

Construction Notice Southwest Lima-West Moulton and St Mary's- West Moulton 138 kV Transmission Line Adjustment Project



PUCO Case No. 21-0893-EL-BNR

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

Submitted by:
Ohio Power Company

October 1, 2021

Construction Notice

Ohio Power Company

**Southwest Lima-West Moulton and St Mary's-West Moulton 138 kV Transmission Line
Adjustment Project**

Construction Notice for Southwest Lima-West Moulton and St Mary's-West Moulton 138 kV Transmission Line Adjustment Project

4906-6-05

Ohio Power Company (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 Southwest Lima-West Moulton and St Mary's-West Moulton 138 kV Transmission Line Adjustment Project ("Project"), which is located in Auglaize County, Ohio. The Project involves the new construction of 0.15-mile of a new 138kV transmission line to tie-in between the existing City of St. Mary's Substation with the Company's West Moulton Station as well as 0.16-mile of a rebuild of the existing Southwest Lima-West Moulton 138kV Transmission Line. The Project is necessary due to the expansions of the existing West Moulton Station (pending review in OPSB Case Number 21-0892-EL-BLN) and to provide additional reliability to the City of St. Mary's delivery point, by replacing the existing hard tap currently located outside of the City of St. Mary's Substation with a new greenfield tie line to the West Moulton Station. After the Project is completed, the City of St. Mary's will take ownership of the span between the City of St. Mary's Substation and the Company's first pole outside of their Substation. The proposed Project will be constructed on property owned by Ohio Power Company, the City of St. Mary's, or located within existing easement owned by the Company.

Figures 1 and Figures 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) and 2(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.*
2. *Adding new circuits on existing structures designed for multiple circuit use, replacing conductors on existing structures with larger or bundled conductors, adding structures to an existing transmission line, or replacing structures with a different type of structure, for a distance of:*
 - a. *Two miles or less.*

The Project has been assigned PUCO Case No. 21-0893-EL-BNR.

B(2) Statement of Need

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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 adjustments to the Southwest Lima-West Moulton and St. Mary's-West Moulton 138 kV lines are associated and included in the overall West Moulton 138 kV Station Expansion Project, which is required due to Dayton Power and Light Company's (DP&L) 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 improves 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 line.

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. The Project was listed in Ohio Power Company's 2021 AEP Long Term Forecast Report on page 10 (Form FE-T7, Characteristics of Existing Transmission Lines).

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
- City of St. Mary's Substation
- Southwest Lima-West Moulton 138kV Transmission Line

Ohio Power Company.

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

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be limited to, impacts associated with socioeconomic, ecological, construction, or engineering aspects of the project.

The proposed Project is a rebuild of the existing Southwest Lima-West Moulton 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, City of St. Mary's property, and/or utilizing existing transmission ROW. In addition, the proposed rebuild and new construction of the Southwest Lima-West Moulton and St. Mary's-West Moulton transmission lines, respectively, allow for a minimized length of adjustments required to tie into the expansion area of the West Moulton Station. Regarding the St. Mary's-West Moulton 138 kV transmission line, the proposed design minimizes disturbance and impacts to existing infrastructure by paralleling the existing Southwest Lima-West Moulton transmission line to allow for the most direct route to the City of St. Mary's substation as well as removing the need to cross over existing transmission lines. In addition, the St-Mary's-West Moulton transmission line is located on Company owned and City of St. Mary's property. Therefore, both the Southwest Lima-West Moulton and St. Mary's West Moulton transmission lines would result in minimized disturbances.

Furthermore, The Project is also located on undeveloped fallow land and will not impact any streams. Additionally, the Project will only require clearing of scrub-shrub vegetation and anticipates less than 0.001 of permanent impacts to delineated wetlands, detailed below in Section B(10)(f). Relocating the existing station and associated lines off of 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 Project 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 February 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.

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Figure 1 provides the proposed Project area and the locations of the existing West Moulton Station, planned Southwest Lima-West Moulton and St Mary's-West Moulton transmission lines, and proposed line adjustments 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 quadrangles provided by the National Geographic Society. **Figure 2** shows the Project area on recent aerial photography, dated 2021, as provided by the Microsoft Corporation, 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 US33 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.

Please refer to the table below of property parcel numbers and an indication as to whether the easement/option necessary to construct and operate the facility has been obtained.

Parcel ID	Agreement Type	Easement Obtained
K3190000801	Company Owned	N/A
K3100101000	Supplement Easement	No
K3110102103	Existing Easement*	Yes

*The Company is currently seeking a temporary easement agreement for construction.

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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 Southwest Lima-West Moulton 138kV transmission line is anticipated to include the following:

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Voltage:	138kV
Conductors:	Grosbeak 636 ACSR 26/7
Static Wire:	7#10 Alumoweld AW 7
Insulators:	Polymer
ROW Width:	100-foot
Structure Types:	Two (2) single circuit, steel monopole suspension One (1) single circuit, steel monopole deadend

The transmission line construction for the St. Mary's West Moulton 138kV transmission line is anticipated to include the following:

Voltage:	138kV
Conductors:	DOVE 556.5 ACSR 26/7
Static Wire:	7#8 Alumoweld AW 7
Insulators:	Polymer
ROW Width:	100-foot
Structure Types:	Three (3), single circuit, steel monopole deadends One (1) single circuit, steel monopole suspension

B(9)(b) Electric and Magnetic Fields

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

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

B(9)(c) Project Cost

The estimated capital cost of the project.

The capital cost estimate for the proposed Project, which is comprised of applicable tangible and capital costs, is approximately \$1,100,000 using a Class 4 estimate. Pursuant to the PJM OATT, the costs for this Project will be recovered in the Ohio Power Company's FERC formula rate (Attachment H-14 to the PJM OATT) and allocated to the AEP Zone.

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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 August 13, 2021. As a result, the Project is not located within lands identified as Agricultural District Lands.

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 Investigations and separate History/Architecture Investigations 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 C**. 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

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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, additional details regarding the delineated features is provided in Section (10) (f) below. The Company will be submitting a preliminary jurisdictional determination to the US Army Corps of Engineers ("USACE") to confirm the results of the wetland and stream delineations. A Pre-Construction Notification (PCN) application will also be submitted to USACE, describing potential impacts to wetlands and streams. To address permanent impacts to wetlands occurring during construction activities, the PCN and a Nationwide Permit application will be also be submitted to USACE.

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

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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. However, the Company intends to clear shrubs and saplings between October 1 and March 31 to avoid adverse effects to both the Indiana and northern long-eared bat.

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 field an 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 classified as a PEM and palustrine shrub/scrub (PSS) complex. One intermittent stream was identified within the Project survey area.

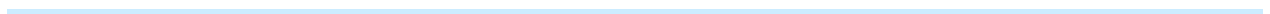
The Project is anticipated to permanently impact approximately 0.001-acres of one PEM wetland (Wetland 03a) due to the installation of a new structure along St. Mary's-West Moulton 138kV transmission line. Additionally, temporary disturbances from placement of timber matting for equipment crossings within Wetland 03a will total approximately 0.1 acre.

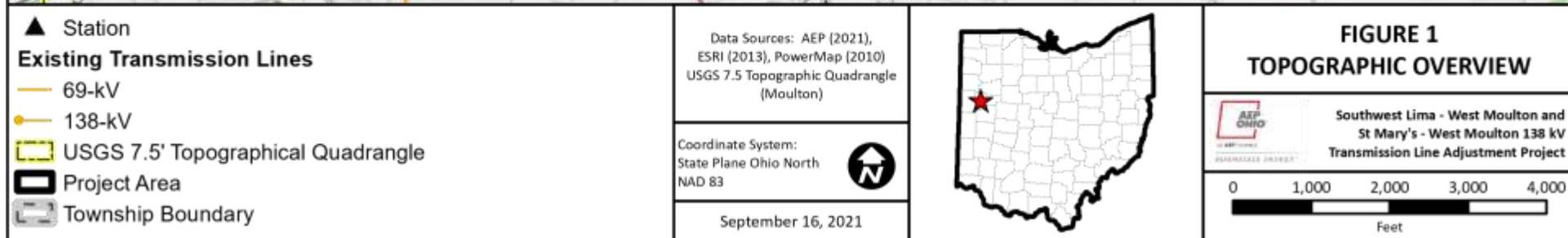
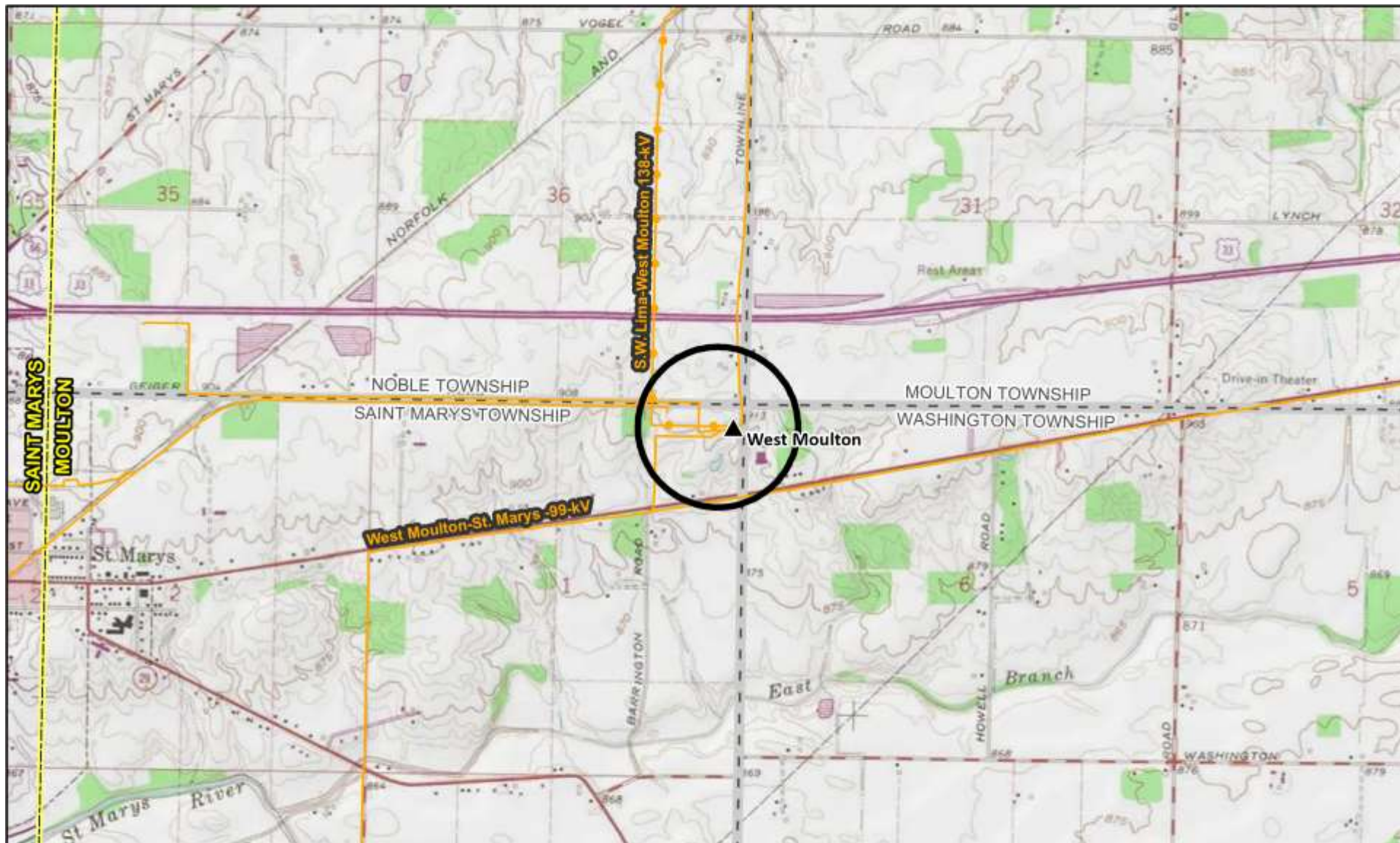
B(10)(g) Unusual Conditions

