Construction Notice for the West Moulton - Amsterdam 138 kV Transmission Line Project

PUCO Case No. 22-0175-EL-BNR

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

Submitted by:
AEP Ohio Transmission Company, Inc.

March 24, 2022

CONSTRUCTION NOTICE

AEP Ohio Transmission Company, Inc.
West Moulton - Amsterdam 138 kV Transmission Line Project

4906-6-05

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

4906-6-5(B) General Information

B(1) Project Description

The name of the project and applicant's reference number, names and reference number(s) of resulting circuits, a brief description of the project, and why the project meets the requirements for a Letter of Notification.

The Company proposes the West Moulton-Amsterdam 138 kV Transmission Line Project ("Project"), which is in Auglaize County, Ohio. The Project involves the construction a new span, approximately 110 feet of 138kV transmission line, which is necessary due to the expansion of the existing West Moulton Station (OPSB Case Number 21-0892-EL-BLN) and a request from Dayton Power & Light (DP&L) for a 138kV interconnection service from their Amsterdam Station to the Company's West Moulton Station. The Company will be responsible for constructing the first span and pole south of the West Moulton Station and DP&L will construct the remaining portion of the 138 kV transmission line. The proposed Project will be constructed on property owned by Ohio Power Company.

Figure 1 and Figure 2, included in **Appendix A,** show the location of the Project in relation to the surrounding vicinity.

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

> *1. New construction, extension, or relocation of single or multiple circuit electric power transmission line(s), or upgrading existing transmission or distribution line(s) for operation at a higher transmission voltage, as follows:*
>
> *a. Lines(s) not greater than 0.2 miles in length.*

The Project has been assigned PUCO Case No. 22-0175-EL-BNR.

B(2) Statement of Need

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

The West Moulton-Amsterdam 138 kV Transmission Line is associated and included in the overall West Moulton 138 kV Station Expansion Project, which is required due to DP&L's request for 138 kV

interconnection service from their Amsterdam Station to the Company's West Moulton Station. This interconnection will help avoid potential extended outages and improve service to DP&L's customers, including a single 55 MW industrial customer. Further, these improvements will provide operational flexibility to withstand outages in the North portion of DP&L's service territory that has been prone to multiple outages, prevent operations voltage and thermal issues in real-time, and strengthen the underlying 69 kV system. To accommodate this interconnection, the Company will expand the planned 138 kV ring bus at the West Moulton Station and connect the 138 kV line from the West Moulton station to DP&L's West Moulton – Amsterdam 138kV Transmission Line, which is associated with this filing request.

West Moulton Station was originally planned to be converted from a straight bus configuration to a four-circuit breaker ring bus configuration in a separate Project (s1856) which was presented and reviewed with PJM stakeholders on January 11, 2019. Subsequently with this new interconnection request from DP&L, West Moulton Station is being changed from a four-breaker ring to a six-breaker ring configuration (S2398). Failure to do this project will result in DP&L's ongoing reliability issues to their customers and the potential to drop 55 MW in industrial load under contingency conditions.

The Project was presented by DP&L to PJM and reviewed with stakeholders on October 16, 2020 and was assigned PJM #s2398.

B(3) Project Location

The applicant shall provide the location of the project in relation to existing or proposed lines and substations shown on an area system map of sufficient scale and size to show existing and proposed transmission facilities in the Project area.

The location of the Project in relation to existing and proposed transmission lines and substations is shown on **Figure 1**.

The Project directly impacts the following existing facilities:

- West Moulton Station

B(4) Alternatives Considered

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

The proposed Project is new construction and connection of the existing West Moulton-Amsterdam 138kV Transmission Line as result of the expansion of the West Moulton 138 kV Station. Other alternatives would require impacting neighboring properties, as opposed to remaining on Company property. The proposed construction of the West Moulton-Amsterdam 138kV Transmission line would also allow for minimized length of adjustments required to tie-into the expansion area of the West Moulton Station. Lastly, the proposed design minimizes disturbance and impacts to existing infrastructure by connecting to the existing West Moulton-Amsterdam 138kV Transmission Line.

Furthermore, The Project is also located on undeveloped fallow land and will not impact any streams. Additionally, the Project will only require clearing of shrubs and grasslands and no permanent impacts are anticipated to occur to delineated wetlands, , detailed below in Section B(10)(f). Relocating the existing station and associated lines off Ohio Power Company property would have a greater impact to property owners, land use, and potential for a greater impact to environmental features. Therefore, the West Moulton-Amsterdam 138kV Transmission line would result in minimal disturbances relative to other design alternatives and represents the most suitable location and most appropriate solution for meeting the Company's and DP&L's needs.

B(5) Public Information Program

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

The Company maintains a website (http://aeptransmission.com/ohio/) on which an electronic copy of this CN is available. An electronic copy of the CN will be served to the public library in each political subdivision affected by this Project. The Company also retains land agents who will discuss project timelines, construction and restoration activities with affected owners and tenants.

B(6) Construction Schedule

The applicant shall provide an anticipated construction schedule and proposed in-service date of the project.

Construction of the Project is anticipated to begin in June 2022, and the anticipated in-service date is December 2022.

B(7) Area Map
The applicant shall provide a map of at least 1:24,000 scale clearly depicting the facility with clearly marked streets, roads, and highways, and an aerial image.

Figure 1 provides the proposed Project area, the locations of the existing transmission lines, West Moulton Station, and the proposed transmission line on a map of 1:24,000-scale (1-inch equals 2,000 feet), showing the Project on a topographic map of the Moulton and St. Mary's quadrangle provided by the National Geographic Society. **Figure 2** shows the Project area on recent aerial photography, dated 2021, as provided by Google Earth Aerial Imagery Extension, at a scale of 1:2,400 (1-inch equals 200 feet).

To visit the Project site from Columbus, Ohio, take I-70 West to I-270 North toward Cleveland for approximately 9 miles. Take Exit 17B to merge onto Ohio State Route 161 West/U.S. 33 West. Follow US-33 for approximately 80 miles. Turn left onto Townline Kossuth Road and follow Townline Kossuth Road for 0.2 mile. The western end of the Project site will be on the right. The approximate address of the West Moulton Station site is 13921 Townline Kossuth Road, St. Mary's, Ohio 45885, at latitude 40.552805, longitude -84.339802.

B(8) Property Agreements

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

All work activities are proposed on a parcel (PARID#: K3190000801) owned by Ohio Power Company and no other landowners will be directed affected by the project.

B(9) Technical Features

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

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

The transmission line construction for the West Moulton-Amsterdam 138kV transmission line include the following:

Voltage:	138kV
Conductors:	795 KcmACSR 45/7 Strand, Tern
Static Wire:	7#10 Alumoweld
Insulators:	Polymer
ROW Width:	100-foot
Structure Types:	One (1) double circuit, steel monopole with davit arms

B(9)(b) Electric and Magnetic Fields

For electric power transmission lines that are within one hundred feet of an occupied residence or institution, the production of electric and magnetic fields during the operation of the proposed electric power transmission line.

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

B(9)(c) Project Cost

The estimated capital cost of the project.

The capital cost estimate for the proposed Project, which is comprised of applicable tangible and capital costs, is approximately $333,900 using a Class 4 estimate. Pursuant to the PJM OATT, the costs for this Project will be recovered in the AEP Ohio Transmission Company's FERC formula rate (Attachment H-20 to the PJM OATT) and allocated to the AEP Zone.

B(10) Social and Economic Impacts

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

B(10)(a) Land Use Characteristics

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

An aerial photograph of the Project vicinity is provided as **Figure 2**. The Project location and vicinity have historically been primarily agricultural land with scattered woodlots. The Project is mapped within the northeastern corner of St. Mary's Township, Auglaize County. The Project vicinity is currently rural in nature, and is comprised primarily of agricultural land used for row crops, and lesser amounts of old fields, forested land, landscaped areas, and scattered residences.

B(10)(b) Agricultural Land Information

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

The Auglaize County Auditor provided a list of parcels registered as Agricultural District Land on February 9, 2022. As a result, the Project is not located within lands identified as Agricultural District Lands. The Project is located on undeveloped, fallow land and no agricultural land is anticipated to be impacted.

B(10)(c) Archaeological and Cultural Resources

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

Phase I Archaeological Investigation and a separate History/Architecture Investigation for the Project occurred in January 2020. No archaeological sites were identified within the Project area, and no historic properties listed or eligible for listing in the National Register of Historic Places were identified. Consultation with the Ohio State Historic Preservation Office ("SHPO") was initiated in January 2020, and an updated response from the Ohio SHPO was received in July 2021, and is included in **Appendix B**. The SHPO stated that the Project will have no effect on historic properties, and that no further investigation or consultation with the SHPO is necessary.

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

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

A Notice of Intent will be filed with the Ohio Environmental Protection Agency for authorization of construction storm water discharges under General Permit OHC000005. The Company will also coordinate storm water permitting needs with local government agencies, as necessary. The Company will implement and maintain best management practices as outlined in the Project-specific Storm Water Pollution Prevention Plan to minimize erosion and control sediment to protect surface water quality during storm events.

The Company's consultant conducted a stream and wetland delineation within the Project study area. Three wetlands and 1 intermittent stream were identified within the Project study area. Under the West Moulton Substation Expansion Project, the Company received a US Army Corps of Engineers ("USACE") approval for the proposed disturbance and jurisdictional status of the wetlands and streams identified within the Project Study Area. No additional temporary and/or permanent disturbances to wetlands and/or streams are anticipated to be required for this Project. Therefore, coordination with the USACE is not anticipated to be required for this Project. Additional details regarding the delineated features are provided in Section (10)(f) below.

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

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

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

The United States Fish and Wildlife Service (USFWS) *Ohio County Distribution of Federally-Listed Threatened, Endangered, Proposed, and Candidate Species* (available at https://www.fws.gov/midwest/Endangered/lists/pdf/OhioCtyList29Jan2018.pdf) was reviewed to identify the threatened and endangered species known to occur in the Project county. This USFWS publication lists the Indiana bat (*Myotis sodalis*; federally endangered) and northern long-eared bat (*Myotis septentrionalis*; federally threatened). On March 2, 2018, coordination letters were sent to USFWS and the Ohio Department of Natural Resources (ODNR) soliciting responses.

Responses were received from the USFWS on March 9, 2018 and from the ODNR on March 23, 2018. According to a response letter received from the USFWS on March 9, 2018, this Project is located within the range of the federally endangered Indiana bat and federally threatened northern long-eared bat. With regard to state threatened and endangered species that may occur within the Project vicinity, five species were listed by ODNR. These species included: Indiana bat, club shell, pondhorn, greater redhorse, and lark sparrow. No impacts are anticipated to the club shell, pondhorn, or greater redhorse, as no in-water work is proposed as part of the Project. A copy of the agency correspondence is provided in **Appendix C**.

Based on general observations during the ecological survey, a portion of the Project survey corridor contained potential summer habitat for the Indiana bat and the northern long-eared bat. The USFWS commented that due to the project type, size, and location, and the proposal to adhere to seasonal tree cutting between October 1 and March 31, there should be no adverse effects to the Indiana bat or northern long-eared bat. ODNR stated that presence of the Indiana bat has been established in the area, therefore additional summer surveys would not constitute presence/absence in the area and if trees must be cut, the Department of Wildlife (DOW) recommends seasonal tree clearing activities to occur between October 1 and March 31. Based on review of the existing land use associated with the Project area, no tree clearing is anticipated to be required for the Project.

The DOW indicated that the Project is within the range of the lark sparrow, a state endangered bird. The sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, and patches of bare soil. The DOW stated if potential habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 to June 30. The Company's consultant completed a field assessment within the Project area on May 26, 2020 and no potential habitat was identified within the Project area. Therefore, the Project is not anticipated to have an adverse effect on lark sparrow or its nesting habitat. Additional information regarding habitat assessments within the Project area is provide within the Wetland Delineation and Stream Assessment Report found in **Appendix D**.

B(10)(f) Areas of Ecological Concern

Provide a description of the applicant's investigation concerning the presence or absence of areas of ecological concern (including national and state forests and parks, floodplains, wetlands, designated or proposed wilderness areas, national and state wild and scenic rivers, wildlife areas, wildlife refuges, wildlife management areas, and wildlife sanctuaries) that may be located within the potential disturbance area of the project, a statement of the findings of the investigation, and a copy of any document produced as a result of the investigation.

The Company's consultant prepared a Wetland Delineation and Stream Assessment Report and Addendum Wetland Delineation and Steam Assessment Report, which are provided in **Appendix D**. The survey of the Project area identified a total of three wetlands totaling 1.57 acres and one intermittent stream. One delineated wetland was classified as palustrine emergent (PEM), and the other two wetlands were each classified as PEM and palustrine shrub/scrub (PSS) complexes.

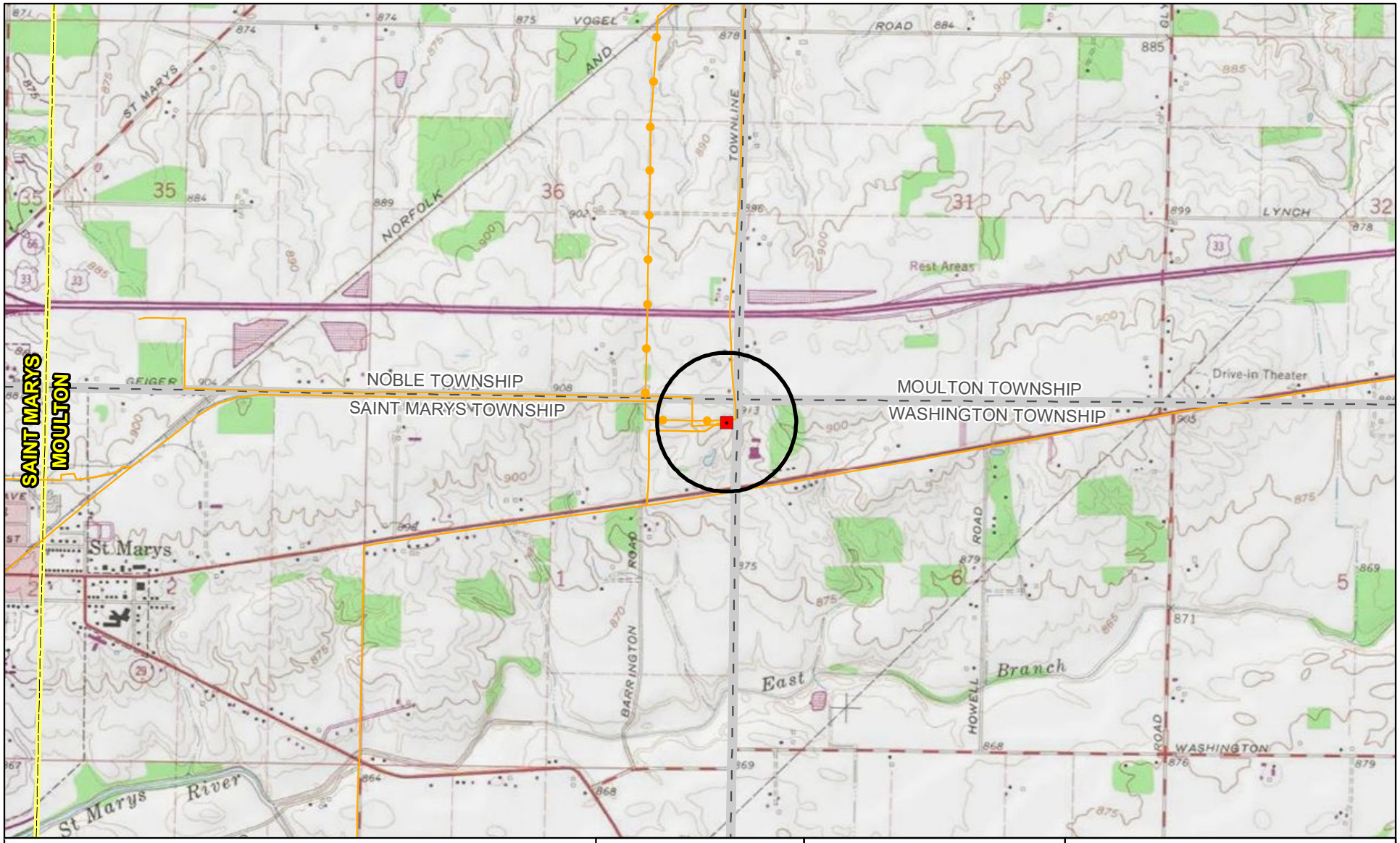
The Project is not anticipated to require permanent disturbances to wetland areas as well as no streams will be impacted by the Project. However, one PEM wetland (Wetland 02a) will have temporary timber matting for equipment access installed within the previously approved disturbance area associated with the West Moulton Station PCN authorization. Therefore, no further coordination regarding disturbances to wetlands and/or streams are anticipated for this Project.

B(10)(g) Unusual Conditions

Provide any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

To the best of the Company's knowledge, no unusual conditions exist that would result in significant environmental, social, health, or safety impacts.

Appendix A Project Figures



Existing Station

Existing Transmission Lines

- 69 kV
- 138 kV

USGS 7.5' Topographical Quadrangle

Project Area

Township Boundary

Data Sources: AEP (2021), ESRI (2013), PowerMap (2010) USGS 7.5 Topographic Quadrangle (Moulton)

Coordinate System: State Plane Ohio North NAD 83

February 14, 2022

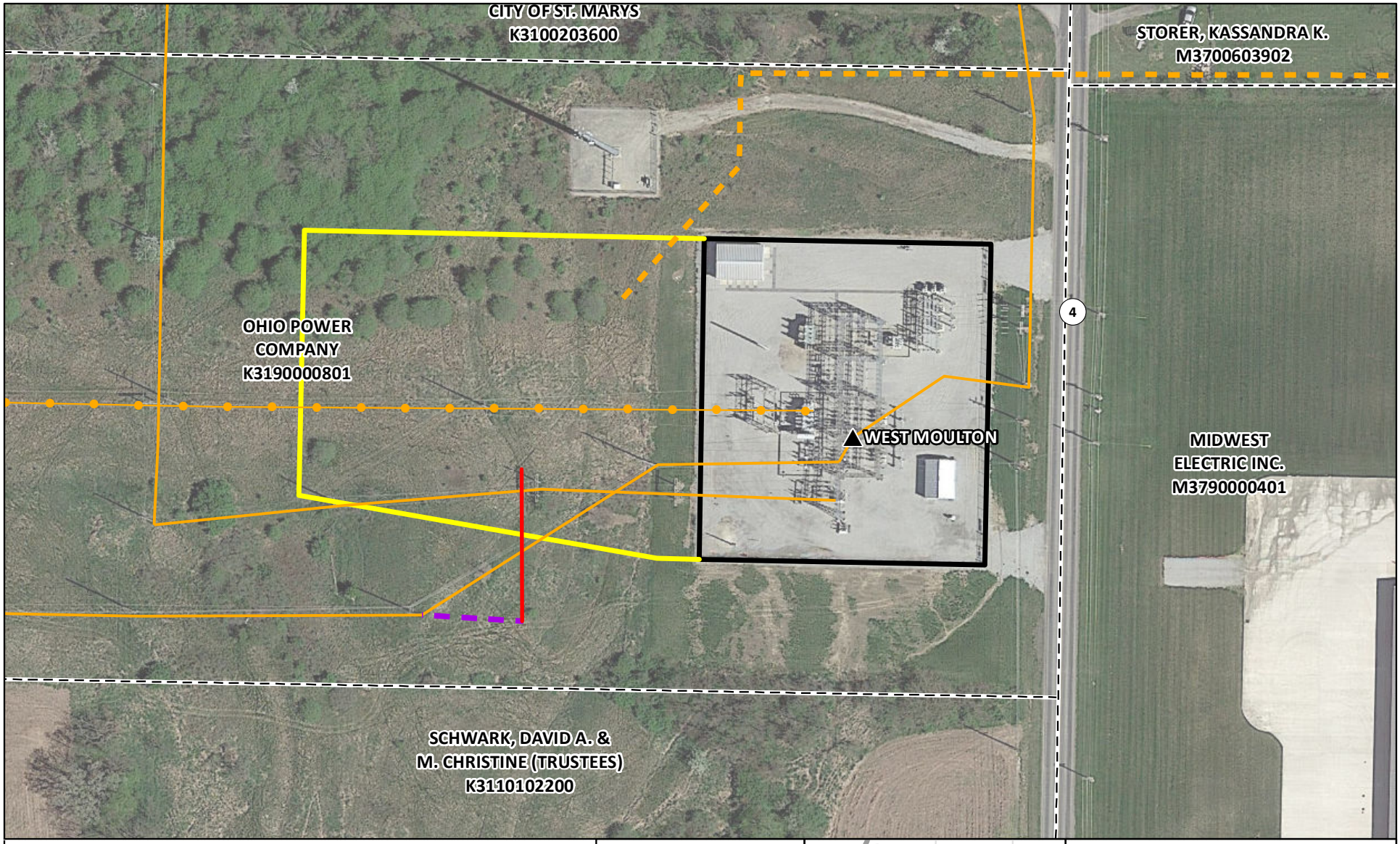
FIGURE 1
TOPOGRAPHIC OVERVIEW

AEP OHIO TRANSMISSION COMPANY

West Moulton - Amsterdam 138 kV Transmission Line Adjustment Project

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

Feet



Existing Station
Proposed Transmission Line

Existing Transmission Lines

69 kV
138 kV
Proposed Fence PUCO Case No. 21-0892-EL-BLN
Existing Fence
Proposed West Moulton - Gemini 138 kV Transmission Centerline
DP&L Transmission Line
Property Boundary

Data Sources: AEP (2021), Google (2021), PowerMap (2010)

Coordinate System: State Plane Ohio North NAD 83

March 23, 2022

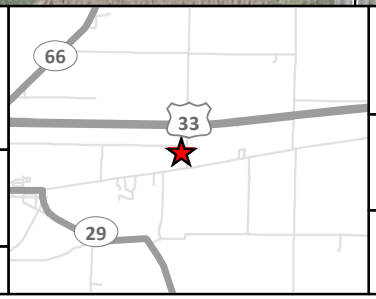


FIGURE 2
AERIAL MAP

AEP OHIO TRANSMISSION COMPANY

West Moulton - Amsterdam 138 kV Transmission Line Adjustment Project

0 100 200
Feet

Appendix B SHPO Coordination

In reply, refer to
2020-AUG-47151

July 7, 2021

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

RE: West Moulton Station Expansion Project, Saint Marys Township, Auglaize County, Ohio

Dear Mr. Weller:

This letter is in response to the correspondence received on July 2, 2021 regarding the proposed West Moulton Station Expansion Project, Saint Marys Township, Auglaize County, Ohio. We appreciate the opportunity to comment on this project. The comments of the Ohio State Historic Preservation Office (SHPO) are made pursuant to Section 149.53 of the Ohio Revised Code and the Ohio Power Siting Board rules for siting this project (OAC 4906-5). The comments of the Ohio SHPO are also submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended (54 U.S.C. 306108 [36 CFR 800]).

