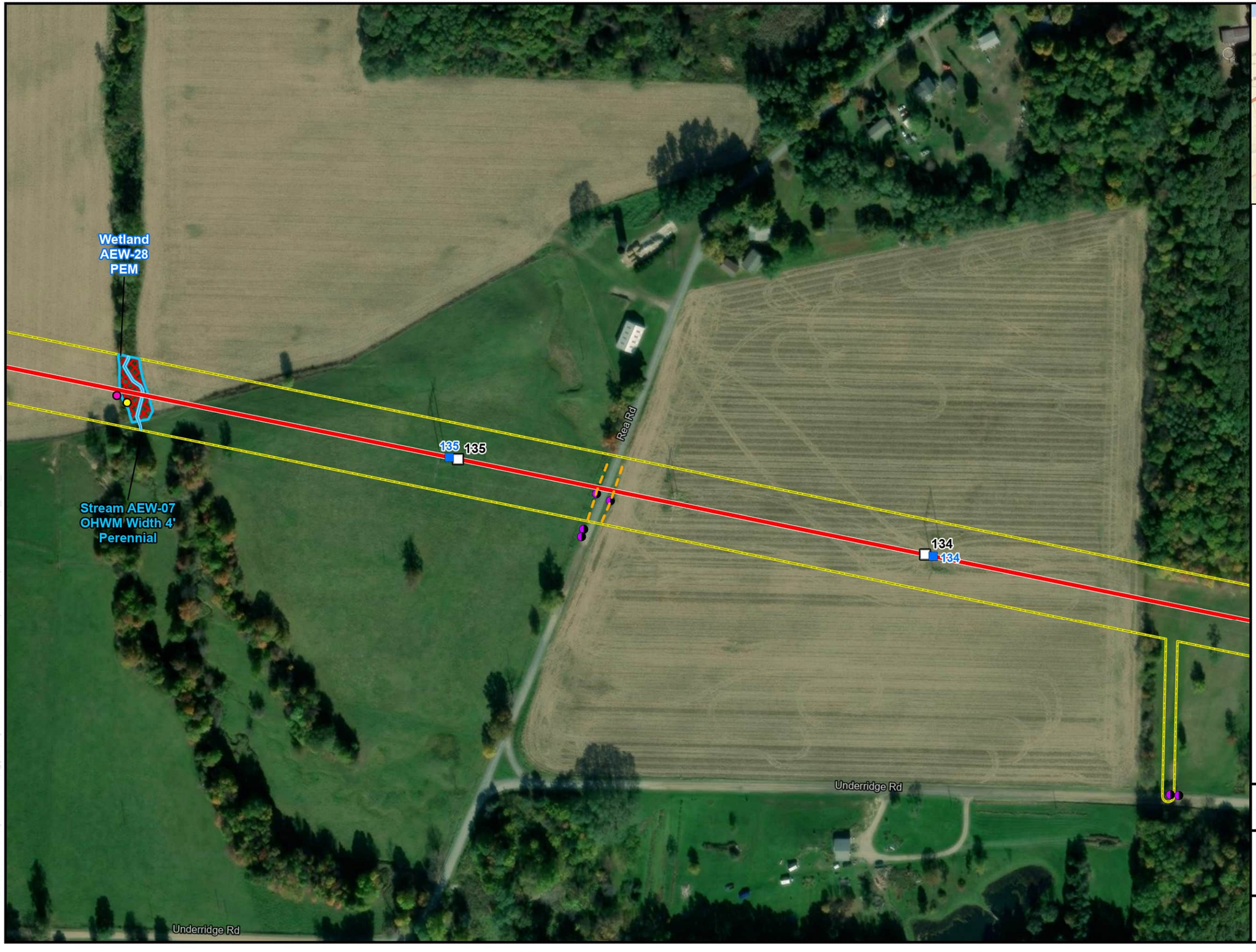

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Culvert
- Upland Drainage Line
- Stream
- PEM Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
Esri World Imagery

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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-12
DELINEATED FEATURES MAP

DATE: 7/16/2025

Jacobs

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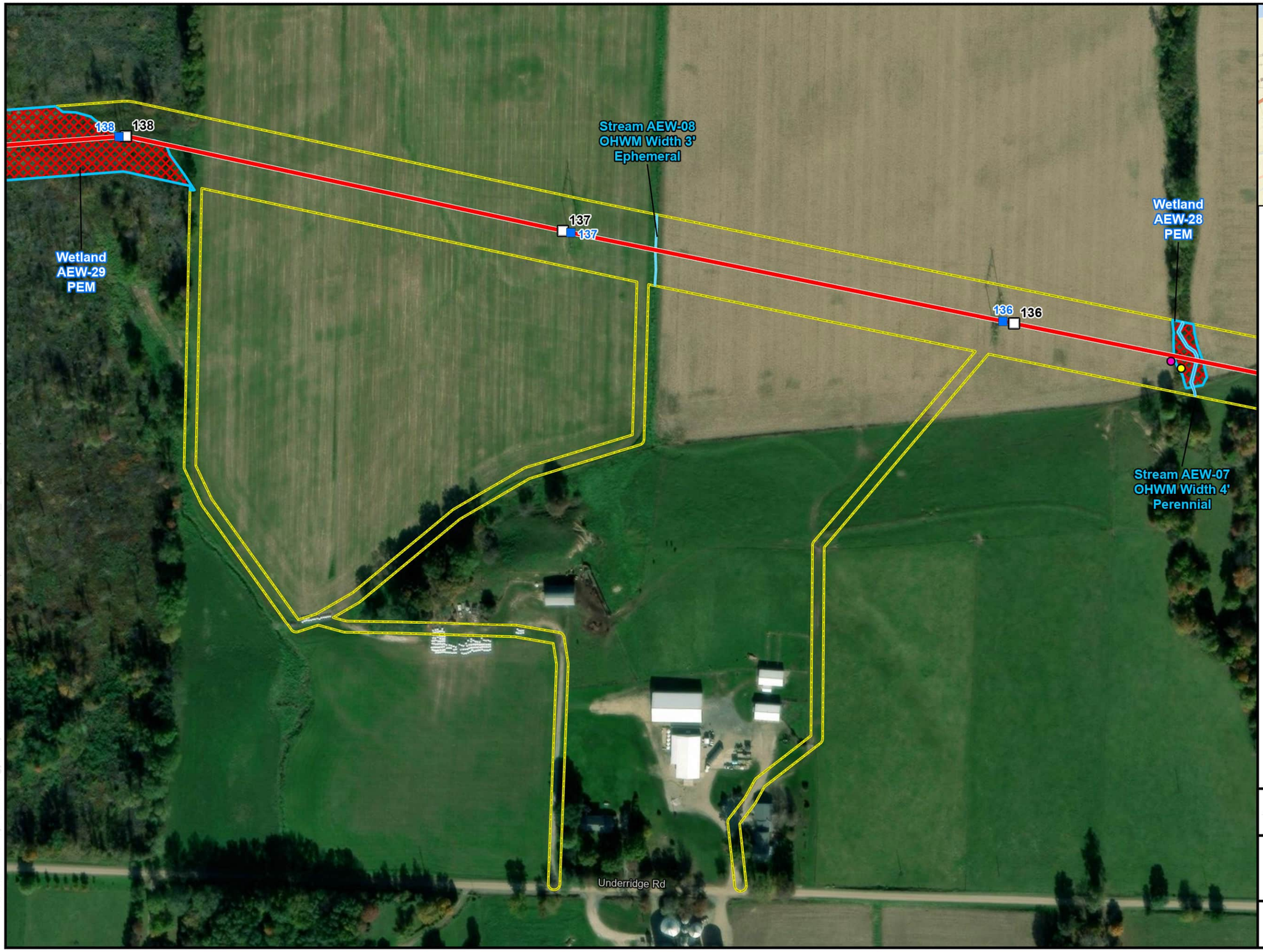

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Stream
- PEM Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-13
DELINEATED FEATURES MAP

DATE: 7/16/2025

Jacobs

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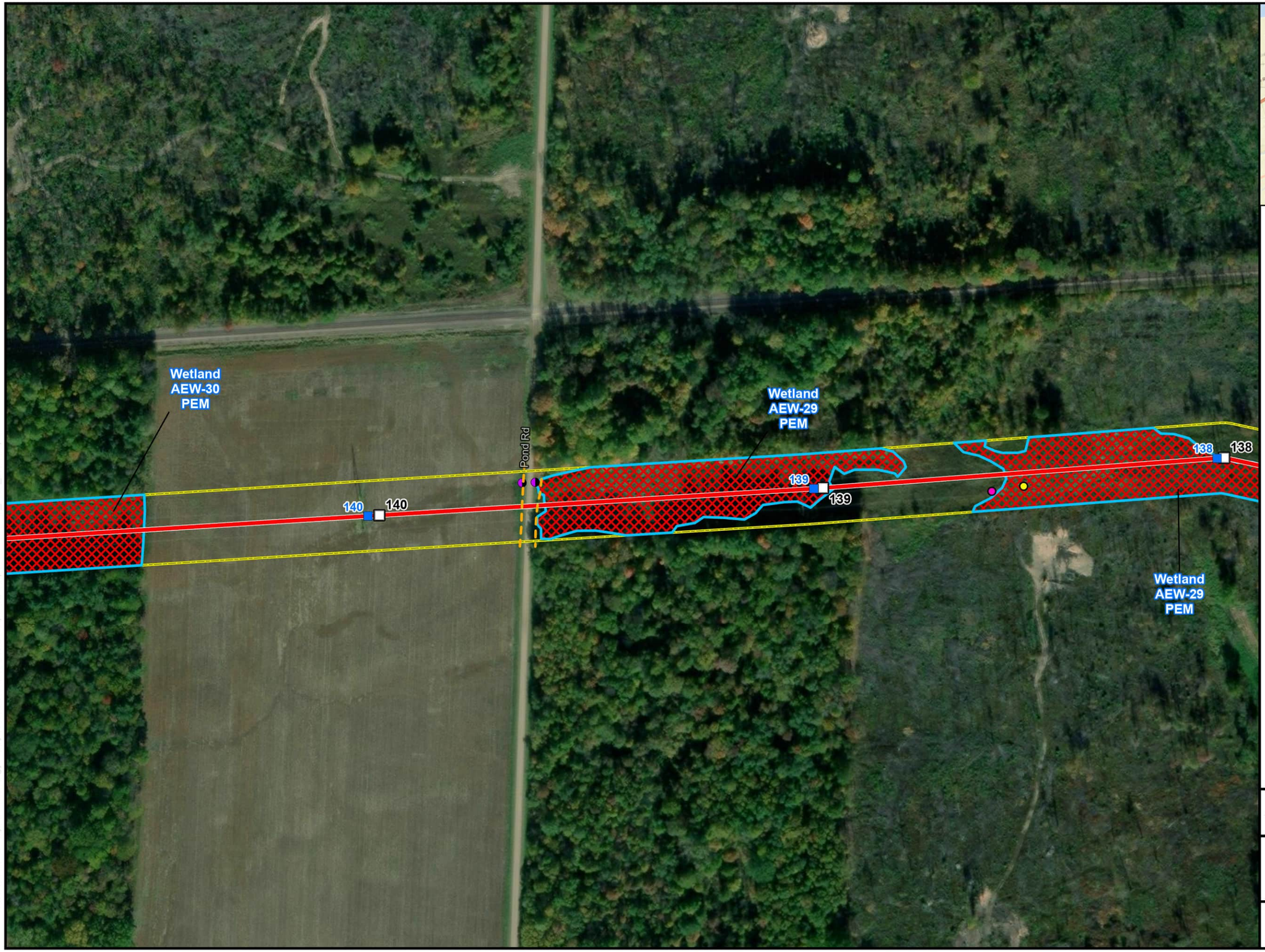

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Culvert
- Upland Drainage Line
- PEM Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-14
DELINEATED FEATURES MAP

DATE: 7/16/2025

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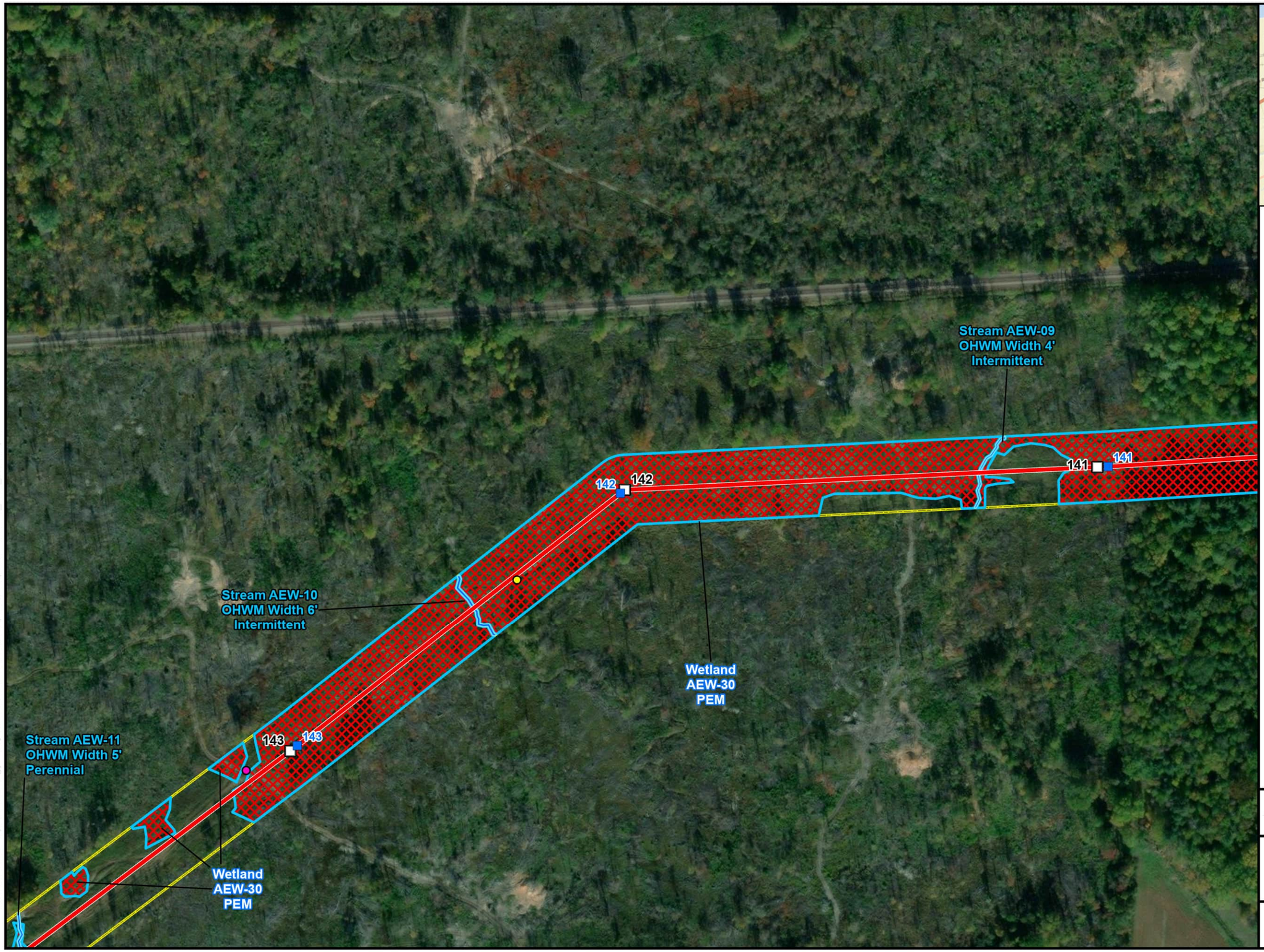

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Stream
- PEM Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-15
DELINEATED FEATURES MAP

