Legal Department

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April 9, 2021

Ms. Tanowa Troupe, Secretary
Ohio Power Siting Board
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Columbus, Ohio 43215-3793

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Re: In the Matter of the Letter of Notification Application of AEP Ohio Transmission Company, Inc. for a Certificate of Environmental Compatibility and Public Need for the West Moulton-Gemini 138 kV Transmission Line Project
Case No. 21-0167-EL-BLN

Dear Ms. Troupe,

On March 12, 2021, AEP Ohio Transmission Company, Inc. (the "Company") filed its Letter of Notification Application for the above-referenced Project. In its Application, the Company noted that it was unable to complete a field survey for a portion of the Project located between Canning Factory Road and US 33 as part of its overall survey for the Project. The Company stated that the survey for this area would be completed in March 2021 and the results would be docket as soon as they were available.

The Company hereby files this notice and the attached Addendum Wetland Delineation and Stream Assessment Report, which updates the field survey results for the portion of the Project located between Canning Factory Road and US 33, consistent with its Application.

If you have any questions, please do not hesitate to contact me.

Respectfully submitted,

/s/ *Tanner S. Wolffram*
Christen M. Blend (0086881), Counsel of Record
Tanner S. Wolffram (0097789)
Counsel for AEP Ohio Transmission Company, Inc.

cc: Jon Pawley

WEST MOULTON-GEMINI 138 KV TRANSMISSION LINE PROJECT

AUGLAIZE COUNTY, OHIO

ADDENDUM WETLAND DELINEATION AND STREAM ASSESSMENT REPORT

Prepared for:

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

AEP OHIO TRANSMISSION COMPANY℠

Prepared by:

AECOM

525 Vine Street, Suite 1800
Cincinnati, Ohio 45202

Project #: 60567997

March 2021

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1.0 INTRODUCTION

AECOM Technical Services, Inc. (AECOM) is providing various permitting support for American Electric Power Ohio Transmission Company (AEP Ohio Transco) as part of the Wapakoneta Improvements Project. As part of the overall improvements, AEP Ohio Transco is proposing to construct approximately 10-miles of a greenfield 138 kV transmission line between West Moulton and Gemini Stations in Auglaize County, Ohio (Project). Since the completion of the original wetland delineation and stream assessment report, AEP Ohio Transco required a re-route of a 2.1-mile portion of the Project between US Route 33 and Canning Factory Road, as well as the addition of two access roads (totaling approximately 0.28 miles) in Auglaize County, Ohio (Figure 1). AEP Ohio Transco retained AECOM Technical Services, Inc. (AECOM) to survey a 150-foot buffer of the 2.1-mile re-route and a 25-foot buffer of the two new 0.14-mile access road, producing a Greenfield Project survey corridor of approximately 23.4 acres. Results of the field survey are included within this report.

As a reference, AECOM has also included the identified features along the Project that was originally provided within the *West Moulton-Gemini 138 kV Transmission Line Project – March 2021* (March 2021 – Report) within the text and tables. Previously identified features, data forms, photographs, and supporting information of the previous surveys of the Project are contained within the March 2021 - Report.

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

2.0 METHODOLOGY

A comprehensive methodology of the field surveys and data reviews completed for this report are included within the March 2021 – Report and a brief summary of the delineation and agency coordination methodology has been provided below.

Delineations were conducted in accordance with the procedures outlined in the U.S. Army Corps of Engineers (USACE) 1987 Wetland Delineation Manual (1987 Manual) (Environmental Laboratory, 1987), and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region (USACE, 2010). In addition, any wetlands were classified using the Ohio Environmental Protection Agency (OEPA) Ohio Rapid Assessment Method for Wetlands v. 5.0 (ORAM). 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).

Initial coordination from the U.S. Fish and Wildlife Service (USFWS) and Ohio Department of Natural Resources (ODNR) was received in March 2018. AECOM supplemented the original agency coordination with inquires to the USFWS Information for Planning and Consultation (IPaC) online tool in February 2021 to obtain an up-to-date list of federally listed species that may occur within the Project corridor. Additionally, AECOM reviewed the county list of rare, threatened, and endangered species from the ODNR website.

3.0 RESULTS

In March 2021, AECOM ecologists walked the Survey Corridor to conduct the wetland delineation, stream assessment and habitat survey. Within the survey corridor, one previously delineated wetland (Wetland 06) and one previously identified stream (Stream 01) were extended, and a new wetland (Wetland 15) was delineated. Data forms and photographs for the new and extended features within the Project Survey Corridor are included in Appendix A, B, C, and D. Data forms, photographs, and additional information on all other previously delineated features are contained within the March 2021 – Report.