The following comments pertain to the *Phase I Archaeological Investigations for the 5.9 ha (14.6 ac) West Moulton Station Expansion Project in St. Marys Township, Auglaize County, Ohio* by Weller & Associates, Inc. (2020). This report is an update of the report originally received by our office on January 7, 2020.

A literature review, visual inspection, surface collection, shovel probe, and shovel test unit excavation was completed as part of the investigations. In 2020, no previously identified archaeological sites were located within the project area and no new archaeological sites were identified in the project area. A small section of project area was added to the northern boundary of the original 2020 project area. No archaeological sites were identified in this new area. Our office agrees no additional archeological investigation is needed.

The following comments pertain to the *History/Architecture Investigations for the 5.9 ha (14.6 ac) West Moulton Station Expansion Project in St. Marys Township, Auglaize County, Ohio* by Weller & Associates, Inc. (2020). This report is an update of the report originally received by our office on January 7, 2020.

A literature review and field survey were completed as part of the investigations. In 2020, seventy (17) resources (including one extant OHI property) was identified within the study area that may have a direct line of sight to the project. It was Weller's recommendation that the identified properties were not eligible for listing in the National Register of Historic Places (NRHP). Our office agreed with Weller's recommendation. No additional properties were identified within the additional project area or study area.

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

Sincerely,

Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1089191-1089192

Appendix C ODNR and USFWS Correspondence

Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR JAMES ZEHRINGER, DIRECTOR

Office of Real Estate
Paul R. Baldridge, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6649
Fax: (614) 267-4764

March 23, 2018

Jason Tucker
AECOM
525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

Re: 18-409; Wapakoneta Improvements Project

Project: The proposed project includes a new Gristmill Station, a new Gemini Station, a new 138 kV transmission line between Gristmill and Gemini Stations, a new 138 kV transmission line between Gemini and West Moulton Stations, and expanding the West Moulton Station.

Location: The proposed project is located in Pusheta and Washington Townships, Auglaize County, Ohio.

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

Natural Heritage Database: The Natural Heritage Database has the following records at or within a one-mile radius of the project area:

Greater redhorse (*Moxostoma valenciennesi*), State threatened, federal species of concern
Great blue heron rookery

The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980. This information is provided to inform you of features present within your project area and vicinity. Additional comments on some of the features may be found in pertinent sections below.

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

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The project area east of Dixie Highway and south of Weimert School Road is within the vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. Presence of the Indiana bat has been established in the area, and therefore additional summer surveys would not constitute presence/absence in the area. The following species of trees have relatively high value as potential Indiana bat roost trees to include: shagbark hickory (*Carya ovata*), shellbark hickory (*Carya laciniosa*), bitternut hickory (*Carya cordiformis*), black ash (*Fraxinus nigra*), green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), shingle oak (*Quercus imbricaria*), northern red oak (*Quercus rubra*), slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), eastern cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), sassafras (*Sassafras albidum*), post oak (*Quercus stellata*), and white oak (*Quercus alba*). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31.

The remainder of the project area is within the range of the Indiana bat (*Myotis sodalis*). If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the clubshell (*Pleurobema clava*), a state endangered and federally endangered mussel, and the pondhorn (*Uniomerus tetralasmus*), a state threatened mussel. This project must not have an impact on freshwater native mussels at the project site. This applies to both listed and non-listed species. Per the Ohio Mussel Survey Protocol (2016), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 10 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. This is further explained within the Ohio Mussel Survey Protocol. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, as a last resort, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. The Ohio Mussel Survey Protocol (2018) can be found at:

http://wildlife.ohiodnr.gov/portals/wildlife/pdfs/licenses%20&%20permits/OH%20Mussel%20Survey%20Protocol.pdf

The project is within the range of the greater redhorse (*Moxostoma valenciennesi*), a state threatened fish. The DOW recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this or other aquatic species.

The project is within the range of the lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 to June 30. If this habitat will not be impacted, the project is not likely to impact this species.

The DOW has a record for a great blue heron rookery within the boundary of the project area. The rookery is located within the large woodlot between the following roads: Washington Pike, Burr Oak Road, Kettlersville Road, and Kohler Road. Nesting great blue herons are protected under the Migratory Bird Treaty Act of 1918. Impacts to great blue heron rookeries can have a significant impact on a local population due to the large number of birds that return each year to the same rookery to nest. Rookeries often include a certain set of characteristics that are not easily found elsewhere. The DOW recommends that construction activity within the rookery be avoided to preserve the rookery. If construction within the rookery cannot be avoided, the DOW recommends at the very least, the rookery be avoided during the nesting season of March 1 through June 31 as to not interfere with nesting birds. In addition, the DOW recommends a 100 yard no activity buffer be maintained around the rookery during the breeding season as to not interfere with nesting birds.

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

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

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

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

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler
ODNR Office of Real Estate
2045 Morse Road, Building E-2
Columbus, Ohio 43229-6693
John.Kessler@dnr.state.oh.us

Tucker, Jason

From: susan_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov>
Sent: Friday, March 09, 2018 10:35 AM
To: Tucker, Jason
Subject: Wapakoneta Transmission Infrastructures (Several 138 kV Stations) in Auglaize Co.

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

TAILS# 03E15000-2018-TA-0902

Dear Mr. Tucker,

We have received your recent correspondence regarding potential impacts to federally listed species in the vicinity of the above referenced project. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. We recommend that proposed activities minimize water quality impacts, including fill in streams and wetlands. Best management practices should be utilized to minimize erosion and sedimentation.

FEDERALLY LISTED, PROPOSED, AND CANDIDATE SPECIES COMMENTS: Due to the project type, size, location, and the proposed implementation of seasonal tree cutting (clearing of trees ≥3 inches diameter at breast height between October 1 and March 31) to avoid impacts to Indiana bats and northern long-eared bats, we do not anticipate adverse effects to any federally endangered, threatened, proposed or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the U.S. Fish and Wildlife Service (Service) should be initiated to assess any potential impacts.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the Endangered Species Act (ESA), between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

Dan Everson
Field Supervisor

Appendix D Ecological Resources Inventory Report

WEST MOULTON STATION EXPANSION PROJECT AUGLAIZE COUNTY, OHIO

WETLAND DELINEATION AND STREAM ASSESSMENT REPORT

Prepared for:
American Electric Power Ohio Transmission Company
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New Albany, Ohio 43054

Prepared by:

AECOM Imagine it. Delivered.
525 Vine Street, Suite 1800
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Project #: 60567952

January 2020

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LIST OF ACRONYMS and ABBREVIATIONS

AECOM	AECOM Technical Services, Inc.
AEP Ohio Transco	American Electric Power Ohio Transmission Company
DBH	Diameter at Breast Height
DOW	Division of Wildlife
DWR	Division of Water Resources
FAC	Facultative
FACU	Facultative upland
FACW	Facultative wetland
GIS	Geographic Information System
GNSS	Global Navigation Satellite System
HHEI	Headwater Habitat Evaluation Index
IBI	Index of Biotic Integrity
NHD	National Hydrography Dataset
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OAC	Ohio Administrative Code
OBL	Obligate wetland
ODNR	Ohio Department of Natural Resources
OEPA	Ohio Environmental Protection Agency
OHWM	Ordinary High Water mark
ONHD	Ohio Natural Heritage Database
ORAM	Ohio Rapid Assessment Method
PEM	Palustrine emergent
PFO	Palustrine forested
PSS	Palustrine scrub/shrub
PUB	Palustrine unconsolidated bottom
PHW	Primary Headwater
QHEI	Qualitative Habitat Evaluation Index
ROW	Right-of-way
UDF	Upland Drainage Feature
UPL	Upland
U.S.	United States
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
WOTUS	Waters of the U.S.

1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) proposes to expand the existing West Moulton Station (Project) in Auglaize County, Ohio. The Project is one part of the Wapakoneta Improvements Project, having separate Wetland Delineation and Stream Assessment reports for each project component. AEP Ohio Transco identified the existing 14-acre property boundary as the study area for the Project, encompassing the existing West Moulton Station and two transmission lines, as the potential work area (Project survey area). The proposed Project location is illustrated on Figure 1.

The purpose of the field survey was to assess the presence of wetlands and other "Waters of the United States (WOTUS)" within the Project survey area. Secondarily, land cover was recorded to classify and characterize potential habitat for rare, threatened, and endangered species. This report will be used to assist AEP Ohio Transco's efforts to identify potential WOTUS and rare, threatened and endangered species habitat present within the Project survey area to avoid and/or minimize impacts to those resources during construction activities.

2.0 METHODOLOGY

Prior to conducting field surveys, digital United States (U.S.) Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil surveys, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps, U.S. Geological Survey (USGS) National Hydrography Dataset (NHD), and USGS 7.5-minute topographic maps were reviewed to identify the occurrence and location of potential wetlands and streams in the Project survey area.

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

2.1 WETLAND DELINEATION

The Project survey area was evaluated according to the procedures outlined in the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual (*1987 Manual*) (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (Version 2.0) (*MW Regional Supplement*) (USACE, 2010). The *1987 Manual* and *Regional Supplement*

define wetlands as areas that have positive evidence of three environmental parameters: hydric soils, wetland hydrology, and hydrophytic vegetation. Wetland boundaries are placed where one or more of these parameters give way to upland characteristics. The *MW Regional Supplement* was developed to address regional wetland characteristics and improve the accuracy and efficiency of wetland delineation procedures.

During field survey activities AECOM Technical Services Inc. (AECOM) utilized the routine on-site delineation method described in the *1987 Manual* and *MW Regional Supplement* that consisted of a pedestrian site reconnaissance, including soils identification, geomorphologic assessment of hydrology, identification of vegetative communities, and notation of disturbance. The methodology used to examine each parameter is described in the following sections.

2.1.1 SOILS

A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (*MW Regional Supplement*). The presence of hydric soil indicators is positive evidence of the hydric soil parameter. Soils were examined for hydric soil characteristics using a spade shovel to extract soil samples. A *Munsell Soil Color Chart* (Kollmorgen Corporation, 2010) was used to identify the hue, value, and chroma of the matrix and mottles of the soils which describes the soil profile. The completed soil profile was used to determine which, if any, hydric soil indicators were met as detailed in the *MW Regional Supplement*.

2.1.2 HYDROLOGY

The *1987 Manual* requires that an area be inundated or saturated to the surface for a 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 *MW 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-degree Fahrenheit (^{o}F) 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 *MW Regional Supplement* also states that if onsite data gathering is not practical, the growing season can be approximated by the number of days between the average (five years out of 10, or 50 percent probability) date of the last and first 28^{o} F air temperature in the spring and fall, respectively. The National Weather Service WETS data review from the NRCS National Water and Climate Center for Auglaize County, Ohio stated that all three stations lacked sufficient data for this analysis. Therefore, data from neighboring Allen County was reviewed and it was found that in an average year, this period

lasts from April 10 to November 3, or 207 days. For the Project survey area, five percent of the growing season equates to approximately 10 days.

The soils and ground surface were examined for evidence of wetland hydrology in lieu of detailed hydrological data. This is an acceptable approach according to the *1987 Manual* and the *MW 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, micro-topographic relief, and a positive Facultative (FAC)-neutral test (USACE, 2010).

2.1.3 VEGETATION

Dominant vegetation was visually assessed for each stratum (tree, sapling/shrub, herb and woody vine) and an indicator status of obligate wetland (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), and/or upland (UPL) was assigned to each plant species based on the U.S. Army Corps of Engineers *2016 National Wetland Plant List* (Lichvar et al, 2016) Midwest Region indicator, which encompasses the Project location. An area is determined to have hydrophytic vegetation when, under normal circumstances, 50 percent or more of the composition of the dominant species are OBL, FACW and/or FAC species. Vegetation of an area was determined to be non-hydrophytic when more than 50 percent of the composition of the dominant species was FACU and/or UPL species. In addition to the dominance test, the FAC-Neutral test and prevalence tests are used to determine if a wetland has a predominance of hydrophytic vegetation. Recent USACE guidance indicates that to the extent possible, the hydrophytic vegetation decision should be based on the plant community that is normally present during the wet portion of the growing season in a normal rainfall year (USACE, 2010).

2.1.4 WETLAND CLASSIFICATION

Wetlands identified in the field were classified based on the naming convention found in *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al, 1979). There are five main classes of wetlands and deepwater habitats, including: marine, estuarine, riverine, lacustrine, and palustrine (Cowardin classifications). Marine and estuarine wetlands are not found in the interior of the U.S. while riverine wetlands are typically delineated as streams (when there is an absence of vegetation within the channel). Lacustrine systems typically include dammed river channels and non-vegetated open water exceeding 20 acres. Palustrine systems, which includes non-tidal wetlands dominated by trees, shrubs, or emergent vegetation, are the primary wetland types which may be identified within the Project survey area. The possible palustrine wetland classification types are as follows:

PEM – Palustrine emergent wetlands are characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.

PSS – Palustrine scrub/shrub wetlands are characterized by woody vegetation that is less than three inches diameter at breast height (DBH), and greater than 3.28 feet tall. The woody angiosperms (i.e., small trees or shrubs) in this broad-leaved deciduous community have relatively wide, flat leaves that are shed annually during the cold or dry season.

PFO – Palustrine forested wetlands are characterized by woody vegetation that is three inches or more DBH, regardless of total height. These wetlands generally include an overstory of broad-leaved and needle-leaved trees, an understory or young saplings and shrubs, and an herbaceous layer.

PUB – Palustrine unconsolidated bottom wetlands includes all open water wetlands and deepwater habitats with at least 25 percent cover of particles smaller than stones, and a vegetative cover less than 30 percent. Palustrine open water wetlands are characterized by the lack of large stable surfaces for plant and animal attachment.

For some wetlands, multiple Cowardin classifications may be present where more than one classification's vegetation is dominant (vegetation covers 30 percent or more of the substrate). Where multiple Cowardin classifications are present, the Cowardin classification of the plants that constitute the uppermost layer of vegetation is listed.

2.1.5 OHIO RAPID ASSESSMENT METHOD v. 5.0

The Ohio Environmental Protection Agency (OEPA) *Ohio Rapid Assessment Method for Wetlands v. 5.0* (ORAM; Mack, 2001) was developed to determine the relative ecological quality and level of disturbance of a wetland in order to meet requirements under the Clean Water Act Section 401 Certification. Wetlands are scored based on the integrity of existing hydrology, upland buffer, habitat alteration, special wetland communities, and vegetation communities. Each of these subject areas is further divided into subcategories under the ORAM resulting in a score that describes the wetland using a range from 0 (low quality and high disturbance) to 100 (high quality and low disturbance). Wetlands scored from 0 to 29.9 are grouped into "Category 1", 30 to 59.9 are "Category 2" and 60 to 100 are "Category 3". Transitional zones exist between "Categories 1 and 2" from 30 to 34.9 and between "Categories 2 and 3" from 60 to 64.9. However, according to the OEPA, if the wetland score falls into the transitional range, it must be given the higher Category unless scientific data can prove it should be in a lower Category (Mack, 2001).

Category 1 Wetlands – support minimal wildlife habitat, hydrological and recreational functions, and do not provide for or contain critical habitats for threatened or endangered species. In addition, Category 1 wetlands are often hydrologically isolated and have some or all of the following characteristics: low species diversity, no significant habitat for wildlife use, limited potential to achieve wetland functions, and/or a predominance of non-native species. These limited quality wetlands are considered to be a

resource that has been severely degraded, has a limited potential for restoration, or is of low ecological functionality.

Category 2 Wetlands – support "moderate wildlife habitat, or hydrological or recreational functions," and as wetlands which are "...dominated by native species but generally without the presence of, or habitat for, rare, threatened or endangered species; and wetlands which are degraded but have a reasonable potential for reestablishing lost wetland functions." Category 2 wetlands constitute the broad middle category of "good" quality wetlands, and can be considered a functioning, diverse, healthy water resource that has ecological integrity and human value. Some Category 2 wetlands are lacking in human disturbance and considered to be naturally of moderate quality; others may have been Category 3 wetlands in the past but have been degraded to Category 2 status.

Category 3 Wetlands – have "...superior habitat, or superior hydrological or recreational functions." They are typified by high levels of diversity, a high proportion of native species, and/or high functional values. Category 3 wetlands include wetlands which contain or provide habitat for threatened or endangered species, are high quality mature forested wetlands, vernal pools, bogs, fens, or which are scarce regionally and/or statewide. A wetland may be a Category 3 wetland because it exhibits one or all the above characteristics. For example, a forested wetland located in the flood plain of a river may exhibit "superior" hydrologic functions (e.g., flood retention, nutrient removal), but not contain mature trees or high levels of plant species diversity.

2.2 STREAM ASSESSMENT

Regulatory activities under the Clean Water Act provide authority for states to issue water quality standards and "designated uses" to all waters of the U.S. upstream to the highest reaches of the tributary streams. In addition, the Clean Water Act requires knowledge of the potential fish or biological communities that can be supported in a stream or river, including upstream headwaters. Streams were identified by the presence of a defined bed and bank, and evidence of an ordinary high-water mark (OHWM). The USACE defines OHWM as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (USACE, 2005).

Stream assessments were conducted using the methods described in the OEPA's Methods for Assessing Habitat in Flowing Waters: Using OEPA's *Qualitative Habitat Evaluation Index* (Rankin, 2006) and in the OEPA's *Field Methods for Evaluating Primary Headwater Streams in Ohio* (OEPA, 2018). Streams assessed in the Project survey area were reviewed for existing OEPA Aquatic Life Use Designations per OEPA's Water Quality Standards (Ohio Administrative Code [OAC] Chapter 3745-1). Those without an

existing use designation were assigned a provisional aquatic life use designation based upon habitat assessment results (Rankin, 1989).

2.2.1 OEPA QUALITATIVE HABITAT EVALUATION INDEX

The Qualitative Habitat Evaluation Index (QHEI) is designed to provide a rapid determination of habitat features that correspond to those physical factors that most affect fish communities and which are generally important to other aquatic life (e.g., macroinvertebrates). The quantitative measure of habitat used to calibrate the QHEI score are Indices (or Index) of Biotic Integrity (IBI) for fish. In most instances the QHEI is sufficient to give an indication of habitat quality, and the intensive quantitative analysis used to measure the IBI is not necessary. It is the IBI, rather than the QHEI, that is directly correlated with the aquatic life use designation for a particular surface water.

The QHEI method is generally considered appropriate for waterbodies with drainage basins greater than one square mile, streams with natural pools greater than 15.75 in in depth, or if the water feature is shown as blue-line waterway on USGS 7.5-minute topographic quadrangle maps. In order to convey general stream habitat quality to the regulated public, the OEPA has assigned narrative ratings to QHEI scores. The ranges vary slightly for headwater streams ("H" are those with a watershed area less than or equal to 20 square miles) versus larger streams ("L" are those with a watershed area greater than 20 square miles). The Narrative Rating System includes: Very Poor (<30 H and L), Poor (30 to 42 H, 30 to 44 L), Fair (43 to 54 H, 45 to 59 L), Good (55 to 69 H, 60 to 74 L) and Excellent ($\geq$70 H, $\geq$75 L).