DATE: 7/16/2025

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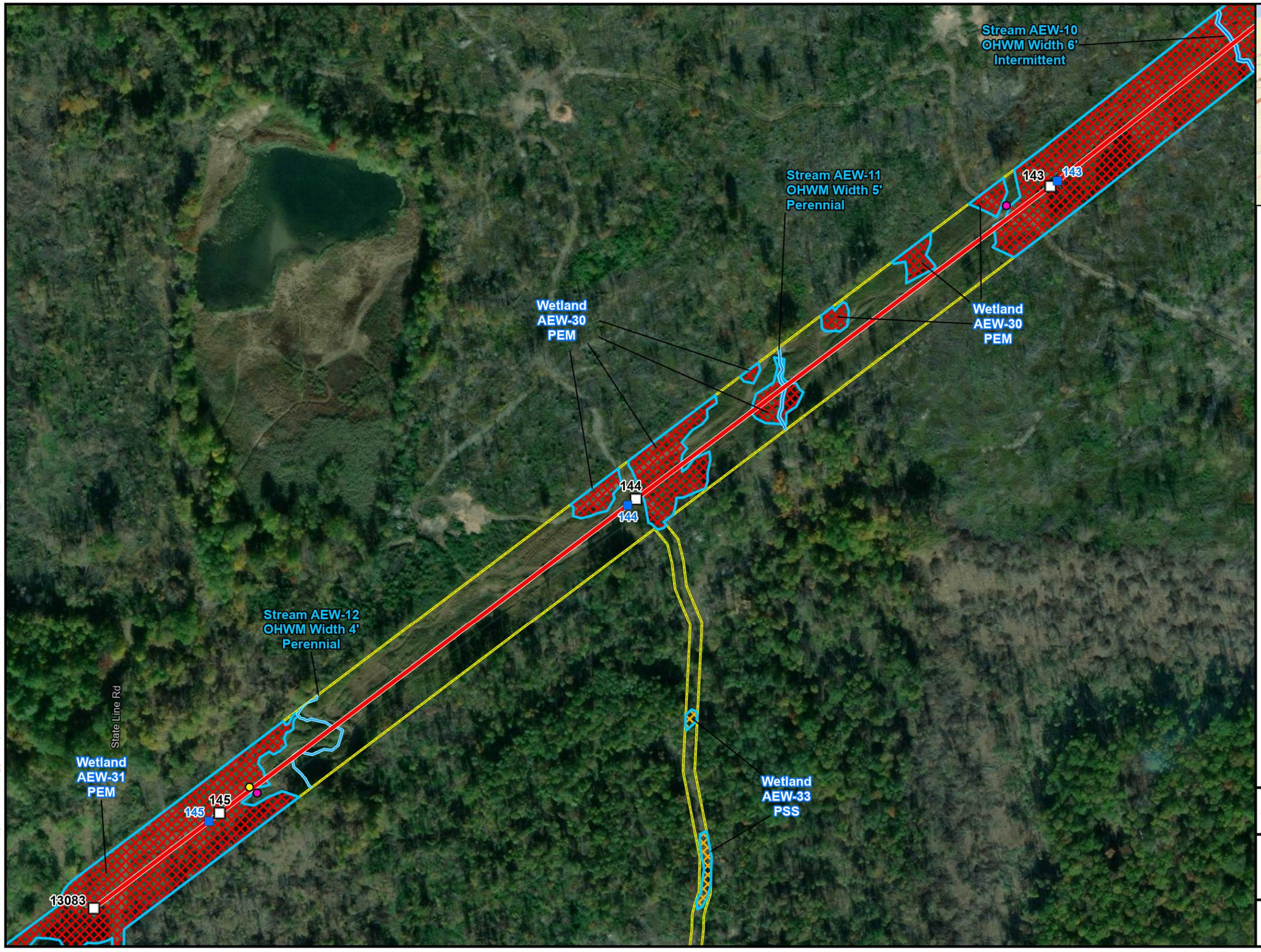

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Stream
- PEM Wetland
- PSS Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-16
DELINEATED FEATURES MAP

DATE: 7/16/2025

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\\dc1vs01\GISProj\FirstEnergy\Perry-Ashtabula-Erie West\MapFiles\Reports\WDR\FE_PAE_WDR.aprx

Stream AEW-12
OHWM Width 4'
Perennial

State Line Rd

Wetland
AEW-31
PEM

145

145

13083

13082

Wetland
AEW-33
PSS

Wetland
AEW-33
PSS

Underridge Rd

E Underridge Rd

LEGEND:

- Existing Structure
- Proposed Structure
- Upland Data Point
- Wetland Data Point
- Upland Drainage Line
- Stream
- PEM Wetland
- PSS Wetland
- Ashtabula-Erie West 345 kV Centerline
- Environmental Survey Boundary

N

BASE MAP SOURCE:
Esri World Imagery

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FEET

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Ashtabula-Erie West 345 kV Rehab Project

FIGURE 3-17
DELINEATED FEATURES MAP

DATE: 7/16/2025

Jacobs

\\dc1vs01\GISProj\FirstEnergy\Perry-Ashtabula-Erie West\MapFiles\Reports\WDR\FE_PAE_WDR.aprx

LEGEND:

- Existing Structure
- Culvert
- Upland Drainage Line
- Environmental Survey Boundary

N

BASE MAP SOURCE:
Esri World Imagery

0 200 400
FEET

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Ashtabula-Erie West
345 kV Rehab Project

FIGURE 3-18
DELINEATED FEATURES MAP

DATE: 7/16/2025

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Appendix B
USACE Wetland Determination Field Data Forms

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/15/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-01

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.934135 Long: -80.390513 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-01
Wetland Hydrology Present?	Yes X	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-01

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Apocynum cannabinum	20	Yes	FAC
2. Phalaris arundinacea	70	Yes	FACW
3. Juncus effusus	5	No	OBL
4. Solidago gigantea	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5.0
FACW species	75	x 2 =	150.0
FAC species	20	x 3 =	60.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		215.0 (B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-01

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 2/1	95	7.5R 5/6	5	C	PL	Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-01

S

N

E

W

General Site Photos Wetland AEW-01

Soil

Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/15/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-01

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): Undulating Slope (%): 5

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93413 Long: -80.39054 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-01
Wetland Hydrology Present?	Yes _____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-01

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Andropogon virginicus	10	No	FACU
2. Podophyllum peltatum	10	No	FACU
3. Solidago canadensis	10	No	FACU
4. Poa annua	60	Yes	FACU
5. Potentilla simplex	10	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= 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: 1 (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 =	0.0
FACW species	0	x 2 =	0.0
FAC species	0	x 3 =	0.0
FACU species	20	x 4 =	80.0
UPL species	0	x 5 =	0.0
Column Totals:	20 (A)		80.0 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-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 - 6	10YR 3/2	100					Silty loam	
6 - 18	10YR 3/3	100					Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Upland AEW-01

Soil

SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/15/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-02E

Investigator(s): JFW Section, Township, Range: N/A

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

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.933215 Long: -80.398676 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1F

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-02E

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes X	No _____	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-02E

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Phragmites australis	30	Yes	FACW
2. Juncus effusus	10	No	OBL
3. Carex vulpinoidea	60	Yes	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	70	x 1 =	70.0
FACW species	30	x 2 =	60.0
FAC species	0	x 3 =	0.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		130.0 (B)

Prevalence Index = B/A = 1.3

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-02E

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	2.5Y 4/1	85	5YR 3/4	15	C	PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-02E

E

N

S

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/15/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-02S

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.933444 Long: -80.397762 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1F

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-02S
Wetland Hydrology Present?	Yes X	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

- X 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)
- X 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)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 6
Water Table Present?	Yes _____	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches):

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-02S

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Salix discolor	50	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	50 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Persicaria amphibia	20	Yes	OBL
2. Lemna minor	5	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	25 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25.0
FACW species	50	x 2 =	100.0
FAC species	0	x 3 =	0.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	75 (A)		125.0 (B)

Prevalence Index = B/A = 1.7

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-02S

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

Soil assumed hydric under 6 inches of standing water

General Site Photos Wetland AEW-02S

E

S

W

Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/15/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-02

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Flat Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93322 Long: -80.39886 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-02
Wetland Hydrology Present?	Yes _____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-02

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
= Total Cover			
Herb Stratum (Plot size: 5)			
1. Andropogon virginicus	30	Yes	FACU
2. Poa annua	10	No	FACU
3. Phalaris arundinacea	60	Yes	FACW
4. Daucus carota	5	No	UPL
5. Elaeagnus angustifolia	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
110 = Total Cover			
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
= Total Cover			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	60	x 2 =	120.0
FAC species	0	x 3 =	0.0
FACU species	45	x 4 =	180.0
UPL species	5	x 5 =	25.0
Column Totals:	110 (A)		325.0 (B)

Prevalence Index = B/A = 3.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-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 - 8	10YR 4/2	100					Clay loam	
8 - 18	10YR 4/2	50	10YR 4/4	50			Clay loam	No redox. Mixing layers
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Upland AEW-02

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-03

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.933256 Long: -80.400492 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1D

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-03

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes X	No _____	Depth (inches):	8
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	6

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-03

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Cornus amomum	5	Yes	FACW
2. Rosa multiflora	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phragmites australis	85	Yes	FACW
2. Phalaris arundinacea	10	No	FACW
3. Vernonia gigantea	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	100	x 2 =	200.0
FAC species	5	x 3 =	15.0
FACU species	5	x 4 =	20.0
UPL species	0	x 5 =	0.0
Column Totals:	110 (A)		235.0 (B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-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 - 8	10YR 2/1	100					Loam	
8 - 18	10YR 3/1	95	10YR 5/8	5	C	PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-03

Soil

S

E

N

General Site Photos Wetland AEW-03

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-04E

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.933001 Long: -80.402242 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1F

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-04E

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes X	No _____	Depth (inches): 1
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-04E

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Scirpus cyperinus	30	Yes	OBL
2. Juncus effusus	30	Yes	OBL
3. Leersia oryzoides	35	Yes	OBL
4. Verbena hastata	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	95	x 1 =	95.0
FACW species	5	x 2 =	10.0
FAC species	0	x 3 =	0.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		105.0 (B)

Prevalence Index = B/A = 1.1

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-04E

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	2.5Y 3/2	80	5YR 4/6	20	C	M,PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-04E

Soil

N

W

S

General Site Photos Wetland AEW-04E

E

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-04S

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Concave Slope (%): 4

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.933016 Long: -80.404248 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1F

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-04S

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes _____	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	10

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-04S

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Cephalanthus occidentalis	80	Yes	OBL
2. Salix nigra	5	No	OBL
3. Cornus amomum	10	No	FACW
4. Rosa multiflora	5	No	FACU
5.			
6.			
7.			
	100 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Juncus effusus	5	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	90	x 1 =	90.0
FACW species	10	x 2 =	20.0
FAC species	0	x 3 =	0.0
FACU species	5	x 4 =	20.0
UPL species	0	x 5 =	0.0
Column Totals:	105 (A)		130.0 (B)

Prevalence Index = B/A = 1.2

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-04S

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 3	10YR 3/2	90	5YR 3/4	10	C	PL,M	Clay loam	
3 - 12	10YR 4/2	85	5YR 3/4	15	C	PL	Clay loam	
12 - 18	2.5Y 5/4	95	5YR 4/6	6	C	M,PL	Silty clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-04S

Soil

N

E

W

General Site Photos	Wetland AEW-04S

S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-03,04

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93329 Long: -80.40075 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-03,04

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-03,04

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa multiflora	20	Yes	FACU
2. Lonicera morrowii	35	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	55 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Andropogon virginicus	25	Yes	FACU
2. Dichanthelium clandestinum	50	Yes	FACW
3. Poa annua	15	No	FACU
4. Daucus carota	10	No	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 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	0	x 1 =	0.0
FACW species	50	x 2 =	100.0
FAC species	0	x 3 =	0.0
FACU species	95	x 4 =	380.0
UPL species	10	x 5 =	50.0
Column Totals:	155 (A)		530.0 (B)

Prevalence Index = B/A = 3.40

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-03,04

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 - 6	10YR 3/1	90	2.5YR 2.5/3	10	C	M	Loam	
6 - 18	2.5Y 5/3	70	7.5YR 4/6	30	D	M	Sandy clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Upland AEW-03,04

Soil

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-05

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.932107 Long: -80.412144 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1/SS1D

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-05

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes X	No _____	Depth (inches):	8
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	6

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-05

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Scirpus cyperinus	80	Yes	OBL
2. Phalaris arundinacea	10	No	FACW
3. Apocynum cannabinum	10	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	80	x 1 =	80.0
FACW species	10	x 2 =	20.0
FAC species	10	x 3 =	30.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		130.0 (B)

Prevalence Index = B/A = 1.3

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-05

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 2/1	100					Loam	
8 - 18	10YR 3/1	90	10YR 5/6	10	C	PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-05

Soil

E

N

W

General Site Photos	Wetland AEW-05

S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-06

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93188 Long: -80.413907 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1E

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-06

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches):	1
Water Table Present?	Yes X	No _____	Depth (inches):	3
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	0

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-06

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Cornus amomum	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Juncus effusus	20	Yes	OBL
2. Carex vulpinoidea	60	Yes	OBL
3. Scirpus cyperinus	10	No	OBL
4. Cornus amomum	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30.0
FACW species	20	x 2 =	40.0
FAC species	0	x 3 =	0.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	50 (A)		70.0 (B)

Prevalence Index = B/A = 1.4

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-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 - 3	10YR 3/2	100					Loam	
3 - 8	10YR 4/1	90	7.5YR 3/4	10	C	PL	Clay loam	
8 - 18	2.5Y 6/3	70	7.5YR 4/6	30	C	M,PL	Silty clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-06

Soil

N

S

General Site Photos	Wetland AEW-06

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-05,06

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93223 Long: -80.41225 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1/SS1D

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-05,06

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-05,06

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa multiflora	25	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	25 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Onoclea sensibilis	20	Yes	FACW
2. Solidago canadensis	50	Yes	FACU
3. Verbascum thapsus	30	Yes	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 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	0	x 1 =	0.0
FACW species	20	x 2 =	40.0
FAC species	0	x 3 =	0.0
FACU species	75	x 4 =	300.0
UPL species	30	x 5 =	150.0
Column Totals:	125 (A)		490.0 (B)

Prevalence Index = B/A = 3.90

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-05,06

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 - 6	10YR 2/2	100					Loam	
6 - 18	10YR 3/2	100						
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Upland AEW-05,06

Soil

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-07

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.931477 Long: -80.419847 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1D

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-07

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes X	No _____	Depth (inches):	1
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	0

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-07

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Phragmites australis	75	Yes	FACW
2. Phalaris arundinacea	20	Yes	FACW
3. Symplocarpus foetidus	5	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5.0
FACW species	95	x 2 =	190.0
FAC species	0	x 3 =	0.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		195.0 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-07

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 2/2	100					Loam	Organic/Duff
2 - 18	10YR 2/1	98	10YR 3/3	2	C	M	Loam	Muck
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-07

Soil

S

N

E

General Site Photos Wetland AEW-07

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-08

Investigator(s): JFW Section, Township, Range: N/A

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

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.931378 Long: -80.4219 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-08

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ 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)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes X	No _____	Depth (inches): 6
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-08

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Juncus effusus	15	No	OBL
2. Phalaris arundinacea	80	Yes	FACW
3. Andropogon virginicus	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15.0
FACW species	80	x 2 =	160.0
FAC species	0	x 3 =	0.0
FACU species	5	x 4 =	20.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		195.0 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-08

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	2.5Y 3/2	95	7.5YR 4/6	5	C	PL	Loam	
8 - 18	5Y 6/2	80	7.5YR 5/8	20	C	PL,M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-08

Soil

N

E

S

General Site Photos Wetland AEW-08

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-07,08

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Undulating Local relief (concave, convex, none): Flat Slope (%): 1

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93077 Long: -80.46626 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-07,08

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-07,08

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Lonicera morrowii	20	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Rosa multiflora	10	No	FACU
2. Solidago canadensis	50	Yes	FACU
3. Achillea millefolium	10	No	FACU
4. Taraxacum officinale	5	No	FACU
5. Poa annua	30	Yes	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= 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 =	0.0
FACW species	0	x 2 =	0.0
FAC species	0	x 3 =	0.0
FACU species	125	x 4 =	500.0
UPL species	0	x 5 =	0.0
Column Totals:	125 (A)		500.0 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-07,08

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 10	10YR 3/2	100					Loam	
10 - 18	2.5Y 5/4	60	10YR 5/6	40	C	M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Upland AEW-07,08

Soil

E

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-09

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.930881 Long: -80.427661 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-09

Remarks: (Explain alternative procedures here or in a separate report.)