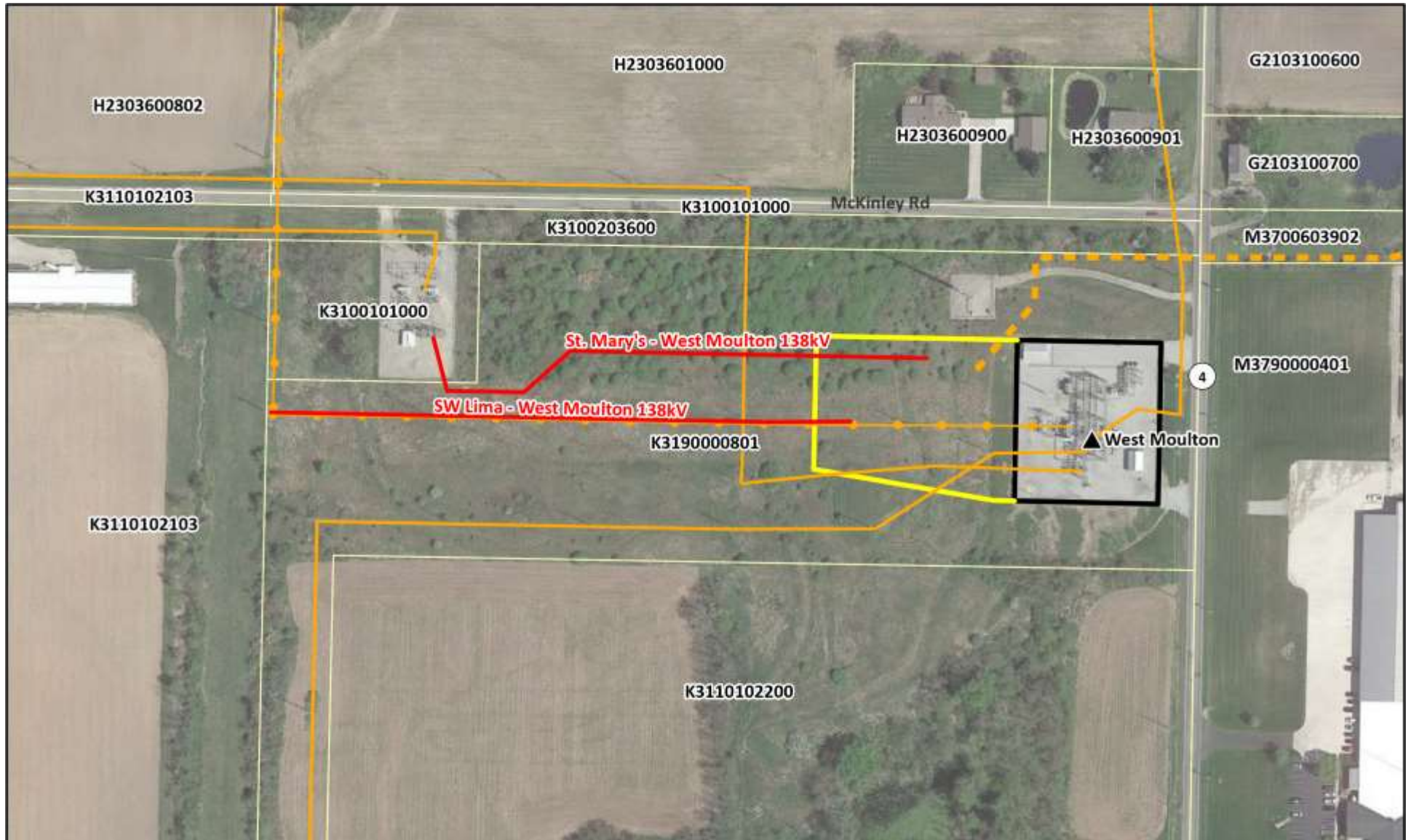
Provide any known additional information that will describe any unusual conditions resulting in significant environmental, social, health, or safety impacts.

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

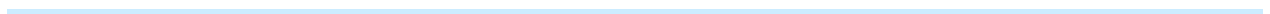
Appendix A Project Figures







Appendix B Long Term Forecast Report

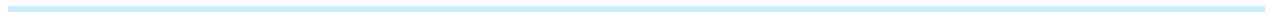


PUCO Form FE-T7;
AEP Ohio Transmission Company
Characteristics of Existing Transmission Lines

751	South Lancaster - West Lancaster	167	167	210	210	138	138	3.98	100/100	Steel - Lattice	1	1	
2845	South Point - Tri State	302	366	399	436	138	138	7.24	100/100	Wood - 1 pole	1	1	
749	Southeast Canton - Sunnyside	296	392	375	429	138	138	3.2	100/100	Steel - Lattice	1	1	
750	Southeast Canton - Timken	145	183	183	211	138	138	7.44	100/100	Steel - Lattice	1	1	
752	Southwest Lima - West Lima	348	388	440	484	138	138	5.35	100/100	Wood - 1 pole	1	1	
4842	Southwest Lima - West Moulton	154	180	213	227	138	138	13.34	100/100	Wood - 1 pole	1	1	
8433	Spom - Waterford (JPP)	1239	1566	1564	1809	345	345	45.61	150/150	Steel - Lattice	1	1	
28201	Spom South - Spom South	257	257	325	325	138	138	10	100/100	Steel - Lattice	1	1	
25279	Stemple - Tidd	1409	1409	1781	1781	345	345	34.2	150/150	Steel - Lattice	1	1	
756	Sunnyside - Toney 138kV	195	220	216	239	138	138	3.95	100/100	Steel - Lattice	1	1	
756	Sunnyside - Wagenhals	296	392	375	452	138	138	7.24	100/100	Wood - H-frame	1	1	
25280	Tidd - West Belaire	971	1318	1234	1522	345	345	18.9	150/150	Steel - 1 pole	1	1	
16817	Timber Road #2 - Timber Switch	167	245	210	271	138	138	0.03	100/100	Steel - 1 pole	1	1	
29117	Wagenhals - Wayview	251	335	317	363	138	138	12.32	100/100	Steel - 1 pole	1	1	BELDEN VILLAGE
762	Wagenhals - West Canton	205	205	258	258	138	138	10.08	100/100	Steel - 1 pole	1	1	PACKARD, NORTHEAST CANTON
18299	Ware Road - Waverly	150	150	189	189	138	138	3.1	100/100	Wood - H-frame	1	1	
765	Wayview - West Canton	219	255	277	303	138	138	4.17	100/100	Steel - 1 pole	1	1	PROMWAY
19340	West Hebron - West Milersport	167	245	210	271	138	138	6.32	100/100	Steel - Lattice	1	1	
12477	West Milersburg - Wooster	185	185	234	234	138	138	15.18	100/100	Wood - 1 pole	1	1	

a. Indicate with * if transmission line is an interconnection with another electric transmission owner and list the other transmission owner's name.

Appendix C Agency Correspondence





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 khorricks@ohiohistory.org. Thank you for your cooperation.

Sincerely,

A handwritten signature in blue ink, appearing to read "Krista Horrocks".

Krista Horrocks, Project Reviews Manager
Resource Protection and Review

RPR Serial No: 1089191-1089192



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Office of Real Estate

Paul R. Baldrige, 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 (*Unio merus 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,

A handwritten signature in blue ink, appearing to read "Dan Everson", written in a cursive style.

1

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
8600 Smiths Mill Road
New Albany, Ohio 43054



Prepared by:



525 Vine Street, Suite 1800 Cincinnati,
Ohio 45202

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. Secondly, 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 submeter 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 (12in. depth) is 41-degree Fahrenheit (°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° 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 (≥ 70 H, ≥ 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/](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.htm](https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcseprd1316619.htm)

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 scrubshrub 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 (<i>Robinia pseudoacacia</i>), black cherry (<i>Prunus serotina</i>), and Tree of Heaven (<i>Ailanthus altissima</i>). The dominant shrub/sapling-layer included gray dogwood (<i>Cornus racemosa</i>) and Morrow's honeysuckle (<i>Lonicera morrowii</i>).	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 (<i>Myotis sodalis</i>)	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 (<i>Carya</i> spp.), oak (<i>Quercus</i> spp.), ash (<i>Fraxinus</i> spp.), birch (<i>Betula</i> spp.), and elm (<i>Ulmus</i> 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	<p>Potentially suitable habitat is present within the Project area (successional woodlands), primarily restricted to the south boundary of the Project survey area.</p> <p>This Project does not anticipate any need to clear trees; the proposed project is not likely to adversely affect this species.</p>	<p>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.</p> <p>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.</p>

Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Impact Assessment	Agency Comments
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TABLE 4
ODNR AND USFWS LISTED SPECIES WITHIN THE WEST MOULTON STATION EXPANSION PROJECT SURVEY AREA

Northern long-eared bat (<i>Myotis septentrionalis</i>)	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 (<i>Carya</i> spp.), oak (<i>Quercus</i> spp.), ash (<i>Fraxinus</i> spp.), birch (<i>Betula</i> spp.), and elm (<i>Ulmus</i> 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 (<i>Moxostoma valenciennesi</i>)	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 (<i>Pleurobema clava</i>)	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
Common Name (Scientific Name)	State Status	Federal Status	Habitat Description	Potential Habitat Observed in the Project Survey Area	Impact Assessment	Agency Comments

TABLE 4

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

Pondhorn (<i>Uniomereus tetralasmus</i>)	Threatened	None	This species typically inhabits the quiet or slowmoving, 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 (<i>Chondestes grammacus</i>)	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 interdisciplinary 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.