3.1 WETLAND DELINEATION

3.1.1 Preliminary Soils Evaluation

Soils were observed and documented as part of the delineation methodology. No new soil map units were identified during the field survey of the March 2021 – Addendum Project Survey Corridor in March 2021. A list of Soil map units identified within the Project Survey Corridor is provided in the March 2021 – Report.

3.1.2 National Wetland Inventory Map Review

According to the NWI data covering the Project location, the March 2021 – Addendum Project Survey Corridor contains two mapped NWI wetlands. The locations of the two mapped NWI wetlands located within the March 2021 – Addendum Project Survey Corridor are described below and illustrated on Figure 2:

- One palustrine, emergent, persistent, seasonally flooded, diked/impounded (PEM1Ch)
    - No features identified; documented as Upland 06 (See Figure 2B).
- One riverine, lower perennial, unconsolidated bottom, permanently flooded (R2UBH)
    - Features identified: Stream 01 (See Figure 2C).

3.1.3 Delineated Wetlands

During the field survey, AECOM identified one new wetland (Wetland 15) and extended one previously delineated wetland (Wetland 06) within the March 2021 – Addendum Project Survey Corridor. Wetland 15 (approximately 0.04 acres) was delineated as a PEM wetland and was identified as a Category 1 wetland with an ORAM score of 10. Wetland 15 exhibited medium upland buffers, low to moderately high intensive surrounding land use (e.g. old field, residential areas), an extensive percentage of invasive species, and

had habitat and hydrology generally recovered to recent or no recovery from previous manipulation due to filling/grading, installation of ditches and tile, road bed, sedimentation, mowing, and farming.

The boundary of the previously delineated Wetland 06 was extended into the March 2021 – Addendum Project Survey Corridor. The total delineated area of Wetland 06 is now approximately 0.76 acres within the survey corridors and the extension did not result in a change of the ORAM score and/or Category. The remaining wetlands (Wetlands 01-05, and 07-14b) were identified within the March 2021 – Report and are included within Tables 1 and 2 as a reference. Data forms, photographs, location, and additional information on all previously delineated features are contained within the March 2021 – Report. The locations of the delineated features are provided in Figure 3.

AECOM provided a preliminary classification of jurisdictional status for each wetland based upon the 2020 Navigable Waters Rule. Typically, wetlands that are not hydrologically connected to another WOTUS such as an intermittent or perennial stream, are not considered WOTUS themselves. Wetland 15 is preliminary identified as “isolated” and final jurisdictional status can only be determined by the USACE.

TABLE 1
DELINEATED WETLANDS WITHIN THE WEST MOULTON-GEMINI 138 kV TRANSMISSION LINE PROJECT SURVEY CORRIDOR

Wetland Name	Latitude	Longitude	Cowardin Wetland Type[a]	Provisional Jurisdictional Status	ORAM Score	ORAM Category	Length Crossed by Centerline (feet)[b]	Acreage within Project Survey Corridor
Wetland 01	40.540491	-84.192218	PEM	Isolated	19.5	Category 1	13	0.03
Wetland 02	40.540392	-84.197431	PFO	Isolated	28	Category 1	NC	0.15
Wetland 03	40.548029	-84.207178	PFO	Adjacent	40	Category 2	3	0.08
Wetland 04	40.548019	-84.210778	PFO	Isolated	32	Category 2	NC	0.07
Wetland 05	40.547978	-84.211947	PFO	Isolated	31.5	Category 2	86	0.26
Wetland 06	40.561041	-84.221495	PEM	Adjacent	29	Category 1	129	0.76
Wetland 07	40.561872	-84.297657	PEM	Isolated	15.5	Category 1	36	0.02
Wetland 08	40.561215	-84.302407	PFO	Isolated	35.5	Category 2	NC	0.09
Wetland 09	40.561212	-84.302930	PSS	Isolated	34.5	Category 2	NC	0.04
Wetland 10	40.561024	-84.304189	PFO	Isolated	31	Category 2	NC	0.05
Wetland 11	40.561005	-84.305662	PFO	Isolated	32	Category 2	NC	0.03
Wetland 12	40.553770	-84.332480	PSS	Isolated	26	Category 1	NC	0.52
Wetland 13	40.553635	-84.334922	PFO	Isolated	23	Category 1	NC	0.04
Wetland 14a	40.552946	-84.340537	PEM	Isolated	26	Category 1	NC	0.43
Wetland 14b	40.553340	-84.340602	PSS	Isolated	26	Category 1	NC	0.05
Wetland 15	40.5595	-84.219783	PEM	Isolated	10	Category 1	NC	0.04
Total Wetlands: 15 (4 PEM, 8 PFO, 2 PSS, and 1 PEM/PSS)							**267**	**2.66**