Includes wetland ditch feature with flowing channel (NHD feature)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes X	No _____	Depth (inches):	10
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	8

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-09

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Alnus serrulata	35	Yes	OBL
2. Cornus amomum	10	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	45 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phragmites australis	70	Yes	FACW
2. Phalaris arundinacea	20	Yes	FACW
3. Artemisia vulgaris	5	No	UPL
4. Onoclea sensibilis	5	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= 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: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	35	x 1 =	35.0
FACW species	105	x 2 =	210.0
FAC species	0	x 3 =	0.0
FACU species	0	x 4 =	0.0
UPL species	5	x 5 =	25.0
Column Totals:	145 (A)		270.0 (B)

Prevalence Index = B/A = 1.9

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-09

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	2.5Y 3/2	100					Loam	
4 - 18	2.5Y 4/2	90	10YR 5/8	10	C	PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-09

Soil

S

E

W

General Site Photos Wetland AEW-09

N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/15/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-10

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 7

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.930551 Long: -80.428802 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-10

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ 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)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes X	No _____	Depth (inches): 6
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 3

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-10

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Cornus amomum	10	Yes	FACW
2. Rosa multiflora	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	20 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	60	Yes	FACW
2. Typha angustifolia	40	Yes	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40.0
FACW species	70	x 2 =	140.0
FAC species	0	x 3 =	0.0
FACU species	10	x 4 =	40.0
UPL species	0	x 5 =	0.0
Column Totals:	120 (A)		220.0 (B)

Prevalence Index = B/A = 1.8

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-10

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	2.5Y 3/2	95	7.5YR 3/4	5	C	M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-10

Soil

W

S

N

General Site Photos	Wetland AEW-10

E

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/15/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-11

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.930347 Long: -80.431046 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-11
Wetland Hydrology Present?	Yes X	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes _____	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	6

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-11

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Cornus racemosa	15	Yes	FAC
2. Cornus amomum	15	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	30 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	90	Yes	FACW
2. Scirpus cyperinus	10	No	OBL
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10.0
FACW species	105	x 2 =	210.0
FAC species	15	x 3 =	45.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	130 (A)		265.0 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-11

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 - 8	2.5Y 4/2	95	10YR 5/8	5		PL	Clay loam	
8 - 18	2.5Y 5/3	60	7.5YR 4/6	40	D	M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-11

Soil

W

N

S

General Site Photos	Wetland AEW-11

E

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-09,10,11

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93016 Long: -80.46076 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-09,10,11

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-09,10,11

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
= Total Cover			
Herb Stratum (Plot size: 5)			
1. Poa annua	90	Yes	FACU
2. Andropogon virginicus	5	No	FACU
3. Taraxacum officinale	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
100 = Total Cover			
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
= 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: 1 (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 =	0.0
FACW species	0	x 2 =	0.0
FAC species	0	x 3 =	0.0
FACU species	100	x 4 =	400.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		400.0 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-09,10,11

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 - 18	2.5Y 3/2	100					Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Upland AEW-09,10,11

Soil

E

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/15/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-12

Investigator(s): JFW Section, Township, Range: N/A

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

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.930461 Long: -80.431632 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-12

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 1
Water Table Present?	Yes X	No _____	Depth (inches): 2
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-12

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Cornus amomum	80	Yes	FACW
2. Populus tremuloides	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	100 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	80	Yes	FACW
2. Scirpus cyperinus	15	No	OBL
3. Onoclea sensibilis	5	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	165	x 2 =	330.0
FAC species	0	x 3 =	0.0
FACU species	20	x 4 =	80.0
UPL species	0	x 5 =	0.0
Column Totals:	185 (A)		410.0 (B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-12

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 4/2	80	10YR 5/8	20	C	PL,M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-12

Soil

E

S

N

General Site Photos	Wetland AEW-12

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/15/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-13

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.930259 Long: -80.43158 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-13

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-13

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Cornus amomum	30	Yes	FACW
2. Salix nigra	5	No	OBL
3.			
4.			
5.			
6.			
7.			
	35 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	60	Yes	FACW
2. Juncus effusus	30	Yes	OBL
3. Heliotropium indicum	10	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	35	x 1 =	35.0
FACW species	100	x 2 =	200.0
FAC species	0	x 3 =	0.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	135 (A)		235.0 (B)

Prevalence Index = B/A = 1.7

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-13

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	2.5Y 4/2	85	10YR 5/8	15	C	M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-13

Soil

E

N

W

General Site Photos	Wetland AEW-13

S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-12,13

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.92973 Long: -80.45718 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-12,13

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-12,13

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa multiflora	15	Yes	FACU
2. Carya ovata	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	35 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	30	Yes	FACW
2. Artemisia vulgaris	30	Yes	UPL
3. Achillea millefolium	10	No	FACU
4. Andropogon virginicus	10	No	FACU
5. Solidago canadensis	20	Yes	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	30	x 2 =	60.0
FAC species	0	x 3 =	0.0
FACU species	75	x 4 =	300.0
UPL species	30	x 5 =	150.0
Column Totals:	135 (A)		510.0 (B)

Prevalence Index = B/A = 3.80

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-12,13

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 4/2	100					Loam	
6 - 16	10YR 5/4	100					Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Upland AEW-12,13

Soil

E

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/15/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-14E

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 4

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.929924 Long: -80.439762 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-14E

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes X	No _____	Depth (inches):	2
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	1

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-14E

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Salix nigra	30	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
	30 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Juncus effusus	40	Yes	OBL
2. Phalaris arundinacea	30	Yes	FACW
3. Scirpus cyperinus	10	No	OBL
4. Carex vulpinoidea	20	Yes	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= 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: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	100	x 1 =	100.0
FACW species	30	x 2 =	60.0
FAC species	0	x 3 =	0.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	130 (A)		160.0 (B)

Prevalence Index = B/A = 1.2

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-14E

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 3/1	90	7.5YR 4/6	10	C	PL,M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-14E

Soil

E

N

S

General Site Photos	Wetland AEW-14E

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/15/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-14S

Investigator(s): JFW Section, Township, Range: N/A

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

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.92996 Long: -80.436801 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-14S

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches):	1
Water Table Present?	Yes X	No _____	Depth (inches):	8
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	6

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-14S

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Salix nigra	20	Yes	OBL
2. Cornus amomum	70	Yes	FACW
3. Rosa multiflora	10	No	FACU
4.			
5.			
6.			
7.			
	100 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	70	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20.0
FACW species	140	x 2 =	280.0
FAC species	0	x 3 =	0.0
FACU species	10	x 4 =	40.0
UPL species	0	x 5 =	0.0
Column Totals:	170 (A)		340.0 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-14S

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 2/2	95	5YR 3/3	5	C	M	Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-14S

Soil

N

E

S

General Site Photos	Wetland AEW-14S

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/15/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-14

Investigator(s): JFW Section, Township, Range: N/A

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

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.92991 Long: -80.43949 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-14

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-14

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Dichanthelium acuminatum	30	Yes	FAC
2. Achillea millefolium	15	No	FACU
3. Solidago canadensis	25	Yes	FACU
4. Plantago lanceolata	5	No	FACU
5. Poa annua	30	Yes	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	0	x 2 =	0.0
FAC species	30	x 3 =	90.0
FACU species	75	x 4 =	300.0
UPL species	0	x 5 =	0.0
Column Totals:	105 (A)		390.0 (B)

Prevalence Index = B/A = 3.70

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-14

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 - 8	10YR 4/2	100					Loam	
8 - 18	10YR 5/3	90	7.5YR 5/8	10	C	M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Upland AEW-14

S

Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-15

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 4

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.929667 Long: -80.442811 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-15

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes X	No _____	Depth (inches):	6
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	4

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-15

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa multiflora	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	40	Yes	FACW
2. Juncus effusus	30	Yes	OBL
3. Solidago altissima	10	No	FACU
4. Scirpus cyperinus	10	No	OBL
5. Carex vulpinoidea	10	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50.0
FACW species	40	x 2 =	80.0
FAC species	0	x 3 =	0.0
FACU species	15	x 4 =	60.0
UPL species	0	x 5 =	0.0
Column Totals:	105 (A)		190.0 (B)

Prevalence Index = B/A = 1.8

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-15

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	2.5Y 3/1	85	7.5YR 3/4	15	C	PL	Loam	
6 - 18	2.5Y 4/2	85	7.5YR 4/4	15	C	PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-15

Soil

W

S

E

General Site Photos Wetland AEW-15

N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-15

Investigator(s): JFW Section, Township, Range: N/A

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

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.92951 Long: -80.44322 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-15

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-15

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa multiflora	30	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	30 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Cardamine concatenata	20	Yes	FACU
2. Dichanthelium clandestinum	60	Yes	FACW
3. Solidago canadensis	10	No	FACU
4. Phalaris arundinacea	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	70	x 2 =	140.0
FAC species	0	x 3 =	0.0
FACU species	60	x 4 =	240.0
UPL species	0	x 5 =	0.0
Column Totals:	130 (A)		380.0 (B)

Prevalence Index = B/A = 2.90

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-15

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 - 10	2.5Y 3/2	100					Silty clay loam	
10 - 18	2.5Y 3/1	100					Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Upland AEW-15

Soil

SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-16

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.92918 Long: -80.446379 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1A

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-16

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes _____	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	8

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-16

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Cornus amomum	10	Yes	FACW
2. Rosa palustris	5	Yes	OBL
3. Rosa multiflora	5	Yes	FACU
4.			
5.			
6.			
7.			
	20 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phragmites australis	40	Yes	FACW
2. Juncus effusus	10	No	OBL
3. Dichanthelium clandestinum	20	Yes	FACW
4. Packera aurea	30	Yes	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.83 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15.0
FACW species	100	x 2 =	200.0
FAC species	0	x 3 =	0.0
FACU species	5	x 4 =	20.0
UPL species	0	x 5 =	0.0
Column Totals:	120 (A)		235.0 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-16

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	2.5Y 4/1	95	7.5YR 4/6	5	C	PL	Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-16

Soil

N

E

S

General Site Photos	Wetland AEW-16

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-16

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): Flat Slope (%): 5

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.92923 Long: -80.44672 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-16

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes _____	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 16

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-16

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Elaeagnus angustifolia	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Rosa multiflora	20	Yes	FACU
2. Solidago canadensis	80	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= 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 =	0.0
FACW species	0	x 2 =	0.0
FAC species	0	x 3 =	0.0
FACU species	110	x 4 =	440.0
UPL species	0	x 5 =	0.0
Column Totals:	110 (A)		440.0 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-16

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 - 14	2.5Y 4/2	100					Loam	
14 - 18	2.5Y 4/3	50	2.5Y 6/6	50	C	M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Upland AEW-16

Soil

S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-17

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.929386 Long: -80.451168 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1D

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-17

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes X	No _____	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 8

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-17

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Cornus amomum	15	Yes	FACW
2. Rosa multiflora	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	20 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phragmites australis	90	Yes	FACW
2. Apocynum cannabinum	5	No	FAC
3. Solidago canadensis	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	105	x 2 =	210.0
FAC species	5	x 3 =	15.0
FACU species	10	x 4 =	40.0
UPL species	0	x 5 =	0.0
Column Totals:	120 (A)		265.0 (B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-17

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 10	10YR 3/1	90	7.5YR 4/6	10	C	PL	Loam	
10 - 18	10YR 4/1	95	10YR 6/8	5	C	PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-17

Soil

E

S

W

General Site Photos Wetland AEW-17

N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-18

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.929604 Long: -80.452643 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1D

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

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

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

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

Hydrophytic Vegetation Present? Yes X No _____ Hydric Soil Present? Yes X No _____ Wetland Hydrology Present? Yes X No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No** If yes, optional Wetland Site ID: Wetland AEW-18

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches):

Water Table Present? Yes _____ No X Depth (inches):

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches):

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-18

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Salix nigra	50	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
	50 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Juncus effusus	50	Yes	OBL
2. Typha angustifolia	10	No	OBL
3. Phalaris arundinacea	30	Yes	FACW
4. Verbena hastata	5	No	FACW
5. Solidago canadensis	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	110	x 1 =	110.0
FACW species	35	x 2 =	70.0
FAC species	0	x 3 =	0.0
FACU species	5	x 4 =	20.0
UPL species	0	x 5 =	0.0
Column Totals:	150 (A)		200.0 (B)

Prevalence Index = B/A = 1.3

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-18

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 - 4	10YR 3/1	100					Loam	
4 - 18	2.5Y 5/2	85	10YR 5/8	15	C	M,PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-18

Soil

E

N

W

General Site Photos Wetland AEW-18

S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-17,18

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.92955 Long: -80.45205 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Upland AEW-17,18

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-17,18

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Fagus grandifolia	30	Yes	FACU
2. Rosa multiflora	50	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	80 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Dichanthelium clandestinum	30	Yes	FACW
2. Poa annua	60	Yes	FACU
3. Solidago canadensis	10	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 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	0	x 1 =	0.0
FACW species	30	x 2 =	60.0
FAC species	0	x 3 =	0.0
FACU species	150	x 4 =	600.0
UPL species	0	x 5 =	0.0
Column Totals:	180 (A)		660.0 (B)

Prevalence Index = B/A = 3.70

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-17,18

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	2.5YR 6/3	85	7.5YR 5/6	15	C	M,PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Upland AEW-17,18

Soil

S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-19

Investigator(s): JFW Section, Township, Range: N/A

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

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.929565 Long: -80.456291 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1D

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-19

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes _____	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	12

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-19

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Carex vulpinoidea	20	Yes	OBL
2. Juncus effusus	30	Yes	OBL
3. Phalaris arundinacea	40	Yes	FACW
4. Dichanthelium clandestinum	10	No	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	50	x 1 =	50.0
FACW species	50	x 2 =	100.0
FAC species	0	x 3 =	0.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		150.0 (B)

Prevalence Index = B/A = 1.5

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-19

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 6	2.5Y 3/1	95	10YR 5/8	5	C	PL	Loam	
6 - 18	2.5Y 5/1	80	10YR 5/8	20		M,PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-19

Soil

N

E

W

General Site Photos	Wetland AEW-19

S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-20

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.929748 Long: -80.458046 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-20

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes X	No _____	Depth (inches): 16
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 4

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-20

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	70	Yes	FACW
2. Typha angustifolia	10	No	OBL
3. Juncus effusus	10	No	OBL
4. Equisetum arvense	2	No	FAC
5. Carex vulpinoidea	15	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	107 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	35	x 1 =	35.0
FACW species	70	x 2 =	140.0
FAC species	2	x 3 =	6.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	107 (A)		181.0 (B)

Prevalence Index = B/A = 1.7

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-20

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	10YR 3/1	90	10YR 5/8	10	C	PL	Loam	
8 - 18	2.5Y 4/2	90	7.5YR 4/6	10	C	PL,M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-20

Soil

S

N

W

General Site Photos Wetland AEW-20

E

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-19,20

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.92973 Long: -80.45718 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-19,20

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-19,20

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa multiflora	15	Yes	FACU
2. Carya ovata	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	35 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	30	Yes	FACW
2. Artemisia vulgaris	30	Yes	UPL
3. Achillea millefolium	10	No	FACU
4. Andropogon virginicus	10	No	FACU
5. Solidago canadensis	20	Yes	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	30	x 2 =	60.0
FAC species	0	x 3 =	0.0
FACU species	75	x 4 =	300.0
UPL species	30	x 5 =	150.0
Column Totals:	135 (A)		510.0 (B)

Prevalence Index = B/A = 3.80

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-19,20

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 4/2	100					Loam	
6 - 16	10YR 5/4	100					Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Upland AEW-19,20

Soil

E

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-21

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.929812 Long: -80.459069 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: PEM1E

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-21

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes X	No _____	Depth (inches):	8
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	6

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-21

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Carex vulpinoidea	50	Yes	OBL
2. Juncus effusus	35	Yes	OBL
3. Onoclea sensibilis	15	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	85	x 1 =	85.0
FACW species	15	x 2 =	30.0
FAC species	0	x 3 =	0.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		115.0 (B)

Prevalence Index = B/A = 1.2

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

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

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

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

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-21

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	2.5Y 3/2	95	7.5YR 5/6	5	C	PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

General Site Photos Wetland AEW-21

Soil

W

S

E

General Site Photos Wetland AEW-21

N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-22

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93027 Long: -80.460989 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

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

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

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

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

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-22

Remarks: (Explain alternative procedures here or in a separate report.)

Occasionally mowed

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 1
Water Table Present?	Yes X	No _____	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-22

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Carex vulpinoidea	20	No	OBL
2. Juncus effusus	60	Yes	OBL
3. Phalaris arundinacea	20	No	FACW
4. Ludwigia palustris	10	No	OBL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20.0
FACW species	0	x 2 =	0.0
FAC species	0	x 3 =	0.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	20 (A)		20.0 (B)

Prevalence Index = B/A = 1.0

Hydrophytic Vegetation Indicators:

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

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

Definitions of Vegetation Strata:

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

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

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-22

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 4/2	85	2.5YR 3/6	15	C	PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

General Site Photos Wetland AEW-22

N

E

S

W

General Site Photos Wetland AEW-22

Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-23

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93022 Long: -80.462201 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-23

Remarks: (Explain alternative procedures here or in a separate report.)