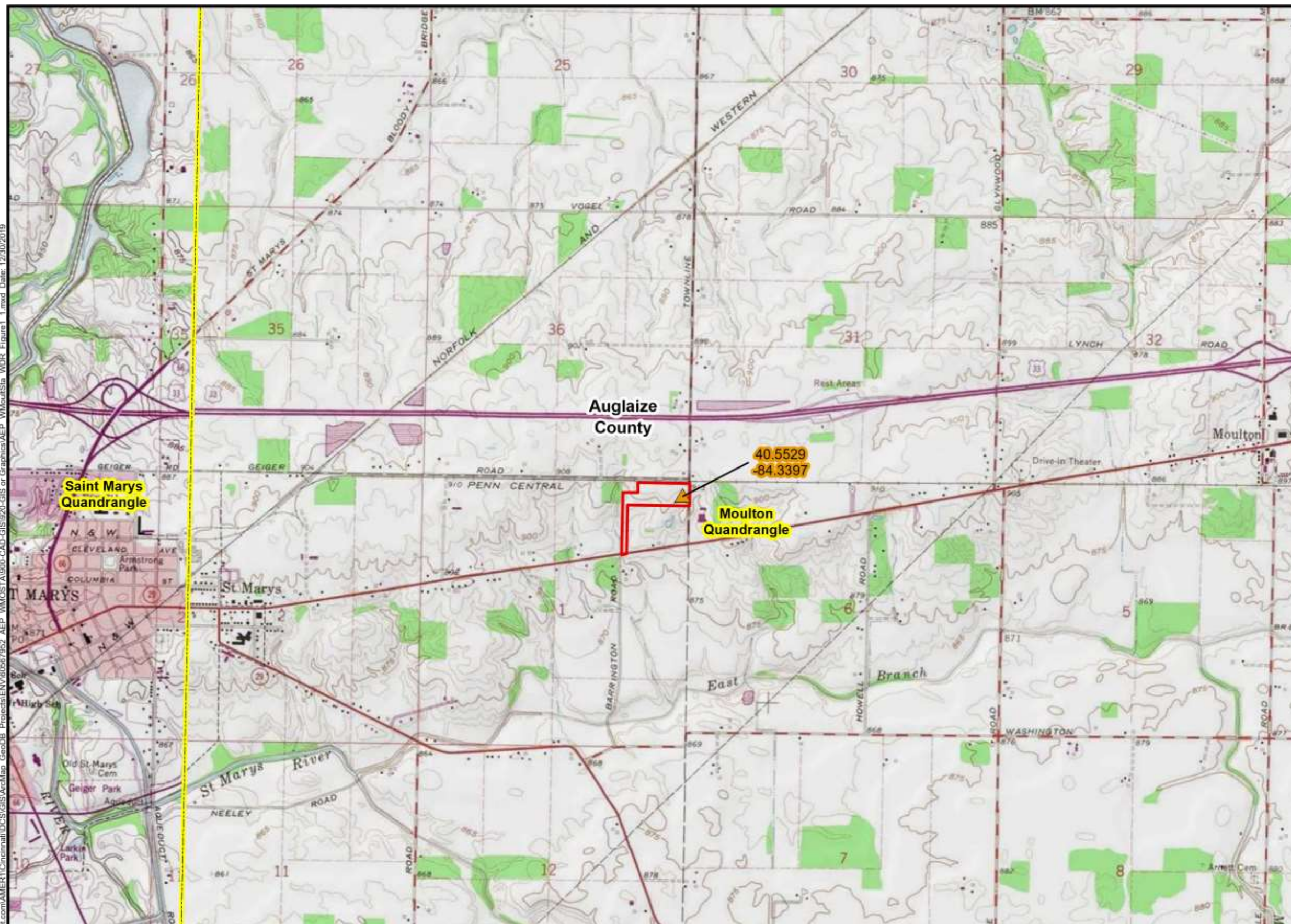
The information contained in this wetland delineation report is for a study area that may be much larger than the actual Project limits-of-disturbance; therefore, lengths and acreages listed in this report may not constitute the actual impacts of the Project defined in subsequent permit applications. 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-oepe.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. *The 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



1:24,000



BASE MAP SOURCE:
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JOB NO. 60567952



West Moulton Station
Expansion Project



LEGEND:

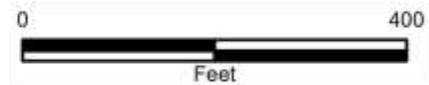
- West Moulton Station
- Project Survey Area
- NHD Stream (USGS)
- NWI Wetland (USFWS)
- Soil Map Unit (USDA-NRCS)

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



1:2,400



BASE MAP SOURCE:

Source: Esri, DigitalGlobe, GeoEye, Earthstar

JOB NO. 60567952

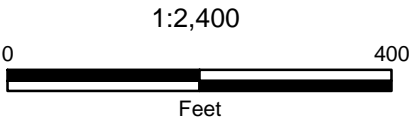
AECOM



- LEGEND:
- #* West Moulton Station
 - Project Survey Area
 - Delineated Wetland
 - #0 Wetland Data Point
 - #0 Upland Data Point
 - Delineated Intermittent Stream
 - Upland Drainage Feature
 - Approximate Wetland Location
 - Approximate Stream

3

Location



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

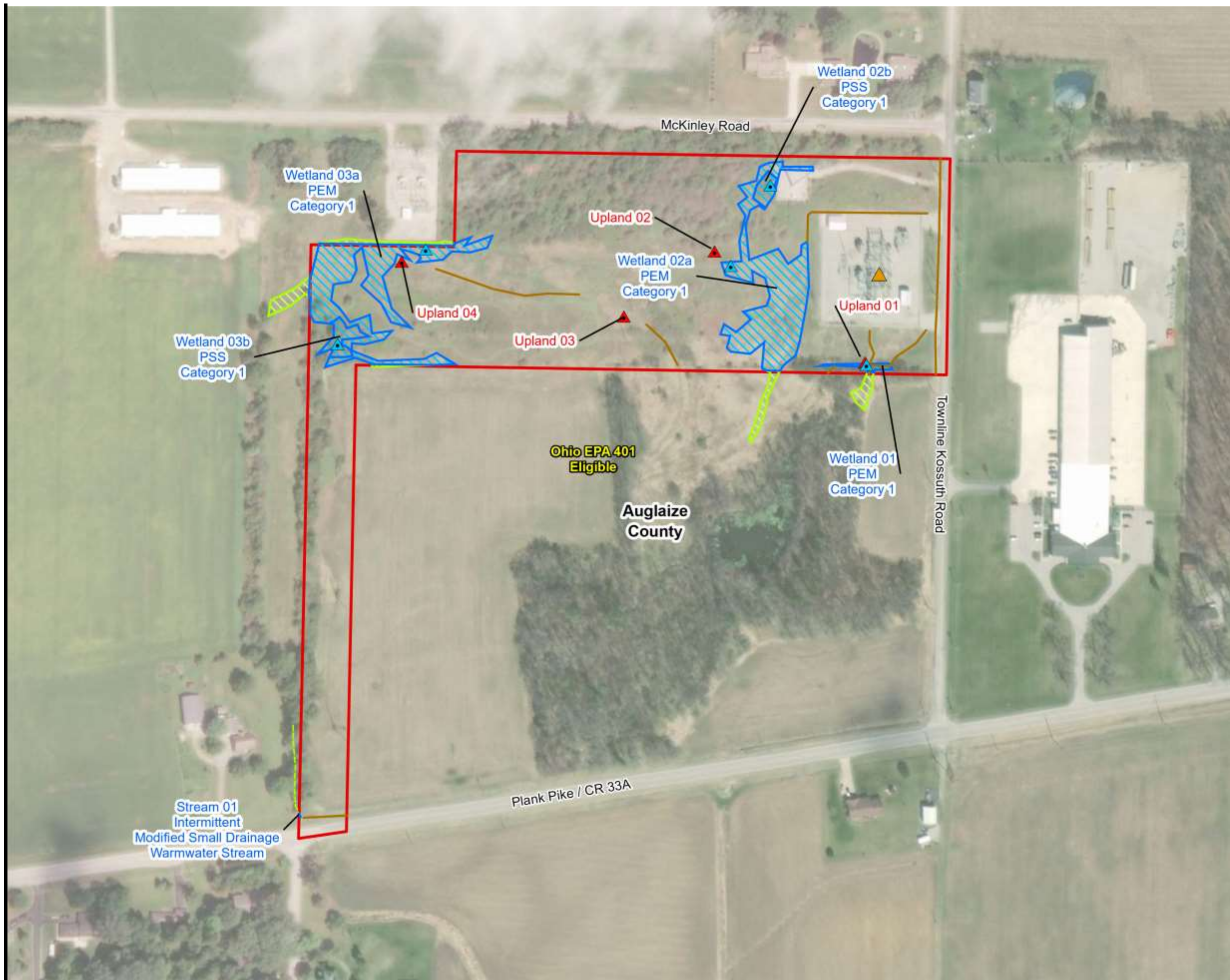
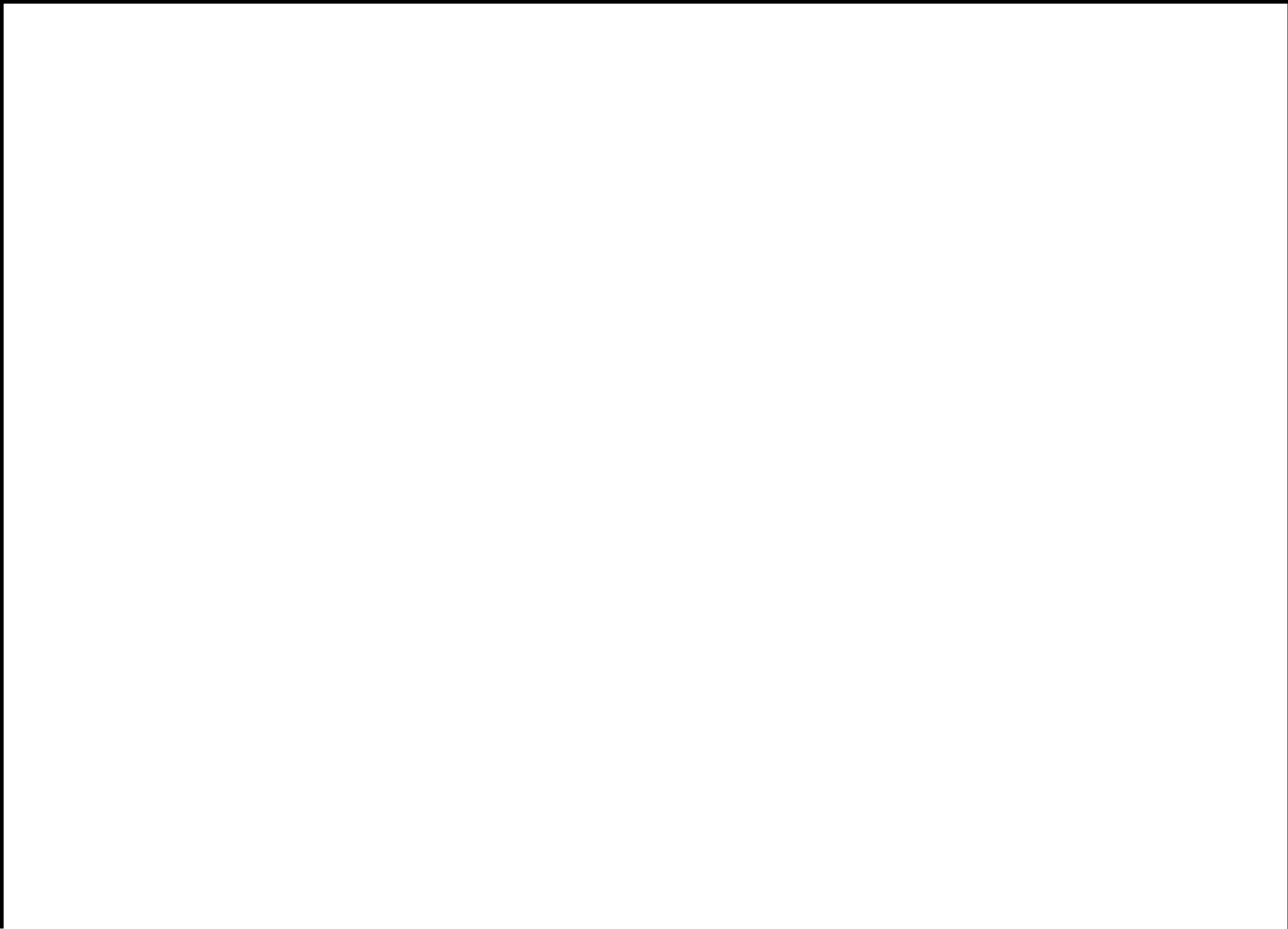
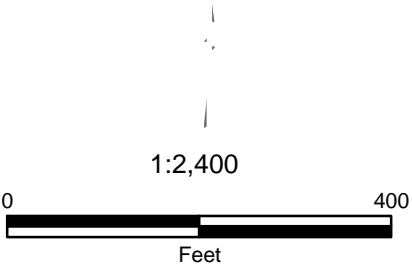