TABLE 1
DELINEATED WETLANDS WITHIN THE WEST MOULTON-GEMINI 138 kV TRANSMISSION LINE PROJECT SURVEY CORRIDOR

Wetland Name	Latitude	Longitude	Cowardin Wetland Type[a]	Provisional Jurisdictional Status	ORAM Score	ORAM Category	Length Crossed by Centerline (feet)[b]	Acreage within Project Survey Corridor

Cowardin Wetland Type[a] : PEM = palustrine emergent, PFO = palustrine forested, PSS = palustrine scrub/shrub
Linear Feet Crossed by Centerline (feet)[b] : NC = Not Crossed by proposed centerline
Isolated = Isolated not a WOTUS under the 2020 Navigable Waters Rule; Adjacent = Adjacent wetland is a WOTUS under the 2020 Navigable Waters Rule. Final jurisdictional can only be determined by the USACE
NOTE: Cells highlighted in yellow indicate changes to the information provided in the March 2021 – Report

TABLE 2
DELINEATED WETLANDS SUMMARIZED BY COWARDIN AND ORAM TYPE WITHIN THE WEST MOULTON-GEMINI 138 kV TRANSMISSION LINE PROJECT SURVEY CORRIDOR

Cowardin Wetland Type[a]	ORAM Category 1	ORAM Category 2	ORAM Category 3	Number of Wetlands	Acreage within Project Survey Corridor	Length Crossed by Centerline (feet)[b]
PEM	4	0	0	4	0.85	178
PFO	2	6	0	8	0.77	89
PSS	1	1	0	2	0.56	NC
PEM/PSS complex	1	0	0	1	0.48	NC
Acreage per ORAM Category	2.04 acres	0.62 acres	0 acres	NA	NA	NA
Total	**8**	**7**	**0**	**15**	**2.66**	**267**

Cowardin Wetland Typea : PEM = palustrine emergent, PSS= palustrine shrub/scrub, PFO = palustrine forested
Linear Feet Crossed by Centerline (feet)[b] : NC = Not Spanned by centerline
NOTE: Cells highlighted in yellow indicate changes to the information provided in the March 2021 – Report

3.2 STREAM CROSSINGS

Streams identified in the March 2021 – Addendum Project Survey Corridor include one perennial stream (Stream 01) which was extended by 372 linear feet from the previously surveyed segments included in the March 2021 – Report. The extended segment of Stream 01 within the March 2021 – Addendum Project Survey Corridor exhibited similar channel conditions and flow regime as the previously surveyed upstream portion that was identified in the March 2021 – Report; therefore, an additional data form was not warranted. New photographs were collected at the new proposed stream crossing and are provided in Appendix D. The previously completed QHEI data form for Stream 01 is provided in Appendix C. The remaining streams identified within the March 2021 - Report (Streams 02-04) are included within Table 3 as reference. Data forms, photographs, location, and additional information on all previously delineated features are contained within the March 2021 - Report. Figure 3 within this addendum report provides the location of the new stream segments identified within the March 2021 – Addendum Project Survey Corridor.

AECOM has preliminarily determined that the assessed intermittent and perennial streams within the Project corridor appear to be jurisdictional (i.e., WOTUS), based on the 2020 Navigable Waters Rule. No

ephemeral streams were identified within the March 2021 – Addendum Project Survey Corridor. Final jurisdictional status can only be determined by the USACE and AECOM assessment are preliminary.

TABLE 3
STREAMS IDENTIFIED WITHIN WEST MOULTON-GEMINI 138 kV TRANSMISSION LINE PROJECT SURVEY CORRIDOR

Stream Report Name	Latitude	Longitude	Waterbody	401 WQC Eligibility	Flow Regime	Provisional Jurisdictional Status	Bankfull Width (feet)	Maximum Pool Depth (in)	Form[a]	Score[b]	Class/ Narrative Rating*	Crossed by Centerline	Length (feet) within Project Survey Corridor
Stream 01	40.556293	-84.212667	Pusheta Creek	Eligible	Perennial	Tributary	25	20	QHEI	61	Good Warmwater	Yes	1,444
Stream 02	40.5626585	-84.2263986	Owl Creek	Eligible	Perennial	Tributary	10	8	QHEI	38	Poor Warmwater	Yes	229
Stream 03	40.5613743	-84.3078509	Tributary to Sixmile Creek	Eligible	Intermittent	Tributary	3	4	HHEI	37	Modified Small Drainage Warmwater Stream	No	255
Stream 04	40.5535248	-84.3374128	Tributary to East Branch	Eligible	Ephemeral	Ephemeral	2	2	HHEI	27	Modified Ephemeral Stream	Yes	156
Total Streams: 4 (two perennial, one intermittent, and one ephemeral)													**2,084**