Occasionally mowed

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No _____	Depth (inches): 1
Water Table Present?	Yes X	No _____	Depth (inches): 2
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Aquatic larva

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-23

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Juncus effusus	30	Yes	OBL
2. Phalaris arundinacea	60	Yes	FACW
3. Carex vulpinoidea	10	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40.0
FACW species	0	x 2 =	0.0
FAC species	0	x 3 =	0.0
FACU species	0	x 4 =	0.0
UPL species	0	x 5 =	0.0
Column Totals:	40 (A)		40.0 (B)

Prevalence Index = B/A = 1.0

Hydrophytic Vegetation Indicators:

- X 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-23

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 4/2	85	2.5YR 3/6	15	C	PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

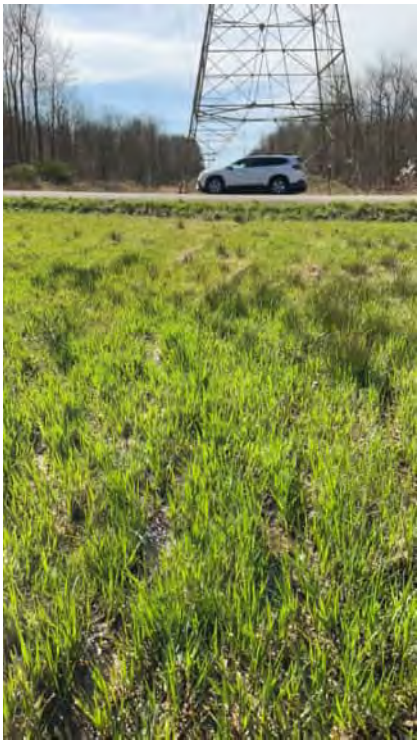
Remarks:

General Site Photos Wetland AEW-23

N

E

S



W

General Site Photos Wetland AEW-23

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-21,22,23

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope (%): 5

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93016 Long: -80.46076 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-21,22,23

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes _____	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches):

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-21,22,23

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Poa annua	90	Yes	FACU
2. Andropogon virginicus	5	No	FACU
3. Taraxacum officinale	5	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= 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: 1 (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 =	0.0
FACW species	0	x 2 =	0.0
FAC species	0	x 3 =	0.0
FACU species	100	x 4 =	400.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		400.0 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-21,22,23

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 - 18	2.5Y 3/2	100					Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

General Site Photos Upland AEW-21,22,23

Soil

E

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-24

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.930466 Long: -80.46502 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-24
Wetland Hydrology Present?	Yes X	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes X	No _____	Depth (inches):	14
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	4

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-24

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa palustris	15	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	70	Yes	FACW
2. Onoclea sensibilis	10	No	FACW
3. Solidago gigantea	5	No	FACW
4. Apocynum cannabinum	10	No	FAC
5. Andropogon gerardii	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15	x 1 =	15.0
FACW species	85	x 2 =	170.0
FAC species	10	x 3 =	30.0
FACU species	5	x 4 =	20.0
UPL species	0	x 5 =	0.0
Column Totals:	115 (A)		235.0 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

- [X] 1 - Rapid Test for Hydrophytic Vegetation
- [X] 2 - Dominance Test is >50%
- [X] 3 - Prevalence Index is ≤3.0[1]
- [ ] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-24

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 - 4	2.5Y 4/1	100					Loam	
4 - 18	2.5Y 6/2	85	10YR 5/8	15	C	PL,M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

General Site Photos Wetland AEW-24

Soil

E

W

S

General Site Photos Wetland AEW-24

N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-25

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.930692 Long: -80.466372 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No _____ Hydric Soil Present? Yes X No _____ Wetland Hydrology Present? Yes X No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No** If yes, optional Wetland Site ID: Wetland AEW-25

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches):

Water Table Present? Yes _____ No X Depth (inches):

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches):

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-25

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa multiflora	10	Yes	FACU
2. Lonicera morrowii	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	90	Yes	FACW
2. Onoclea sensibilis	10	No	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.33 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	100	x 2 =	200.0
FAC species	0	x 3 =	0.0
FACU species	15	x 4 =	60.0
UPL species	0	x 5 =	0.0
Column Totals:	115 (A)		260.0 (B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-25

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 6	10YR 4/2	100					Loam	
6 - 18	2.5Y 5/2	90	7.5YR 5/6	10	C	PL,M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

General Site Photos Wetland AEW-25

Soil

N

E

S

General Site Photos Wetland AEW-25

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/16/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-24,25

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope (%): 8

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93147 Long: -80.42035 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Upland AEW-24,25

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes _____	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches):

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-24,25

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa multiflora	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Andropogon virginicus	80	Yes	FACU
2. Dichanthelium clandestinum	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	20	x 2 =	40.0
FAC species	0	x 3 =	0.0
FACU species	90	x 4 =	360.0
UPL species	0	x 5 =	0.0
Column Totals:	110 (A)		400.0 (B)

Prevalence Index = B/A = 3.60

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-24,25

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 - 4	2.5Y 3/1	70	2.5Y 4/3	30	D		Clay loam	Mixing in layers
4 - 18	2.5Y 4/3	90	10YR 5/8	10	C	PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

General Site Photos Upland AEW-24,25

Soil

E

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-26

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Undulating Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.931475 Long: -80.472086 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-26

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes X	No _____	Depth (inches): 10
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-26

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	90	Yes	FACW
2. Phragmites australis	5	No	FACW
3. Scirpus cyperinus	5	No	OBL
4. Rosa multiflora	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5.0
FACW species	90	x 2 =	180.0
FAC species	0	x 3 =	0.0
FACU species	5	x 4 =	20.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		205.0 (B)

Prevalence Index = B/A = 2.1

Hydrophytic Vegetation Indicators:

X 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	2.5Y 4/2	95	10YR 3/4	5	C	PL	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

General Site Photos Wetland AEW-26

N

E

S

W

General Site Photos	Wetland AEW-26

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-26

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93146 Long: -80.47184 Datum: NAD 83

Soil Map Unit Name: Sheffield-Platea (s6095) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-26

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes _____	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches):

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-26

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Lonicera morrowii	15	Yes	FACU
2. Rosa multiflora	30	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	45 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Solidago canadensis	10	No	FACU
2. Andropogon virginicus	10	No	FACU
3. Juncus tenuis	10	No	FAC
4. Poa annua	70	Yes	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= 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 =	0.0
FACW species	0	x 2 =	0.0
FAC species	10	x 3 =	30.0
FACU species	135	x 4 =	540.0
UPL species	0	x 5 =	0.0
Column Totals:	145 (A)		570.0 (B)

Prevalence Index = B/A = 3.90

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 6	2.5Y 4/2	100					Clay loam	
6 - 18	5Y 5/2	60	7.5YR 5/6	40	C	M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

General Site Photos Upland AEW-26

Soil

S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-27

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.932111 Long: -80.477666 Datum: NAD 83

Soil Map Unit Name: Conotton-Conneaut (s6072) NWI classification: PSS1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-27

Remarks: (Explain alternative procedures here or in a separate report.)

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HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- X Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- X Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes _____	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	0

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-27

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Phragmites australis	40	Yes	FACW
2. Carex vulpinoidea	20	Yes	OBL
3. Lysimachia nummularia	20	Yes	FACW
4. Poa annua	20	Yes	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20.0
FACW species	60	x 2 =	120.0
FAC species	0	x 3 =	0.0
FACU species	20	x 4 =	80.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		220.0 (B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-27

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 2	10YR 3/2	90	2.5YR 2.5/3	10	C	M	Clay loam	
2 - 18	Gley 1 4/10Y	97	10YR 4/4	3	C	PL	Clay	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

General Site Photos Wetland AEW-27

Soil

N

E

S

General Site Photos Wetland AEW-27

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/17/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-27

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93206 Long: -80.47748 Datum: NAD 83

Soil Map Unit Name: Conotton-Conneaut (s6072) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: Upland AEW-27
Wetland Hydrology Present?	Yes _____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes _____	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches):

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-27

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Poa annua	95	Yes	FACU
2. Taraxacum officinale	5	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= 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: 1 (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 =	0.0
FACW species	0	x 2 =	0.0
FAC species	0	x 3 =	0.0
FACU species	100	x 4 =	400.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		400.0 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-27

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4	10YR 4/2	97	5YR 4/6	3		PL	Loam	
4 - 18	10YR 5/2	97	5YR 4/6	3	C	M	Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

General Site Photos Upland AEW-27

Soil

E

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-28

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.933393 Long: -80.487328 Datum: NAD 83

Soil Map Unit Name: Conotton-Conneaut (s6072) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-28

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes _____	No X	Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	8

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-28

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa multiflora	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	90	Yes	FACW
2. Symplocarpus foetidus	5	No	OBL
3. Solidago gigantea	5	No	FACW
4. Apocynum cannabinum	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.5 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	90	x 2 =	180.0
FAC species	5	x 3 =	15.0
FACU species	10	x 4 =	40.0
UPL species	0	x 5 =	0.0
Column Totals:	105 (A)		235.0 (B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-28

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 4/2	85	10YR 4/4	13	C	M	Clay loam	With gravel
-			10YR 4/6	2	C	M		
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

General Site Photos Wetland AEW-28

N

E

S

W

General Site Photos Wetland AEW-28

Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-28

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): Flat Slope (%): 0

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93343 Long: -80.48741 Datum: NAD 83

Soil Map Unit Name: Conotton-Conneaut (s6072) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-28

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes _____	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches):

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-28

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
= Total Cover			
Herb Stratum (Plot size: 5)			
1. Poa annua	70	Yes	FACU
2. Solidago canadensis	10	No	FACU
3. Taraxacum officinale	10	No	FACU
4. Achillea millefolium	5	No	FACU
5. Trifolium pratense	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
100 = Total Cover			
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
= 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: 1 (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 =	0.0
FACW species	0	x 2 =	0.0
FAC species	0	x 3 =	0.0
FACU species	100	x 4 =	400.0
UPL species	0	x 5 =	0.0
Column Totals:	100 (A)		400.0 (B)

Prevalence Index = B/A = 4.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-28

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 - 12	10YR 4/2	100					Clay loam	
12 - 18	10YR 4/2	60	10YR 4/4	40	C	M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

General Site Photos Upland AEW-28

Soil

SW

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/19/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-29

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 3

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.934356 Long: -80.497249 Datum: NAD 83

Soil Map Unit Name: Conotton-Conneaut (s6072) NWI classification: PEM1D

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-29
Wetland Hydrology Present?	Yes X	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes X	No _____	Depth (inches): 8
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-29

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Lonicera morrowii	10	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	10 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phragmites australis	60	Yes	FACW
2. Phalaris arundinacea	20	Yes	FACW
3. Apocynum cannabinum	15	No	FAC
4. Solidago canadensis	5	No	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	80	x 2 =	160.0
FAC species	15	x 3 =	45.0
FACU species	15	x 4 =	60.0
UPL species	0	x 5 =	0.0
Column Totals:	110 (A)		265.0 (B)

Prevalence Index = B/A = 2.4

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-29

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 3/1	98	10YR 3/3	2	C	M	Fine sandy loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

General Site Photos Wetland AEW-29

Soil

E

S

N

General Site Photos Wetland AEW-29

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/19/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-29

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope (%): 8

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93432 Long: -80.49750 Datum: NAD 83

Soil Map Unit Name: Conotton-Conneaut (s6072) NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-29

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes _____	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches):

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-29

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa multiflora	15	Yes	FACU
2. Lonicera morrowii	20	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	35 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Solidago canadensis	30	Yes	FACU
2. Andropogon virginicus	10	No	FACU
3. Poa annua	40	Yes	FACU
4. Verbascum thapsus	10	No	UPL
5. Phalaris arundinacea	10	No	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= 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: 4 (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 =	0.0
FACW species	10	x 2 =	20.0
FAC species	0	x 3 =	0.0
FACU species	115	x 4 =	460.0
UPL species	10	x 5 =	50.0
Column Totals:	135 (A)		530.0 (B)

Prevalence Index = B/A = 3.90

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-29

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 - 4	10YR 4/1	100					Fine sandy loam	
4 - 10	10YR 4/2	100					Fine sandy loam	
10 - 18	10YR 4/3	100					Fine sandy loam	
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

General Site Photos Upland AEW-29

Soil

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-30

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.933042 Long: -80.510431 Datum: NAD 83

Soil Map Unit Name: Conotton-Conneaut (s6072) NWI classification: PFO1D

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-30

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- X 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)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes X	No _____	Depth (inches):	14
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	10

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-30

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Cornus amomum	10	Yes	FACW
2. Rosa multiflora	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	95	Yes	FACW
2. Podophyllum peltatum	5	No	FACU
3. Apocynum cannabinum	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	105	x 2 =	210.0
FAC species	5	x 3 =	15.0
FACU species	10	x 4 =	40.0
UPL species	0	x 5 =	0.0
Column Totals:	120 (A)		265.0 (B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- X 2 - Dominance Test is >50%
- X 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-30

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 14	10YR 2/1	100					Fine sandy loam	
14 - 18	10YR 4/1	90	5YR 4/6	10	C	M	Fine sandy loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- X Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

General Site Photos Wetland AEW-30

Soil

E

S

W

General Site Photos Wetland AEW-30

N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-30

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Mound Local relief (concave, convex, none): Convex Slope (%): 2

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.93187 Long: -80.51251 Datum: NAD 83

Soil Map Unit Name: Conotton-Conneaut (s6072) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: Upland AEW-30
Wetland Hydrology Present?	Yes _____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes _____	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches):

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-30

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Spiraea alba	40	Yes	FACW
2. Rosa multiflora	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	55 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Andropogon virginicus	40	Yes	FACU
2. Achillea millefolium	10	No	FACU
3. Taraxacum officinale	5	No	FACU
4. Phalaris arundinacea	10	No	FACW
5. Solidago canadensis	10	No	FACU
6. Poa annua	25	Yes	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 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	0	x 1 =	0.0
FACW species	50	x 2 =	100.0
FAC species	0	x 3 =	0.0
FACU species	105	x 4 =	420.0
UPL species	0	x 5 =	0.0
Column Totals:	155 (A)		520.0 (B)

Prevalence Index = B/A = 3.40

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-30

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 - 4	2.5Y 4/2	90	5YR 4/6	10	C	M	Fine sandy loam	
4 - 18	10YR 5/3	95	7.5YR 4/6	5	C	M	Fine loamy sand	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

General Site Photos Upland AEW-30

Soil

W

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-31

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Concave Slope (%): 5

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.92831 Long: -80.518325 Datum: NAD 83

Soil Map Unit Name: Conotton-Conneaut (s6072) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-31
Wetland Hydrology Present?	Yes X	No _____	

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes X	No _____	Depth (inches):	16
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	0

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-31

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa palustris	10	Yes	OBL
2. Lonicera morrowii	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	15 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	90	Yes	FACW
2. Phragmites australis	7	No	FACW
3. Solidago canadensis	3	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.67 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10.0
FACW species	97	x 2 =	194.0
FAC species	0	x 3 =	0.0
FACU species	3	x 4 =	12.0
UPL species	0	x 5 =	0.0
Column Totals:	110 (A)		216.0 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland AEW-31

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 - 10	2.5Y 4/1	100					Clay loam	
10 - 18	2.5Y 6/2	80	10YR 6/8	20	C	M,PL		
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

General Site Photos Wetland AEW-31

Soil

E

W

N

General Site Photos Wetland AEW-31

S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/18/2024

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-31

Investigator(s): JFW Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Undulating Local relief (concave, convex, none): Convex Slope (%): 3

Subregion (LRR or MLRA): LRR R MLRA 139 Lat: 41.92828 Long: -80.51826 Datum: NAD 83

Soil Map Unit Name: Conotton-Conneaut (s6072) NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-31

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes _____	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches):

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-31

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
= Total Cover			
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
= Total Cover			
Herb Stratum (Plot size: 5)			
1. Poa annua	50	Yes	FACU
2. Trifolium repens	20	Yes	FACU
3. Achillea millefolium	5	No	FACU
4. Taraxacum officinale	2	No	FACU
5. Phalaris arundinacea	20	Yes	FACW
6. Plantago lanceolata	5	No	FACU
7.			
8.			
9.			
10.			
11.			
12.			
102 = Total Cover			
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
= Total Cover			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	20	x 2 =	40.0
FAC species	0	x 3 =	0.0
FACU species	77	x 4 =	308.0
UPL species	0	x 5 =	0.0
Column Totals:	97 (A)		348.0 (B)

Prevalence Index = B/A = 3.60

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland AEW-31

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 - 4	2.5Y 4/2	100					Loam	
4 - 18	2.5Y 6/2	85	7.5YR 4/6	15	C	M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

General Site Photos Upland AEW-31

SW

Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/08/2025

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-33

Investigator(s): JBL Section, Township, Range:

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Undulating Slope (%): 1-3

Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.926797 Long: -80.514746 Datum: NAD 83

Soil Map Unit Name: Fitchville silt loam, 2 to 6 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-33

Remarks: (Explain alternative procedures here or in a separate report.)

PSS dominated wetland areas along potential access road north of Underridge Road. Wetland extends outside survey area into adjacent wooded wetland area.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):	
Water Table Present?	Yes X	No _____	Depth (inches):	0
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches):	0

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

multiple primary and secondary hydrology indicators present. Wetland areas extend into the adjancent wooded areas outside of survey area.

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-33

Tree Stratum (Plot size: 20)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	
Sapling/Shrub Stratum (Plot size: 20)			
1. Gleditsia triacanthos	25	Yes	FAC
2. Rosa multiflora	20	Yes	FACU
3. Rubus allegheniensis	5	No	FACU
4. Acer rubrum	20	Yes	FAC
5. Cornus amomum	15	No	FACW
6.			
7.			
	85	= Total Cover	
Herb Stratum (Plot size: 20)			
1. Dichanthelium clandestinum	29	Yes	FACW
2. Agrostis stolonifera	15	No	FACW
3. Lysimachia nummularia	20	Yes	FACW
4. Onoclea sensibilis	20	Yes	FACW
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	84	= Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.86 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	99	x 2 =	198.0
FAC species	60	x 3 =	180.0
FACU species	25	x 4 =	100.0
UPL species	0	x 5 =	0.0
Column Totals:	184 (A)		478.0 (B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

hydrophytic vegetation indicators present as domincance test >50% and PI less than 3. Sample point confined to approx 20-foot radius centered on old access road. Higher tree coverage outside of plot

SOIL

Sampling Point: Wetland AEW-33

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 5/2	95	10YR 4/4	5	C	M,PL	Silty loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

hydric soil indicator of depleted matrix observed as low chroma/high value matrix with distinct redox features.

General Site Photos Wetland AEW-33

N

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W

S

General Site Photos Wetland AEW-33

Soil

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/08/2025

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-33

Investigator(s): JBL Section, Township, Range:

Landform (hillslope, terrace, etc.): Undulating Local relief (concave, convex, none): Convex Slope (%): 1-5

Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.92735 Long: -80.51485 Datum: NAD 83

Soil Map Unit Name: Fitchville silt loam, 2 to 6 percent slopes NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-33

Remarks: (Explain alternative procedures here or in a separate report.)

upland area along old access road

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes _____	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 15

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

wetland hydrology indicators not present. Sample point does not meet wetland criteria.