FIGURE 3
WETLAND DELINEATION AND
STREAM ASSESSMENT MAP



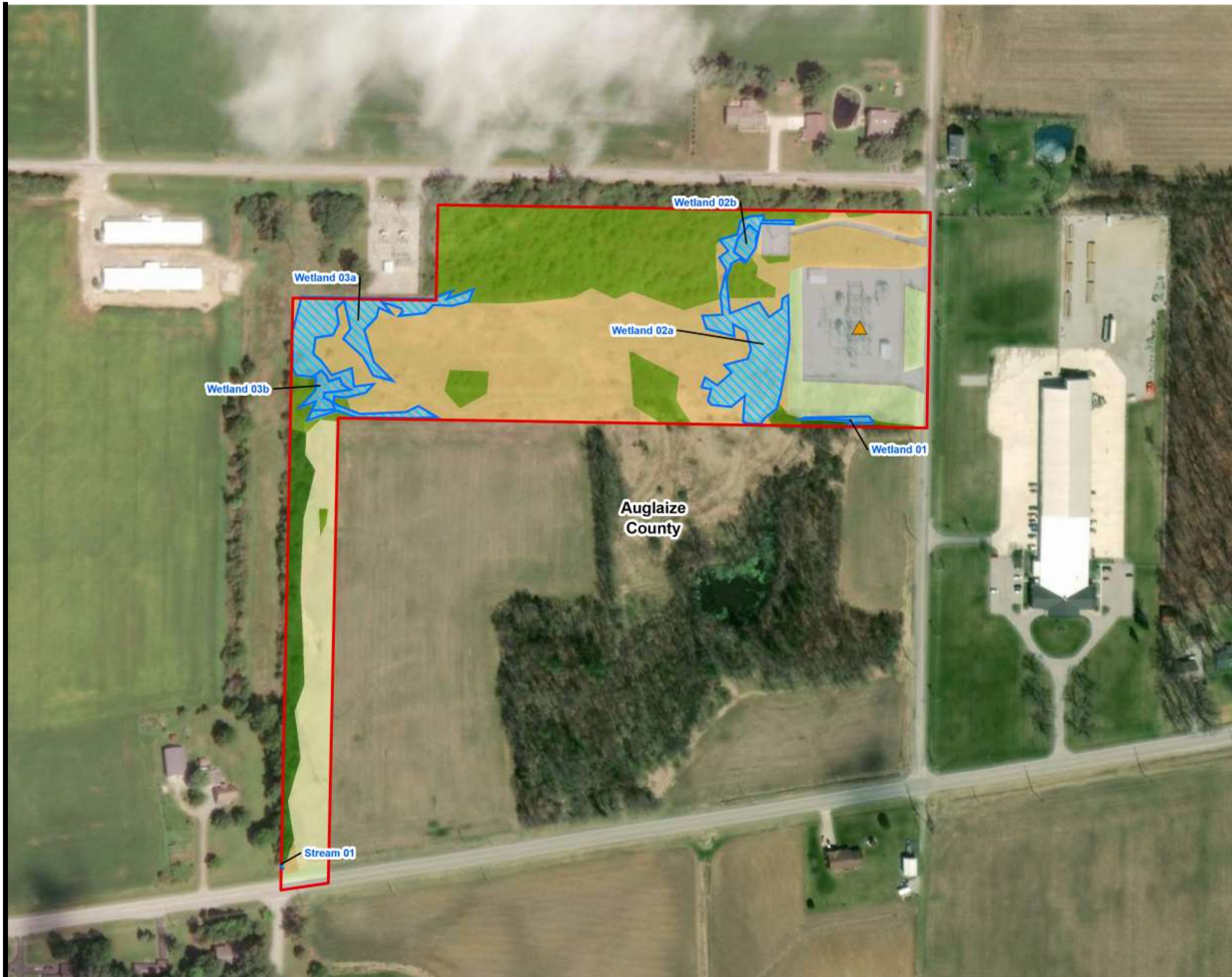
- LEGEND:
- #* West Moulton Station
 - Project Survey Area
 - Delineated Wetland
 - Delineated Intermittent Stream
 - Vegetative Communities**
 - Agricultural Land
 - Landscaped Areas
 - Old Field
 - Shrub-scrub
 - Stream/Wetland
 - Successional Woodland
 - Urban

3



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

FIGURE 4
VEGETATIVE COMMUNITIES MAP



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

Sampling Point:

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc*		
		100					sicll	
							sicl	
	AEP							

plains

convex, none):concave

2 Lat: 40.55235

Long: -84.33982

Datum: WGS84

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

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 <u> x </u>	No <u> </u>	Is the Sampled Area		
Hydric Soil Present?	Yes <u> </u>	No <u> </u> x	No	within a Wetland?	<u> </u> <u> </u> Yes
Wetland Hydrology Present?	Yes <u> x </u>	No <u> </u>			
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 NW1/PUB					

VEGETATION - Use scientific names of plants.

	Absolute % Cover		
		Dominant Species?	Indicator Status
=Total Cover			
		yes	FAC
		yes	FACW
=Total Cover			

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 _____

Total Number of Dominant Species Across All Strata: _____ (A)

Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (B)

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

Prevalence Index = B/A = 2.21 (B)

Wetland Hydrology Present? Yes _____ No _____

photos, previous inspections), if available:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: _____ City/County: Auglaize Sampling Date: 12/23/2019
 Applicant/Owner: _____ State: OH Sampling Point: _____
 _____ Section, Township, Range: S1, 6S, 4E
 Landform (hillside, terrace, etc.): _____ Local relief (concave, _____)
 Investigator(s): _____

Slope (%): _____

Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 2 to 6 percent slopes

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

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation x 2 - Dominance Test is
x >50%
 3UHYDOHQFH,QGH[LV"
 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 Yes _____ x
 No
 Present?