Form Used[a] : QHEI = Qualitative Habitat Evaluation Index, HHEI = Headwater Habitat Evaluation Index, NA = Not Assessed (default to the State of Ohio's assessment)
* = Narrative description is based on Ohio Environmental Protection Agency's ranking. See Ohio Administrative Code 3745-1-07
Provisional Jurisdictional Status is based upon the 2020 Navigable Waters Rule. Ephemeral = Not a WOTUS; Tributary = WOTUS by definition
NOTE: Cells highlighted in yellow indicate changes to the lengths provided in the March 2021 – Report

3.2.1 OEPA STREAM ELIGIBILITY

OEPA stream eligibility for 401 Water Quality Certification mapping was reviewed for all of the field identified streams. The March 2021 – Addendum Project Survey Corridor occurs in one subwatershed (Pusheta Creek, 041000070104) designated by 401 WQC eligibility. A list of all watersheds within the Project Survey Corridors are provided within Table 5 of the March 2021 – Report. The watershed is designated "Eligible". OEPA stream eligibility mapping for the Project vicinity, with field identified streams, is provided on Figure 4.

3.3 PONDS

No Ponds were identified within the Greenfield Routes and/or Re-Route survey corridor.

3.4 VEGETATIVE COMMUNITIES WITHIN THE PROJECT SURVEY CORRIDOR

AECOM ecologists conducted a general habitat survey in conjunction with the stream and wetland field surveys in March 2021. Portions of the March 2021 – Addendum Project Survey Corridor were identified as agricultural land, landscaped area, mixed mesophytic forest, streams/wetlands, and urban areas. Habitat descriptions, applicable to the Project, and details on the expected impacts of construction are provided below in **Table 4**. Vegetated land cover can be seen visually from aerial photography provided on **Figure 5**.

TABLE 4
VEGETATIVE COMMUNITIES WITHIN THE WEST MOULTON-GEMINI 138 kV TRANSMISSION LINE PROJECT - MARCH 2021 – ADDENDUM PROJECTSURVEY CORRIDOR

Vegetative Community	Description	Approximate Acreage Within the Project Survey Corridor	Approximate Percentage Within the Project Survey Corridor (%)
Agricultural Land	Agricultural land consisting of soybean and corn fields was present along the Project Survey Corridor. The agricultural land contains row crops and is not used for pasture or hay fields.	15.4	65.8
Landscaped Areas	Landscaped areas, including residential properties, were observed within the Project vicinity. These landscaped areas within the Project Survey Corridor and adjacent areas are frequently mowed grasses and forbs.	2.5	10.7
Mixed Mesophytic Forest	Mixed mesophytic forests are present along the Project Survey Corridor. Woody species dominating these areas included shagbark hickory (*Carya ovata*), red maple (*Acer rubrum*), black cherry (*Prunus serotina*), pin oak (*Quercus palustris*), silver maple (*Acer saccharinum*), American sycamore (*Platanus occidentalis*), shellbark hickory (*Carya laciniosa*), white oak (*Quercus alba*), slippery elm (*Ulmus rubra*), and honeylocust (*Gleditsia triacanthos*). The dominant shrub-layer species included green ash (*Fraxinus pennsylvanica*), Morrow's honeysuckle (*Lonicera morrowii*), silky dogwood (*Cornus amomum*), and Allegheny blackberry (*Rubus allegheniensis*).	4	17
Streams/Wetlands	Streams and wetlands were observed both within and beyond the survey corridor for the Project.	0.98	4.2

TABLE 4
VEGETATIVE COMMUNITIES WITHIN THE WEST MOULTON-GEMINI 138 kV TRANSMISSION LINE PROJECT - MARCH 2021 – ADDENDUM PROJECTSURVEY CORRIDOR

Vegetative Community	Description	Approximate Acreage Within the Project Survey Corridor	Approximate Percentage Within the Project Survey Corridor (%)
Urban	Urban areas are areas developed with residential and commercial land uses, including roads, buildings and parking lots. These areas are generally devoid of significant woody and herbaceous vegetation.	0.54	2.3
Totals:		**23.42**	**100**

Note: See March 2021 – Report for the total **acreage of land use along the West Moulton-Gemini 138 kV Transmission Line Project Survey Corridor.**