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-33

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Gleditsia triacanthos	20	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20 = Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa multiflora	30	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	30 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Impatiens capensis	10	No	FACW
2. Rosa multiflora	15	Yes	FACU
3. Solidago altissima	20	Yes	FACU
4. Glechoma hederacea	25	Yes	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1. Lonicera japonica	10	Yes	FACU
2.			
3.			
4.			
	10 = 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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 17% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	10	x 2 =	20.0
FAC species	20	x 3 =	60.0
FACU species	90	x 4 =	360.0
UPL species	0	x 5 =	0.0
Column Totals:	120 (A)		440.0 (B)

Prevalence Index = B/A = 3.70

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

hydrophytic vegetation indicators not present

SOIL

Sampling Point: Upland AEW-33

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 - 18	10YR 3/3	100					Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

hydric soil inidcators not present.

General Site Photos Upland AEW-33

Soil

SE

S

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/07/2025

Applicant/Owner: FirstEnergy State: PA Sampling Point: Wetland AEW-34

Investigator(s): JBL Section, Township, Range:

Landform (hillslope, terrace, etc.): Lowland Local relief (concave, convex, none): Undulating Slope (%): 2

Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.932725 Long: -80.401259 Datum: NAD 83

Soil Map Unit Name: Platea silt loam, 2 to 6 percent slopes NWI classification: PSS1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No**
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	If yes, optional Wetland Site ID: Wetland AEW-34

Remarks: (Explain alternative procedures here or in a separate report.)

wetland area along proposed access south of the RR tracks. Wetland extends into ROW adjacent to stream.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- X Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No X	Depth (inches):
Water Table Present?	Yes X	No _____	Depth (inches): 0
Saturation Present? (includes capillary fringe)	Yes X	No _____	Depth (inches): 0

Wetland Hydrology Present? **Yes** X **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

multiple primary and secondary hydrology indicators present. Wetland extends to the north and south outside of the survey area.

VEGETATION – Use scientific names of plants.

Sampling Point: Wetland AEW-34

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	70	Yes	FACW
2. Onoclea sensibilis	10	No	FACW
3. Solidago altissima	10	No	FACU
4. Apocynum cannabinum	20	No	FAC
5. Cardamine hirsuta	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	115 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 1.0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	80	x 2 =	160.0
FAC species	0	x 3 =	0.0
FACU species	15	x 4 =	60.0
UPL species	0	x 5 =	0.0
Column Totals:	95 (A)		220.0 (B)

Prevalence Index = B/A = 2.3

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No**

Remarks: (Include photo numbers here or on a separate sheet.)

hydrophytic vegetation indicators present as dominance test >50% and PI less than 3

SOIL

Sampling Point: Wetland AEW-34

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	7.5YR 5/1	80	7.5YR 3/4	20	C	M,PL	Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** _____

Remarks:

hydric soil indicators of depleted matrix present

General Site Photos Wetland AEW-34

Soil

E

S

W

General Site Photos Wetland AEW-34

N

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Perry-Ashtabula-Erie West City/County: Erie County Sampling Date: 04/07/2025

Applicant/Owner: FirstEnergy State: PA Sampling Point: Upland AEW-34

Investigator(s): JBL Section, Township, Range:

Landform (hillslope, terrace, etc.): Undulating Local relief (concave, convex, none): Convex Slope (%): 1-3

Subregion (LRR or MLRA): LRR R, MLRA 139 Lat: 41.93290 Long: -80.40161 Datum: NAD 83

Soil Map Unit Name: Platea silt loam, 2 to 6 percent slopes NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	If yes, optional Wetland Site ID: Upland AEW-34

Remarks: (Explain alternative procedures here or in a separate report.)

upland area west of PEM 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 X	Depth (inches):
Water Table Present?	Yes _____	No X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes _____	No X	Depth (inches):

Wetland Hydrology Present? Yes _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

no wetland hydrology indicators present. Sample point does not meet wetland criteria.

VEGETATION – Use scientific names of plants.

Sampling Point: Upland AEW-34

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. Rosa multiflora	20	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20 = Total Cover		
Herb Stratum (Plot size: 5)			
1. Phalaris arundinacea	50	Yes	FACW
2. Lonicera maackii	5	No	FACU
3. Rosa multiflora	5	No	FACU
4. Solidago altissima	40	Yes	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	= Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0.0
FACW species	50	x 2 =	100.0
FAC species	0	x 3 =	0.0
FACU species	70	x 4 =	280.0
UPL species	0	x 5 =	0.0
Column Totals:	120 (A)		380.0 (B)

Prevalence Index = B/A = 3.20

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** _____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

hydrophytic vegetation indicators not present

SOIL

Sampling Point: Upland AEW-34

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 18	10YR 3/3	98	10YR 4/3	3	C	M	Clay loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ 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)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L, M**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

hydric soil indicators not present.

General Site Photos Upland AEW-34

Soil

E

W

N

Appendix C
Jacobs Stream Data Forms

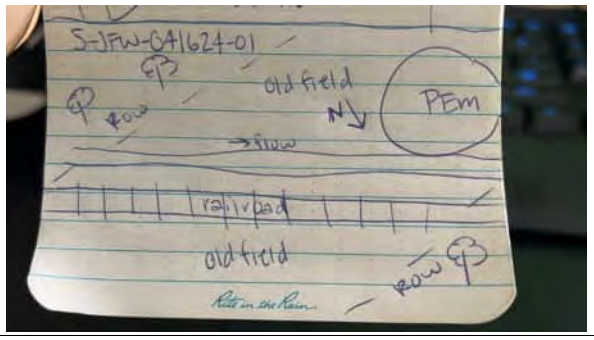
Jacobs

Ordinary High Water Mark Data Form

Stream Name: UNT to Crooked Creek	Stream No: Stream AEW-01	
Assoc Wetland No: W-JFW-041624-02	Date: 2024-04-16	County/State: Erie County Pennsylvania

Investigator: JFW, JEH	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate X	Slow ___	Very Slow ___	None ___
	Perennial ___	Intermittent X	Ephemeral: ___		

Stream Depth (in.)	0-3 ___	3-6 ___	6-12 X	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 20.0	Water Surface: 5.0

Stream Substrate %	Bedrock_____	Gravel 30	Sand_____	Clay_____	Organic 20
	Boulder _____	Cobble_____	Silt 50	Artificial _____	

Bank Height (ft.)	Left	0-2 ___	2-4 ___	4-6 X	6-8 ___	8+ ___
	Right	0-2 ___	2-4 ___	4-6 X	6-8 ___	8+ ___

Bank Slope (º)	Left	0-20 ___	20-40 ___	40-60 X	60-80 ___	80+ ___
	Right	0-20 ___	20-40 ___	40-60 X	60-80 ___	80+ ___

Water Clarity	Clear ___	Slightly Turbid X	Turbid ___	Very Turbid ___	Color: Brown

Aquatic Habitat	Sand Bar ___	Gravel Bar ___	Mud Bar ___	Gravel Riffles ___	Deep Pools ___
	Overhanging trees/shrubs ___	In-stream emergent plants X	In-stream submergent plants ___	Bank root systems X	Fringing Wetlands ___

Aquatic Organisms	Waterfowl ___	Fish (adult) ___	Fish (juvenile) ___	Frogs ___	Turtles ___
	Snakes ___	Invertebrates ___	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No

RIPARIAN VEGETATION DESCRIPTION
Herbaceous - Phalaris, Solidago, Asclepias, Lonicera, Carex

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Parallel to railroad

STREAM QUALITY (indicate)	High ___	Moderate X	Low ___

Rationale for selected rank (explain):
Altered by railroad, erosion potential, some habitat diversity

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-01

Upstream

Substrate

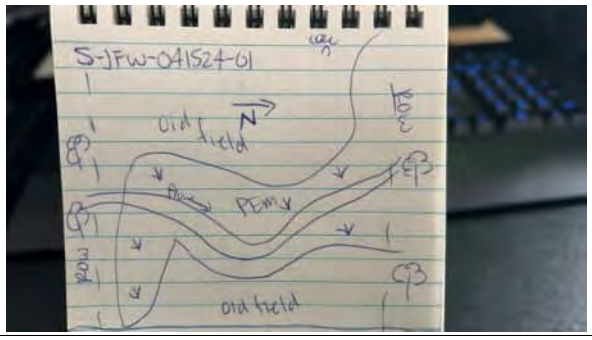
Downstream

Ordinary High Water Mark Data Form

Stream Name: UNT to Raccoon Creek	Stream No: Stream AEW-02	
Assoc Wetland No: W-JFW-041524-03	Date: 2024-04-15	County/State: Erie County Pennsylvania

Investigator: JFW, JEH	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate X	Slow ___	Very Slow ___	None ___
	Perennial ___	Intermittent X	Ephemeral: ___		

Stream Depth (in.)	0-3 ___	3-6 X	6-12 ___	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 1.5	Water Surface: 1.0

Stream Substrate %	Bedrock_____	Gravel 20	Sand_____	Clay_____	Organic 40
	Boulder _____	Cobble_____	Silt 40	Artificial _____	

Bank Height (ft.)	Left	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___
	Right	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___

Bank Slope (º)	Left	0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___
	Right	0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___

Water Clarity	Clear X	Slightly Turbid ___	Turbid ___	Very Turbid ___	Color: Clear

Aquatic Habitat	Sand Bar ___	Gravel Bar ___	Mud Bar ___	Gravel Riffles ___	Deep Pools ___
	Overhanging trees/shrubs ___	In-stream emergent plants X	In-stream submergent plants ___	Bank root systems ___	Fringing Wetlands X

Aquatic Organisms	Waterfowl ___	Fish (adult) ___	Fish (juvenile) ___	Frogs X	Turtles ___
	Snakes X	Invertebrates X	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No

RIPARIAN VEGETATION DESCRIPTION
Phragmites dominant

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Stream is narrow through Phragmites dominant wetland within ROW. Stream widens and becomes channelized outside of ROW to the north.

STREAM QUALITY	(indicate)	High ___	Moderate ___	Low X

Rationale for selected rank (explain):
Small stream flowing through wetland that likely doesn't support fish habitat.

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-02

Upstream

Stream crossing through access path

Substrate

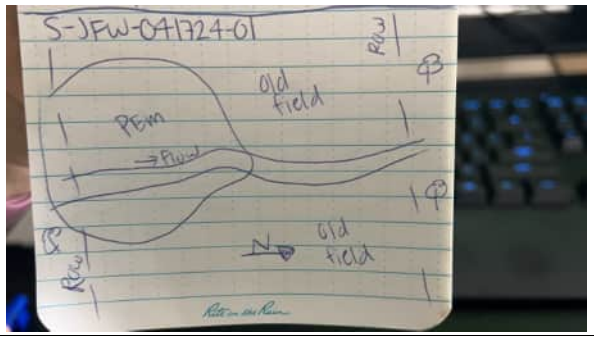
Downstream

Ordinary High Water Mark Data Form

Stream Name: UNT to Raccoon Creek	Stream No: Stream AEW-03	
Assoc Wetland No: W-JFW-041724-02	Date: 2024-04-17	County/State: Erie County Pennsylvania

Investigator: JFW, JEH	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate X	Slow ___	Very Slow ___	None ___
	Perennial X	Intermittent ___	Ephemeral: ___		

Stream Depth (in.)	0-3 ___	3-6 ___	6-12 X	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 5.0	Water Surface: 3.0

Stream Substrate %	Bedrock_____	Gravel 20	Sand_____	Clay_____	Organic 20
	Boulder _____	Cobble 30	Silt 30	Artificial _____	

Bank Height (ft.)	Left 0-2 ___	2-4 X	4-6 ___	6-8 ___	8+ ___
	Right 0-2 ___	2-4 X	4-6 ___	6-8 ___	8+ ___

Bank Slope (º)	Left 0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___
	Right 0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___

Water Clarity	Clear X	Slightly Turbid ___	Turbid ___	Very Turbid ___	Color: Clear

Aquatic Habitat	Sand Bar ___	Gravel Bar ___	Mud Bar ___	Gravel Riffles ___	Deep Pools X
	Overhanging trees/shrubs ___	In-stream emergent plants X	In-stream submergent plants ___	Bank root systems ___	Fringing Wetlands X

Aquatic Organisms	Waterfowl ___	Fish (adult) ___	Fish (juvenile) ___	Frogs X	Turtles X
	Snakes X	Invertebrates X	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No

RIPARIAN VEGETATION DESCRIPTION
Herbaceous with minor shrubs

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Stream widens towards pipeline ROW (northern extent). Stream is narrow towards southern extent.

STREAM QUALITY	(indicate)	High ___	Moderate X	Low ___

Rationale for selected rank (explain):
Disturbed however has steady flow and is channelized

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-03

Substrate

Downstream

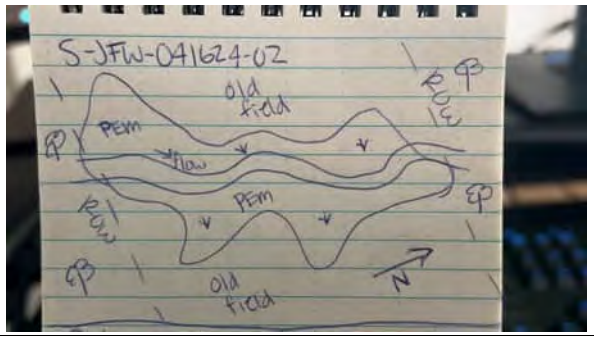
Upstream

Ordinary High Water Mark Data Form

Stream Name: Raccoon Creek	Stream No: Stream AEW-04	
Assoc Wetland No: W-JFW-041524-07	Date: 2024-04-16	County/State: Erie County Pennsylvania

Investigator: JFW, JEH	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate ___	Slow X	Very Slow ___	None ___
	Perennial ___	Intermittent X	Ephemeral: ___		

Stream Depth (in.)	0-3 ___	3-6 ___	6-12 X	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 6.0	Water Surface: 3.0

Stream Substrate %	Bedrock_____	Gravel 30	Sand_____	Clay_____	Organic 20
	Boulder _____	Cobble 30	Silt 20	Artificial _____	

Bank Height (ft.)	Left	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___
	Right	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___

Bank Slope (º)	Left	0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___
	Right	0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___

Water Clarity	Clear X	Slightly Turbid ___	Turbid ___	Very Turbid ___	Color: Clear

Aquatic Habitat	Sand Bar ___	Gravel Bar ___	Mud Bar ___	Gravel Riffles X	Deep Pools X
	Overhanging trees/shrubs ___	In-stream emergent plants X	In-stream submergent plants ___	Bank root systems ___	Fringing Wetlands X

Aquatic Organisms	Waterfowl ___	Fish (adult) ___	Fish (juvenile) ___	Frogs X	Turtles X
	Snakes X	Invertebrates X	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No

RIPARIAN VEGETATION DESCRIPTION
Herbaceous and minor shrubs

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Straight channel and minimal banks

STREAM QUALITY (indicate)	High ___	Moderate X	Low ___

Rationale for selected rank (explain):
Disturbance from maintained ROW

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-04

Downstream

Upstream

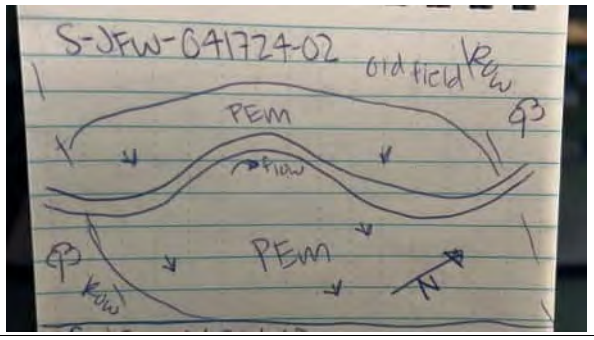
Substrate

Ordinary High Water Mark Data Form

Stream Name: UNT to Raccoon Creek	Stream No: Stream AEW-05	
Assoc Wetland No: W-JFW-041724-09	Date: 2024-04-17	County/State: Erie County Pennsylvania

Investigator: JFW, JEH	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate ___	Slow X	Very Slow ___	None ___
	Perennial X	Intermittent ___	Ephemeral: ___		

Stream Depth (in.)	0-3 ___	3-6 ___	6-12 X	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 6.0	Water Surface: 4.0

Stream Substrate %	Bedrock_____	Gravel_____	Sand_____	Clay_____	Organic_____
	Boulder _____	Cobble_____	Silt 100	Artificial _____	

Bank Height (ft.)	Left	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___
	Right	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___

Bank Slope (º)	Left	0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___
	Right	0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___

Water Clarity	Clear ___	Slightly Turbid X	Turbid ___	Very Turbid ___	Color: Brown

Aquatic Habitat	Sand Bar ___	Gravel Bar ___	Mud Bar ___	Gravel Riffles ___	Deep Pools ___
	Overhanging trees/shrubs ___	In-stream emergent plants X	In-stream submergent plants ___	Bank root systems ___	Fringing Wetlands X

Aquatic Organisms	Waterfowl ___	Fish (adult) ___	Fish (juvenile) ___	Frogs X	Turtles ___
	Snakes ___	Invertebrates ___	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No

RIPARIAN VEGETATION DESCRIPTION
Wetland, forested outside of ROW

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Stream channel is not well defined within ROW because flow is distributed through wetland. Bed and bank are well defined outside of survey area

STREAM QUALITY (indicate)	High ___	Moderate ___	Low X

Rationale for selected rank (explain):

Power line ROW and farm path have disrupted the channel and riparian area, invasive cattail dominated riparian, uniform flow and depth, minimal habitat diversity

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-05

Substrate

Downstream

Upstream

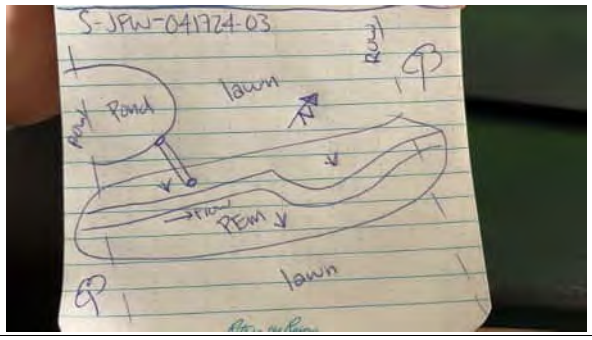
Jacobs

Ordinary High Water Mark Data Form

Stream Name: Turkey Creek	Stream No: Stream AEW-06	
Assoc Wetland No: W-JFW-041724-10	Date: 2024-04-17	County/State: Erie County Pennsylvania

Investigator: JFW, JEH	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate ___	Slow X	Very Slow ___	None ___
	Perennial X	Intermittent ___	Ephemeral: ___		

Stream Depth (in.)	0-3 ___	3-6 ___	6-12 X	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 5.0	Water Surface: 3.0

Stream Substrate %	Bedrock_____	Gravel_____	Sand_____	Clay_____	Organic 50
	Boulder _____	Cobble_____	Silt 50	Artificial _____	

Bank Height (ft.)	Left	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___
	Right	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___

Bank Slope (º)	Left	0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___
	Right	0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___

Water Clarity	Clear X	Slightly Turbid ___	Turbid ___	Very Turbid ___	Color: Darker fror

Aquatic Habitat	Sand Bar ___	Gravel Bar ___	Mud Bar ___	Gravel Riffles ___	Deep Pools ___
	Overhanging trees/shrubs X	In-stream emergent plants X	In-stream submergent plants ___	Bank root systems ___	Fringing Wetlands X

Aquatic Organisms	Waterfowl ___	Fish (adult) ___	Fish (juvenile) ___	Frogs X	Turtles X
	Snakes X	Invertebrates X	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No

RIPARIAN VEGETATION DESCRIPTION
Herbaceous

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Becomes more channelized and widens north of ROW. Low banks on either side. Heavy organic material in substrate.