SOIL

Sampling Point:

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc*		
		100					sicllo	
							sicl	
10.								
1.								
Remarks: (Include photo numbers here or on a separate sheet.) P 215-N, 216-E, 217-S, 218-W, 219-soils								

Wetland Hydrology Present? Yes ____ No ____

photos, previous inspections), if available:

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: _____ City/County: Auglaize Sampling Date: 12/23/2019
 Applicant/Owner: _____ State: OH Sampling Point: _____
 Section, Township, Range: S1, 6S, 4E
 Landform (hillside, terrace, etc.): _____ Local relief (concave, _____)
 Investigator(s): _____

Slope (%): _____

Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 2 to 6 percent slopes

w-bl-20191223-01

0-3	10YR 4/2							
3-9	10YR 3/2	90	10YR 3/4	10	C	M		
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:

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

Indicators for Problematic Hydric Soils*:

- | |
|----------------------------------------------------------|
| <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) |
| <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> 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 ☐

Remarks:
 evidence of past erosion/sedimentation with upper layer

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- | |
|--------------------------------------------------------------------|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input checked="" type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input checked="" type="checkbox"/> Geomorphic Position (D2) |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0-3</u>
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>5</u>
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>0</u>

(includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial p

Remarks:

x

Project/Site: _____ City/County: Auglaize Sampling Date: 12/23/2019
Applicant/Owner: _____ State: OH Sampling Point: _____

Section, Township, Range: S1, 6S, 4E
Landform (hillside, terrace, etc.): _____ Local relief (concave, convex, none): convex

Datum: WGS84
Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 2 to 6 percent slopes NW1 classification: N/A
Investigator(s): _____

AFP

unl-bl-20191223-01

BI

plains

2 Lat: 40.55236

Long: -84.33983

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

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

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

Dominance Test worksheet:			
Number of Dominant Species That Are OBL, FACW, or FAC:	0		
Total Number of Dominant Species Across All Strata:	3		(A)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0%		(B)
			(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:		(A) 360	
		4.00	
Prevalence Index = B/A =			(B)

Hydrophytic Vegetation Indicators:	
___ 1 - Rapid Test for Hydrophytic Vegetation	
___ 2 - Dominance Test is >50%	
___ 3 UHYDOHQFH,QGH[LV"	
___ 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

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: _____
Section, Township, Range: S1, 6S, 4E
Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex
Lat: _____ Datum: WGS84
Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 2 to 6 percent slopes NWI classification: N/A
Investigator(s): BL

Slope (%):

5.	
1.	
2.	
3.	
4.	
5.	
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
1.	

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

Are Vegetation , 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 <u>x</u>	Is the Sampled Area	
Hydric Soil Present?	Yes _____	No _____	x	within a Wetland? _____ Yes
	No _____	x		
Wetland Hydrology Present?	Yes _____	No <u>x</u>		

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.

SOIL

Sampling Point:

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc*		
		100					sicllo	
							sicl	

Wetland Hydrology Present? Yes No

photos, previous inspections), if available:

upl-bl-20191223-01

0-5	10YR 4/3							
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.

Hvdric Soil Indicators:

Indicators for Problematic Hvdric Soils*:

Midwest Region - Version 2.0

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: _____

Section, Township, Range: S1, 6S, 4E

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

Lat: _____ Datum: WGS84

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

Investigator(s): BL

Slope (%): _____

w-bl-20191223-02a

2

40.5529

Long: -84.34085

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

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

Tree Stratum	(Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. <u>n/a</u>				
2. _____				
3. _____				
4. _____				
5. _____				
Sapling/Shrub Stratum (Plot size: 15' radius)				
1. <u>Cornus alba</u>		0		
2. _____		2		
3. _____				
4. _____			no	FACW
5. _____				
Herb Stratum (Plot size: 5' radius)				
1. <u>Phalaris arundinaceus</u>		2		
2. <u>Solidago canadensis</u>		80		
3. <u>Cirsium arvense</u>		15		
4. <u>Festuca rubra</u>		5	yes	FACW
5. _____		10	no	FACU
6. _____			no	FACU
7. _____			no	FACU
8. _____				
9. _____				
10. _____				
Woody Vine Stratum (Plot size: 30' radius)				
1. <u>n/a</u>		110		
2. _____				
Dominance Test worksheet:				
Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u>				
Total Number of Dominant Species Across All Strata: <u>1</u> (A)				
Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (B)				
Prevalence Index :				
worksheet Total % Cover of: Multiply by:				
OBL species	<u>0</u>	x 1 =	<u>0</u>	
FACW species	<u>82</u>	x 2 =	<u>164</u>	
FAC species	<u>0</u>	x 3 =	<u>0</u>	
FACU species	<u>30</u>	x 4 =	<u>120</u>	
UPL species	<u>0</u>	x 5 =	<u>0</u>	
Column Totals:	<u>112</u>	(A)	<u>284</u>	
Prevalence Index = B/A = <u>2.54</u> (B)				
Hydrophytic Vegetation Indicators:				
1 - Rapid Test for Hydrophytic				
Vegetation x 2 - Dominance Test is				
<u>x</u> >50%				
3UHYDOHQFH,QGH[LV"				
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 Yes _____ No _____				
Present? _____				

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc*		
_____	_____	100	_____	_____	_____	_____	sicllo	_____
_____	_____	_____	_____	_____	_____	_____	sicl	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

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

Are Vegetation, 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 <u> x </u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> x </u>	No <u> </u>
Hydric Soil Present?	Yes <u> </u> x	No <u> </u>			
Wetland Hydrology Present?	Yes <u> x </u>	No <u> </u>		<u> </u>	<u> </u>

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

VEGETATION - Use scientific names of plants.

_____ **Wetland Hydrology Present?** Yes No

photos, previous inspections), if available:

SOIL

Sampling Point:

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc*		
		100					sicllo	
							sicl	

Wetland Hydrology Present? Yes No

photos, previous inspections), if available:

w-bl-20191223-02a

0-6	10YR 4/3							
6-15	10YR 4/2	80	10YR 4/4	15	c	m		
			10YR 4/6	5	c	pl		

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

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

Hvdric Soil Indicators:

Indicators for Problematic Hvdric Soils*:

SOIL

Sampling Point:

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc*		
							siclo	

w-bl-20191223-02b

2

40.55336

Long: -84.34057

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

Are ☐ , Soil ☐ Vegetation, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes ☐ No ☒

☐ , Soil ☐

Absolute % Cover Dominant Species? yes _____ _____ _____ _____ =Total Cover yes _____ yes _____ yes _____ no _____ =Total Cover no _____ yes _____ yes _____ _____ _____ _____ _____ =Total Cover	Indicator Status	FACW

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 _____

Total Number of Dominant Species Across All Strata: 6 (A)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83% (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
Prevalence Index = B/A =	2.76 (B)		

Hydrophytic Vegetation Indicators:

1 - Rapid Test for Hydrophytic Vegetation x 2 - Dominance Test is

☒ >50%

3 UHYDOHQFH, QGH[LV"

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.

Wetland Hydrology Present? Yes ☐ No ☐

photos, previous inspections), if available:

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: _____

Section, Township, Range: S1, 6S, 4E

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

Lat: _____ Datum: WGS84

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

Investigator(s): BL

Slope (%):

Tree Stratum (Plot size: 30' radius)					<p>Hydrophytic Vegetation</p> <p>Yes _____ No _____x</p> <p>Present?</p>
1.	<u>Fraxinus pennsylvanica</u>	<u>5</u>			
		<u>5</u>			
Sapling/Shrub Stratum (Plot size: 15' radius)					
1.	<u>Rhamnus cathartica</u>	<u>15</u>			
2.	<u>Cornus sericia</u>	<u>20</u>			
3.	<u>Ulmus americana</u>	<u>10</u>			
4.	<u>Lonicera morrowi</u>	<u>5</u>			
5.					
		<u>50</u>			
Herb Stratum (Plot size: 5' radius)					
1.	<u>Phalaris arundinaceus</u>	<u>5</u>			
2.	<u>Allium canadense</u>	<u>10</u>			
3.	<u>Agrimonia parviflora</u>	<u>15</u>			
4.					
5.					
6.					
7.					
8.					
9.					
10.					
		<u>30</u>			
Woody Vine Stratum (Plot size: 30' radius)					
1.	<u>n/a</u>				
2.		<u>0</u>			
3.					
4.					
5.					
<p>Remarks: (Include photo numbers here or on a separate sheet.)</p> <p>P 254-N, 255-E, 256-S, 257-W, 258-soils</p>					

Are Vegetation , 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 <u>x</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>x</u>	No _____
Hydric Soil Present?	Yes _____x	No _____			
Wetland Hydrology Present?	Yes <u>x</u>	No _____			
<p>Remarks:</p> <p>small scrub-shrub component of W02; appears to be spoils pile area from cell tower grading/construction</p>					

SOIL

Sampling Point: _____

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc*		
_____	_____	_____	_____	_____	_____	_____	silty	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

VEGETATION - Use scientific names of plants.

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

_____ photos, previous inspections), if available:

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: _____

Section, Township, Range: S1, 6S, 4E

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

Lat: _____ Datum: WGS84

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

Investigator(s): BL

Slope (%): _____

w-bl-20191223-02b

0-11	10YR 4/1	90	10YR 4/3	10	c	m	siclo	
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:

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

Indicators for Problematic Hydric Soils*:

- | |
|----------------------------------------------------------|
| <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) |
| <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> 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 ☐

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- | |
|--------------------------------------------------------------------|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0
Water Table Present? Yes ☐ No ☒ Depth (inches): >14
Saturation Present? Yes ☒ No ☐ Depth (inches): 10
(includes capillary fringe)

Describe Recorded Data (stream gauge, monitoring well, aerial p

Remarks: _____

Midwest Region - Version 2.0

x

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: _____
 Section, Township, Range: S1, 6S, 4E Investigator(s): BL
 Landform (hillside, terrace, etc.): hillslope Local relief (concave, _____
 Slope (%): _____ Lat: _____
 Soil Map Unit Name: _____

upl-bl-20191223-02

convex, none): convex

40.55298

Long: -84.34098

Datum: WGS84

Ble1B1 - Blount silt loam, end moraine, 2 to 4 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.)

3

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

Hydrophytic Vegetation Present?	Yes _____	No <u>x</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>x</u>
Hydric Soil Present?	Yes _____	_____			
Wetland Hydrology Present?	Yes _____	_____x No <u>x</u>			
Remarks: w02 point out about 15' NW of boundary near same elevation as 2a point in					

VEGETATION - Use scientific names of plants.