2.2.2 OEPA PRIMARY HEADWATER HABITAT EVALUATION INDEX

Headwater streams are typically considered to be first-order and second-order streams, meaning streams that have no upstream tributaries (or "branches") and those that have only first-order tributaries, respectively. The stream order concept can be problematic when used to define headwater streams because stream-order designations vary depending upon the accuracy and resolution of the stream delineation. Headwater streams are generally not shown on USGS 7.5-minute topographic quadrangles and are sometimes difficult to distinguish on aerial photographs. Nevertheless, headwater streams are now recognized as useful monitoring units due to their abundance, widespread spatial scale and landscape position (Fritz, et al, 2006). Impacts to headwater streams can have a cascading effect on the downstream water quality and habitat value. The headwater habitat evaluation index (HHEI) is a rapid field assessment method for physical habitat that can be used to appraise the biological potential of most Primary Headwater (PHW) streams. The HHEI was developed using many of the same techniques as used for QHEI, but has criteria specifically designed for headwater habitats. To use HHEI, the stream must have a "defined bed and bank, with either continuous or periodically flowing water, with watershed area less than or equal to 1.0 square mile, ***and*** a maximum depth of water pools equal to or less than 15.75 inches" (OEPA, 2018). Pool depth and water volume of headwater streams are normally

insufficient to fully support the biological criteria associated with other sub-categories of aquatic life described OAC 3745-1-07.

Headwater streams are scored based on channel substrate composition, bankfull width, and maximum pool depth. Assessments result in a score (0 to 100) that is converted to a specific PHW stream type. Streams that are scored from 0 to 29 are typically identified as "Ephemeral Aquatic Streams", 30 to 70 are "Small Drainage Warmwater Streams", and 71 to 100 are "Spring Water Streams". Technically, a stream can score relatively high, but actually belong in a lower class, and vice-versa. According to the OEPA, if the stream score falls into a class and the scorer feels that based on site observations that score does not reflect the actual stream class, a biological assessment can be used to determine appropriate PHW stream type using the Level 2 or Level 3 PHW protocol (OEPA, 2018). Evidence of anthropogenic alterations to the natural channel will result in a “Modified” qualifier for the stream type.

***Ephemeral Aquatic Streams*:** are those that have “have limited or no aquatic life potential, except seasonally when flowing water is present for short time periods following precipitation or snow melt” (OEPA, 2018). These waterways typically exhibit no significant habitat for aquatic fauna, no significant wildlife use, and limited or no potential to achieve higher PHW aquatic biological functions.

***Small Drainage Warmwater Streams*:** are equivalent to "warmwater habitat" streams and exhibit intermittent or perennial flow. This stream class has a "moderately diverse community of warmwater adapted native fauna either present seasonally or year-round" (OEPA, 2018). The species communities are composed of vertebrates (fish and salamanders) and/or benthic macroinvertebrates that are considered pioneering and/or temperature facultative species.

***Spring Water Streams*:** have prevailing flow and temperature conditions influenced by groundwater, with diverse communities of cold water adapted native fauna present year-round. Spring Water streams may be further divided into two sub-types based upon a detailed and complete evaluation of the aquatic faunal community, though that level of assessment is outside the scope of the data quality objectives for the proposed project.

2.2.3 OEPA 401 WATER QUALITY CERTIFICATION FOR NATIONWIDE PERMIT ELIGIBILITY

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

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

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

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

2.3 UPLAND DRAINAGE FEATURE

An upland drainage feature (UDF) is a non-jurisdictional drainage that does not meet the criteria of either a jurisdictional stream or a wetland. A UDF generally lacks an OWHM (USACE, 2005), and are equivalent to a swale or an erosional feature as described by the USACE: “generally shallow features in the landscape that may convey water across upland areas during and following storm events. Swales usually occur on nearly flat slopes and typically have grass or other low-lying vegetation throughout the swale” (USACE, 2007). In addition, UDF’s are “generally not waters of the U.S. because they are not tributaries or they do not have a significant nexus to TNWs. Even when not themselves waters of the United States, swales may still contribute to a surface hydrologic connection between an adjacent wetland and a TNW.”

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

2.4 RARE, THREATENED AND ENDANGERED SPECIES

AECOM conducted a rare, threatened, and endangered species review and general field habitat surveys within the Project survey area. The first phase of the review involved a review of online lists of federally and state-listed species. In addition to the review of available lists, AECOM submitted a request to Ohio Department of Natural Resources (ODNR) Office of Real Estate – Environmental Review Section as well

as the USFWS in August 2019 soliciting comments for the proposed Project. Agency-identified rare, threatened, and endangered species and available species-specific information was reviewed to identify the various habitat types that listed species are known to inhabit.

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

3.0 RESULTS

In December 2019, an AECOM ecologist walked the Project survey area to conduct the wetland delineation, stream assessment, and habitat survey. Within the Project survey area, AECOM delineated three wetlands and one stream. No ponds were delineated. These features are discussed in detail in the following sections.

3.1 WETLAND DELINEATION

3.1.1 PRELIMINARY SOILS EVALUATION

Soils in delineated wetlands were observed and documented as part of the delineation methodology. According to the USDA NRCS Web Soil Survey of Auglaize County, Ohio, and the USDA NRCS Hydric Soils Lists of Ohio, three soil types are mapped within the Project survey area (NRCS, 2019). One soil map unit is identified as hydric, while the other map unit has hydric components that may comprise nine percent of the area mapped within the unit. Table 1 provides a detailed overview of all soil series and soil map units within the Project survey area. Soil map units located within the Project survey area are shown on Figure 2.

TABLE 1
SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE WEST MOULTON STATION EXPANSION PROJECT SURVEY AREA

Soil Series	Symbol	Map Unit Description	Topographic Setting	Hydric	Hydric Component (%)
Blount	Ble1B1	Blount silt loam, end moraine, 2 to 4 percent slopes	end moraines, till plains	No	Pewamo, end moraine 6%
Glynwood	Gwe1B1	Glynwood silt loam, end moraine, 2 to 6 percent slopes	end moraines, till plains	No	Pewamo 6%
Pewamo	Pt	Pewamo silty clay loam, 0 to 1 percent slopes	depressions, till plains	Yes	Pewamo 85% Montgomery 5%

USDA, NRCS. 2019 Soil Survey Geographic (SSURGO) Database for Auglaize County, Ohio. Available online at: http://soildatamart.nrcs.usda.gov/
USDA, NRCS. National Hydric Soils List by State (Soil Data Access Live query). Available online at: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316619.html

3.1.2 NATIONAL WETLAND INVENTORY MAP REVIEW

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

According to the NWI data for the project vicinity, the Project survey area contains one NWI mapped wetland identified as a riverine, intermittent streambed, seasonally flooded (R4SBC) system. This wetland is correlated to the one delineated stream feature (see Section 3.2). One additional NWI wetland is mapped approximately 200-feet south of the Project survey area, namely a palustrine, unconsolidated bottom, intermittently exposed, diked/impounded feature (PUBGh). The locations of NWI mapped wetlands are shown on Figure 2.

3.1.3 DELINEATED WETLANDS

During the field survey, AECOM identified three wetlands within the Project survey area. These three wetlands were identified across the northern portion of the Project survey area in old field and scrub-shrub habitats. The wetlands ranged from approximately 0.04 to 0.06 acre. The locations of the wetlands are shown on Figure 3. See Table 2 for a summary of the delineated wetlands within the Project survey area. Completed USACE and ORAM wetland delineation forms are provided in Appendix A and B, respectively. Color photographs taken of the wetlands are provided in Appendix C.

TABLE 2
DELINEATED WETLANDS WITHIN THE WEST MOULTON STATION EXPANSION PROJECT SURVEY AREA

Wetland Name	Latitude	Longitude	Cowardin Wetland Type[a]	ORAM Score[b]	ORAM Category[b]	Acreage within Project Survey Area
Wetland 01	40.55235	-84.33982	PEM	20	Category 1	0.02
Wetland 02a	40.5529	-84.34085	PEM	26	Category 1	0.74
Wetland 02b	40.55336	-84.34057	PSS			0.05
Wetland 03a	40.55296	-84.34315	PEM	28.5	Category 1	0.67
Wetland 03b	40.55241	-84.3438	PSS			0.08
Totals: 3 Wetlands						**1.56**

Cowardin Wetland Type[a]: PEM = palustrine emergent; PSS = palustrine scrub-shrub
ORAM[b] Scoring Category: 0-29.9 = Category 1

3.1.4 DELINEATED WETLANDS ASSESSMENT

Within the Project survey area, each of the delineated wetlands were assessed as Category 1 wetlands. A breakdown of the ORAM score can be found in Table 2. The completed ORAM forms are provided in Appendix B.

Category 1 Wetlands

The three delineated wetlands were each assessed as Category 1 wetlands, including one PEM wetland (Wetland 01) and two PEM/PSS wetlands (Wetland 02 and Wetland 03). These wetlands ranged from 0.02-acre to 0.79-acre in size (within the Project study area), being dominated by the invasive emergent *Phalaris arundinaceus* (reed canary grass), exhibited narrow to medium buffers with low to high intensity surrounding land uses, having disturbances recorded to hydrologic regime, substrate and habitat, and poor to fair habitat development.

Category 2 Wetlands

No Category 2 wetlands were identified during the field survey.

Category 3 Wetlands

No Category 3 wetlands were identified during the field survey.

3.2 STREAM ASSESSMENT

During the field survey, AECOM identified one stream within the Project survey area. This intermittent stream (Stream 01) was identified in the southwest corner of the Project survey area, flowing to the south, parallel to the west Project survey area boundary for an extended length before entering the Project survey area for approximately 13 feet, then flowing to a culvert under Plank Pike and leaving the Project survey area. Stream assessment data form is provided in Appendix C, and the location of this stream is shown on Figure 3.

Stream 01 was assessed using HHEI methodology, having a drainage area of 0.11 square mile and appeared to be recovering from past stream channel modifications (straightening/relocation). The stream was flowing at the time of assessment, having substrates dominated by gravel and sand, with a maximum pool depth of 12-inches (30 centimeters) and an average bankfull width of 4.6-feet (1.4 meter.) The assessment resulted in a score of 65 and a provisional use designation as a Modified Small Drainage Warmwater Stream.

The location of Stream 01 is consistent with a USGS mapped, unnamed intermittent stream, an NHD stream and a NWI-mapped riverine feature. The Project survey area occurs within the East Branch

watershed (HUC-12: 041000040103) of the Saint Marys River basin, which is designated as an OEPA 401 Eligible watershed, as indicated on Figure 3.

3.3 PONDS

No ponds were identified within the Project survey area.

3.4 UPLAND DRAINAGE FEATURES

Several upland drainage features (UDFs) were mapped within the Project survey area. These include a roadside ditch/drainage swale along Townline-Kossuth Road and constructed drainage swales around the existing substation and along field drives through the existing transmission line right of way (ROW). Upland drainage features are mapped on Figure 3. Representative photographs are provided in the photographic log in Appendix D.

3.5 VEGETATIVE COMMUNITIES

AECOM conducted a general habitat survey in conjunction with the stream and wetland field surveys in December 2019. Portions of the Project survey area was identified to contain either agricultural land, landscaped areas, old field, shrub-scrub, successional woodland, urban, or stream/wetland vegetative communities. Habitat descriptions, applicable to the Project and details on the expected impacts of construction are provided below. Vegetated land cover can be seen visually from aerial photography provided on Figure 4.

TABLE 3
VEGETATIVE COMMUNITIES WITHIN THE WEST MOULTON STATION EXPANSION PROJECT SURVEY AREA

Vegetative Community	Description	Approximate Acreage	Approximate Percentage
Agricultural Land	Land utilized for row crops, whether planted or not, and not used for pasture or hay fields.	1.4	9.5
Landscaped Areas	Residential and commercial properties having frequently mowed grasses and forbs.	0.9	6.1
Old Field	Herbaceous cover exhibiting the earliest stages of recolonization by plants following disturbance, typically short-lived, giving way progressively to shrub and forest communities unless periodically re-disturbed. Old field areas identified were infrequently maintained areas of grasses and forbs with occasional shrubs.	5.0	34.0
Shrub-Scrub	The presence of shrubby woody vegetation covering at least 30% of the land surface, representing a successional stage between old field and second growth forest. Dominant species consist of herbaceous communities similar to old field habitat with a few woody species, to a community dominated by woody shrubs and/or sapling tree species.	3.5	23.8
Successional Woodland	Successional mixed hardwood woodland dominated by black locust (*Robinia pseudoacacia*), black cherry (*Prunus serotina*), and Tree of Heaven (*Ailanthus altissima*). The dominant shrub/sapling-layer included gray dogwood (*Cornus racemosa*) and Morrow's honeysuckle (*Lonicera morrowii*).	0.7	4.8
Urban	Developed areas with residential and commercial land uses, including roads, buildings and parking lots, generally devoid of significant woody and herbaceous vegetation.	1.6	10.9
Stream/Wetland	All delineated wetlands, including emergent, scrub-shrub and forested components.	1.6	10.9
	Totals:	**14.7**	**100%**

3.6 RARE, THREATENED AND ENDANGERED SPECIES

Protected Species Agency Coordination

AECOM conducted a rare, threatened, and endangered species review for the AEP Wapakoneta Improvements Project which includes the West Moulton Station Expansion Project survey area. A summary of the agency coordination responses is provided below. Correspondence letters from the USFWS and ODNR are included as Appendix E. Table 4 provides a list of federal and state-listed threatened and endangered species identified by agencies as possibly occurring within or near the Project.

TABLE 4

ODNR AND USFWS LISTED SPECIES WITHIN THE WEST MOULTON STATION EXPANSION PROJECT SURVEY AREA

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Impact Assessment	Agency Comments
Mammals						
Indiana bat (*Myotis sodalis*)	Endangered	Endangered	Winter Indiana bat hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. The 8- to 10-inch diameter size classes of several species of hickory (*Carya* spp.), oak (*Quercus* spp.), ash (*Fraxinus* spp.), birch (*Betula* spp.), and elm (*Ulmus* spp.) have been found to be utilized by the Indiana bat. These tree species and many others may be used when dead, if there are adequately sized patches of loosely-adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes a mixture of loose-barked trees with 60 to 80 percent canopy closure and a low-density sub-canopy (less than 30 percent between about 6 feet high and the base canopy). The suitability of roosting habitat for foraging or the proximity to suitable foraging habitat is critical to the evaluation of a particular tree stand. An open subcanopy zone, under a moderately dense canopy, is important to allow maneuvering while catching insect prey.	Yes	Potentially suitable habitat is present within the Project area (successional woodlands), primarily restricted to the south boundary of the Project survey area. This Project does not anticipate any need to clear trees; the proposed project is not likely to adversely affect this species.	ODNR commented that presence of the Indiana bat has been established in the project area, and therefore additional summer surveys would not constitute presence/absence in the area. If suitable habitat occurs within the project area, ODNR recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, cutting should occur between October 1 and March 31. USFWS commented that due to the project type, size, location, and the proposed implementation of seasonal tree cutting (clearing of trees ≥3 inches diameter at breast height between October 1 and March 31) to avoid impacts to Indiana bats, that they do not anticipate adverse effects to this species.

TABLE 4

ODNR AND USFWS LISTED SPECIES WITHIN THE WEST MOULTON STATION EXPANSION PROJECT SURVEY AREA

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Impact Assessment	Agency Comments
Northern long-eared bat (*Myotis septentrionalis*)	Threatened	Threatened	Winter hibernacula include caves and mines, while summer habitat typically includes tree species exhibiting exfoliating bark or cavities that can be used for roosting. The 8- to 10-inch diameter size classes of several species of hickory (*Carya* spp.), oak (*Quercus* spp.), ash (*Fraxinus* spp.), birch (*Betula* spp.), and elm (*Ulmus* spp.) have been found to be utilized by northern long-eared bats. These tree species and many others may be used when dead, if there are adequately sized patches of loosely-adhering bark or open cavities. The structural configuration of forest stands favored for roosting includes a mixture of loose-barked trees with 60 to 80 percent canopy closure and a low density sub-canopy (less than 30 percent between about 6 feet high and the base canopy). The suitability of roosting habitat for foraging or the proximity to suitable foraging habitat is critical to the evaluation of a particular tree stand. An open subcanopy zone, under a moderately dense canopy, is important to allow maneuvering while catching insect prey. Northern long-eared bats have also been found, albeit rarely, roosting in structures like barns and sheds.	Yes	Potentially suitable habitat is present within the Project area (successional woodlands), primarily restricted to the south boundary of the Project survey area. This Project does not anticipate any need to clear trees; the proposed project is not likely to adversely affect this species.	USFWS commented that due to the project type, size, location, and the proposed implementation of seasonal tree cutting (clearing of trees ≥3 inches diameter at breast height between October 1 and March 31) to avoid impacts to northern long-eared bats, that they do not anticipate adverse effects to this species. ODNR did not provide any comments regarding this species
Fish						
Greater redhorse (*Moxostoma valenciennesi*)	Threatened	Species of Concern	Found in medium to large rivers in the Lake Erie drainage system. Only found in limited portions of the Sandusky, Maumee, and Grand River systems. Greater redhorse is typically found in pools with clean sand or gravel substrate, but are intolerant of pollution and turbid water.	No	No effect on this species as no suitable habitat is present.	ODNR stated if no in-water work is proposed in a perennial stream, this project is not likely to impact this or other aquatic species.
Mussels						
Clubshell (*Pleurobema clava*)	Endangered	Endangered	This mussel prefers clean, loose sand and gravel in medium to small rivers and streams. This mussel will bury itself in the bottom substrate to depths of up to four inches.	No	No effect on this species as no suitable habitat is present.	ODNR stated that due to the location and that there is no in-water work proposed, the Project is not likely to impact this species

TABLE 4

ODNR AND USFWS LISTED SPECIES WITHIN THE WEST MOULTON STATION EXPANSION PROJECT SURVEY AREA

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Impact Assessment	Agency Comments
Pondhorn (*Uniomerus tetralasmus*)	Threatened	None	This species typically inhabits the quiet or slow-moving, shallow waters of sloughs, borrow pits, ponds, ditches, and meandering streams. It is tolerant of poor water conditions and can be found well buried in a substrate of fine silt and/or mud.	No	No in-water work is planned as part of the Project. No impacts to mussel species and their habitat are anticipated.	ODNR stated that due to the location and that there is no in-water work proposed, the Project is not likely to impact this species
Birds						
Lark sparrow (*Chondestes grammacus*)	Endangered	None	Lark Sparrows nest in open grassy habitats with scattered trees and shrubs including orchards, fallow fields, open woodlands, mesquite grasslands, savanna, sagebrush steppe, and grasslands. During migration and winter they use similar habitats, but can also be found in pine-oak forest, thorn scrub, and agricultural areas with scattered trees and hedgerows.	Yes	Suitable habitat (old field and shrub-scrub) is present. Project may potentially impact nesting Lark sparrows.	ODNR stated if this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 to June 30. If this habitat will not be impacted, the project is not likely to impact this species.

ODNR Coordination

Coordination with the ODNR was initiated during the planning stages of the Project to obtain Ohio Natural Heritage Database (ONHD) records located in the vicinity of the project. On March 23, 2018, the ODNR Office of Real Estate Environmental Review Section provided comments on the Project based on an inter-disciplinary review. The ONHD, Division of Wildlife (DOW), and the Division of Water Resources (DWR) provided comments regarding their respective regulatory authorities.

The ONHD review stated that the greater redhorse (*Moxostoma valenciennesi*) and a great blue heron rookery is known to be within a one-mile radius of the (AEP Wapakoneta Improvements) Project area. Subsequent information provided by DOW locates the rookery approximately 4.8-miles southeast of the current Project survey area.

The ODNR Division of Wildlife (DOW) recommended that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The DOW noted that the (AEP Wapakoneta Improvements) Project area east of Dixie Highway and south of Weimert School Road is within the vicinity of records for the Indiana bat, a state and federally endangered species. Presence of the Indiana bat has been established in the area, therefore additional summer surveys would not constitute presence/absence in the area. If suitable habitat occurs within the Project area, the DOW recommends trees be conserved but, if trees must be cut, the DOW recommends cutting between October 1 and March 31 (seasonal tree clearing guidelines). This area is approximately 10 miles east of the current Project survey area.

The DOW indicated that the Project is within the range of the club shell, a state-endangered and federally endangered mussel; the pondhorn, a state threatened mussel; and the greater redhorse, a state threatened fish. DOW stated this project must not have an impact on freshwater native mussels at the Project site. ODNR stated that due to the location and that there is no in-water work proposed, the Project is not likely to impact these species.

The DOW indicated that the Project is within the range of the lark sparrow (*Chondestes grammacus*), a state endangered bird. If potential habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 to June 30. If this habitat will not be impacted, the project is not likely to impact this species. Coordination with DOW regarding presence/absence surveys may be optional based on the habitat and surrounding landuse types.

The DOW indicated that the (AEP Wapakoneta Improvements) Project is within the range of great blue heron rookery and that nesting great blue herons are protected under the Migratory Bird Treaty Act of

1918. Subsequent information provided by DOW locates the rookery approximately 4.8-miles southeast of the current Project survey area. As such, the Project will not impact this resource.