STREAM QUALITY (indicate)	High ___	Moderate X	Low ___

Rationale for selected rank (explain):
Adjacent to maintained lawn. Includes wetland fringe.

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-06

Upstream

Substrate

Downstream

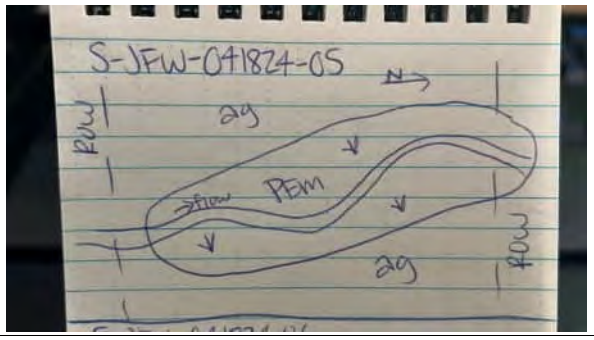
Jacobs

Ordinary High Water Mark Data Form

Stream Name: UNT to Turkey Creek	Stream No: Stream AEW-07	
Assoc Wetland No: W-JFW-041824-03	Date: 2024-04-18	County/State: Erie County Pennsylvania

Investigator: JFW, JEH	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate X	Slow ___	Very Slow ___	None ___
	Perennial X	Intermittent ___	Ephemeral: ___		

Stream Depth (in.)	0-3 ___	3-6 ___	6-12 ___	12-18 X	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 8.0	Water Surface: 4.0

Stream Substrate %	Bedrock_____	Gravel 50	Sand 10	Clay 10	Organic_____
	Boulder _____	Cobble 10	Silt 20	Artificial _____	

Bank Height (ft.)	Left	0-2 ___	2-4 ___	4-6 X	6-8 ___	8+ ___
	Right	0-2 ___	2-4 ___	4-6 X	6-8 ___	8+ ___

Bank Slope (º)	Left	0-20 ___	20-40 ___	40-60 ___	60-80 ___	80+ X
	Right	0-20 ___	20-40 ___	40-60 ___	60-80 ___	80+ X

Water Clarity	Clear X	Slightly Turbid ___	Turbid ___	Very Turbid ___	Color: Clear

Aquatic Habitat	Sand Bar ___	Gravel Bar X	Mud Bar ___	Gravel Riffles X	Deep Pools ___
	Overhanging trees/shrubs ___	In-stream emergent plants ___	In-stream submergent plants ___	Bank root systems ___	Fringing Wetlands X

Aquatic Organisms	Waterfowl ___	Fish (adult) X	Fish (juvenile) ___	Frogs ___	Turtles ___
	Snakes ___	Invertebrates X	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No

RIPARIAN VEGETATION DESCRIPTION
Phalaris

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)

STREAM QUALITY (indicate)	High ___	Moderate X	Low ___

Rationale for selected rank (explain):
Mild disturbance, erosion potential, habitat diversity, grasses dominate banks

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-07

Substrate

Upstream

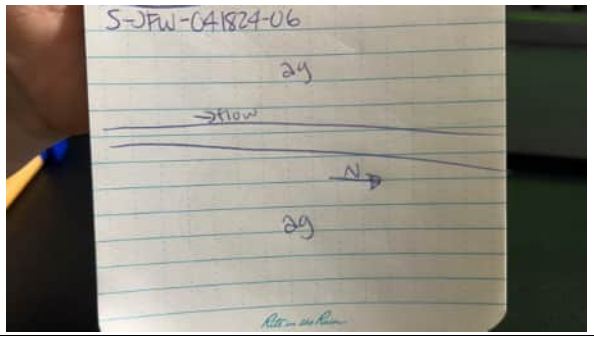
Downstream

Ordinary High Water Mark Data Form

Stream Name: UNT to Conneaut Creek	Stream No: Stream AEW-08	
Assoc Wetland No: None	Date: 2024-04-18	County/State: Erie County Pennsylvania

Investigator: JFW, JEH	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate ___	Slow X	Very Slow ___	None ___
	Perennial ___	Intermittent ___	Ephemeral: X		

Stream Depth (in.)	0-3 ___	3-6 ___	6-12 X	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 8.0	Water Surface: 3.0

Stream Substrate %	Bedrock_____	Gravel_____	Sand_____	Clay_____	Organic 50
	Boulder _____	Cobble_____	Silt 50	Artificial _____	

Bank Height (ft.)	Left	0-2 ___	2-4 X	4-6 ___	6-8 ___	8+ ___
	Right	0-2 ___	2-4 X	4-6 ___	6-8 ___	8+ ___

Bank Slope (º)	Left	0-20 ___	20-40 ___	40-60 X	60-80 ___	80+ ___
	Right	0-20 ___	20-40 ___	40-60 X	60-80 ___	80+ ___

Water Clarity	Clear ___	Slightly Turbid X	Turbid ___	Very Turbid ___	Color: Brown

Aquatic Habitat	Sand Bar ___	Gravel Bar ___	Mud Bar ___	Gravel Riffles ___	Deep Pools ___
	Overhanging trees/shrubs ___	In-stream emergent plants X	In-stream submergent plants ___	Bank root systems ___	Fringing Wetlands ___

Aquatic Organisms	Waterfowl ___	Fish (adult) ___	Fish (juvenile) ___	Frogs ___	Turtles ___
	Snakes ___	Invertebrates X	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No

RIPARIAN VEGETATION DESCRIPTION
Ag fields

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Ag ditch

STREAM QUALITY (indicate)	High ___	Moderate ___	Low X	

Rationale for selected rank (explain):
Minimal habitat, channelized ag ditch

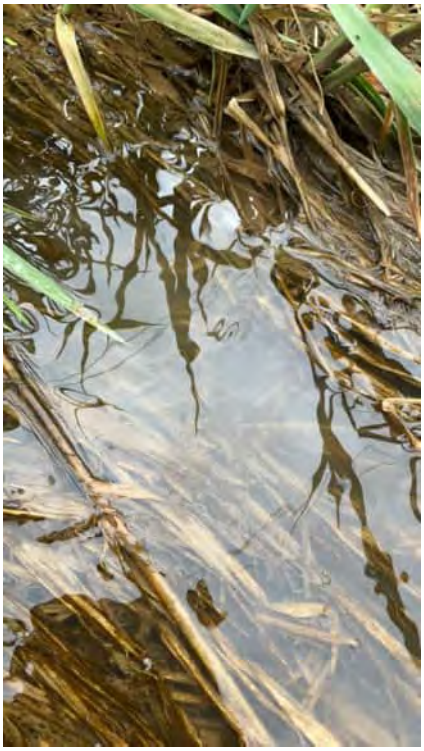
High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-08

Upstream



Substrate

Downstream

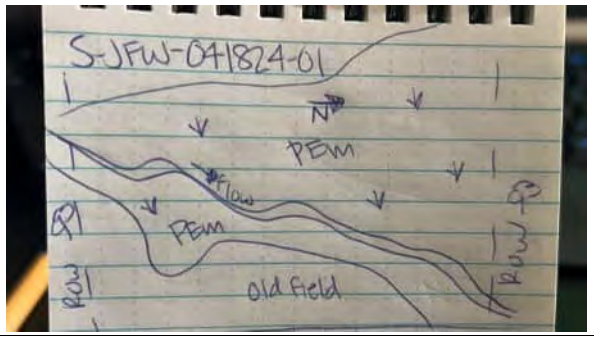
Jacobs

Ordinary High Water Mark Data Form

Stream Name: UNT to Conneaut Creek	Stream No: Stream AEW-09	
Assoc Wetland No: W-JFW-041824-01	Date: 2024-04-18	County/State: Erie County Pennsylvania

Investigator: JFW, JEH	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate X	Slow ___	Very Slow ___	None ___
	Perennial ___	Intermittent X	Ephemeral: ___		

Stream Depth (in.)	0-3 ___	3-6 ___	6-12 ___	12-18 X	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 8.0	Water Surface: 4.0

Stream Substrate %	Bedrock_____	Gravel 20	Sand 10	Clay_____	Organic 30
	Boulder _____	Cobble_____	Silt 40	Artificial _____	

Bank Height (ft.)	Left	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___
	Right	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___

Bank Slope (º)	Left	0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___
	Right	0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___

Water Clarity	Clear ___	Slightly Turbid X	Turbid ___	Very Turbid ___	Color: Darker

Aquatic Habitat	Sand Bar ___	Gravel Bar ___	Mud Bar X	Gravel Riffles ___	Deep Pools X
	Overhanging trees/shrubs ___	In-stream emergent plants X	In-stream submergent plants ___	Bank root systems ___	Fringing Wetlands X

Aquatic Organisms	Waterfowl ___	Fish (adult) ___	Fish (juvenile) ___	Frogs X	Turtles X
	Snakes X	Invertebrates X	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No

RIPARIAN VEGETATION DESCRIPTION
Herbaceous with minor shrubs

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Low banks and fringing wetland

STREAM QUALITY (indicate)	High ___	Moderate X	Low ___

Rationale for selected rank (explain):
ROW disturbance. Low banks and water seeps out in area into fringing wetland

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-09

Downstream

Upstream

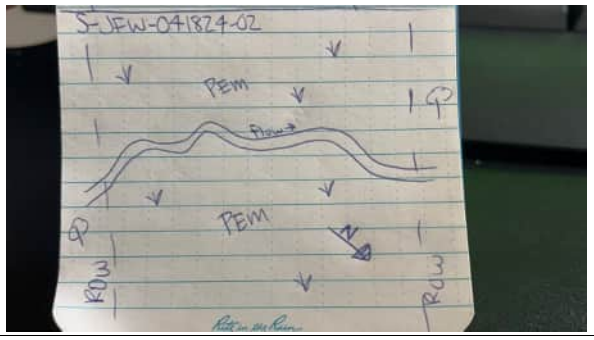
Substrate

Ordinary High Water Mark Data Form

Stream Name: UNT to Conneaut Creek	Stream No: Stream AEW-10	
Assoc Wetland No: W-JFW-041824-01	Date: 2024-04-18	County/State: Erie County Pennsylvania

Investigator: JFW, JEH	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate ___	Slow X	Very Slow ___	None ___
	Perennial ___	Intermittent X	Ephemeral: ___		

Stream Depth (in.)	0-3 ___	3-6 ___	6-12 ___	12-18 ___	18-24 ___	24-36 X	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 20.00	Water Surface: 6.00

Stream Substrate %	Bedrock ___	Gravel 10	Sand 20	Clay 10	Organic ___
	Boulder ___	Cobble ___	Silt 60	Artificial ___	

Bank Height (ft.)	Left	0-2 ___	2-4 ___	4-6 X	6-8 ___	8+ ___
	Right	0-2 ___	2-4 ___	4-6 X	6-8 ___	8+ ___

Bank Slope (º)	Left	0-20 ___	20-40 ___	40-60 ___	60-80 ___	80+ X
	Right	0-20 ___	20-40 ___	40-60 ___	60-80 ___	80+ X

Water Clarity	Clear X	Slightly Turbid ___	Turbid ___	Very Turbid ___	Color: Tan

Aquatic Habitat	Sand Bar ___	Gravel Bar ___	Mud Bar ___	Gravel Riffles ___	Deep Pools X
	Overhanging trees/shrubs ___	In-stream emergent plants ___	In-stream submergent plants ___	Bank root systems ___	Fringing Wetlands ___

Aquatic Organisms	Waterfowl ___	Fish (adult) ___	Fish (juvenile) ___	Frogs X	Turtles ___
	Snakes ___	Invertebrates X	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No

RIPARIAN VEGETATION DESCRIPTION
Cleared ROW

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Eroded unstable banks, disturbed channel and banks from two path crossings

STREAM QUALITY (indicate)	High ___	Moderate ___	Low X

Rationale for selected rank (explain):
High erosion potential, lacking habitat diversity, bank vegetation is grasses and forbs

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-10

Substrate

Downstream

Upstream

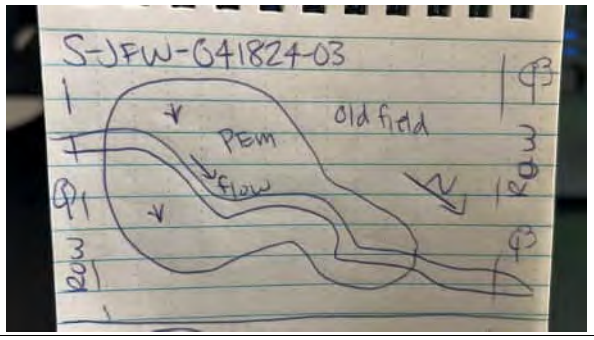
Existing access crossing

Ordinary High Water Mark Data Form

Stream Name: UNT to Conneaut Creek	Stream No: Stream AEW-11	
Assoc Wetland No: W-JFW-041824-01	Date: 2024-04-18	County/State: Erie County Pennsylvania

Investigator: JFW, JEH	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate ___	Slow X	Very Slow ___	None ___
	Perennial X	Intermittent ___	Ephemeral: ___		

Stream Depth (in.)	0-3 ___	3-6 ___	6-12 ___	12-18 ___	18-24 ___	24-36 X	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 5.0	Water Surface: 5.0

Stream Substrate %	Bedrock ___	Gravel ___	Sand ___	Clay 10	Organic 10
	Boulder ___	Cobble ___	Silt 80	Artificial ___	

Bank Height (ft.)	Left	0-2 ___	2-4 X	4-6 ___	6-8 ___	8+ ___
	Right	0-2 ___	2-4 X	4-6 ___	6-8 ___	8+ ___

Bank Slope (º)	Left	0-20 ___	20-40 ___	40-60 X	60-80 ___	80+ ___
	Right	0-20 ___	20-40 ___	40-60 X	60-80 ___	80+ ___

Water Clarity	Clear ___	Slightly Turbid X	Turbid ___	Very Turbid ___	Color: Tan

Aquatic Habitat	Sand Bar ___	Gravel Bar ___	Mud Bar ___	Gravel Riffles ___	Deep Pools ___
	Overhanging trees/shrubs ___	In-stream emergent plants ___	In-stream submergent plants ___	Bank root systems ___	Fringing Wetlands X

Aquatic Organisms	Waterfowl ___	Fish (adult) ___	Fish (juvenile) ___	Frogs X	Turtles ___
	Snakes ___	Invertebrates X	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No

RIPARIAN VEGETATION DESCRIPTION
Cleared ROW

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Two path crossings which have high erosion potential

STREAM QUALITY (indicate)	High ___	Moderate ___	Low X

Rationale for selected rank (explain):
Three path crossings, pipeline and power line ROW cleared riparian