Absolute % Cover	Dominant Species?	Indicator Status	
	no	FACU	
	yes	FAC	
	=Total Cover		
	yes	FAC	
		FACU	
	=Total Cover		
	no	FACW	
	yes	FACU	
	no	FACU	
	no	FACU	
	no	FACU	
	no	FACU	
	yes	FACU	
	=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 :

workshee Total % Cover of: Multiply by:

OBL species	<u>0</u>	x 1 = <u>0</u>
FACW species	<u>10</u>	x 2 = <u>20</u>
FAC species	<u>25</u>	x 3 = <u>75</u>
FACU species	<u>88</u>	x 4 = <u>352</u>
UPL species	<u>0</u>	x 5 = <u>0</u>
Column Totals:		<u>447</u>
Prevalence Index = B/A =		<u>3.63</u> (B)

Hydrophytic Vegetation Indicators:

_____ 1 - Rapid Test for Hydrophytic Vegetation

_____ 2 - Dominance Test is >50%

_____ 3 UHYDOHQFH, QGH[LV"

_____ 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.

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: _____ City/County: Auglaize Sampling Date: 12/23/2019

Applicant/Owner: _____ State: OH Sampling Point: _____

Section, Township, Range: S1, 6S, 4E

Landform (hillside, terrace, etc.): _____

Slope (%): _____

Soil Map Unit Name: _____

Investigator(s): _____

Tree Stratum (Plot size: 30' radius) _____

1. Prunus serotina _____ 2 _____

Rhamnus cathartica _____ 10 =Total Cover

_____ 12 _____

Sapling/Shrub Stratum (Plot size: 15' radius) _____

Rhamnus cathartica _____ 15 _____

Fraxinus americana _____ 1 _____

_____ 16 _____

Herb Stratum (Plot size: 5' radius) _____

Phalaris arundinaceus _____ 10 _____

Datylus glomerata _____ 20 _____

Lolium perrene _____ 15 _____

Cirsium arvense _____ 10 _____

Solidago altissima _____ 10 _____

Cirsium discolor _____ 5 _____

Schedonorus arundinaceus _____ 5 _____

Bromus inermis _____ 20 _____

_____ 95 _____

Woody Vine Stratum (Plot size: 30' radius) _____

n/a _____

2. _____

2. _____ 0 _____

3. _____

4. _____

5. _____

1. _____

2. _____

3. _____

4. _____

5. _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

Hydrophytic

Vegetation

Yes _____

_____No

x

Present?

SOIL

Sampling Point:

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc*		

10.

1.

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

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: _____ City/County: Auglaize Sampling Date: 12/23/2019
 Applicant/Owner: _____ State: OH Sampling Point: _____
 Section, Township, Range: S1, 6S, 4E

Landform (hillside, terrace, etc.): _____

Slope (%): _____

Soil Map Unit Name:
Investigator(s): _____

upl-bl-20191223-02

0-12	10YR 4/3	100					sil
12-17	10YR 4/3	80	10YR 4/1	10	d	m	siclo
			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:

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

Indicators for Problematic Hydric Soils*:

- | |
|----------------------------------------------------------|
| <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) |
| <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> 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)

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

Secondary Indicators (minimum of two required)

- | |
|--------------------------------------------------------------------|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> 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? Yes _____ No x Depth (inches): >20
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No x

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

Remarks:

SOIL

Sampling Point:

~~West Moulton Station / old field~~

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

upl-bl-20191223-03

Unit-BF-20191223-03									
Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (moist)	%	Type*	Loc*	Texture	Remarks	
								Local relief (concave, convex, none): none	
						Long: -84.34165		Datum: WGS84	
								NW1 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.)

BL

hillslope

1 Lat: 40.5526

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

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

Hydrophytic Vegetation Present?	Yes <u> x </u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> </u>	No <u> x </u>
Hydric Soil Present?	Yes <u> </u>	No <u> x </u>			
Wetland Hydrology Present?	Yes <u> x </u>	No <u> </u>			
Remarks: flat area of Phalaris at head of UDF investigated for wetland criteria, w/in powerline ROW					

VEGETATION - Use scientific names of plants.

Absolute % Cover	Dominant Species?	Indicator Status	
=Total Cover			
	yes	FAC	
	yes	FAC	
	no	FACW	
=Total Cover			

Dominance Test worksheet:	
Number of Dominant Species That Are OBL, FACW, or FAC:	3 _____
Total Number of Dominant Species Across All Strata:	_____ (A)
Percent of Dominant Species That Are OBL, FACW, or FAC:	_____ (B)
	_____ (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:	_____ (A) _____ 297
Prevalence Index = B/A =	_____ (B)

WETLAND DETERMINATION DATA FORM - Midwest Region

Project/Site: _____ City/County: Auglaize Sampling Date: 12/23/2019
 Applicant/Owner: _____ State: OH Sampling Point: _____
 _____ Section, Township, Range: S1, 6S, 4E

Landform (hillside, terrace, etc.): _____

Slope (%): _____

Soil Map Unit Name:
Investigator(s):

<u>Tree Stratum</u>	<u>(Plot size: 30' radius)</u>		<u>yes</u>	<u>FACW</u>
1. <u>n/a</u>			<u>no</u>	<u>FACW</u>
			<u>no</u>	<u>FACU</u>
		<u>0</u>		
<u>Sapling/Shrub Stratum</u>	<u>(Plot size: 15' radius)</u>			
<u>Rhamnus cathartica</u>		<u>10</u>		
<u>Cornus racemosa</u>		<u>15</u>		
<u>Cornus alba</u>		<u>5</u>		
			=Total Cover	
		<u>30</u>		
<u>Herb Stratum</u>	<u>(Plot size: 5' radius)</u>			
		<u>95</u>		
<u>Phalaris arundinaceus</u>		<u>5</u>		
<u>Verbesina alternifolia</u>		<u>3</u>		
<u>Cirsium arvense</u>				
		<u>103</u>		
<u>Woody Vine Stratum</u>	<u>(Plot size: 30' radius)</u>			
<u>n/a</u>				
2. _____		<u>0</u>		
3. _____				
4. _____				
5. _____				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic
 ____ Vegetation x 2 - Dominance Test is
x >50%
 ____ 3UHYDOHQFH, QGH[LV"
 ____ 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 Yes ____ x
 No
Present?

SOIL

Sampling Point:

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc*		

10.

1.

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

SOIL

Sampling Point:

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

[illegible]

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

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

Hydric Soil Indicators:

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

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)

Secondary Indicators (minimum of two required)

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

- ☐ 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

Sampling Point:

[illegible]

w-bl-20191223-03a

Long: -84.34315

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

<table border="0"><tr><td><u>Tree Stratum</u></td><td>(Plot size: 30' radius)</td><td>Absolute % Cover</td><td>Dominant Species?</td><td>Indicator Status</td></tr><tr><td>1.</td><td>n/a</td><td></td><td></td><td></td></tr><tr><td>2.</td><td></td><td></td><td></td><td></td></tr><tr><td>3.</td><td></td><td></td><td></td><td></td></tr><tr><td>4.</td><td></td><td></td><td></td><td></td></tr><tr><td>5.</td><td></td><td></td><td></td><td></td></tr><tr><td>Sapling/Shrub Stratum</td><td>(Plot size: 15' radius)</td><td>0</td><td></td><td></td></tr><tr><td>1.</td><td>n/a</td><td></td><td></td><td></td></tr><tr><td>2.</td><td></td><td>=Total Cover</td><td></td><td></td></tr><tr><td>3.</td><td></td><td></td><td></td><td></td></tr><tr><td>4.</td><td></td><td></td><td></td><td></td></tr><tr><td>5.</td><td></td><td></td><td></td><td></td></tr><tr><td>Herb Stratum</td><td>(Plot size: 5' radius)</td><td>0</td><td></td><td></td></tr><tr><td>1.</td><td>Phalaris arundinaceus</td><td></td><td></td><td></td></tr><tr><td>2.</td><td>Solidago altissima</td><td>90 =Total Cover</td><td></td><td></td></tr><tr><td>3.</td><td>Scirpus atrovirens</td><td>5</td><td></td><td></td></tr><tr><td>4.</td><td></td><td>5 yes FACW</td><td></td><td></td></tr><tr><td>5.</td><td></td><td>no FACU</td><td></td><td></td></tr><tr><td>6.</td><td></td><td>no OBL</td><td></td><td></td></tr><tr><td>7.</td><td></td><td></td><td></td><td></td></tr><tr><td>8.</td><td></td><td></td><td></td><td></td></tr><tr><td>9.</td><td></td><td></td><td></td><td></td></tr><tr><td>10.</td><td></td><td></td><td></td><td></td></tr><tr><td>Woody Vine Stratum</td><td>(Plot size: 30' radius)</td><td>100</td><td></td><td></td></tr><tr><td>1.</td><td>n/a</td><td></td><td></td><td></td></tr><tr><td>2.</td><td></td><td>=Total Cover</td><td></td><td></td></tr><tr><td>Water Table Present?</td><td>Yes No</td><td></td><td></td><td></td></tr><tr><td>Saturation Present? <small>(includes capillary fringe)</small></td><td>Yes No</td><td>0</td><td></td><td></td></tr><tr><td></td><td></td><td>=Total Cover</td><td></td><td></td></tr></table>	<u>Tree Stratum</u>	(Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status	1.	n/a				2.					3.					4.					5.					Sapling/Shrub Stratum	(Plot size: 15' radius)	0			1.	n/a				2.		=Total Cover			3.					4.					5.					Herb Stratum	(Plot size: 5' radius)	0			1.	Phalaris arundinaceus				2.	Solidago altissima	90 =Total Cover			3.	Scirpus atrovirens	5			4.		5 yes FACW			5.		no FACU			6.		no OBL			7.					8.					9.					10.					Woody Vine Stratum	(Plot size: 30' radius)	100			1.	n/a				2.		=Total Cover			Water Table Present?	Yes No				Saturation Present? <small>(includes capillary fringe)</small>	Yes No	0					=Total Cover			<p>Dominance Test worksheet:</p> <p>Number of Dominant Species That Are OBL, FACW, or FAC: 1 _____</p> <p>Total Number of Dominant Species Across All Strata: _____1_____(A)</p> <p>Percent of Dominant Species That Are OBL, FACW, or FAC: _____100%_____(B)</p> <p>(A/B) _____</p> <p>Prevalence Index :</p> <p>worksheet Total % Cover of : Multiply by:</p> <table border="0"><tr><td>OBL species</td><td>5 x 1 =</td><td>5</td></tr><tr><td>FACW species</td><td>90 x 2 =</td><td>180</td></tr><tr><td>FAC species</td><td>0 x 3 =</td><td>0</td></tr><tr><td>FACU species</td><td>5 x 4 =</td><td>20</td></tr><tr><td>species</td><td>0 x 5 =</td><td>0</td></tr><tr><td>UPL species</td><td>100 (A)</td><td>205</td></tr></table> <p>Column Totals: 2.05</p> <p>Prevalence Index = B/A = (B) _____</p> <p>Hydrophytic Vegetation Indicators:</p> <p>___ 1 - Rapid Test for Hydrophytic</p> <p>___ Vegetation x 2 - Dominance Test is</p> <p>X >50%</p> <p>___ 3UH YDQH QFH,QGH[LV"</p> <p>___ 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.</p> <p>Wetland Hydrology Present? Yes ___ No ___</p> <p>Vegetation Yes ___ X ___ Present?</p>	OBL species	5 x 1 =	5	FACW species	90 x 2 =	180	FAC species	0 x 3 =	0	FACU species	5 x 4 =	20	species	0 x 5 =	0	UPL species	100 (A)	205
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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: _____
Section, Township, Range: S1, 6S, 4E
Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex
Lat: _____ Datum: WGS84
Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 2 to 6 percent slopes NWI classification: N/A
Investigator(s): BL

Slope (%): _____

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

Are Vegetation , 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 <u>x</u>	No _____	Is the Sampled Area			
Hydric Soil Present?	Yes _____	No <u>x</u>	No	within a Wetland?	_____	Yes
Wetland Hydrology Present?	Yes <u>x</u>	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.