USFWS Coordination

Coordination with the USFWS was initiated during the planning stages of the Project to obtain technical assistance in regard to federally listed species that may occur within the Project vicinity. In a letter dated March 9, 2018, the USFWS indicated that there are no Federal wilderness areas, wildlife refuges, or designated critical habitat within the vicinity of the Project.

The USFWS noted that the Project lies within the range of the federally endangered Indiana bat (*Myotis sodalis*), and the federally threatened northern long-eared bat (*Myotis septentrionalis*). USFWS stated that due to the project type, size, location, and the proposed implementation of seasonal tree cutting (clearing of trees ≥3 inches diameter at breast height between October 1 and March 31) to avoid impacts to Indiana bats and northern long-eared bats, that they do not anticipate adverse effects to any federally endangered, threatened, proposed or candidate species.

4.0 SUMMARY

The ecological survey of the Project survey area delineated three wetlands and one stream. The three wetlands were each assessed as Category 1 wetlands, with one identified as a PEM wetland and two identified as PEM/PSS wetlands. The stream was assessed as a Modified Small Drainage Warmwater Stream having an intermittent flow regime.

According to a response letter received from the USFWS on March 9, 2018, this Project is not anticipated to have adverse effects to federally endangered, threatened, proposed, or candidate species. With regard to state threatened and endangered species that may occur within the Project vicinity, six species were identified by ODNR including the following: Indiana bat, northern long-eared bat, club shell, pondhorn, lark sparrow and greater redhorse. No impacts are anticipated to these species.

Based on general observations during the ecology survey, the Project survey area contains limited potential summer habitat for the Indiana bat and the northern long-eared bat as successional woodland along the south Project boundary. The agencies do not anticipate impacts to these species due to the project type, size, location, and proposed implementation of seasonal tree cutting (during October 1 and March 31), to avoid impacts to these bat species.

The reported results of the ecological survey conducted by AECOM on this Project are limited to the areas within the Project survey area boundary (provided in Figures 2 through 4). Areas that fall outside of the Project survey area boundary were not evaluated in the field and are not included in the reporting of this survey.

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

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

5.0 REFERENCES

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

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

Fritz, K.M., B.R. Johnson, and D.M. Walters. 2006. Field Operations Manual for Assessing the Hydrologic Permanence and Ecological Condition of Headwater Streams. EPA/600/ R-06/126. U.S. Environmental Protection Agency, Office of Research and Development, Washington DC.

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

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X

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

Ohio Administrative Code Chapter 3745-1. Water Quality Standards. https://epa.ohio.gov/Portals/35/rules/01-all.pdf. Effective July 30, 2018.

Ohio Department of Transportation. 2014. *Ecological Manual*. Office of Environmental Services, ODOT, Columbus, Ohio.

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

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

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

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

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

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

U.S. Army Corps of Engineers. 2007. Jurisdictional Determination Form Instructional Guidebook. USACE and U.S. Environmental Protection Agency. Published May 27, 2007.

U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)*, ed. J. S. Wakely, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Army Corps of Engineers. 2016. *National Wetland Plant List*, version 3.3. Engineer Research and Development Center. Cold Regions Research and Engineering Laboratory, Hanover, NH. http://wetland_plants.usace.army.mil/. Accessed 11/15/19.

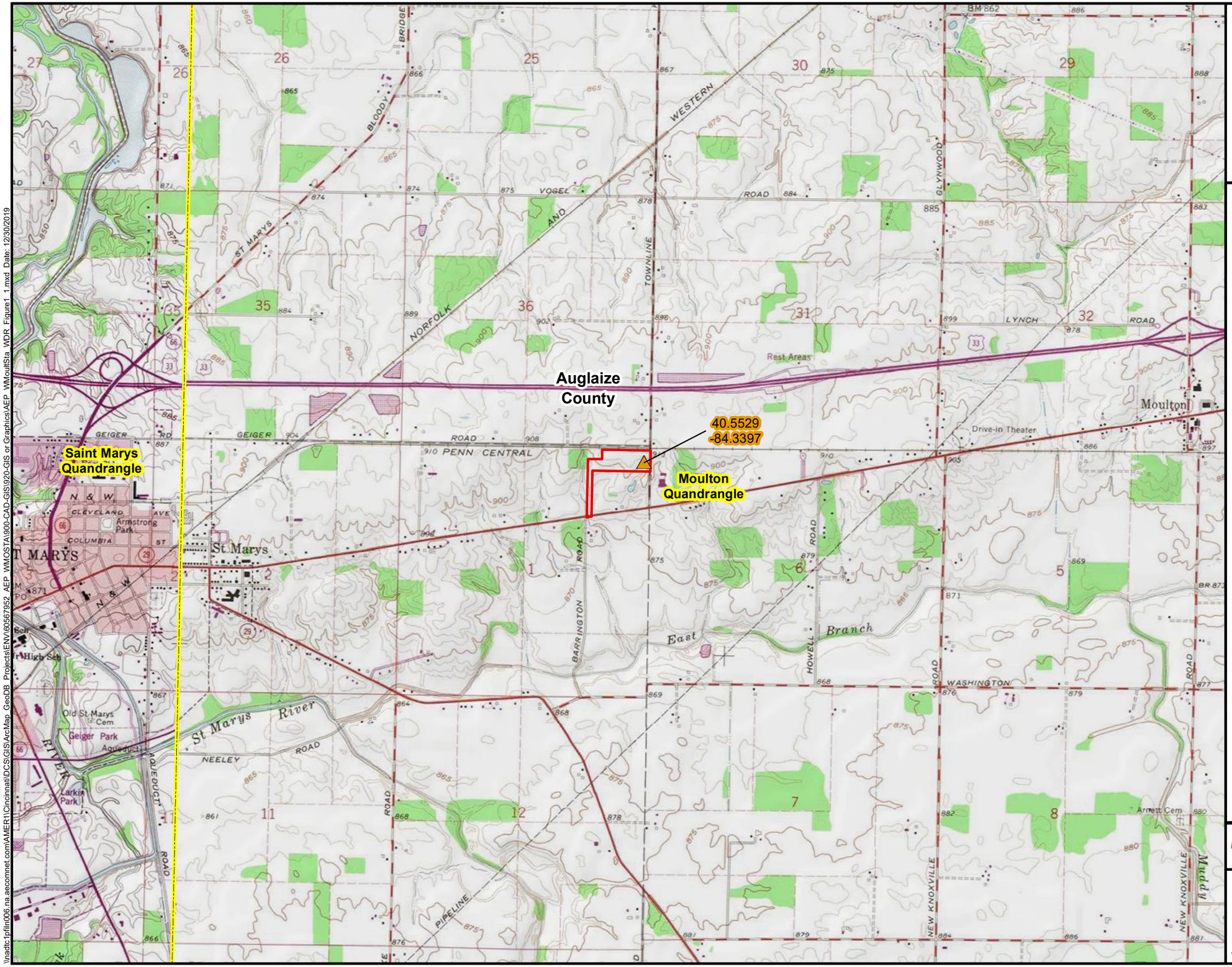
U.S. Department of Agriculture, Natural Resources Conservation Service. 2017. National Hydric Soils List. http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. Accessed 11/12/19.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2018. National Weather Service- Wetland Climate Evaluation Database (WETS Table). http://agacis.rcc-acis.org/ Accessed 10/09/18.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2019. Web Soil Survey. Soil Survey Geographic (SSURGO) Database for Auglaize County, OH. Published 6 September 2019. http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

U.S. Fish and Wildlife Service. 2018. National Wetlands Inventory Geodatabase for Ohio. Available online at http://www.fws.gov/wetlands/Data/Mapper.html. Accessed 11/12/19.

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



LEGEND:

- West Moulton Station
- Project Survey Area
- USGS 7.5" Topographical Quadrangle

N

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Feet

BASE MAP SOURCE:
Copyright:© 2013 National Geographic Society, i-cubed

AEP OHIO TRANSMISSION COMPANY

West Moulton Station Expansion Project

FIGURE 1
PROJECT LOCATION MAP

JOB NO. 60567952

AECOM Imagine it. Delivered.

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LEGEND:

- West Moulton Station
- Project Survey Area
- NHD Stream (USGS)
- NWI Wetland (USFWS)
- Soil Map Unit (USDA-NRCS)

Soil Map Unit Symbol, Name

Ble1A1, Blount silt loam, end moraine, 0 to 2 percent slopes

Ble1B1, Blount silt loam, end moraine, 2 to 4 percent slopes

Gwe1B1, Glynwood silt loam, end moraine, 2 to 6 percent slopes

HkA, Kaskins loam, 0 to 2 percent slopes

Pt, Pewamo silty clay loam, 0 to 1 percent slopes

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BASE MAP SOURCE:
Source: Esri, DigitalGlobe, GeoEye, Earthstar

AEP OHIO TRANSMISSION COMPANY

West Moulton Station Expansion Project

FIGURE 2
SOIL MAP UNIT AND NATIONAL WETLAND INVENTORY MAP

JOB NO. 60567952

AECOM Imagine it. Delivered.

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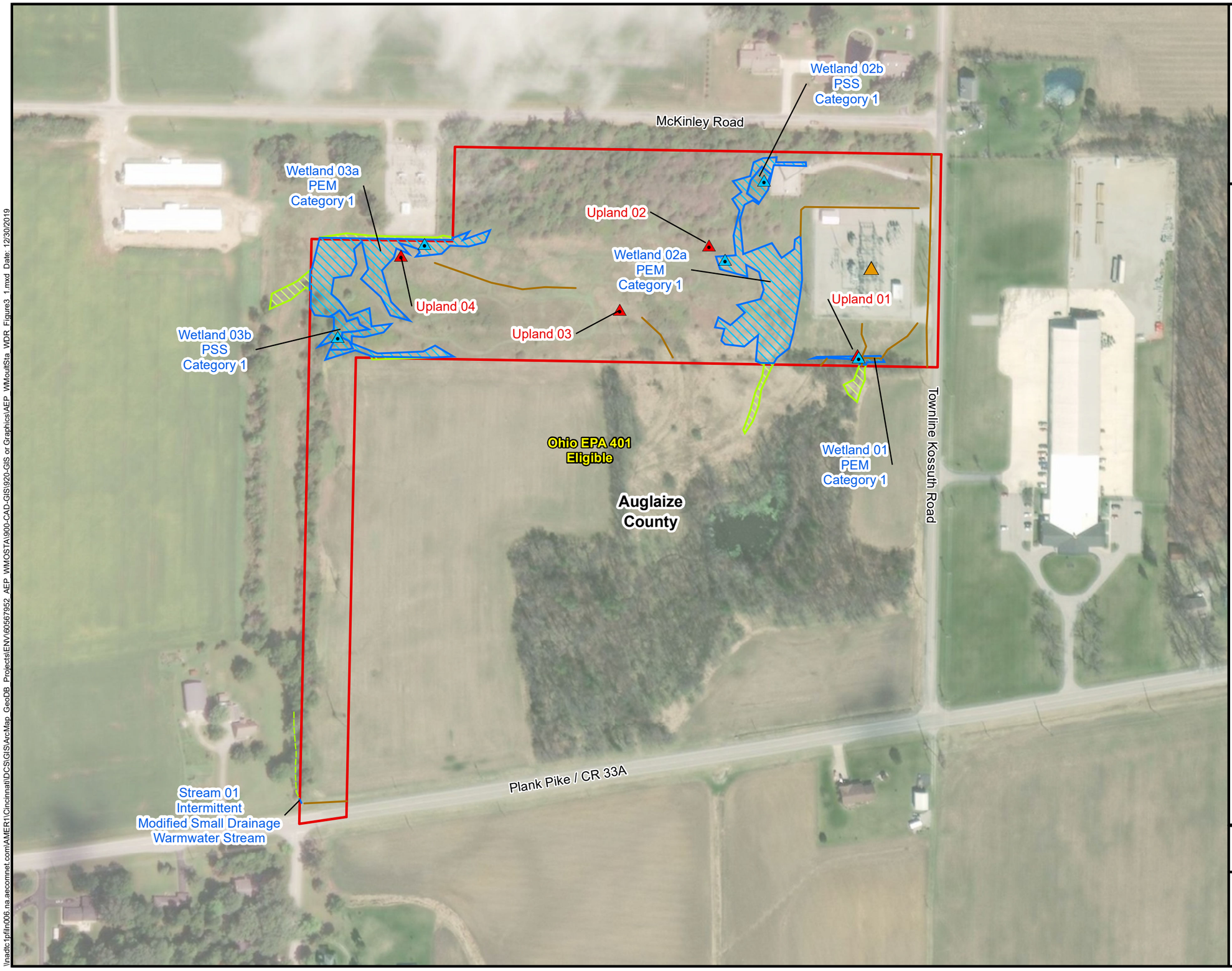

LEGEND:

- West Moulton Station
- Project Survey Area
- Delineated Wetland
- Wetland Data Point
- Upland Data Point
- Delineated Intermittent Stream
- Upland Drainage Feature
- Approximate Wetland Location
- Approximate Stream Location

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BASE MAP SOURCE:
Source: Esri, DigitalGlobe, GeoEye, Earthstar

AEP OHIO TRANSMISSION COMPANY

West Moulton Station Expansion Project

FIGURE 3
WETLAND DELINEATION AND
STREAM ASSESSMENT MAP

JOB NO. 60567952

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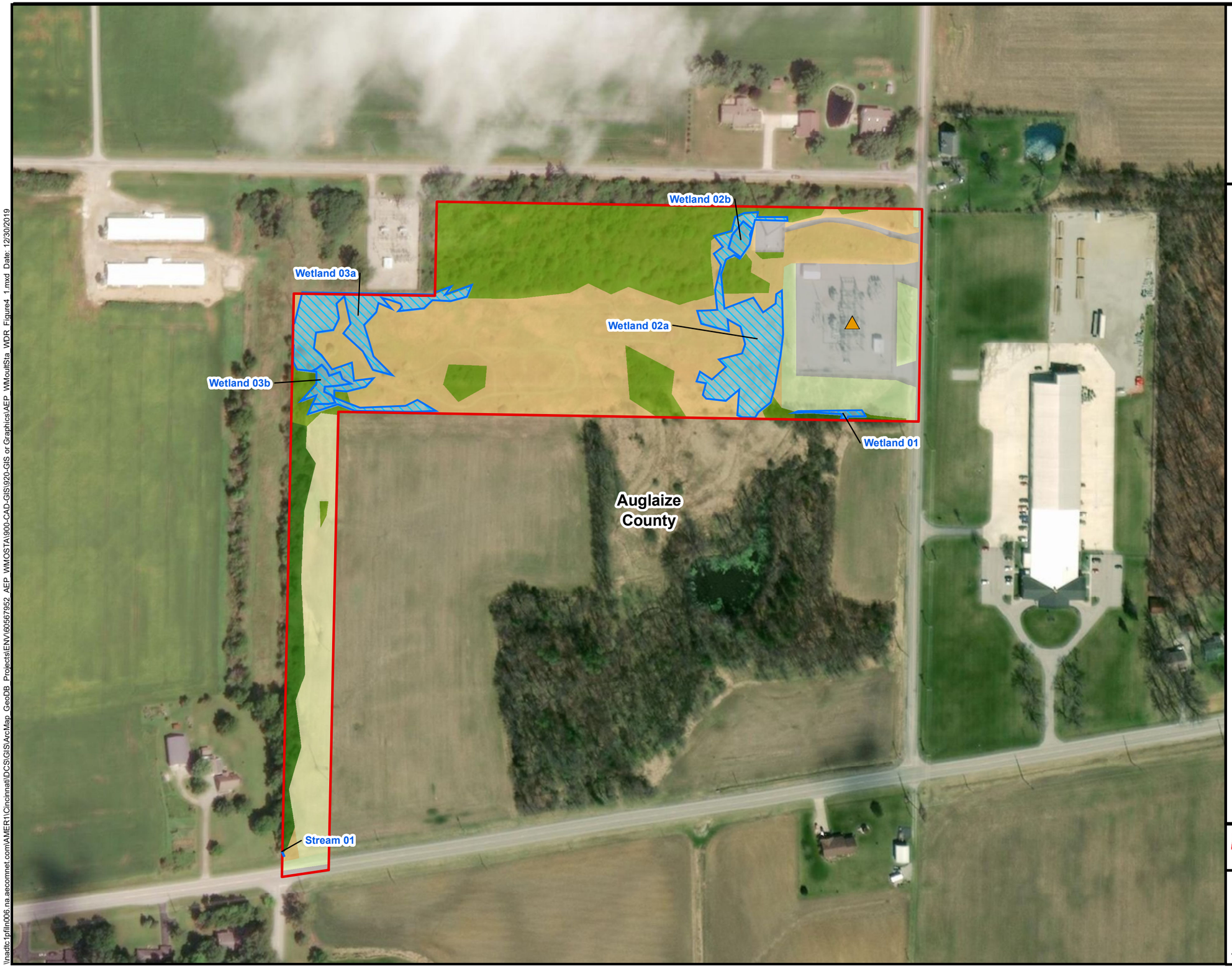

LEGEND:

- West Moulton Station
- Project Survey Area
- Delineated Wetland
- Delineated Intermittent Stream

Vegetative Communities

- Agricultural Land
- Landscaped Areas
- Old Field
- Shrub-scrub
- Stream/Wetland
- Successional Woodland
- Urban

N

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BASE MAP SOURCE:
Source: Esri, DigitalGlobe, GeoEye, Earthstar

AEP OHIO TRANSMISSION COMPANY

West Moulton Station Expansion Project

FIGURE 4
VEGETATIVE COMMUNITIES MAP

JOB NO. 60567952

AECOM Imagine it. Delivered.

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APPENDIX A

U.S. ARMY CORPS OF ENGINEERS

WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: West Moulton Station / W01 City/County: Auglaize Sampling Date: 12/23/2019

Applicant/Owner: AEP State: OH Sampling Point: w-bl-20191223-01

Investigator(s): BL Section, Township, Range: S1, 6S, 4E

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

Slope (%): 2 Lat: 40.55235 Long: -84.33982 Datum: WGS84

Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 2 to 6 percent slopes NWI classification: N/A

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

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

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

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

Hydrophytic Vegetation Present? Yes x No ____

Hydric Soil Present? Yes x No ____

Wetland Hydrology Present? Yes x No ____

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

Remarks:
some snow cover and ice present; drainage swale w/2 UDF's draining into from substation; wetland continues off-site to south to mapped NWI/PUB

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *n/a*			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Sambucus nigra*	10	yes	FAC
2. *Cornus alba*	3	yes	FACW
3.			
4.			
5.			
	13	=Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinaceus*	70	yes	FACW
2. *Bidens frondosa*	3	no	FACW
3. *Solidago sp.*	5	no	FACU
4. *Conium maculatum*	5	no	FACW
5.			
6.			
7.			
8.			
9.			
10.			
	83	=Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *n/a*			
2.			
	0	=Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	81	x 2 =	162
FAC species	10	x 3 =	30
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	96 (A)		212 (B)

Prevalence Index = B/A = 2.21

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

x 2 - Dominance Test is >50%

x 3 - Prevalence Index is ≤3.0*

____ 4 - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation* (Explain)

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

Hydrophytic Vegetation Present? Yes x No ____

Remarks: (Include photo numbers here or on a separate sheet.)
P 215-N, 216-E, 217-S, 218-W, 219-soils

SOIL

Sampling Point: w-bl-20191223-01

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc*	Texture	Remarks
0-3	10YR 4/2	100					sicllo	
3-9	10YR 3/2	90	10YR 3/4	10	C	M	sicl	
9-16	10YR 4/1	95	10YR 3/4	5	C	pl	sicl	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils*:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

*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:
evidence of past erosion/sedimentation with upper layer

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)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes x No ___ Depth (inches): 0-3

Water Table Present? Yes x No ___ Depth (inches): 5

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:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: West Moulton Station / W01 City/County: Auglaize Sampling Date: 12/23/2019

Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20191223-01

Investigator(s): BL Section, Township, Range: S1, 6S, 4E

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

Slope (%): 2 Lat: 40.55236 Long: -84.33983 Datum: WGS84

Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 2 to 6 percent slopes NWI classification: N/A

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

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

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

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

Hydrophytic Vegetation Present? Yes ____ No x

Hydric Soil Present? Yes ____ No x

Wetland Hydrology Present? Yes ____ No x

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

Remarks:
some snow cover present; point out about 10 ft north of wetland boundary in maintained grass lawn mowed shore; past filling/grading, gravel in soils

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *n/a*			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *n/a*			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Schedonorus arundinaceus*	30	yes	FACU
2. *Poa sp.*	20	yes	FACU
3. *Festuca sp.*	40	yes	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	90	=Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *n/a*			
2.			
	0	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	90 (A)		360 (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*

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

___ Problematic Hydrophytic Vegetation* (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No x

Remarks: (Include photo numbers here or on a separate sheet.)
P 221-N, 222-E, 223-S, 224-W, 225-soils

SOIL

Sampling Point: upl-bl-20191223-01

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc*	Texture	Remarks
0-5	10YR 4/3	100					sicllo	
5-9	10YR 3/2	100					sicl	gravelly
9+								gravel fill

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

*Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils*:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: gravel