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-11

Substrate

Downstream

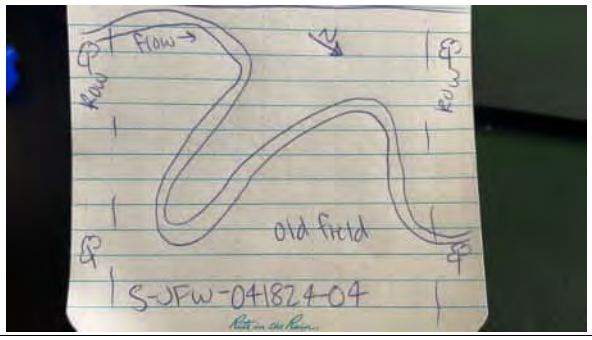
Path crossing

Ordinary High Water Mark Data Form

Stream Name: UNT to Conneaut Creek	Stream No: Stream AEW-12	
Assoc Wetland No: W-JFW-041824-02	Date: 2024-04-18	County/State: Erie County Pennsylvania

Investigator: JFW, JEH	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate X	Slow ___	Very Slow ___	None ___
	Perennial X	Intermittent ___	Ephemeral: ___		

Stream Depth (in.)	0-3 ___	3-6 ___	6-12 ___	12-18 ___	18-24 ___	24-36 X	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 10.0	Water Surface: 4.0

Stream Substrate %	Bedrock 35	Gravel 20	Sand ___	Clay ___	Organic 10
	Boulder ___	Cobble 10	Silt 25	Artificial ___	

Bank Height (ft.)	Left	0-2 ___	2-4 ___	4-6 X	6-8 ___	8+ ___
	Right	0-2 ___	2-4 ___	4-6 X	6-8 ___	8+ ___

Bank Slope (°)	Left	0-20 ___	20-40 ___	40-60 ___	60-80 ___	80+ X
	Right	0-20 ___	20-40 ___	40-60 ___	60-80 ___	80+ X

Water Clarity	Clear X	Slightly Turbid ___	Turbid ___	Very Turbid ___	Color: Clear

Aquatic Habitat	Sand Bar X	Gravel Bar X	Mud Bar ___	Gravel Riffles X	Deep Pools X
	Overhanging trees/shrubs ___	In-stream emergent plants X	In-stream submergent plants ___	Bank root systems X	Fringing Wetlands ___

Aquatic Organisms	Waterfowl ___	Fish (adult) X	Fish (juvenile) ___	Frogs X	Turtles ___
	Snakes ___	Invertebrates X	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
No

RIPARIAN VEGETATION DESCRIPTION
Cleared ROW

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Extremely eroded banks in places, existing access crossing

STREAM QUALITY	(indicate)	High ___	Moderate X	Low ___

Rationale for selected rank (explain):
Moderate disturbance, heavy erosion, habitat diversity and potential

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-12

Existing access crossing

Substrate

Downstream

Upstream

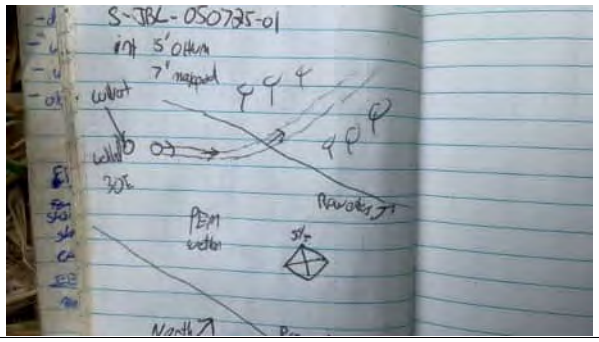
Jacobs

Ordinary High Water Mark Data Form

Stream Name: UNK to Crooked Creek	Stream No: Stream AEW-13	
Assoc Wetland No: Wetland AEW 30	Date: 2025-05-07	County/State: Erie County Pennsylvania

Investigator: JBL	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate X	Slow ___	Very Slow ___	None ___
	Perennial ___	Intermittent X	Ephemeral: ___		

Stream Depth (in.)	0-3 ___	3-6 ___	6-12 X	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 7.00	Water Surface: 5.00

Stream Substrate %	Bedrock_____	Gravel_____	Sand 10	Clay 40	Organic 40
	Boulder _____	Cobble_____	Silt 10	Artificial _____	

Bank Height (ft.)	Left	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___
	Right	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___

Bank Slope (º)	Left	0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___
	Right	0-20 X	20-40 ___	40-60 ___	60-80 ___	80+ ___

Water Clarity	Clear X	Slightly Turbid ___	Turbid ___	Very Turbid ___	Color: _____

Aquatic Habitat	Sand Bar ___	Gravel Bar ___	Mud Bar ___	Gravel Riffles ___	Deep Pools ___
	Overhanging trees/shrubs X	In-stream emergent plants X	In-stream submergent plants X	Bank root systems ___	Fringing Wetlands X

Aquatic Organisms	Waterfowl ___	Fish (adult) ___	Fish (juvenile) ___	Frogs X	Turtles ___
	Snakes ___	Invertebrates ___	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)

RIPARIAN VEGETATION DESCRIPTION

Reed canary

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)

culvert present, stream channelized in ROW

STREAM QUALITY (indicate)	High ___	Moderate X	Low ___

Rationale for selected rank (explain):

Channelized, culvert in ROW

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-13

Substrate

Downstream

Upstream

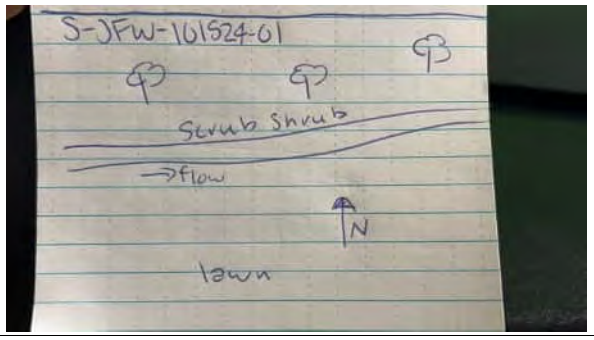
Jacobs

Ordinary High Water Mark Data Form

Stream Name: UNT to Raccoon Creek	Stream No: Stream AEW-14	
Assoc Wetland No: None	Date: 2024-10-15	County/State: Erie County Pennsylvania

Investigator: JFW, BCR	Team No.: N/A	Landowner/Tract No.:

STREAM DRAWING:



Stream Flow	Fast ___	Moderate X	Slow ___	Very Slow ___	None ___
	Perennial ___	Intermittent X	Ephemeral: ___		

Stream Depth (in.)	0-3 ___	3-6 X	6-12 ___	12-18 ___	18-24 ___	24-36 ___	36-48 ___	48-60 ___	60+ ___

Stream Width (ft.)	Top of Banks: 1.5	Water Surface: 1.0

Stream Substrate %	Bedrock_____	Gravel 5	Sand 15	Clay 60	Organic_____
	Boulder _____	Cobble_____	Silt 20	Artificial _____	

Bank Height (ft.)	Left	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___
	Right	0-2 X	2-4 ___	4-6 ___	6-8 ___	8+ ___

Bank Slope (º)	Left	0-20 ___	20-40 ___	40-60 ___	60-80 X	80+ ___
	Right	0-20 ___	20-40 ___	40-60 ___	60-80 X	80+ ___

Water Clarity	Clear X	Slightly Turbid ___	Turbid ___	Very Turbid ___	Color: Clear

Aquatic Habitat	Sand Bar ___	Gravel Bar ___	Mud Bar ___	Gravel Riffles ___	Deep Pools ___
	Overhanging trees/shrubs X	In-stream emergent plants X	In-stream submergent plants ___	Bank root systems X	Fringing Wetlands ___

Aquatic Organisms	Waterfowl ___	Fish (adult) ___	Fish (juvenile) ___	Frogs ___	Turtles ___
	Snakes ___	Invertebrates ___	Other:		

T/E SPECIES / SUITABLE HABITAT (briefly describe potential/occurrence)
N/A

RIPARIAN VEGETATION DESCRIPTION
LB scrub, RB cleared residential

COMMENTS (construction constraints, erosion potential, existing disturbances, and meanders)
Grading adjacent to stream channel, materials pushed toward stream channel and in stream channel

STREAM QUALITY	(indicate)	High ___	Moderate X	Low ___

Rationale for selected rank (explain):
Ongoing human alteration/disturbance, yet clear flow as a positive

High Quality – no indication of stress or disturbance in stream or adjacent area – diverse and mature fringing shrub-dominated cover - diverse and stable fish & wildlife habitat – gravel beds, submerged logs, undercut banks, riffles and pools – no channelization

Moderate Quality – mild to moderate disturbances result in minor recognizable alterations – pipeline, road, railroad, other ROWs – provides fair fish and wildlife habitat – some erosion potential – some habitat diversity – fine sediment deposition predominate – flow and depth variation restricted – some channelization – trees, grass, or forbes dominate bank vegetation

Low quality – disturbances cause significant changes affecting plant species – mechanical alteration of plant species and/or soils – intense grazing activities – stream course channelization or ditching – exotic, nuisance, or invasive species – habitat diversity lacking – high erosion potential – flow and depth variation lacking - does not provide suitable wildlife habitat – grass or forbes dominate bank vegetation

Site Photos Stream AEW-14

Substrate

Downstream

Upstream

Appendix D
Jacobs Open Water/Pond Data Forms

Jacobs

P-JFW-041624-01

POND DATA SHEET

FEATURE ID Pond AEW-01		**ASSOCIATED FEATURES:**	
SURVEY TYPE: Wetland and waterbodies delineation			
DATE: 04/16/2024	**CLIENT/PROJECT NAME:** FirstEnergy	Perry-Ashtabula-Erie West	
INVESTIGATORS: JFW		**ROUTE:**	
STATE/COUNTY: PA	Erie County	**IS THIS A MAPPED NWI FEATURE?:** yes	PSS1E

WATERBODY CHARACTERISTICS

WATERBODY TYPE:	Wetland pond
AVG. DEPTH:	24”
AVG. WIDTH (WATER SURFACE):	400 feet
APPROXIMATE SIZE:	3.6 acres

QUALITATIVE ATTRIBUTES

AVERAGE WATER APPEARANCE:	Dark
PRIMARY SUBSTRATE (IF OBSERVED):	Organic/muck
POTENTIAL HABITAT FOR:	Amphibians, waterfowl, rodents
SURROUNDING LAND USE:	Utility ROW, forested, and wetlands
WETLAND FRINGE (IF PRESENT):	PEM

COMMENTS

Site Photos

West

West

Northwest

East

Site Photos

East

Jacobs

P-JFW-041724-02

POND DATA SHEET

FEATURE ID Pond AEW-02		**ASSOCIATED FEATURES:**	
SURVEY TYPE: Wetland and waterbodies delineation			
DATE: 04/17/2024	**CLIENT/PROJECT NAME:** FirstEnergy	Perry-Ashtabula-Erie West	
INVESTIGATORS: JFW		**ROUTE:**	
STATE/COUNTY: PA	Erie County	**IS THIS A MAPPED NWI FEATURE?:** no	None

WATERBODY CHARACTERISTICS

WATERBODY TYPE:	Pond
AVG. DEPTH:	8 feet
AVG. WIDTH (WATER SURFACE):	170 feet
APPROXIMATE SIZE:	0.54 acre

QUALITATIVE ATTRIBUTES

AVERAGE WATER APPEARANCE:	Blue-green
PRIMARY SUBSTRATE (IF OBSERVED):	Silt
POTENTIAL HABITAT FOR:	Koi observed, potential for waterfowl, insects
SURROUNDING LAND USE:	Mowed residential lawn
WETLAND FRINGE (IF PRESENT):	None

COMMENTS

Site Photos

Southeast

Southwest

East

Jacobs

P-JFW-041724-01

POND DATA SHEET

FEATURE ID Pond AEW-03		**ASSOCIATED FEATURES:**	
SURVEY TYPE: Wetland and waterbodies delineation			
DATE: 04/17/2024	**CLIENT/PROJECT NAME:** FirstEnergy	Perry-Ashtabula-Erie West	
INVESTIGATORS: JFW		**ROUTE:**	
STATE/COUNTY: PA	Erie County	**IS THIS A MAPPED NWI FEATURE?:** no	None

WATERBODY CHARACTERISTICS

WATERBODY TYPE:	Pond
AVG. DEPTH:	5 feet
AVG. WIDTH (WATER SURFACE):	70 feet
APPROXIMATE SIZE:	0.2 acre

QUALITATIVE ATTRIBUTES

AVERAGE WATER APPEARANCE:	Dark
PRIMARY SUBSTRATE (IF OBSERVED):	Silt
POTENTIAL HABITAT FOR:	Fish, waterfowl, amphibians
SURROUNDING LAND USE:	Maintained lawn
WETLAND FRINGE (IF PRESENT):	None

COMMENTS

Site Photos

West

Southwest

Southwest

Southeast

Exhibit 10

1. PROJECT INFORMATION

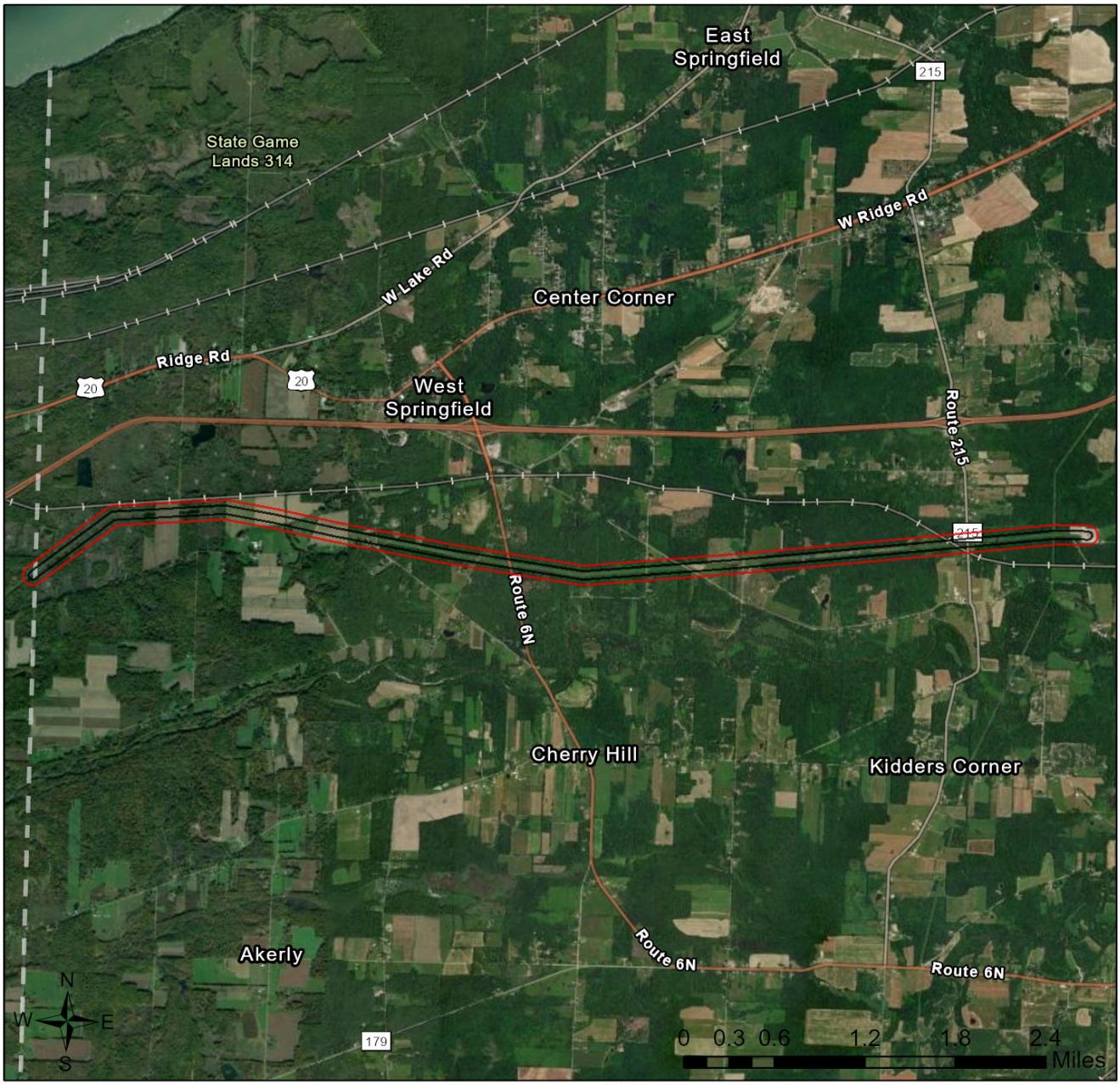
Project Name: **Ashtabula-Erie West 345 kV Transmission Line Rehab Project**
Date of Review: **1/31/2025 03:26:23 PM**
Project Category: **Energy Storage, Production, and Transfer, Energy Transfer, Power/electric line - service, replace existing above/under-ground line**
Project Area: **262.95 acres**
County(s): **Erie**
Township/Municipality(s): **Conneaut Township; Springfield Township**
ZIP Code:
Quadrangle Name(s): **CONNEAUT; EAST SPRINGFIELD**
Watersheds HUC 8: **Chautauqua-Conneaut**
Watersheds HUC 12: **Crooked Creek; Marsh Run-Conneaut Creek; Turkey Creek-Frontal Lake Erie**
Decimal Degrees: **41.929292, -80.451910**
Degrees Minutes Seconds: **41° 55' 45.4499" N, 80° 27' 6.8742" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	**Potential Impact**	**FURTHER REVIEW IS REQUIRED, See Agency Response**
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