SOIL

Sampling Point:

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc*		

Water Table Present? Yes _____ No _____

Saturation Present? Yes _____ No _____

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No _____

w-bl-20191223-03a

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

Remarks: 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

Midwest Region - Version 2.0

SOIL

Sampling Point:

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc*		

Hydrophytic Vegetation Present?	Yes <u> x </u>	No <u> </u>	Is the Sampled Area within a Wetland?	Yes <u> x </u>	No <u> </u>
Hydric Soil Present?	Yes <u> </u> x	No <u> </u>			
Wetland Hydrology Present?	Yes <u> x </u>	No <u> </u>		<u> </u>	<u> </u>

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

VEGETATION - Use scientific names of plants.

Water Table Present?	Yes <u> </u>	No <u> </u>	<u> </u>	Wetland Hydrology Present?	Yes <u> </u>	No <u> </u>
Saturation Present?	Yes <u> </u>	No <u> </u>	<u> </u>			

(includes capillary fringe)

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: _____

Section, Township, Range: S1, 6S, 4E

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

Lat: _____ Datum: WGS84

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

Investigator(s): BL

Slope (%): _____

w-bl-20191223-03b

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	saci

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils*:

- | |
|----------------------------------------------------------|
| <input type="checkbox"/> Coast Prairie Redox (A16) |
| <input type="checkbox"/> Dark Surface (S7) |
| <input type="checkbox"/> Iron-Manganese Masses (F12) |
| <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> 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 ☐

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

- | |
|--------------------------------------------------------------------|
| <input type="checkbox"/> Surface Soil Cracks (B6) |
| <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Stunted or Stressed Plants (D1) |
| <input type="checkbox"/> Geomorphic Position (D2) |
| <input checked="" type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0
Water Table Present? Yes ☐ No ☒ Depth (inches): >14
x Depth (inches): 9

x

Sampling Point:

[illegible]

upl-bl-20191223-04

Long: -84.34333

Yes x No

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

<table border="0"><tr><td style="text-align: right;">Tree Stratum</td><td>(Plot size: 30' radius)</td></tr><tr><td>1.</td><td>n/a</td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td>Sapling/Shrub Stratum</td><td>(Plot size: 15' radius n/a)</td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td> </td><td> </td></tr><tr><td>Herb Stratum</td><td>(Plot size: 5' radius)</td></tr><tr><td>Phalaris arundinaceus</td><td> </td></tr><tr><td>Dactylus glomerata</td><td>10</td></tr><tr><td>Lolium perrene</td><td>20</td></tr><tr><td>Cirsium arvense</td><td>10</td></tr><tr><td>Solidago altissima</td><td>20</td></tr><tr><td>Cirsium discolor</td><td>10</td></tr><tr><td>Schedonorus arundinaceus</td><td>3</td></tr><tr><td>Bromus inermis</td><td>10</td></tr><tr><td> </td><td>20</td></tr><tr><td>Woody Vine Stratum</td><td>(Plot size: 30' radius n/a)</td></tr><tr><td>2.</td><td> </td></tr><tr><td>Water Table Present?</td><td>Yes No</td></tr><tr><td>Saturation Present?</td><td>Yes No</td></tr><tr><td>(Includes capillary fringe)</td><td> </td></tr><tr><td>5.</td><td> </td></tr><tr><td>1.</td><td> </td></tr></table>	Tree Stratum	(Plot size: 30' radius)	1.	n/a									Sapling/Shrub Stratum	(Plot size: 15' radius n/a)									Herb Stratum	(Plot size: 5' radius)	Phalaris arundinaceus		Dactylus glomerata	10	Lolium perrene	20	Cirsium arvense	10	Solidago altissima	20	Cirsium discolor	10	Schedonorus arundinaceus	3	Bromus inermis	10		20	Woody Vine Stratum	(Plot size: 30' radius n/a)	2.		Water Table Present?	Yes No	Saturation Present?	Yes No	(Includes capillary fringe)		5.		1.		Absolute % Cover Dominant Species? Indicator Status =Total Cover no FACW yes ACU no ACU yes ACU no ACU yes ACU no ACU no ACU yes ACU
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Hydrophytic Vegetation Indicators: ____ 1 - Rapid Test for Hydrophytic Vegetation ____ 2 - Dominance Test is >50% ____ 3 UHYDOHQFH,QGH[LV" ____ 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. 																																																									
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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: _____
Section, Township, Range: S1, 6S, 4E
Landform (hillside, terrace, etc.): hillslope Local relief (concave, convex, none): convex
Lat: _____ Datum: WGS84
Soil Map Unit Name: Gwe1B1 - Glynwood silt loam, end moraine, 2 to 6 percent slopes NWI classification: N/A
Investigator(s): BL

Slope (%):

2.
3.
4.
5.

1.
2.
3.
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6.
7.
8.
9.
10.

1.

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

Are Vegetation , 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 <u>x</u>	Is the Sampled Area within a Wetland?	Yes _____	No <u>x</u>
Hydric Soil Present?	Yes <u>x</u>	No _____			
Wetland Hydrology Present?	Yes _____	No <u>x</u>			

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

VEGETATION - Use scientific names of plants.

SOIL

Sampling Point:

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type*	Loc*		

Water Table Present? Yes _____ No _____

Saturation Present? Yes _____ No _____

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No _____

upl-bl-20191223-04

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

Remarks: 2.5Y 4/3 100
8-16 2.5Y 4/2 90 2.5Y 4/6 10 c m saclo
saci

APPENDIX B OEPA WETLAND ORAM FORMS

Field Id:

Metric 1. Wetland Area (size).

Select one size class and assign score.

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

>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)
 <0.1 acres (0.04ha) (0 pts)

acres

AEP Ohio
January 2020

Transco

West Moulton Station Expansion Project

Wetland 01

0	0
---	---

max 6 pts subtotal

w-bl-20191220-01

0.03

x

4	4
---	---

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) NARROW.
 Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
 VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)
 x
 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)

9.0	13.0
-----	------

Metric 3. Hydrology.

max 30 pts.

subtotal

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

3b. Connectivity. Score all

Perennial surface water (lake)

that apply.
 High pH groundwater (5) 100 year floodplain (1)
 Other groundwater (3) Between stream/lake and other
 x Precipitation (1) Part of wetland/upland (e.g. forest),
 Seasonal/intermittent surface water (3) Part of riparian or
 or stream) (5) 3d. Duration inundation/saturation.
 3c. Maximum water depth. Select one. Semi- to
 >0.7 (27.6in) (3) Regularly inundated/saturated (3)
 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2)
 <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1)
 3e. Modifications to natural hydrologic regime. Score
 x None or none apparent (12) Check all disturbances
 Recovered (7) point source (nonstormwater)
 Recovering (3) filling/grading
 x Recent or no recovery (1) road bed/RR track
 dredging
 Other:

human use (1)
 x complex (1)
 x upland corridor (1)
 Score one or dbl check.
 permanently inundated/saturated (4)

one or double check and average.

observed

x ditch
 tile
 dike weir
 stormwater input

x

Development.

disturbance. Score one or

7	20
---	----

double check and average.

None or none apparent (4)
 Recovered (3)
 x Recovering (2)
 Recent or no recovery (1)
 4b. Habitat development. Select only one and assign score.
 Excellent (7)
 Very good (6)
 Good (5)
 Moderately good (4)
 Fair (3)
 Poor to fair (2)
 x Poor (1)
 4c. Habitat alteration. Score one or double check and average.

4a. Substrate

max 20 pts. subtotal

Field Id:

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

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

Bog (10)

Fen (10)

Old growth forest (10)

Mature forested wetland (5)

None or none apparent (9) Check all disturbances observed

Recovered (6) shrub/sapling removal

Recovering (3) herbaceous/aquatic bed removal Recent or

x mowing grazing
clearcutting selective
cutting woody debris
removal toxic
pollutants

no recovery (1) sedimentation
dredging farming
nutrient enrichment

20

subtotal this page

ORAM v. 5.0 Field Form Quantitative Rating

w-bl-20191220-01-ORAM.xlsm | test_Field

Wetland 01

20

max 10 pts.

subtotal

subtotal this page

0 20

Lake Erie coastal/tributary wetland-unrestricted hydrology (10)

Lake Erie coastal/tributary wetland-restricted hydrology (5)

Lake Plain Sand Prairies (Oak Openings) (10)

Relict Wet Prairies (10)

Known occurrence state/federal threatened or endangered species (10)

Significant migratory songbird/water fowl habitat or usage (10)

Category 1 Wetland. See Question 5 Qualitative Rating (-10)

0 20

max 20pts.

subtotal

Metric 6. Plant communities, interspersions, microtopography.

6a. Wetland Vegetation

Communities.Vegetation Community Cover Scale

Score all present using 0 to 3 scale.

Aquatic bed

Emergent

1 Shrub

0 Forest

Mudflats

Open water

Other

6b. horizontal (plan view) Interspersion.

Select only one.

w-bl-20191220-01

0	Absent or comprises <0.1ha (0.2471 acres) contiguous area
1	Present and either comprises small part of wetland's 1 vegetation and is of moderate quality, or comprises a significant part but is of low quality
2	Present and either comprises significant part of wetland's 2 vegetation and is of moderate quality or comprises a small part and is of high quality
3	Present and comprises significant part, or more, of wetland's 3 vegetation and is of high quality
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 generally w/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	
0	Absent <0.1ha (0.247 acres)
1	Low 0.1 to <1ha (0.247 to 2.47 acres)

12/24/2019

Field Id: w-bl-

20191220-02

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

- Bog (10)
- Fen (10)
- Old growth forest (10)
- Mature forested wetland (5)

Wetland 02

2	2
---	---

max 6 pts

subtotal

0.80

x

7	9
---	---

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) NARROW.
- ☒ Buffers average 10m to <25m (32ft to <82ft) around wetland perimeter (1)
- ☐ VERY NARROW. Buffers average <10m (<32ft) around wetland perimeter (0)

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

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

8.0	17.0
-----	------

Metric 3. Hydrology.

max 30 pts.

subtotal

3a. Sources of Water. Score all

that apply. 3b. Connectivity.