Depth (inches): 9

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

Remarks:
no redox features present

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): 0

Water Table Present? Yes ___ No x Depth (inches): >9

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): >9

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

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: West Moulton Station / W02 City/County: Auglaize Sampling Date: 12/23/2019

Applicant/Owner: AEP State: OH Sampling Point: w-bl-20191223-02a

Investigator(s): BL Section, Township, Range: S1, 6S, 4E

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

Slope (%): 2 Lat: 40.5529 Long: -84.34085 Datum: WGS84

Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 2 to 6 percent slopes NWI classification: N/A

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

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

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

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

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

Remarks:
point in at highest elevation over drainage swale, uncertain why wetland conditions persist up here

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *n/a*			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Cornus alba*	2	no	FACW
2.			
3.			
4.			
5.			
	2	=Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinaceus*	80	yes	FACW
2. *Solidago canadensis*	15	no	FACU
3. *Cirsium arvense*	5	no	FACU
4. *Festuca rubra*	10	no	FACU
5.			
6.			
7.			
8.			
9.			
10.			
	110	=Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *n/a*			
2.			
	0	=Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	82	x 2 =	164
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	0	x 5 =	0
Column Totals:	112 (A)		284 (B)

Prevalence Index = B/A = 2.54

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes x No ____

Remarks: (Include photo numbers here or on a separate sheet.)
P 248-N, 249-E, 250-S, 251-W, 252-soils

SOIL

Sampling Point: w-bl-20191223-02a

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc*	Texture	Remarks
0-6	10YR 4/3	100					sicllo	
6-15	10YR 4/2	80	10YR 4/4	15	c	m	sicl	
			10YR 4/6	5	c	pl		

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils*:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

several soil pits dug at upper elevation of wetland, all w/redox features in depleted soils present

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): 0

Water Table Present? Yes ___ No x Depth (inches): >15

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): >15

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

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

Remarks:

no evidence of hydrology ndicators at this location except for oxidized rhizospheres

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: West Moulton Station / W02 City/County: Auglaize Sampling Date: 12/23/2019

Applicant/Owner: AEP State: OH Sampling Point: w-bl-20191223-02b

Investigator(s): BL Section, Township, Range: S1, 6S, 4E

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

Slope (%): 2 Lat: 40.55336 Long: -84.34057 Datum: WGS84

Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 2 to 6 percent slopes NWI classification: N/A

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

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

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

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

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

Remarks:
small scrub-shrub component of W02; appears to be spoils pile area from cell tower grading/construction

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Fraxinus pennsylvanica*	5	yes	FACW
2.			
3.			
4.			
5.			
	5	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Rhamnus cathartica*	15	yes	FAC
2. *Cornus sericia*	20	yes	FAC
3. *Ulmus americana*	10	yes	FACW
4. *Lonicera morrowi*	5	no	FACU
5.			
	50	=Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinaceus*	5	no	FACW
2. *Allium canadense*	10	yes	FACU
3. *Agrimonia parviflora*	15	yes	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	30	=Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *n/a*			
2.			
	0	=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: 83% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	35	x 2 =	70
FAC species	35	x 3 =	105
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	85 (A)		235 (B)

Prevalence Index = B/A = 2.76

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes x No ____

Remarks: (Include photo numbers here or on a separate sheet.)
P 254-N, 255-E, 256-S, 257-W, 258-soils

SOIL

Sampling Point: w-bl-20191223-02b

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc*	Texture	Remarks
0-11	10YR 4/1	90	10YR 4/3	10	c	m	sicllo	
11-14	10YR 3/2	90	10YR 3/4	10	c	m	cllo	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils*:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

*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:

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)
- x Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): 0

Water Table Present? Yes ___ No x Depth (inches): >14

Saturation Present? Yes x No ___ Depth (inches): 10

(includes capillary fringe)

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

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: West Moulton Station / W02 City/County: Auglaize Sampling Date: 12/23/2019

Applicant/Owner: AEP State: OH Sampling Point: upl-bl-20191223-02

Investigator(s): BL Section, Township, Range: S1, 6S, 4E

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

Slope (%): 3 Lat: 40.55298 Long: -84.34098 Datum: WGS84

Soil Map Unit Name: Ble1B1 - Blount silt loam, end moraine, 2 to 4 percent slopes NWI classification: N/A

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

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

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

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

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

Remarks:
w02 point out about 15' NW of boundary near same elevation as 2a point in

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus serotina*	2	no	FACU
2. *Rhamnus cathartica*	10	yes	FAC
3.			
4.			
5.			
	12	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Rhamnus cathartica*	15	yes	FAC
2. *Fraxinus americana*	1	no	FACU
3.			
4.			
5.			
	16	=Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinaceus*	10	no	FACW
2. *Datylus glomerata*	20	yes	FACU
3. *Lolium perrene*	15	no	FACU
4. *Cirsium arvense*	10	no	FACU
5. *Solidago altissima*	10	no	FACU
6. *Cirsium discolor*	5	no	FACU
7. *Schedonorus arundinaceus*	5	no	FACU
8. *Bromus inermis*	20	yes	FACU
9.			
10.			
	95	=Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *n/a*			
2.			
	0	=Total Cover	

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	25	x 3 =	75
FACU species	88	x 4 =	352
UPL species	0	x 5 =	0
Column Totals:	123 (A)		447 (B)

Prevalence Index = B/A = 3.63

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0*

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

___ Problematic Hydrophytic Vegetation* (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No x

Remarks: (Include photo numbers here or on a separate sheet.)
P 242-N, 243-E, 244-S, 245-W, 246-soils

SOIL

Sampling Point: upl-bl-20191223-02

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc*	Texture	Remarks
0-12	10YR 4/3	100					silo	
12-17	10YR 4/3	80	10YR 4/1	10	d	m	sicllo	
			10YR 4/6	10	c	pl		
17-20	10YR 4/2	60					cl	
	10YR 4/6	40						

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

*Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils*:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

*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:
complicated soil profile, no hydric soil indicators present

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): 0

Water Table Present? Yes ___ No x Depth (inches): >20

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): >20

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

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: West Moulton Station / old field | City/County: Auglaize | Sampling Date: 12/23/2019

Applicant/Owner: AEP | State: OH | Sampling Point: upl-bl-20191223-03

Investigator(s): BL | Section, Township, Range: S1, 6S, 4E

Landform (hillside, terrace, etc.): hillslope | Local relief (concave, convex, none): none

Slope (%): 1 | Lat: 40.5526 | Long: -84.34165 | Datum: WGS84

Soil Map Unit Name: Ble1B1 - Blount silt loam, end moraine, 2 to 4 percent slopes | NWI classification: N/A

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

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

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

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

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

Remarks:
flat area of Phalaris at head of UDF investigated for wetland criteria, w/in powerline ROW

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *n/a*			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Rhamnus cathartica*	10	yes	FAC
2. *Cornus racemosa*	15	yes	FAC
3. *Cornus alba*	5	no	FACW
4.			
5.			
	30	=Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinaceus*	95	yes	FACW
2. *Verbesina alternifolia*	5	no	FACW
3. *Cirsium arvense*	3	no	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	103	=Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *n/a*			
2.			
	0	=Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	105	x 2 =	210
FAC species	25	x 3 =	75
FACU species	3	x 4 =	12
UPL species	0	x 5 =	0
Column Totals:	133 (A)		297 (B)

Prevalence Index = B/A = 2.23

Hydrophytic Vegetation Indicators:

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

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

Hydrophytic Vegetation Present? Yes x No ____

Remarks: (Include photo numbers here or on a separate sheet.)
P 267-N, 268-E, 269-S, 270-W, 271-soils

SOIL

Sampling Point: upl-bl-20191223-03

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc*	Texture	Remarks
0-7	2.5Y 4/3	100					sasilo	
7-16	2.5Y4/2	100					sacl	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils*:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:
no redox features present in lower layer; dug several soil pits in vicinity, soils all similar

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): 0

Water Table Present? Yes ___ No x Depth (inches): >16

Saturation Present? Yes ___ No x Depth (inches): >16

(includes capillary fringe)

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

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

Remarks:
no primary hydrology indicators present; slight step in hillslope provides some water accumulation

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: West Moulton Station / W03 City/County: Auglaize Sampling Date: 12/23/2019

Applicant/Owner: AEP State: OH Sampling Point: w-bl-20191223-03a

Investigator(s): BL Section, Township, Range: S1, 6S, 4E

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

Slope (%): 4 Lat: 40.55296 Long: -84.34315 Datum: WGS84

Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 2 to 6 percent slopes NWI classification: N/A

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

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

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

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

Hydrophytic Vegetation Present? Yes x No ____

Hydric Soil Present? Yes x No ____

Wetland Hydrology Present? Yes x No ____

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

Remarks:
adjacent to other substation; extends to west towards NHD stream; soils very heavy, within existing powerline ROW, possibly compacted soils

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *n/a*			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *n/a*			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinaceus*	90	yes	FACW
2. *Solidago altissima*	5	no	FACU
3. *Scirpus atrovirens*	5	no	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *n/a*			
2.			
	0	=Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	90	x 2 =	180
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	100 (A)		205 (B)

Prevalence Index = B/A = 2.05

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

x 2 - Dominance Test is >50%

x 3 - Prevalence Index is ≤3.0*

____ 4 - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation* (Explain)

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

Hydrophytic Vegetation Present? Yes x No ____

Remarks: (Include photo numbers here or on a separate sheet.)
P 278-N, 279-E, 280-S, 281-W, 282-soils

SOIL

Sampling Point: w-bl-20191223-03a

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc*	Texture	Remarks
0-7	2.5Y 4/2	90	10YR 4/6	10	c	pl	sacl	
7-18	2.5Y 5/1	70	2.5Y 4/6	30	c	m	cl	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils*:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

soils very heavy, possibly compacted; evidence of past vehicle movement through 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)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- x Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): 0

Water Table Present? Yes x No ___ Depth (inches): 10

Saturation Present? Yes x No ___ Depth (inches): 5

(includes capillary fringe)

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

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: West Moulton Station / W03 City/County: Auglaize Sampling Date: 12/23/2019

Applicant/Owner: AEP State: OH Sampling Point: w-bl-20191223-03b

Investigator(s): BL Section, Township, Range: S1, 6S, 4E

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

Slope (%): 2 Lat: 40.55241 Long: -84.3438 Datum: WGS84

Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 2 to 6 percent slopes NWI classification: N/A

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

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

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

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

Hydrophytic Vegetation Present? Yes x No ____

Hydric Soil Present? Yes x No ____

Wetland Hydrology Present? Yes x No ____

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

Remarks:
small scrub-shrub component of W03 in southwest corner near fence row

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus palustris*	5	yes	FACW
2.			
3.			
4.			
5.			
	5	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *Rhamnus cathartica*	15	yes	FAC
2. *Cornus alba*	20	yes	FACW
3. *Rubus allegheniensis*	5	no	FACU
4. *Lonicera morrowi*	5	no	FACU
5.			
	45	=Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinaceus*	5	no	FACW
2. *Allium canadense*	10	yes	FACU
3. *Agrimonia parviflora*	15	yes	FACW
4. *Xanthium strumarium*	5	no	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	35	=Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *n/a*			
2.			
	0	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	45	x 2 =	90
FAC species	20	x 3 =	60
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	85 (A)		230 (B)

Prevalence Index = B/A = 2.71

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

x 2 - Dominance Test is >50%

x 3 - Prevalence Index is ≤3.0*

____ 4 - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation* (Explain)

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

Hydrophytic Vegetation Present? Yes x No ____

Remarks: (Include photo numbers here or on a separate sheet.)
no photos captured due to low light (near sunset)

SOIL

Sampling Point: w-bl-20191223-03b

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc*	Texture	Remarks
0-11	2.5Y 4/2	95	10YR 4/6	5	c	pl	salo	
11-14	2.5Y 5/1	90	2.5Y 4/6	10	c	m	sacl	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils*:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

*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:

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)
- x Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ True Aquatic Plants (B14)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Gauge or Well Data (D9)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): 0

Water Table Present? Yes ___ No x Depth (inches): >14

Saturation Present? (includes capillary fringe) Yes x No ___ Depth (inches): 9

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

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

Remarks:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: West Moulton Station / W03 | City/County: Auglaize | Sampling Date: 12/23/2019

Applicant/Owner: AEP | State: OH | Sampling Point: upl-bl-20191223-04

Investigator(s): BL | Section, Township, Range: S1, 6S, 4E

Landform (hillside, terrace, etc.): hillslope | Local relief (concave, convex, none): convex

Slope (%): 4 | Lat: 40.55289 | Long: -84.34333 | Datum: WGS84

Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 2 to 6 percent slopes | NWI classification: N/A

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

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

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

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

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

Remarks:
w03 point out about 5 feet south of wetland boundary

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. *n/a*			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15' radius)			
1. *n/a*			
2.			
3.			
4.			
5.			
	0	=Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. *Phalaris arundinaceus*	10	no	FACW
2. *Dactylus glomerata*	20	yes	FACU
3. *Lolium perrene*	10	no	FACU
4. *Cirsium arvense*	20	yes	FACU
5. *Solidago altissima*	10	no	FACU
6. *Cirsium discolor*	3	no	FACU
7. *Schedonorus arundinaceus*	10	no	FACU
8. *Bromus inermis*	20	yes	FACU
9.			
10.			
	103	=Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1. *n/a*			
2.			
	0	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	0	x 3 =	0
FACU species	93	x 4 =	372
UPL species	0	x 5 =	0
Column Totals:	103 (A)		392 (B)

Prevalence Index = B/A = 3.81

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0*

____ 4 - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation* (Explain)

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

Hydrophytic Vegetation Present? Yes ____ No x

Remarks: (Include photo numbers here or on a separate sheet.)
P 287-N, 288-E, 289-S, 290-W, 291-soils

SOIL

Sampling Point: upl-bl-20191223-04

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc*	Texture	Remarks
0-8	2.5Y 4/3	100					sacllo	
8-16	2.5Y 4/2	90	2.5Y 4/6	10	c	m	sacl	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils*:

- ___ Coast Prairie Redox (A16)
- ___ Dark Surface (S7)
- ___ Iron-Manganese Masses (F12)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

*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:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ___ No x Depth (inches): 0

Water Table Present? Yes ___ No x Depth (inches): >16

Saturation Present? (includes capillary fringe) Yes ___ No x Depth (inches): >16

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

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

Remarks:

APPENDIX B

OEPA WETLAND ORAM FORMS

Wetland 01

Site: AEP West Moulton Station	Rater(s): BL (AECOM)	Date: 12/23/2019

Field Id: **w-bl-20191220-01**

Metric 1. Wetland Area (size).

0 | 0 (max 6 pts | subtotal)

Select one size class and assign score.

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

0.03 acres

Metric 2. Upland buffers and surrounding land use.

4 | 4 (max 14 pts. | subtotal)

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

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

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

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

Metric 3. Hydrology.

9.0 | 13.0 (max 30 pts. | subtotal)

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select one.

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

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

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

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

7 | 20 (max 20 pts. | subtotal)

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

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

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

	Excellent (7)
	Very good (6)
	Good (5)
	Moderately good (4)
	Fair (3)
	Poor to fair (2)
x	Poor (1)

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

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

Check all disturbances observed

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

20 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 01

Site: AEP West Moulton Station	Rater(s): BL (AECOM)	Date: 12/23/2019

Field Id:
w-bl-20191220-01

	20
	subtotal this page

0	**20**	**Metric 5. Special Wetlands.**
max 10 pts.	subtotal	Check all that apply and score as indicated.

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

0	**20**	**Metric 6. Plant communities, interspersion, microtopography.**
max 20pts.	subtotal	

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

	Aquatic bed
1	Emergent
0	Shrub
	Forest
	Mudflats
	Open water
	Other_____

6b. horizontal (plan view) Interspersion.
Select only one.

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

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

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

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

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

Category 2

20	**GRAND TOTAL(max 100 pts)**

Wetland 02

Site: AEP West Moulton Station	Rater(s): BL (AECOM)	Date: 12/23/2019

Field Id:
w-bl-20191220-02

Metric 1. Wetland Area (size).

2 | 2 (max 6 pts | subtotal)

Select one size class and assign score.

0.80 acres

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

Metric 2. Upland buffers and surrounding land use.

7 | 9 (max 14 pts. | subtotal)

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

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

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

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

Metric 3. Hydrology.

8.0 | 17.0 (max 30 pts. | subtotal)

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select one.

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

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

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

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

8 | 25 (max 20 pts. | subtotal)

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

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

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

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [x] Poor to fair (2)
- [ ] Poor (1)

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

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

Check all disturbances observed

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

25 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 02

Site: AEP West Moulton Station	Rater(s): BL (AECOM)	Date: 12/23/2019

Field Id:
w-bl-20191220-02

25
subtotal this page

0 | 25 **Metric 5. Special Wetlands.**

max 10 pts. | subtotal

Check all that apply and score as indicated.

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

1 | 26 **Metric 6. Plant communities, interspersion, microtopography.**

max 20pts. | subtotal

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

Category 2

26 **GRAND TOTAL(max 100 pts)**

Wetland 03

Site: AEP West Moulton Station	Rater(s): BL (AECOM)	Date: 12/23/2019

Field Id: **w-bl-20191220-02**

Metric 1. Wetland Area (size).

2 | 2 (max 6 pts | subtotal)

Select one size class and assign score.

0.77 acres

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

Metric 2. Upland buffers and surrounding land use.

4 | 6 (max 14 pts. | subtotal)

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

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

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

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

Metric 3. Hydrology.

12.0 | 18.0 (max 30 pts. | subtotal)

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select one.

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

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

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

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

9.5 | 27.5 (max 20 pts. | subtotal)

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

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

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

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [x] Poor to fair (2)
- [ ] Poor (1)

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

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

Check all disturbances observed

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

27.5 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 03

Site: AEP West Moulton Station	Rater(s): BL (AECOM)	Date: 12/23/2019

Field Id:
w-bl-20191220-02

27.5 subtotal this page

0 max 10 pts. | **27.5** subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

1 max 20pts. | **28.5** subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

Category 2

28.5 **GRAND TOTAL(max 100 pts)**

APPENDIX C

OEPA STREAM ASSESSMENT FORMS

Field Methods for Evaluating Primary Headwater Streams in Ohio
Ohio EPA, Division of Surface Water

Version 4.0
October 2018

Primary Headwater Habitat Field Evaluation Form

HHEI Score (sum of metrics 1+2+3): 65

SITE NAME/LOCATION: AEP-West Moulton Station / s-bl-20191223-01
SITE NUMBER: S01 | RIVER BASIN: St. Marys | RIVER CODE: | DRAINAGE AREA (mi²): 0.11
LENGTH OF STREAM REACH (ft): 200 | LAT: 40.54979 | LONG: -84.34404 | RIVER MILE: 0.34
DATE: 12/23/19 | SCORER: BL | COMMENTS: intermittent; past straightening evident

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

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

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

TYPE		PERCENT	TYPE		PERCENT
☐	BLDR SLABS [16 pts]	0%	☐	SILT [3 pt]	20%
☐	BOULDER (>256 mm) [16 pts]	0%	☐	LEAF PACK/WOODY DEBRIS [3 pts]	15%
☐	BEDROCK [16 pts]	0%	☐	FINE DETRITUS [3 pts]	0%
☐	COBBLE (65-256 mm) [12 pts]	0%	☐	CLAY or HARDPAN [0 pt]	0%
☑	GRAVEL (2-64 mm) [9 pts]	30%	☐	MUCK [0 pts]	0%
☐	SAND (<2 mm) [6 pts]	30%	☐	ARTIFICIAL [3 pts]	5%

Total of Percentages of Bldr Slabs, Boulder, Cobble, Bedrock: 0.00%

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: (A) 15

100%

TOTAL NUMBER OF SUBSTRATE TYPES: (B) 5

HHEI Metric Points
Substrate Max = 40: **20**
A + B

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

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

COMMENTS: OHW = 3.4'w x 1.1'd

MAXIMUM POOL DEPTH (centimeters): 30

Pool Depth Max = 30: **30**

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

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

COMMENTS: BF = 4.8'w x 1.9'd

AVERAGE BANKFULL WIDTH (meters): 1.4

Bankfull Width Max=30: **15**

This information must also be completed

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

RIPARIAN WIDTH (Per Bank)

L	R	
☐	☐	Wide >10m
☑	☐	Moderate 5-10m
☐	☐	Narrow <5m
☐	☑	None

FLOODPLAIN QUALITY (Most Predominant per Bank)

L	R	
☐	☐	Mature Forest, Wetland
☐	☐	Immature Forest, Shrub or Old Field
☐	☑	Residential, Park, New Field
☐	☐	Fenced Pasture
☐	☐	Conservation Tillage
☐	☐	Urban or Industrial
☑	☐	Open Pasture, Row Crop
☐	☐	Mining or Construction

COMMENTS: straightened NHD stream

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

- ☑ Stream Flowing
- ☐ Subsurface flow with isolated pools (interstitial)
- ☐ Moist Channel, isolated pools, no flow (intermittent)
- ☐ Dry channel, no water (ephemeral)

COMMENTS: current snowmelt / precipitation

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

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

STREAM GRADIENT ESTIMATE

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

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

QHEI PERFORMED? [✓] Yes [ ] No QHEI Score _____ (If Yes, Attach Completed QHEI form)