Ashtabula-Erie West 345 kV Transmission Line Rehab Project

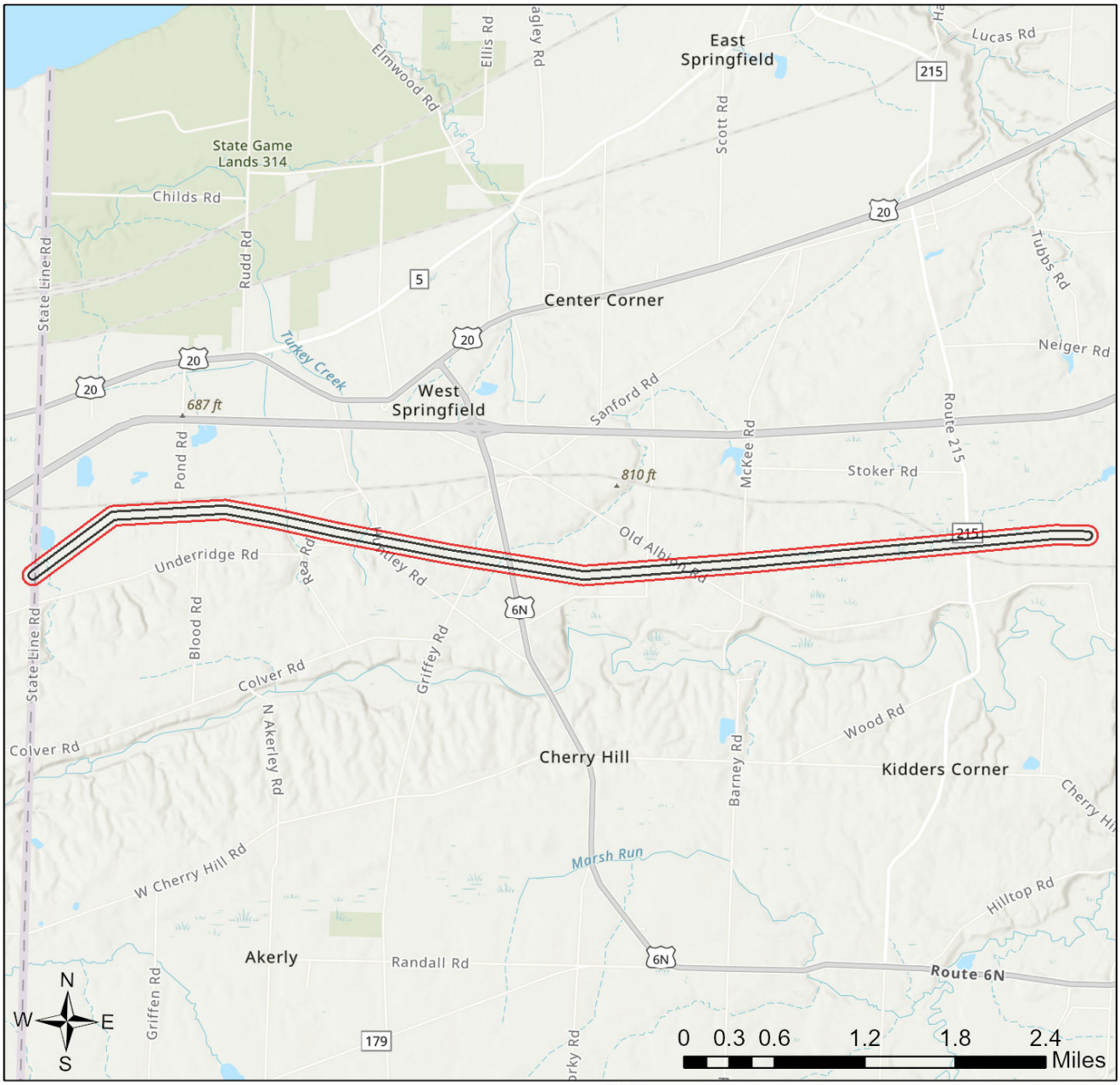


Buffered Project Boundary

Project Boundary

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Ashtabula-Erie West 345 kV Transmission Line Rehab Project



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

RESPONSE TO QUESTION(S) ASKED

Q1: Will the entire project (including any discharge) occur in or on an existing building, parking lot, driveway, road, road shoulder, street, runway, paved area, railroad bed, maintained (periodically mown) lawn, crop agriculture field or maintained orchard?
Your answer is: No

Q2: Accurately describe what is known about wetland presence in the project area or on the land parcel by selecting ONE of the following. "Project" includes all features of the project (including buildings, roads, utility lines, outfall and intake structures, wells, stormwater retention/detention basins, parking lots, driveways, lawns, etc.), as well as all associated impacts (e.g., temporary staging areas, work areas, temporary road crossings, areas subject to grading or clearing, etc.). Include all areas that will be permanently or temporarily affected -- either directly or indirectly -- by any type of disturbance (e.g., land clearing, grading, tree removal, flooding, etc.). Land parcel = the lot(s) on which some type of project(s) or activity(s) are proposed to occur.
Your answer is: Someone qualified to identify and delineate wetlands (holding a natural resource degree or equivalent work experience) has investigated the site, and determined that wetlands ARE located in or within 300 feet of the project area. (A written report from a wetland specialist, and detailed project maps should document this.)

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jursidictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission
RESPONSE:
No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources
RESPONSE:
Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

DCNR Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below. After desktop review, if a botanical survey is required by DCNR, we recommend the DCNR Botanical Survey Protocols, available here: https://conservationexplorer.dcnr.pa.gov/content/survey-protocols)

Scientific Name	Common Name	Current Status	Proposed Status	Survey Window
Fraxinus profunda	Pumpkin Ash	Endangered	Endangered	Flowers late April - early May
Luzula bulbosa	Southern Wood-rush	Special Concern Species*	Threatened	Flowers late March - June; fruits April - June

PA Fish and Boat Commission
RESPONSE:
No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service
RESPONSE:
No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.
** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email the following information to the agency(s) (see AGENCY CONTACT INFORMATION). Instructions for uploading project materials can be found here. This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies (but not USFWS).
*If information was requested by USFWS, applicants must email, or mail, project information to IR1_ESPenn@fws.gov to initiate a review. USFWS will not accept uploaded project materials.

Check-list of Minimum Materials to be submitted:
____Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.
____A map with the project boundary and/or a basic site plan(particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)
In addition to the materials listed above, USFWS REQUIRES the following
____**SIGNED** copy of a Final Project Environmental Review Receipt

The inclusion of the following information may expedite the review process.
____Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)
____Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION
The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
Email: IR1_ESPenn@fws.gov
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Management
Division of Environmental Review
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name:_____
Company/Business Name:_____
Address:_____
City, State, Zip:_____
Phone:(_____)_____Fax:(_____)_____
Email:_____

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

_____ _____
applicant/project proponent signature date

Exhibit 11

September 17, 2025

PNDI Number: 815124
Version: Final_1; 1/31/2025

Matt Abbott
Jacobs
2 Crowne Point Ct
Cincinnati, OH 45241
Email: matt.abbott@jacobs.com (hard copy will not follow)

Re: Ashtabula-Erie West 345 kV Transmission Line Rehab Project
Conneaut and Springfield Townships, Erie County, PA

Dear Matt,

Thank you for the submission of your field survey for Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Receipt Number **815124 (Final_1)** for review. PA Department of Conservation and Natural Resources screened this project for potential impacts to species and resources under DCNR's responsibility, which includes plants, terrestrial invertebrates, natural communities, and geologic features only.

No Impact Anticipated per Survey with Avoidance Measures

PNDI records indicate species or resources under DCNR's jurisdiction are located in the vicinity of the project. DCNR requested a botanical survey for 11 target species on February 13, 2025. Surveys were conducted by Jacobs on June 16-19 and August 4-7, 2025. Two of the target species, pumpkin ash (*Fraxinus profunda*; PA Endangered) and northern water-plantain (*Alisma triviale*; PA Endangered) were documented within the study area.

Avoidance Measures:

Over 25 *Fraxinus profunda* young saplings or resprouts were encountered and all will be avoided. The largest concentration was found along a proposed access road (see Jacobs' botanical survey report dated August 2025, Appendix D, Figures 1-19 and 1-20). To avoid impacts, this road is no longer being considered for use. Another grouping was observed around a work area (see Appendix D, Figures 1-17 and 1-18). One sapling was documented within a pull site, which will be narrowed to avoid impacts. Another sapling was documented near a proposed access road, which will be shifted away from its position. A smaller population was observed outside of the work area (see Appendix D, Figure 1-16).

Three subpopulations of *Alisma triviale* were observed within a single large wetland and occur adjacent to existing dirt and gravel drives (see Appendix D, Figures 1-19 and 1-20). All subpopulations will be avoided. One subpopulation overlaps with a proposed work pad; however, the pad will be shifted so that it no longer impacts this subpopulation.

Orange construction fencing and E&S controls will be installed between work areas and adjacent *Fraxinus profunda* and *Alisma triviale*. These precautions are not necessary for *Fraxinus profunda* documented outside the ROW or along the access road removed from the project scope. All locations of

Fraxinus profunda and *Alisma triviale*, as well as specifications for fencing, will be included on project plans and communicated to relevant personnel.

Based on the avoidance of *Fraxinus profunda* and *Alisma triviale*, DCNR has determined that no impact is likely. No further coordination with our agency is needed for this project.

Recommended Best Management Practices:

- Use a conservative approach to project design that minimizes permanent and temporary disturbances to soil and native vegetation. This will conserve habitat and limit opportunities for invasive plants.
- Clean boot treads, tools, construction equipment, watercraft, and vehicles thoroughly (especially the undercarriage and wheels) before they are brought on site. This will remove invasive plant seeds and invasive earthworms/cocoons that may have been picked up at other worksites.
- Use clean project materials (e.g., weed-free straw, topsoil, rock fill, etc.) or materials native to the worksite to avoid introducing invasive species from contaminated sources.
- Do not use seed mixes that include invasive species. More information about invasive plants in Pennsylvania can be found at the following link: http://www.dcnr.pa.gov/Conservation/WildPlants/InvasivePlants/Pages/default.aspx
- Use habitat appropriate seed mixes and, when available, use PA ecotypes. For example, use a riparian seed mix when reseeding along a waterway. The Bureau of Forestry Planting & Seeding Guidelines can be found at the following link for recommendations: http://www.docs.dcnr.pa.gov/cs/groups/public/documents/document/dcnr_20031083.pdf
- Use native plants for landscaping, revegetation, and stormwater management. Do not use nonnative invasive species. Reduce the area of lawn and impermeable surfaces to the fullest extent practicable in favor of native gardens or habitat restoration (e.g., forest, meadow, wetland, etc.). More information about lawn conversion can be found at the following link: https://www.dcnr.pa.gov/Conservation/Water/LawnConversion/Pages/default.aspx
- Plant forest buffers where trees were historically present along streams, wetlands, and bodies of water. Buffers should be a minimum of 35 feet in width (ideally at least 100 feet in width). Where trees are not appropriate (e.g., powerline rights-of-way), buffer with native shrubs and herbaceous plants. More information about riparian buffers can be found at the following link: https://www.dcnr.pa.gov/Conservation/Water/RiparianBuffers/Pages/default.aspx
- Manage road/utility rights-of-way, median strips, edges, and other green spaces for diverse native plant communities and wildlife (e.g., common and swamp milkweed for monarch butterfly). In seed mixes, include PA native wildflowers that have overlapping bloom periods and provide forage for pollinators throughout the growing season.
- Avoid blanket herbicide applications; instead, spot-treat undesirable tall woody vegetation and invasive weeds. Where mowing is necessary, reduce frequency to once every few years during the dormant season (i.e., after first frost in late fall and before bird nesting in early spring), leaving some refugia for overwintering wildlife.
- Monitor for invasive plants before, during, and after project activities and promptly control any identified infestations. Frequent monitoring allows for early detection and rapid response.

P.O. Box 8552, Harrisburg, PA 17015-8552 717-787-3444 (fax) 717-772-0271

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This response represents the most up-to-date review of the PNDI data files and is valid for two (2) years only. If project plans change or more information on listed or proposed species becomes available, our determination may be reconsidered. Should the proposed work continue beyond the period covered by this letter and a permit has not been acquired, please resubmit the project to this agency as an "Update" (including an updated PNDI receipt, project narrative, description of project changes and accurate map). As a reminder, this finding applies to potential impacts under DCNR's jurisdiction only. Visit the PNHP website for directions on contacting the Commonwealth's other resource agencies for environmental review.

Should you have any questions or concerns, please contact Jason Ryndock, Ecological Information Specialist, by phone (717-705-2822) or via email (c-jryndock@pa.gov).

Sincerely,

Greg Podniesinski, Section Chief
Natural Heritage Section

Exhibit 12

Pennsylvania State Historic Preservation Office
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

August 12, 2025

Sent Via PA-SHARE

RE: ER Project # 2025PR03698.001, Perry-Ashtabula-West Erie S29 345kV Rehab Project, Erie County, Pennsylvania, Department of Energy, Conneaut Township, Erie County

Dear Submitter,

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Above Ground Resources
No Above Ground Concerns - Environmental Review - No Effect - Above Ground

Based on the information received and available within our files, and as outlined in our Guidelines for Projects with Potential Visual Effects, it is our opinion that the new poles will not have a greater visual effect than the existing infrastructure and the proposed project will have No Effect on above ground historic properties, including historic buildings, districts, structures, and/or objects, should they exist. Should the scope of the project change and/or should you be made aware of historic property concerns, you will need to reinitiate consultation with our office using PA-SHARE.

For questions concerning above ground resources, please contact Sara-Ladd Manley at samanley@pa.gov.

Archaeological Resources
More Information Requested - Environmental Review - More Info Archaeological - High Prob

Based on an evaluation by our staff, there is a high probability that National Register-eligible archaeological sites are present within this project area. These sites could be adversely affected by project activities. Our review considers the locations of known archaeological resources, the Statewide Pre-Contact Predictive Model, soil type, topographic setting, slope direction and distance to water, among other regionally specific predictive factors for archaeological site locations. It is our opinion that a Phase I archaeological survey should be conducted to locate potentially significant resources. Furthermore, PA SHPO concurs with the proposed Phase I survey methodologies. Guidelines and instructions for conducting all phases of archaeological survey in Pennsylvania are available on our website.

More Information Requested - New Survey

Please use this request for more information to enter survey and resource details and upload the survey report. Please submit the requested materials to the PA SHPO through PA-SHARE using the link under SHPO Requests More Information on the Response screen. Please submit the requested materials to the PA SHPO through PA-SHARE using the link under SHPO Requests More Information on the Response screen.

For questions concerning archaeological resources, please contact Kristen Walczesky at kwalczesky@pa.gov.

Sincerely,

Barbara Frederick
Environmental Review Division Manager

Pennsylvania State Historic Preservation Office
PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION

Exhibit 12

August 29, 2025

Sent Via PA-SHARE

RE: ER Project # 2025PR03698.002, Perry-Ashtabula-West Erie S29 345kV Rehab Project, Erie County, Pennsylvania, Department of Energy, Conneaut Township, Erie County

Dear Submitter,

Thank you for submitting information concerning the above referenced project. The Pennsylvania State Historic Preservation Office (PA SHPO) reviews projects in accordance with state and federal laws. Section 106 of the National Historic Preservation Act of 1966, and the implementing regulations (36 CFR Part 800) of the Advisory Council on Historic Preservation, is the primary federal legislation. The Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988) is the primary state legislation. These laws include consideration of the project's potential effects on both historic and archaeological resources.

Archaeological Resources
No Archaeological Concerns - Environmental Review - Negative Survey Report/Negative Survey Form

This report meets our standards and specifications as outlined in Guidelines for Archaeological Investigations in Pennsylvania (SHPO 2021) and the Secretary of the Interior's Guidelines for Archaeological Documentation. We agree with the recommendations of this report, and in our opinion, no further archaeological work is necessary for this project. If project plans should change and/or you should be made aware of historic property concerns, please reinitiate consultation with our office using PA-SHARE.

For questions concerning archaeological resources, please contact Clare Connelly at clconnelly@pa.gov.

Sincerely,

Barbara Frederick
Environmental Review Division Manager

CONFIDENTIAL

ATTACHMENT A

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

LETTER OF NOTIFICATION OF MID-ATLANTIC INTERSTATE TRANSMISSION, LLC FOR APPROVAL OF THE ASHTABULA-ERIE WEST 345 KILOVOLT TRANSMISSION LINE REBUILD PROJECT IN SPRINGFIELD AND CONNEAUT TOWNSHIPS, ERIE COUNTY, PENNSYLVANIA.	:	**Docket No. _____**

VERIFICATION

I, Michael DeSarro, state that I am a Transmission Specialist for FirstEnergy Service Company; that I am authorized to make this Verification on behalf of Mid-Atlantic Interstate Transmission, LLC; and that the facts set forth in the Letter of Notification are true and correct to the best of my knowledge, information, and belief. I understand that the statements herein are subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Date: March 31, 2026

Michael DeSarro