Score all that apply.

- ☐ High pH groundwater (5) 100 year floodplain (1)
- ☐ Other groundwater (3) Between stream/lake and other
- ☒ Precipitation (1) Part of wetland/upland (e.g. forest),
- ☐ Seasonal/intermittent surface water (3) Part of riparian or
- ☐ or stream (5) 3d. Duration inundation/saturation.

- ☐ human use (1)
- ☒ complex (1)
- ☒ upland corridor (1)

- ☐ 3c. Maximum water depth. Select one. Semi- to
- ☐ >0.7 (27.6in) (3) Regularly inundated/saturated (3)
- ☐ 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2)
- ☐ <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1)

Score one or dbl check.
permanently inundated/saturated (4)

3e. Modifications to natural hydrologic regime. Score

- ☒ None or none apparent (12)
- ☐ Recovered (7) point source (nonstormwater)
- ☐ Recovering (3) filling/grading
- ☐ Recent or no recovery (1) road bed/RR track

Check all disturbances

one or double check and average.

- ☒ ditch
- ☒ tile
- ☐ dike weir
- ☐ stormwater input
- dredging
- Other:

observed

8	25
---	----

max 20 pts.

subtotal

Metric 4. Habitat Alteration and Development.

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

- ☐ None or none apparent (4)
- ☐ Recovered (3)
- ☒ 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)
- ☐ Poor (1)

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

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | <ul style="list-style-type: none"> <input checked="" type="checkbox"/> mowing grazing <input type="checkbox"/> clearcutting selective <input type="checkbox"/> cutting woody debris <input checked="" type="checkbox"/> removal toxic <input type="checkbox"/> pollutants |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Field Id:
w-bl-20191220-02

Select one size class and assign score.

(>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)
<0.1 acres (0.04ha) (0 pts)

None or none apparent (9) Check all ☐
Recovered (6)shrub/sapling removal ☐
Recovering (3)herbaceous/aquatic bed ☐

acres

□ disturbances observed

removal Recent or no recovery (1) sedimentation
dredging farming nutrient enrichment

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

max 10 pts.

subtotal

[illegible]

subtotal this page

0	25
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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
---	----

max 20pts.

subtotal

6a. Wetland Vegetation

Score all present using 0 to 3 scale.

1
0

Aquatic bed
Emergent

Shrub

Forest

Mudflat

Open water

Open water
Other

6b. ho

6b. horizontal (plan view) Interspersion.

Select only one.

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

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 generally w/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

Site: AEP West Moulton Station	Rater(s): BL (AECOM)	Date: 12/23/2019
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Field Id: w-bl-

20191220-02

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

Bog (10)
Fen (10)
Old growth forest (10)
Mature forested wetland (5)

x

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

Narrative Description of Vegetation Quality

6c. Coverage of invasive plants. Refer Table 1 ORAM long form for list. Add or deduct points for coverage Extensive >75% cover (-5)
Moderate 25-75% cover (-3)
Sparse 5-25% cover (-1)
Nearly absent <5% cover (0)
Absent (1)

x

6d. Microtopography.
Score all present using 0 to 3 scale.
Vegetated hummocks/tussucks
Coarse woody debris >15cm (6in)

Mudflat and Open Water Class Quality

Standing dead >25cm (10in) dbh
Amphibian breeding pools

1
0
0
0

Microtopography Cover Scale

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

Category 2

26 GRAND TOTAL(max 100 pts)

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

w-bl-20191220-02-ORAM.xlsm | test_Field

Wetland 03

2	2
---	---

max 6 pts

subtotal

0.77

x

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.

Field Id:
w-bl-20191220-02

Metric 1. Wetland Area (size).

Select one size class and assign score.

<div style="display: flex; align-items: center;"> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> </div>	<div style="display: flex; justify-content: space-between;"> >50 acres (>20.2ha) (6 pts) </div> <div style="display: flex; align-items: center; margin-top: 5px;"> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> </div>
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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)
<0.1 acres (0.04ha) (0 pts)

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

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

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

12.0

18.0

Metric 3. Hydrology.

<p>that apply. 3b. Connectivity.</p> <div style="display: flex; align-items: center;"> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> </div> <p>Perennial surface water (lake)</p>	<p>Score all that apply.</p> <p>High pH groundwater (5) 100 year floodplain (1) Other groundwater (3) Between stream/lake and other Precipitation (1) Part of wetland/upland (e.g. forest), Seasonal/intermittent surface water (3) Part of riparian or or stream) (5) 3d. Duration inundation/saturation.</p> <p>3c. Maximum water depth. Select one. Semi- to >0.7 (27.6in) (3) Regularly inundated/saturated (3) 0.4 to 0.7m (15.7 to 27.6in) (2) Seasonally inundated (2) <0.4m (<15.7in) (1) Seasonally saturated in upper 30cm (12in) (1)</p> <p>3e. Modifications to natural hydrologic regime. Score</p> <p>None or none apparent (12) Check all disturbances Recovered (7) point source (nonstormwater) Recovering (3) filling/grading Recent or no recovery (1) road bed/RR track</p>	<p>human use (1) complex (1) upland corridor (1) permanently inundated/saturated (4)</p> <p>Score one or dbl check.</p> <p>one or double check and average.</p> <p>observed</p>
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9.5

27.5

Metric 4. Habitat Alteration and

Development.

<p>max 20 pts. subtotal 4a.</p> <div style="display: flex; align-items: center;"> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> <div style="width: 20px; height: 20px; border: 1px solid black; margin-right: 5px;"></div> </div>	<p>Substrate disturbance. Score one or double check and average.</p> <p>None or none apparent (4) Recovered (3) Recovering (2) Recent or no recovery (1)</p> <p>4b. Habitat development. Select only one and assign score.</p> <p>Excellent (7) Very good (6) Good (5) Moderately good (4) Fair (3) Poor to fair (2) Poor (1)</p> <p>4c. Habitat alteration. Score one or double check and average.</p> <p>None or none apparent (9) Check all disturbances observed Recovered (6) shrub/sapling removal Recovering (3) herbaceous/aquatic bed removal Recent or</p>	<p>ditch tile dike weir stormwater input</p> <p>observed</p>
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27.5

subtotal this page ORAM v. 5.0 Field Form Quantitative Rating

Client Name:

w-bl-20191220-03-ORAM.xlsm | test_Field

Site Location:

Project No.

Wetland Delineation and Stream Assessment Report

APPENDIX C OEPA STREAM ASSESSMENT FORMS

Client Name:

Site Location:

Project No.

AEP Ohio Transco
January 2020

West Moulton Station Expansion Project

Stream 01

Modified Small Drainage WW

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

Version 4.0
October 2018

Client Name:

Site Location:

Project No.



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

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

(A)

100%

(B)

SCORE OF TWO MOST PREDOMINATE SUBSTRATE TYPES: **15**

TOTAL NUMBER OF SUBSTRATE TYPES: **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):

<input type="checkbox"/> > 30 centimeters [20 pts]	<input type="checkbox"/> 5 cm - 10 cm [15 pts]
<input checked="" type="checkbox"/> > 22.5 - 30 cm [30 pts]	<input type="checkbox"/> < 5 cm [5 pts]
<input type="checkbox"/> > 10 - 22.5 cm [25 pts]	<input type="checkbox"/> NO WATER OR MOIST CHANNEL [0 pts]

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):

<input type="checkbox"/> > 4.0 meters (> 13') [30 pts]	<input checked="" type="checkbox"/> > 1.0 m - 1.5 m (> 3' 3" - 4' 8") [15 pts]
<input type="checkbox"/> > 3.0 m - 4.0 m (> 9' 7" - 13') [25 pts]	<input type="checkbox"/> ≤ 1.0 m (≤ 3' 3") [5 pts]
<input type="checkbox"/> > 1.5 m - 3.0 m (> 4' 8" - 9' 7") [20 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	
<input type="checkbox"/>	<input type="checkbox"/>	Wide >10m
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Moderate 5-10m
<input type="checkbox"/>	<input type="checkbox"/>	Narrow <5m
<input type="checkbox"/>	<input checked="" type="checkbox"/>	None

FLOODPLAIN QUALITY (Most Predominant per Bank)

L	R	
<input type="checkbox"/>	<input type="checkbox"/>	Mature Forest, Wetland
<input type="checkbox"/>	<input type="checkbox"/>	Immature Forest, Shrub or Old Field
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Residential, Park, New Field
<input type="checkbox"/>	<input type="checkbox"/>	Fenced Pasture
<input type="checkbox"/>	<input type="checkbox"/>	Conservation Tillage
<input type="checkbox"/>	<input type="checkbox"/>	Urban or Industrial
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Open Pasture, Row Crop
<input type="checkbox"/>	<input type="checkbox"/>	Mining or Construction

COMMENTS **straightened NHD stream**

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

<input checked="" type="checkbox"/> Stream Flowing	<input type="checkbox"/> Moist Channel, isolated pools, no flow (intermittent)
<input type="checkbox"/> Subsurface flow with isolated pools (interstitial)	<input type="checkbox"/> Dry channel, no water (ephemeral)

COMMENTS **current snowmelt / precipitation**

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

<input type="checkbox"/> None	<input checked="" type="checkbox"/> 1.0	<input type="checkbox"/> 2.0	<input type="checkbox"/> 3.0
<input type="checkbox"/> 0.5	<input type="checkbox"/> 1.5	<input type="checkbox"/> 2.5	<input type="checkbox"/> >3

STREAM GRADIENT ESTIMATE

<input type="checkbox"/> Flat (0.5 ft/100 ft)	<input checked="" type="checkbox"/> Flat to Moderate	<input type="checkbox"/> Moderate (2 ft/100 ft)	<input type="checkbox"/> Moderate to Severe	<input type="checkbox"/> Severe (10 ft/100 ft)
-----------------------------------------------	------------------------------------------------------	-------------------------------------------------	---------------------------------------------	------------------------------------------------

Client Name:

Site Location:

Project No.

Client Name:

Site Location:

Project No.

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