DOWNSTREAM DESIGNATED USE(S)

[✓] WWH Name: Clear Creek Distance from Evaluated Stream 0.68

[ ] CWH Name: _____ Distance from Evaluated Stream _____

[ ] EWH Name: _____ Distance from Evaluated Stream _____

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

USGS Quadrangle Name: Moulton NRCS Soil Map Page: _____ NRCS Soil Map Stream Order: _____

County: Auglaize Township/City: Saint Marys

MISCELLANEOUS

Base Flow Conditions? (Y/N): N Date of last precipitation: 12/16/19 Quantity: 0.09

Photo-documentation Notes: BL 298-Up, 299-down, 300-substrates

Elevated Turbidity? (Y/N): N Canopy (% open): 40%

Were samples collected for water chemistry? (Y/N): N Lab Sample # or ID (attach results): _____

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

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

lots of ag runoff

Additional comments/description of pollution impacts:

Overall Stability of BOTH Stream Banks (check one): Stable [✓] Moderately Stable [ ] Unstable [ ]

BIOLOGICAL OBSERVATIONS

(Record all observations below)

Fish Observed? (Y/N) _____ Species observed (if known): _____

Frogs or Tadpoles Observed? (Y/N) _____ Species observed (if known): _____

Salamanders Observed? (Y/N) _____ Species observed (if known): _____

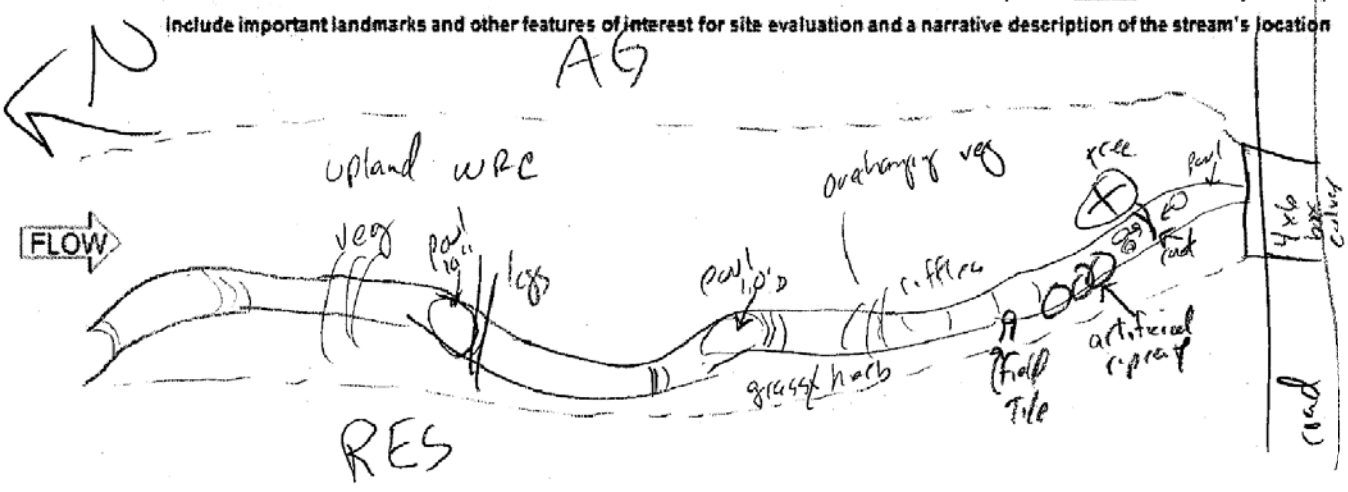
Aquatic Macroinvertebrates Observed? (Y/N) _____ Species observed (if known): _____

Comments Regarding Biology:

none observed

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

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



APPENDIX D

PHOTOGRAPHIC LOG

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Wetland 01
Date: December 23, 2019
Description: PEM Category 1 Facing North

Wetland 01
Date: December 23, 2019
Description: PEM Category 1 Facing East

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Wetland 01
Date: December 23, 2019
Description: PEM Category 1 Facing South

Wetland 01
Date: December 23, 2019
Description: PEM Category 1 Facing West

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Wetland 01	
Date: December 23, 2019	
Description: PEM Category 1 Soil Pit	

Upland 01	
Date: December 23, 2019	
Description: Facing North	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Upland 01 **Date:** December 23, 2019 **Description:** Facing East	

Upland 01 **Date:** December 23, 2019 **Description:** Facing South	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Upland 01 **Date:** December 23, 2019 **Description:** Facing West	

Upland 01 **Date:** December 23, 2019 **Description:** Soil Pit	

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PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Wetland 02a **Date:** December 23, 2019 **Description:** PEM Category 1 Facing North	

Wetland 02a **Date:** December 23, 2019 **Description:** PEM Category 1 Facing East	

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PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Wetland 02a
Date: December 23, 2019
Description: PEM Category 1 Facing South

Wetland 02a
Date: December 23, 2019
Description: PEM Category 1 Facing West

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Wetland 02a
Date: December 23, 2019
Description: PEM Category 1 Soil Pit

Wetland 02b
Date: December 23, 2019
Description: PSS Category 1 Facing North

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Wetland 02b **Date:** December 23, 2019 **Description:** PSS Category 1 Facing East	

Wetland 02b **Date:** December 23, 2019 **Description:** PSS Category 1 Facing South	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Wetland 02b **Date:** December 23, 2019 **Description:** PSS Category 1 Facing West	

Wetland 02b **Date:** December 23, 2019 **Description:** PSS Category 1 Soil Pit	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Upland 02
Date: December 23, 2019
Description: Facing North

Upland 02
Date: December 23, 2019
Description: Facing East

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Upland 02 **Date:** December 23, 2019 **Description:** Facing South	

Upland 02 **Date:** December 23, 2019 **Description:** Facing West	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Upland 02 **Date:** December 23, 2019 **Description:** Soil Pit	

Wetland 03a **Date:** December 23, 2019 **Description:** PEM Category 1 Facing North	

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PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Wetland 03a
Date: December 23, 2019
Description: PEM Category 1 Facing East

Wetland 03a
Date: December 23, 2019
Description: PEM Category 1 Facing South

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Wetland 03a **Date:** December 23, 2019 **Description:** PEM Category 1 Facing West	

Wetland 03a **Date:** December 23, 2019 **Description:** PEM Category 1 Soil Pit	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Upland 03 **Date:** December 23, 2019 **Description:** Facing North	

Upland 03 **Date:** December 23, 2019 **Description:** Facing East	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Upland 03 **Date:** December 23, 2019 **Description:** Facing South	

Upland 03 **Date:** December 23, 2019 **Description:** Facing West	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Upland 03
Date: December 23, 2019
Description: Soil Pit

Upland 04
Date: December 23, 2019
Description: Facing North

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Upland 04 **Date:** December 23, 2019 **Description:** Facing East	

Upland 04 **Date:** December 23, 2019 **Description:** Facing South	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Upland 04 **Date:** December 23, 2019 **Description:** Facing West	

Upland 04 **Date:** December 23, 2019 **Description:** Soil Pit	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Stream 01 **Date:** December 23, 2019 **Description:** Intermittent Modified Small Drainage Warmwater Facing Upstream	

Stream 01 **Date:** December 23, 2019 **Description:** Intermittent Modified Small Drainage Warmwater Facing Downstream	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Stream 01 **Date:** December 23, 2019 **Description:** Intermittent Modified Small Drainage Warmwater Substrate	

Date: December 23, 2019 **Description:** UDF and old field vegetative community Facing North	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Date:

December 23, 2019

Description:

UDF and old field vegetative community

Facing East

Date:

December 23, 2019

Description:

UDF and old field vegetative community

Facing South

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Date: December 23, 2019 **Description:** UDF and old field vegetative community Facing West	

Date: December 23, 2019 **Description:** Roadside ditch UDF and landscaped area/urban vegetative community Facing North	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Date:

December 23, 2019

Description:

Roadside ditch UDF and landscaped area/urban vegetative community

Facing South

Date:

December 23, 2019

Description:

Shrub-scrub vegetative community

Facing North

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Date:

December 23, 2019

Description:

Upland woodland vegetative community

Facing South

Date:

December 23, 2019

Description:

Agricultural vegetative community

Facing East

AECOM Imagine it. Delivered.

PHOTOGRAPHIC LOG
WETLANDS, STREAMS, UDFs, AND VEGETATIVE COMMUNITIES

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project	60567952

Date:

December 23, 2019

Description:

Urban vegetative community; existing West Moulton Station

Facing West

Date:

December 23, 2019

Description:

Old field and urban vegetative community; existing gravel drive and cellular tower

Facing Wast

APPENDIX E

AGENCY CORRESPONDENCE

Tucker, Jason

From: susan_zimmermann@fws.gov on behalf of Ohio, FW3 <ohio@fws.gov>
Sent: Friday, March 09, 2018 10:35 AM
To: Tucker, Jason
Subject: Wapakoneta Transmission Infrastructures (Several 138 kV Stations) in Auglaize Co.

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

TAILS# 03E15000-2018-TA-0902

Dear Mr. Tucker,

We have received your recent correspondence regarding potential impacts to federally listed species in the vicinity of the above referenced project. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. We recommend that proposed activities minimize water quality impacts, including fill in streams and wetlands. Best management practices should be utilized to minimize erosion and sedimentation.

FEDERALLY LISTED, PROPOSED, AND CANDIDATE SPECIES COMMENTS: Due to the project type, size, location, and the proposed implementation of seasonal tree cutting (clearing of trees ≥3 inches diameter at breast height between October 1 and March 31) to avoid impacts to Indiana bats and northern long-eared bats, we do not anticipate adverse effects to any federally endangered, threatened, proposed or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the U.S. Fish and Wildlife Service (Service) should be initiated to assess any potential impacts.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the Endangered Species Act (ESA), between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact John Kessler, Environmental Services Administrator, at (614) 265-6621 or at john.kessler@dnr.state.oh.us.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or ohio@fws.gov.

Sincerely,

Dan Everson
Field Supervisor

Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR JAMES ZEHRINGER, DIRECTOR

Office of Real Estate
Paul R. Baldridge, Chief
2045 Morse Road – Bldg. E-2
Columbus, OH 43229
Phone: (614) 265-6649
Fax: (614) 267-4764

March 23, 2018

Jason Tucker
AECOM
525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

Re: 18-409; Wapakoneta Improvements Project

Project: The proposed project includes a new Gristmill Station, a new Gemini Station, a new 138 kV transmission line between Gristmill and Gemini Stations, a new 138 kV transmission line between Gemini and West Moulton Stations, and expanding the West Moulton Station.

Location: The proposed project is located in Pusheta and Washington Townships, Auglaize County, Ohio.

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

Natural Heritage Database: The Natural Heritage Database has the following records at or within a one-mile radius of the project area:

Greater redhorse (*Moxostoma valenciennesi*), State threatened, federal species of concern
Great blue heron rookery

The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980. This information is provided to inform you of features present within your project area and vicinity. Additional comments on some of the features may be found in pertinent sections below.

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

Fish and Wildlife: The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The project area east of Dixie Highway and south of Weimert School Road is within the vicinity of records for the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. Presence of the Indiana bat has been established in the area, and therefore additional summer surveys would not constitute presence/absence in the area. The following species of trees have relatively high value as potential Indiana bat roost trees to include: shagbark hickory (*Carya ovata*), shellbark hickory (*Carya laciniosa*), bitternut hickory (*Carya cordiformis*), black ash (*Fraxinus nigra*), green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), shingle oak (*Quercus imbricaria*), northern red oak (*Quercus rubra*), slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), eastern cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), sassafras (*Sassafras albidum*), post oak (*Quercus stellata*), and white oak (*Quercus alba*). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31.

The remainder of the project area is within the range of the Indiana bat (*Myotis sodalis*). If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the clubshell (*Pleurobema clava*), a state endangered and federally endangered mussel, and the pondhorn (*Uniomerus tetralasmus*), a state threatened mussel. This project must not have an impact on freshwater native mussels at the project site. This applies to both listed and non-listed species. Per the Ohio Mussel Survey Protocol (2016), all Group 2, 3, and 4 streams (Appendix A) require a mussel survey. Per the Ohio Mussel Survey Protocol, Group 1 streams (Appendix A) and unlisted streams with a watershed of 10 square miles or larger above the point of impact should be assessed using the Reconnaissance Survey for Unionid Mussels (Appendix B) to determine if mussels are present. Mussel surveys may be recommended for these streams as well. This is further explained within the Ohio Mussel Survey Protocol. Therefore, if in-water work is planned in any stream that meets any of the above criteria, the DOW recommends the applicant provide information to indicate no mussel impacts will occur. If this is not possible, the DOW recommends a professional malacologist conduct a mussel survey in the project area. If mussels that cannot be avoided are found in the project area, as a last resort, the DOW recommends a professional malacologist collect and relocate the mussels to suitable and similar habitat upstream of the project site. Mussel surveys and any subsequent mussel relocation should be done in accordance with the Ohio Mussel Survey Protocol. The Ohio Mussel Survey Protocol (2018) can be found at:

http://wildlife.ohiodnr.gov/portals/wildlife/pdfs/licenses%20&%20permits/OH%20Mussel%20Survey%20Protocol.pdf

The project is within the range of the greater redhorse (*Moxostoma valenciennesi*), a state threatened fish. The DOW recommends no in-water work in perennial streams from April 15 to June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact this or other aquatic species.

The project is within the range of the lark sparrow (*Chondestes grammacus*), a state endangered bird. This sparrow nests in grassland habitats with scattered shrub layers, disturbed open areas, as well as patches of bare soil. These summer residents normally migrate out of Ohio shortly after their young fledge or leave the nest. If this type of habitat will be impacted, construction should be avoided in this habitat during the species' nesting period of May 1 to June 30. If this habitat will not be impacted, the project is not likely to impact this species.

The DOW has a record for a great blue heron rookery within the boundary of the project area. The rookery is located within the large woodlot between the following roads: Washington Pike, Burr Oak Road, Kettlersville Road, and Kohler Road. Nesting great blue herons are protected under the Migratory Bird Treaty Act of 1918. Impacts to great blue heron rookeries can have a significant impact on a local population due to the large number of birds that return each year to the same rookery to nest. Rookeries often include a certain set of characteristics that are not easily found elsewhere. The DOW recommends that construction activity within the rookery be avoided to preserve the rookery. If construction within the rookery cannot be avoided, the DOW recommends at the very least, the rookery be avoided during the nesting season of March 1 through June 31 as to not interfere with nesting birds. In addition, the DOW recommends a 100 yard no activity buffer be maintained around the rookery during the breeding season as to not interfere with nesting birds.

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

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

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

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

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler
ODNR Office of Real Estate
2045 Morse Road, Building E-2
Columbus, Ohio 43229-6693
John.Kessler@dnr.state.oh.us

WEST MOULTON STATION EXPANSION PROJECT AUGLAIZE COUNTY, OHIO

WETLAND DELINEATION AND STREAM ADDENDUM REPORT

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

Prepared by:

AECOM Imagine it. Delivered.
525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

Project #: 60567952

September 2021

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APPENDICES

LIST OF ACRONYMS and ABBREVIATIONS

AECOM	AECOM Technical Services, Inc.
AEP Ohio Transco	American Electric Power Ohio Transmission Company
DBH	Diameter at Breast Height
DOW	Division of Wildlife
DWR	Division of Water Resources
FAC	Facultative
FACU	Facultative upland
FACW	Facultative wetland
GIS	Geographic Information System
GNSS	Global Navigation Satellite System
HHEI	Headwater Habitat Evaluation Index
IBI	Index of Biotic Integrity
NHD	National Hydrography Dataset
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OAC	Ohio Administrative Code
OBL	Obligate wetland
ODNR	Ohio Department of Natural Resources
OEPA	Ohio Environmental Protection Agency
OHWM	Ordinary High Water mark
ONHD	Ohio Natural Heritage Database
ORAM	Ohio Rapid Assessment Method
PEM	Palustrine emergent
PFO	Palustrine forested
PSS	Palustrine scrub/shrub
PUB	Palustrine unconsolidated bottom
PHW	Primary Headwater
QHEI	Qualitative Habitat Evaluation Index
ROW	Right-of-way
UDF	Upland Drainage Feature
UPL	Upland
U.S.	United States
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
WOTUS	Waters of the U.S.

1.0 INTRODUCTION

American Electric Power Ohio Transmission Company (AEP Ohio Transco) proposes to expand the existing West Moulton Station (Project) in Auglaize County, Ohio. The Project is one part of the Wapakoneta Improvements Project, having separate Wetland Delineation and Stream Assessment reports for each project component. In January of 2019, AEP Ohio Transco identified the existing 14-acre property boundary and two transmission lines, as the potential work area (Project Survey area). The original delineation report (*West Moulton Station Expansion Project Wetland Delineation and Stream Assessment Report – January 2020*) discussed herein shall be referred to as the January 2020 – Report.

Since the January 2020 – Report, AEP Ohio Transco has updated the Project survey area to include a 0.30-acre survey area to accommodate an additional work pad and adjustment to the proposed tie-in to the St. Mary's substation. The proposed Project location which includes the newly added work areas is illustrated on Figure 1. As reference, AECOM has included the identified features along the Project that were originally provided within the January 2020 – Report within the text and tables. Previously identified features, data forms, photographs, and supporting information of the previous surveys of the Project are contained within the January 2020 Report.

This addendum wetland delineation and stream assessment report includes the results (data forms, photographs, and updated figures) associated with wetlands and/or streams identified within the addendum survey area of the Project. Due to potential overlap between new and previously delineated features, the extent of delineated features and survey areas (new and previously identified) are displayed on the attached figures within the extent of the Project.

2.0 METHODOLOGY

A comprehensive methodology of the field surveys and data reviews completed for this report are included in the January 2020 – Report and a summary of the delineation and agency coordination methodology has been provided below.

Delineations were conducted in accordance with the procedures outlined in the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual (*1987 Manual*) (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (Version 2.0) (*MW Regional Supplement*) (USACE, 2010). In addition, any wetlands that were identified were classified using the Ohio Environmental Protection Agency (OEPA) Ohio Rapid Assessment Method for Wetlands V. 5.0 (ORAM) (Mark, 2010). Stream assessments were conducted using the methods described in the OEPA's Methods for Assessing Habitat in Flowing Waters by using the OEPA's Qualitative Habitat Evaluation Index (Rank, 2006) and the OEPA's Field Methods for Evaluating Primary Headwater Streams in Ohio (OEPA, 2020).

Initial coordination from the U.S. Fish and Wildlife Service (USFWS) and the Ohio Department of Natural Resources (ODNR) was received as part of the original January 2020 – Report in August 2019. As the Addendum Project is located within proximity to the original assessment, AECOM review the original correspondence to identify if additional habitats would warrant further review regarding the previous correspondence for federal and/or state listed threatened and/or endangered species.

3.0 RESULTS

On September 2, 2021, an AECOM ecologist walked the Project survey area to conduct the wetland delineation, stream assessment, and habitat survey. AECOM extended the boundary of one wetland (Wetland 03a) that extends south of the proposed additional work area. No new wetlands, streams or ponds were identified within the addendum study area. The location of this extended wetland is illustrated on Figure 3. The extended feature, previously identified features and habitat types found in the Project survey area are discussed in detail in the following sections.

3.1 WETLAND DELINEATION

3.1.1 PRELIMINARY SOILS EVALUATION

Soils in delineated wetlands were observed and documented as part of the delineation methodology. According to the USDA NRCS Web Soil Survey of Auglaize County, Ohio, and the USDA NRCS Hydric Soils Lists of Ohio, there are three soil types mapped within the Project survey area (NRCS, 2019). One soil map unit is identified as hydric, while the other map units have hydric components that may comprise nine percent of the area mapped within the unit. No new soil map units were identified in the added Project survey areas. Table 1 provides a detailed overview of all soil series and soil map units within the Project survey area. Soil map units located within the Project survey area are shown on Figure 2.

TABLE 1
SOIL MAP UNITS AND DESCRIPTIONS WITHIN THE WEST MOULTON STATION EXPANSION PROJECT SURVEY AREA

Soil Series	Symbol	Map Unit Description	Topographic Setting	Hydric	Hydric Component (%)
Blount	Ble1B1	Blount silt loam, end moraine, 2 to 4 percent slopes	end moraines, till plains	No	Pewamo, end moraine 6%
Glynwood	Gwe1B1	Glynwood silt loam, end moraine, 2 to 6 percent slopes	end moraines, till plains	No	Pewamo 6%
Pewamo	Pt	Pewamo silty clay loam, 0 to 1 percent slopes	depressions, till plains	Yes	Pewamo 85% Montgomery 5%

USDA, NRCS. 2019 Soil Survey Geographic (SSURGO) Database for Auglaize County, Ohio. Available online at: http://soildatamart.nrcs.usda.gov/
USDA, NRCS. National Hydric Soils List by State (Soil Data Access Live query). Available online at: https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316619.html

3.1.2 NATIONAL WETLAND INVENTORY MAP REVIEW

According to the NWI data covering the Project location, the September 2021 – Addendum Project Survey area contains no new NWI mapped wetlands were identified. The locations of the NWI mapped wetlands are shown on Figure 2.

3.1.3 DELINEATED WETLANDS

No new wetlands were delienated and one previously identified wetland (Wetland 03a) was extended during the September 2021 field survey. The boundary of the previously delineated Wetland 03a was extended into the Addendum Survey Area. The total delineated area of Wetland 03a is approximately 0.68 acre (previously 0.67-acre) and the extension did not result in a change of the ORAM score and/or Category for this wetland. The remaining wetlands noted in the follow tables are associated with features delineated in the original Project survey area and additional information for these resources are provided in the January 2020 – Report.

Completed USACE wetland delineation forms and OEPA ORAM forms for the extended portion of Wetland 03a are provided in Appendix A and B of this Addendum report, respectively. Photographs taken of the extended portion of Wetland 03a are provided in Appendix C.

TABLE 2
DELINEATED WETLANDS WITHIN THE WEST MOULTON STATION EXPANSION PROJECT SURVEY AREA

Wetland Name	Latitude	Longitude	Cowardin Wetland Type[a]	ORAM Score[b]	ORAM Category[b]	Acreage within Project Survey Area
Wetland 01	40.55235	-84.33982	PEM	20	Category 1	0.02
Wetland 02a	40.5529	-84.34085	PEM	26	Category 1	0.74
Wetland 02b	40.55336	-84.34057	PSS			0.05
Wetland 03a	40.55296	-84.34315	PEM	28.5	Category 1	0.68
Wetland 03b	40.55241	-84.3438	PSS			0.08
Totals: 3 Wetlands						**1.57**

Cowardin Wetland Type[a]: PEM = palustrine emergent; PSS = palustrine scrub-shrub
ORAM[b] Scoring Category: 0-29.9 = Category 1

NOTE: Cells highlighted in yellow indicate changes to the information provided in the January 2020 – Report.

3.2 STREAM ASSESSMENT

During the Addendum survey, AECOM did not identify and/or modify any previously identified streams. Previously identified features, data forms, photographs, and supporting information of the previous surveys of the Project are contained within the January 2020 – Report.

3.3 PONDS

No ponds were identified within the original and/or addendum Project survey area.

3.4 UPLAND DRAINAGE FEATURES

No new upland drainage features (UDFs) were identified during the September 2021 field survey. Previously identified upland drainage features from the January 2020 field survey are discussed in the January 2020 - Report.

3.5 VEGETATIVE COMMUNITIES

AECOM conducted a general habitat survey in conjunction with the stream and wetland field surveys during the January 2020 and September 2021 studies. Portions of the Project survey area were identified to contain either agricultural land, landscaped areas, old field, shrub-scrub, successional woodland, urban, or stream/wetland vegetative communities. Table 3 provides descriptions and updated acreages of the various types of land cover found in entire Project Survey Area, which is composed of the addendum and original survey areas. Vegetative communities that have had acreages updated are highlighted to signify the increase in area. Vegetated land cover can be seen visually from aerial photography provided on Figure 4.

TABLE 3
VEGETATIVE COMMUNITIES WITHIN THE WEST MOULTON STATION EXPANSION PROJECT SURVEY AREA

Vegetative Community	Description	Approximate Acreage	Approximate Percentage
Agricultural Land	Land utilized for row crops, whether planted or not, and not used for pasture or hay fields.	1.4	9.5
Landscaped Areas	Residential and commercial properties having frequently mowed grasses and forbs.	0.9	6.1
Old Field	Herbaceous cover exhibiting the earliest stages of recolonization by plants following disturbance, typically short-lived, giving way progressively to shrub and forest communities unless periodically re-disturbed. Old field areas identified were infrequently maintained areas of grasses and forbs with occasional shrubs.	5.1	34.0
Shrub-Scrub	The presence of shrubby woody vegetation covering at least 30% of the land surface, representing a successional stage between old field and second growth forest. Dominant species consist of herbaceous communities similar to old field habitat with a few woody species, to a community dominated by woody shrubs and/or sapling tree species.	3.6	23.8
Successional Woodland	Successional mixed hardwood woodland dominated by black locust (*Robinia pseudoacacia*), black cherry (*Prunus serotina*), and Tree of Heaven (*Ailanthus altissima*). The dominant shrub/sapling-layer included gray dogwood (*Cornus racemosa*) and Morrow's honeysuckle (*Lonicera morrowii*).	0.7	4.8
Urban	Developed areas with residential and commercial land uses, including roads, buildings and parking lots, generally devoid of significant woody and herbaceous vegetation.	1.8	10.9

TABLE 3
VEGETATIVE COMMUNITIES WITHIN THE WEST MOULTON STATION EXPANSION PROJECT SURVEY AREA

Vegetative Community	Description	Approximate Acreage	Approximate Percentage
Stream/Wetland	All delineated wetlands, including emergent, scrub-shrub and forested components.	1.6	10.9
	Totals:	**14.7**	**100%**

3.6 RARE, THREATENED AND ENDANGERED SPECIES

Within the January 2020 – Report, AECOM conducted a rare, threatened, and endangered species review for the AEP Wapakoneta Improvement Project which includes the West Moulton Station Expansion Project survey area. As this addendum does not result in a significant change of location, habitats, and potential for impact to the federal and/or state listed threatened and endangered species, a revision to the previous assessment was not warranted. Therefore, results of the protected species review are provided within the January 2020 – Report.

4.0 SUMMARY

This addendum includes the wetland delineation and stream assessment results associated with the new survey areas located outside of the original survey associated with the West Moulton Station Expansion Project's January 2020 – Report. Identified wetlands and streams within the original wetland delineation and stream assessment report, *West Moulton Station Expansion Project – January 2020*, are included in the tables and on figures for reference. Data forms, photographs, and supporting information of the previously identified features are provided within the January 2020 – Report. As a result of the September 2021 Addendum, AECOM did not identify any new features and only extend one previously identified wetland (Wetland 03a) within the Addendum Survey Area.

Due to previous correspondence with ODNR/USFWS agencies regarding potential for federal and/or state listed species, AECOM concluded that the additional addendum area would not result in a change of the previously completed assessment. Therefore, threatened and endangered species summaries associated with this addendum are provided within the January 2020 – Report.

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

The field survey results presented herein apply to the existing and reasonably foreseeable site conditions at the time of our assessment. They cannot apply to site changes of which AECOM is unaware and has not

had the opportunity to review. Changes in the condition of a property may occur with time due to natural processes or human impacts at the project site or on adjacent properties. Changes in applicable standards may also occur because of legislation or the expansion of knowledge over time. Accordingly, the findings of this report may be invalidated, wholly or in part, by changes beyond the control of AECOM. Final jurisdictional determination of WOTUS can only be made by the USACE.

5.0 REFERENCES

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

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

Ohio Environmental Protection Agency. 2020. *Field Methods for Evaluating Primary Headwater Streams in Ohio*. Version 4.1. OEPA Division of Surface Water, Columbus, Ohio. 129 pp.

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

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

U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (Version 2.0)*, ed. J. S. Wakely, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

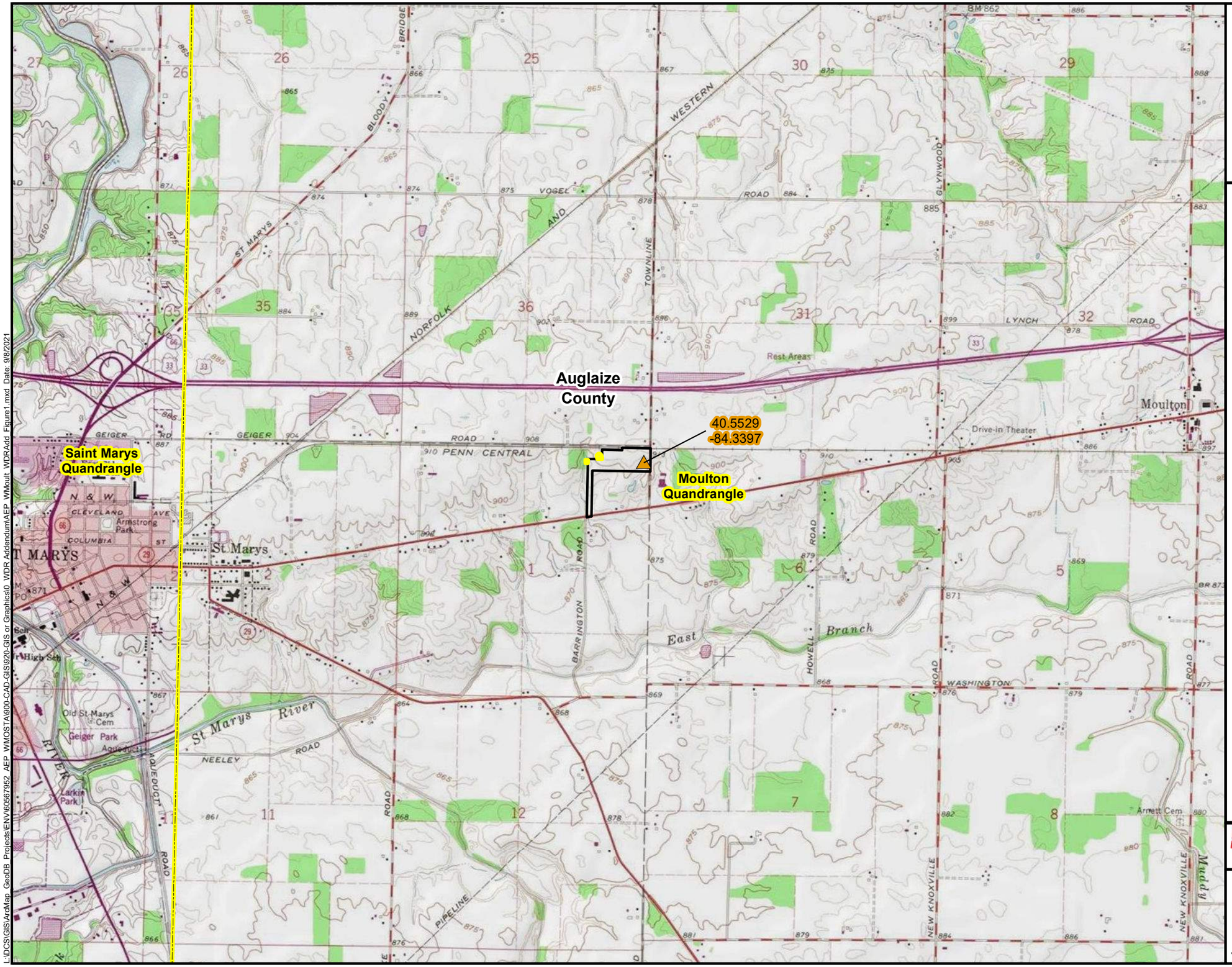
U.S. Army Corps of Engineers. 2018. *National Wetland Plant List*, version 3.3. Engineer Research and Development Center. Cold Regions Research and Engineering Laboratory, Hanover, NH. http://wetland_plants.usace.army.mil/.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2017. National Hydric Soils List. http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. Accessed 9/07/2021.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2019. Web Soil Survey. Soil Survey Geographic (SSURGO) Database for Auglaize County, OH. Published 6 September 2019. http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm.

U.S. Fish and Wildlife Service. 2018. National Wetlands Inventory Geodatabase for Ohio. Available online at http://www.fws.gov/wetlands/Data/Mapper.html. Accessed 9/07/2021.

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



LEGEND:

- West Moulton Station
- Project Survey Area (September 2021 Addendum)
- Project Survey Area (January 2020)
- USGS 7.5" Topographical Quadrangle

N

1:24,000

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Feet

BASE MAP SOURCE:
Copyright:© 2013 National Geographic Society, i-cubed

AEP OHIO TRANSMISSION COMPANY

West Moulton Station Expansion Project Addendum

FIGURE 1
PROJECT LOCATION MAP

JOB NO. 60567952

AECOM Imagine it. Delivered.

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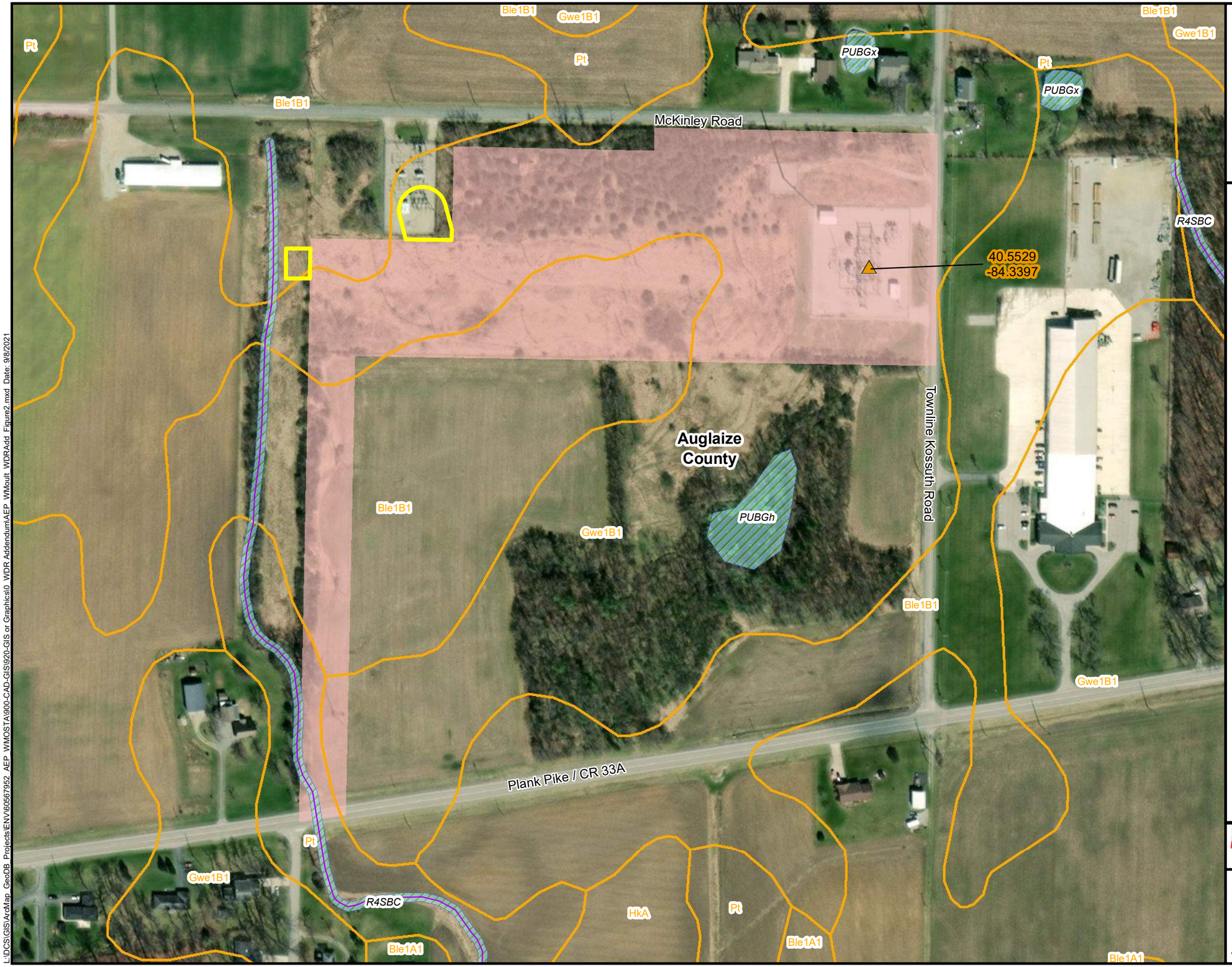

LEGEND:

- West Moulton Station
- Project Survey Area (September 2021 Addendum)
- Project Survey Area (January 2020)
- NHD Stream (USGS)
- NWI Wetland (USFWS)
- Soil Map Unit (USDA-NRCS)

Soil Map Unit Symbol, Name

Ble1A1, Blount silt loam, end moraine, 0 to 2 percent slopes

Ble1B1, Blount silt loam, end moraine, 2 to 4 percent slopes

Gwe1B1, Glynwood silt loam, end moraine, 2 to 6 percent slopes

HkA, Kaskins loam, 0 to 2 percent slopes

Pt, Pewamo silty clay loam, 0 to 1 percent slopes

N

1:2,400

0 400

Feet

BASE MAP SOURCE:
Source: Esri, Maxar, GeoEye, Earthstar Geographics,

AEP OHIO TRANSMISSION COMPANY

West Moulton Station Expansion Project Addendum

FIGURE 2
SOIL MAP UNIT AND NATIONAL WETLAND INVENTORY MAP

JOB NO. 60567952

AECOM Imagine it. Delivered.

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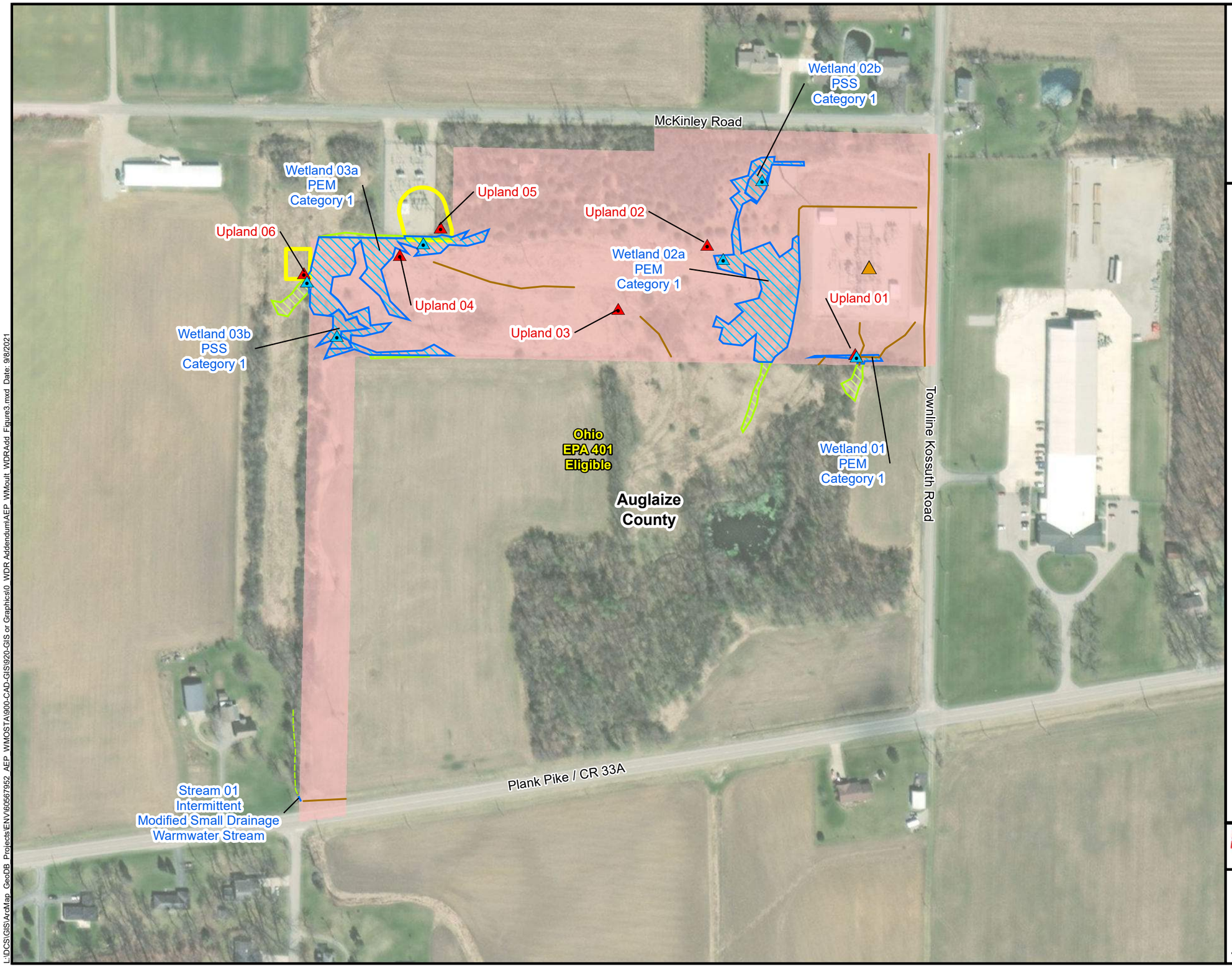


LEGEND:

- West Moulton Station
- Project Survey Area (September 2021 Addendum)
- Project Survey Area (January 2020)
- Delineated Wetland
- Wetland Data Point
- Upland Data Point
- Delineated Intermittent Stream
- Upland Drainage Feature
- Approximate Wetland Location
- Approximate Stream Location

N

1:2,400

0 400

Feet

BASE MAP SOURCE:
Source: Esri, Maxar, GeoEye, Earthstar Geographics,

AEP OHIO TRANSMISSION COMPANY

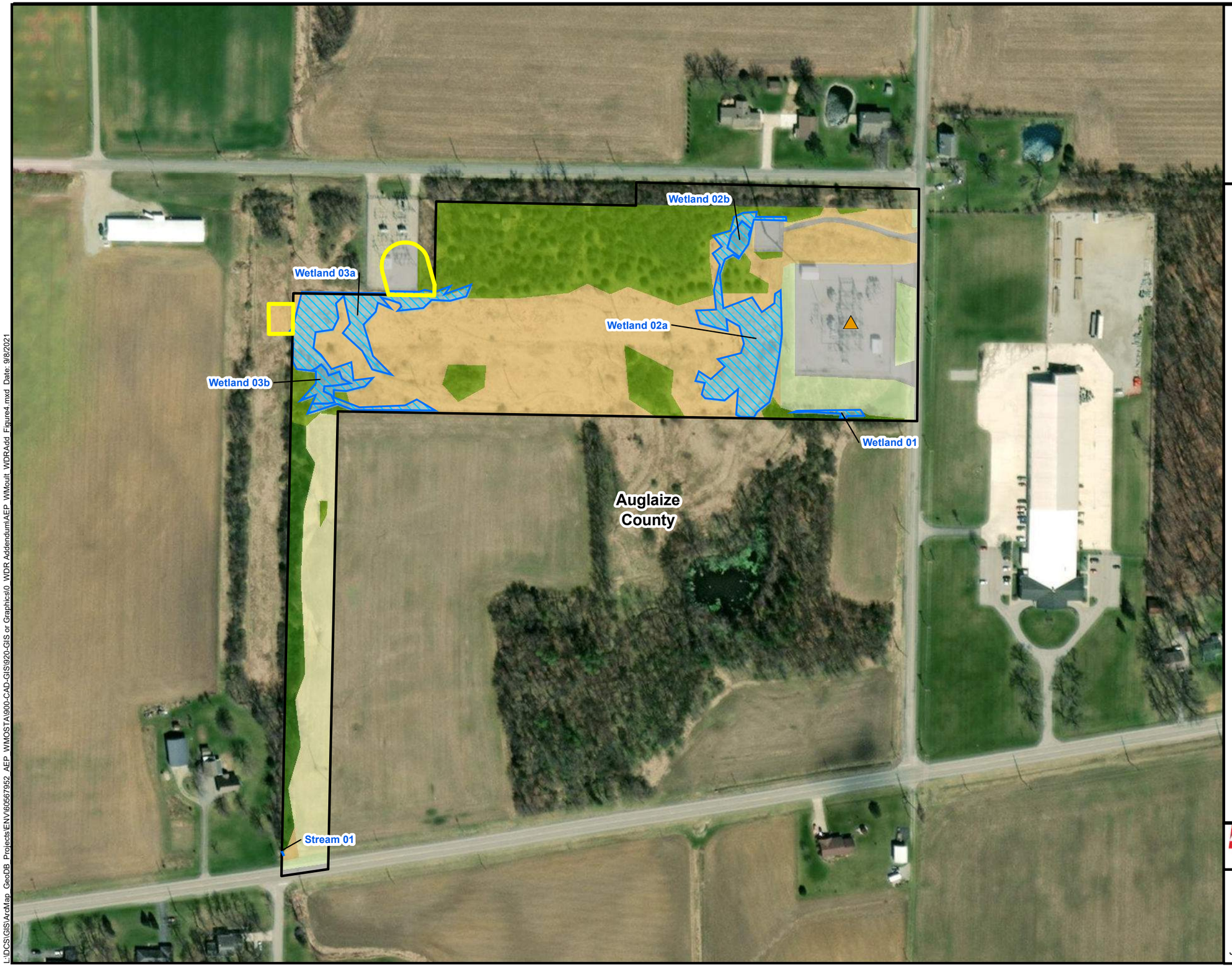
West Moulton Station Expansion Project Addendum

FIGURE 3
WETLAND DELINEATION AND STREAM ASSESSMENT MAP

JOB NO. 60567952

AECOM

L:\DCS\GIS\ArcMap_GeoDB_Projects\ENV\60567952_AEP_WMOSTA\900-CAD-GIS\920-GIS or Graphics\0_WDR Addendum\AEP_WMoult_WDRAdd_Figure3.mxd Date: 9/8/2021



LEGEND:

- West Moulton Station
- Project Survey Area (September 2021 Addendum)
- Project Survey Area (January 2020)
- Delineated Wetland
- Delineated Intermittent Stream

Vegetative Communities

- Agricultural Land
- Landscaped Areas
- Old Field
- Shrub-scrub
- Stream/Wetland
- Successional Woodland
- Urban

N

1:2,400

0 400

Feet

BASE MAP SOURCE:
Source: Esri, Maxar, GeoEye, Earthstar Geographics,

AEP OHIO TRANSMISSION COMPANY

West Moulton Station Expansion Project Addendum

FIGURE 4
VEGETATIVE COMMUNITIES MAP

JOB NO. 60567952

AECOM Imagine it. Delivered.

L:\DCS\GIS\ArcMap GeoDB Projects\ENV\60567952_AEP_WMOSTA\900-CAD-GIS\920-GIS or Graphics\0 WDR Addendum\AEP_WMoult_WDRAdd_Figure4.mxd Date: 9/8/2021

APPENDIX A

USACE WETLAND DETERMINATION DATA FORMS

Upland 5

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: West Moulton Station Expansion Project City/County: Auglaize County Sampling Date: 09/02/2021

Applicant/Owner: AEP State: OH Sampling Point: upl-jbl-20210902-01

Investigator(s): JBL Section, Township, Range: S1, T6S, R4E

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

Slope (%): 0-1 Lat: 40.55304 Long: -84.343017 Datum: NAD 83

Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 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	

Remarks:
Sample point upl-jbl-20210902-01 for adjacent previously delineated wetland 03a. Taken on area north of wetland and eat of existing sub station. Area does not meet wetland criteria.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pyrus calleryana*	15	Yes	UPL
2.			
3.			
4.			
5.			
	15	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Cornus racemosa*	60	Yes	FAC
2. *Pyrus calleryana*	15	Yes	UPL
3.			
4.			
5.			
	75	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Solidago canadensis*	40	Yes	FACU
2. *Vernonia gigantea*	25	Yes	FAC
3. *Daucus carota*	15	No	UPL
4. *Geum canadense*	15	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
	95	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1. *Toxicodendron radicans*	15	Yes	FAC
2.			
	15	=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: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	115	x 3 =	345
FACU species	40	x 4 =	160
UPL species	45	x 5 =	225
Column Totals:	200 (A)		730 (B)

Prevalence Index = B/A = 3.65

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

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

SOIL

Sampling Point: jbl-20210902

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 4/3	100					Loamy/Clayey	
10-16	10YR 4/2	100	10YR 4/2	2	C	M	Loamy/Clayey	Faint redox concentrations

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

No hydric soil indicators present

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): ____

Water Table Present? Yes ____ No x Depth (inches): ____

Saturation Present? Yes ____ No x Depth (inches): ____

(includes capillary fringe)

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

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

Remarks:

No hydrologic indicators observed.

Upland 6

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: West Moulton Station Expansion Project | City/County: Auglaize County | Sampling Date: 09/02/2021

Applicant/Owner: AEP | State: OH | Sampling Point: upl-jbl-20210902-02

Investigator(s): JBL | Section, Township, Range: S1, T6S, R4E

Landform (hillside, terrace, etc.): mound | Local relief (concave, convex, none): concave

Slope (%): 2 | Lat: 40.550373 | Long: -84.352443 | Datum: NAD 83

Soil Map Unit Name: Ble1B1 | 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	

Remarks:
Sample point upl-jbl-20210902-01 for extension of previously delineated PEM wetland 03a. Taken on area north of extended wetland area. Sample oint does not meet wetland criteria

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *N/A*			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	90	Yes	FACW
2. *Daucus carota*	25	Yes	UPL
3. *Vernonia gigantea*	5	No	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	120 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *N/A*			
2.			
	=Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	90	x 2 =	180
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	25	x 5 =	125
Column Totals:	120 (A)		320 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:

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

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

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

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

SOIL

Sampling Point: jbl-20210902

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/2	100					Loamy/Clayey	
9-17	10YR 3/2	98	10YR 3/6	2	C	M	Loamy/Clayey	Prominent redox concentrations

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

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

Remarks:
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
Hydric soils indictors not observed.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:
No hydrologic indicators observed. Sample point does not meet wetland criteria.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Gemini West Moulton 138 kV T-Line Project | City/County: Auglaize County | Sampling Date: 09/02/2021

Applicant/Owner: AEP | State: OH | Sampling Point: w-jbl-20210902-01

Investigator(s): JBL | Section, Township, Range: S8, T6S, R6E

Landform (hillside, terrace, etc.): swale | Local relief (concave, convex, none): concave

Slope (%): 2 | Lat: 40.552714 | Long: -84.34403 | Datum: NAD 83

Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 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 X	No ____	**Is the Sampled Area within a Wetland?** **Yes** X **No** ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Sample point w-jbl-20210902-01 for extension of wetland 03a- PEM. Wetland domniated by phalaris. Boundary of the wetland is defined by geomorphic position and dominance of hydrophytic veg. Wetland extends to NHD stream to the west

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15')	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
5.			
	=Total Cover		

Sapling/Shrub Stratum (Plot size: 15')			
1. *N/A*			
2.			
3.			
4.			
5.			
	=Total Cover		

Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	100	Yes	FACW
2. *Cirsium discolor*	5	No	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	105	=Total Cover	

Woody Vine Stratum (Plot size: 30')			
1. *N/A*			
2.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	105 (A)		220 (B)

Prevalence Index = B/A = 2.10

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indictor present as Dominance Test >50% and Prevalence Index is less than 3

SOIL

Sampling Point: bl-20210902-

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/2	100					Loamy/Clayey	
4-17	10YR 3/1	95	10YR 3/4	5	C	PL/M	Loamy/Clayey	Distinct redox concentrations

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ? Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

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

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

Hydric soil indictor of Redox Dark Surface present

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

Multiple secondary hydrology indictors present; Wetland receives water from precipitation and surrounding runoff. Wetland extends offsite to NHD stream to the west.

APPENDIX B

OEPA ORAM FORMS

Background Information

Name	Bill Leopold	09/02/2021
Afilliation	AECOM	
Address	525 Vine Street, Suite 1800 Cincinnati, OH 45202	
Phone Number:	(513) 419-3449	
Email address:	bill.leopold@aecom.com	
Name of Wetland:	**Wetland 03a,b**	
Vegetation Communities (US	Emergent and shrub/scrub	
HGM Class	Depressional	
Location of Wetland include map, address if available, north arrow, landmarks, distances, roads, etc.	See attached map	

		Sources of information used Check all that apply	
Lat/Long or UTM Coordinate	40.55296, -84.34315	Site Visit	x
USGS Quad Name	Moulton	USGS Topo Map	x
County	Auglaize	National Wetland Inventory Map	x
Township	S1	Ohio Wetland Inventory Map	x
Section and Subsection	6S, 4E	Soil Survey	x
Hydrologic Unit Code	St. Marys (04100004)	Delineation report/map	x
Wetland Size (acres, hectares	Approximately 0.77-acres		

Name: Wetland 03a,b		12/23/2019
sketch (include north arrow, relationship with other surface waters, vegetation zones, etc.)		Site: AEP West Moulton Station

See attached map

Notes/Comments/Narrative

Contains a PEM portion (Wetland 03a) and a PSS portion (03b)

Final Score	28.5	Provisional Wetland Category	1

Scoring Boundary Worksheet

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

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

Narrative Rating

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

#	Question	Circle one	
1	**Critical Habitat.** Is the wetland in a township, section, or subsection of a United States Geological Survey 7.5 minute Quadrangle that has been designated by the U.S. Fish and Wildlife Service as "critical habitat" for any threatened or endangered plant or animal species? Note: as of January 1, 2001, of the federally listed endangered or threatened species which can be found in Ohio, the Indiana Bat has had critical habitat designated (50 CFR 17.95(a)) and the piping plover has had critical habitat proposed (65 FR 41812 July 6, 2000).	YES Wetland should be evaluated for possible Category 3 status Go to Question 2	(NO) Go to Question 2
2	**Threatened or Endangered Species.** Is the wetland known to contain an individual of, or documented occurrences of federal or state-listed threatened or endangered plant or animal species?	YES Wetland is a Category 3 wetland. Go to Question 3	(NO) Go to Question 3
3	**Documented High Quality Wetland.** Is the wetland on record in Natural Heritage Database as a high quality wetland?	YES Wetland is a Category 3 wetland Go to Question 4	(NO) Go to Question 4
4	**Significant Breeding or Concentration Area.** Does the wetland contain documented regionally significant breeding or nonbreeding waterfowl, neotropical songbird, or shorebird concentration areas?	YES Wetland is a Category 3 wetland Go to Question 5	(NO) Go to Question 5
5	**Category 1 Wetlands.** Is the wetland less than 0.5 hectares (1 acre) in size and **hydrologically isolated** and either 1) comprised of vegetation that is dominated (greater than eighty per cent areal cover) by *Phalaris arundinacea, Lythrum salicaria,* or *Phragmites australis*, or 2) an acidic pond created or excavated on mined lands that has little or no vegetation?	YES Wetland is a Category 1 wetland Go to Question 6	(NO) Go to Question 6
6	**Bogs.** Is the wetland a peat-accumulating wetland that 1) has no significant inflows or outflows, 2) supports acidophilic mosses, particularly *Sphagnum* spp., 3) the acidophilic mosses have >30% cover, 4) at least one species from Table 1 is present, and 5) the cover of invasive species (see Table 1) is <25%?	YES Wetland is a Category 3 wetland Go to Question 7	(NO) Go to Question 7
7	**Fens.** Is the wetland a carbon accumulating (peat, muck) wetland that is the saturated during most of the year, primarily by a discharge of free flowing, mineral rich, ground water with a circumneutral ph (5.5-9.0) and with one or more plant species listed in Table 1 and the cover of invasive species listed in Table 1 is <25%?	YES Wetland is a Category 3 wetland Go to Question 8a	(NO) Go to Question 8a

#	Question	Circle one	
8a	**"Old Growth Forest."** Is the wetland a forested wetland and is the forest characterized by, but not limited to, the following characteristics: overstory canopy trees of great age (exceeding at least 50% of a projected maximum attainable age for a species); little or no evidence of human-caused understory disturbance during the past 80 to 100 years; an all-aged structure and multilayered canopies; aggregations of canopy trees interspersed with canopy gaps; and significant numbers of standing dead snags and downed logs?	YES Wetland is a Category 3 wetland. Go to Question 8b	(NO) Go to Question 8b
8b	**Mature forested wetlands**. Is the wetland a forested wetland with 50% or more of the cover of upper forest canopy consisting of deciduous trees with large diameters at breast height (dbh), generally diameters greater than 45cm (17.7in) dbh?	YES Wetland should be evaluated for possible Category 3 status. Go to Question 9a	(NO) Go to Question 9a
9a	**Lake Erie coastal and tributary wetlands**. Is the wetland located at an elevation less than 575 feet on the USGS map, adjacent to this elevation, or along a tributary to Lake Erie that is accessible to fish?	YES Go to Question 9b	(NO) Go to Question 10
9b	Does the wetland's hydrology result from measures designed to prevent erosion and the loss of aquatic plants, i.e. the wetland is partially hydrologically restricted from Lake Erie due to lakeward or landward dikes or other hydrological controls?	YES Wetland should be evaluated for possible Category 3 status Go to Question 9d	(NO) Go to Question 9c
9c	Are Lake Erie water levels the wetland's primary hydrological influence, i.e. the wetland is hydrologically unrestricted (no lakeward or upland border alterations), or the wetland can be characterized as an "estuarine" wetland with lake and river influenced hydrology. These include sandbar deposition wetlands, estuarine wetlands, river mouth wetlands, or those dominated by submersed aquatic vegetation.	YES Go to Question 9d	(NO) Go to Question 9d
9d	Does the wetland have a predominance of native species within its vegetation communities, although non-native or disturbance tolerant native species can also be present?	YES Wetland is a Category 3 wetland Go to Question 10	(NO) Go to Question 9e
9e	Does the wetland have a predominance of non-native or disturbance tolerant native plant species within its vegetation communities?	YES Wetland should be evaluated for possible Category 3 status Go to Question 10	(NO) Go to Question 10
10	**Lake Plain Sand Prairies (Oak Openings)** Is the wetland located in Lucas, Fulton, Henry, or Wood Counties and can the wetland be characterized by the following description: the wetland has a sandy substrate with interspersed organic matter, a water table often within several inches of the surface, and often with a dominance of the gramineous vegetation listed in Table 1 (woody species may also be present). The Ohio Department of Natural Resources Division of Natural Areas and Preserves can provide assistance in confirming this type of wetland and its quality.	YES Wetland is a Category 3 wetland. Go to Question 11	(NO) Go to Question 11
11	**Relict Wet Prairies**. Is the wetland a relict wet prairie community dominated by some or all of the species in Table 1. Extensive prairies were formerly located in the Darby Plains (Madison and Union Counties), Sandusky Plains (Wyandot, Crawford, and Marion Counties), northwest Ohio, Erie County, and portions of western Ohio Counties (e.g. Darke, Mercer, Miami, Montgomery, etc.).	YES Wetland should be evaluated for possible Category 3 status Complete Quantitative Rating	(NO) Complete Quantitative Rating

Table 1. Characteristic plant species.

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

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

Wetland 03a,b

Site: AEP West Moulton Station	Rater(s): BL (AECOM)	Date: 09/02/2021

Field Id:

2 / 2 — Metric 1. Wetland Area (size).

w-bl-20191220-02

max 6 pts | subtotal

Select one size class and assign score.

0.77 acres

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

4 / 6 — Metric 2. Upland buffers and surrounding land use.

max 14 pts. | subtotal

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

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

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

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

12.0 / 18.0 — Metric 3. Hydrology.

max 30 pts. | subtotal

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select one.

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

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

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

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

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

Check all disturbances observed

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

9.5 / 27.5 — Metric 4. Habitat Alteration and Development.

max 20 pts. | subtotal

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

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

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

- [ ] Excellent (7)
- [ ] Very good (6)
- [ ] Good (5)
- [ ] Moderately good (4)
- [ ] Fair (3)
- [x] Poor to fair (2)
- [ ] Poor (1)

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

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

Check all disturbances observed

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

27.5

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 03a,b

Site: AEP West Moulton Station	Rater(s): BL (AECOM)	Date: 09/02/2021

Field Id:
w-bl-20191220-02

27.5 subtotal this page

0 (max 10 pts.) | 27.5 (subtotal)

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

1 (max 20pts.) | 28.5 (subtotal)

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

Category 1

28.5 **GRAND TOTAL(max 100 pts)**

Wetland 03a.b

ORAM Summary Worksheet

		circle answer or insert score	Result
Narrative Rating	Question 1 Critical Habitat	YES (NO)	If yes, Category 3.
	Question 2. Threatened or Endangered Species	YES (NO)	If yes, Category 3.
	Question 3. High Quality Natural Wetland	YES (NO)	If yes, Category 3.
	Question 4. Significant bird habitat	YES (NO)	If yes, Category 3.
	Question 5. Category 1 Wetlands	YES (NO)	If yes, Category 1.
	Question 6. Bogs	YES (NO)	If yes, Category 3.
	Question 7. Fens	YES (NO)	If yes, Category 3.
	Question 8a. Old Growth Forest	YES (NO)	If yes, Category 3.
	Question 8b. Mature Forested Wetland	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9b. Lake Erie Wetlands - Restricted	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 9d. Lake Erie Wetlands - Unrestricted.	YES (NO)	If yes, Category 3
	Question 9e. Lake Erie Wetlands - Unrestricted with invasive plants	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
	Question 10. Oak Openings	YES (NO)	If yes, Category 3
	Question 11. Relict Wet Prairies	YES (NO)	If yes, evaluate for Category 3; may also be 1 or 2.
Quantitative Rating	Metric 1. Size	2	
	Metric 2. Buffers and surrounding land use	4	
	Metric 3. Hydrology	12	
	Metric 4. Habitat	9.5	
	Metric 5. Special Wetland Communities	0	
	Metric 6. Plant communities, interspersion, microtopography	1	
	TOTAL SCORE Consult most recent score calibration report at http://www.epa.ohio.gov/dsw/401/index.aspx to determine the wetland's category based on its quantitative score	28.5	Category based on score breakpoints Category 1

Complete Wetland Categorization Worksheet.

Wetland Categorization Worksheet

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

Final Category

Choose one	Category 1	Category 2	Category 3

End of Ohio Rapid Assessment Method for Wetlands.

APPENDIX C

DELINEATED WETLANDS PHOTOGRAPHS

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project Addendum	60567997

Wetland 03a **Date:** September 2, 2021 **Description:** PEM wetland Category 1 Facing North	

Wetland 03a **Date:** September 2, 2021 **Description:** PEM wetland Category 1 Facing East	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project Addendum	60567997

Wetland 03a **Date:** September 2, 2021 **Description:** PEM wetland Category 1 Facing South	

Wetland 03a **Date:** September 2, 2021 **Description:** PEM wetland Category 1 Facing West	

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	West Moulton Station Expansion Project Addendum	60567997

Wetland 03a

Date:

September 2, 2021

Description:

PEM wetland

Category 1

Facing Soil Pit