3.5 RARE, THREATENED AND ENDANGERED SPECIES AGENCY COORDINATION

Protected Species Agency Consultation –

Correspondence for state and federal listed species were completed as part of the original project and included within the March 2021 - Report. AECOM reviewed these previous correspondences with the USFWS and ODNR to identify if the potential presence of listed species and/or their habitat within the new work areas associated with the Project. Based on the due-diligence review, the March 2021 – Addendum Project Survey Corridor presents potentially suitable habitat for the state and federally threatened Indiana bat and the state and federally threatened northern long-eared bat. This is consistent with the findings in the March 2021 – Report, as AECOM identified potentially suitable habitat for these bat species. The USFWS commented that due to the project type, size, and location, plus the proposal for seasonal tree cutting between October 1 and March 31, there should be no adverse effects to the Indiana bat or northern long- eared bat. The ODNR-DOW identified suitable habitat within the Project area the Indiana Bat and recommends seasonal tree clearing to be completed between October 1 and March 31. If seasonal tree clearing is not feasible, the ODNR-DOW requires mist nest surveys to be completed prior to construction and between June 1 and August 15. An overview/summary of ODNR and USFWS Listed Species within the Project Survey Corridor is provided within the March 2021 – Report.

As time has lapsed since the initial correspondence with these regulatory agencies, AECOM completed an additional review to identify if new species were added to the federal and/or state list by completing an IPaC report and reviewing state-listed species on the ODNR website.

The results from the IPaC report of the March 2021 – Addendum Project Survey Corridor did not identify any additional federally listed species. However, the ODNR guidance issued in June 2020 identified the northern long-eared bat (*Myotis septentrionalis*), little brown bat (*Myotis lucifugus*), and tricolored bat

(*Perimyotis subflavus*) as state endangered as of July 1, 2020[1]. Potentially suitable habitat (woodlands) for these bat species was identified within the March 2021 – Addendum Project Survey Corridor. As the northern long-eared bat and Indiana bat were previously listed and included as an avoidance measure within the March 2021 - Report, no additional recommendations and/or avoidance measures would likely be required. *As the little brown bat and the tricolored bat were not previously identified, Table 5 within this addendum report provides additional information regarding potential agency response and/or avoidance recommendations.* The completed IPaC report and ODNR June 2020 guidance are provided in Appendix D.

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 scatted 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. AECOM completed a field assessment within the Project area on May 26, 2020 for potential habitat for the Lark Sparrow. Prior to conducting the field assessment component of the habitat assessment, AECOM conducted a desktop review. The information reviewed included the ODNR coordination information regarding the Lark Sparrow and its habitats within the vicinity of the Project area and a literature review to identify if the species may be present based on range, habitat needs, and natural history. AECOM also completed a desktop analysis of habitat using Google Earth aerial photography, National Land Cover Classification data, eBird database, and the proposed limits of disturbance for the Project. Based on the desktop review, target areas of habitat were identified for detailed assessment in the field. While the entire Project area was visited, the areas identified as potential habitat during the desktop review were given greater concentration. These areas were used to identify if areas of suitable habitat were available that could be used by the Lark Sparrow. Where applicable, the adjacent habitats were considered when evaluating potential habitat. No habitat was identified within or adjacent to the Project area for the Lark Sparrow. The Project area consists of primarily agricultural fields with a mix of forested and urban areas. Due to the absence of potentially suitable nesting habitat for the lark sparrow, presence/absence surveys for this species in the Project area are not likely warranted. The Habitat Assessment for Lark Sparrow report is provided under separate cover. AEP Ohio Transco will coordinate the Lark sparrow field assessment results with ODNR for confirmation of absence of habitat in the Project area.

Furthermore, the initial review and response from the USFWS and ODNR was associated with the entire extent of the existing corridor associated with the Project area as described in the March 2021 - Report. As the areas included within this addendum are located within the Project area submitted to the agencies, the previous agency correspondence and recommendations are considered valid for these additional areas.

[1] *Ohio Division of Wildlife Guidance for Bat Surveys and Tree Clearing June 2020.*

TABLE 5
ADDITIONAL ODNR LISTED SPECIES WITHIN THE WEST MOULTON-GEMINI 138 KV TRANSMISSION LINE PROJECT SURVEY CORRIDOR AND MARCH 2021 – ADDENDUM PROJECT SURVEY CORRIDOR

Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat Description	Habitat Observed	Agency Comments	Potential Impacts and Avoidance Dates
Mammals						
Little brown bat (*Myotis lucifugus*)	Endangered	NA	The little brown bat shares similar habitat requirements as other Myotis species including the Indiana bat and northern long-eared bat. This species may roost in trees, attics, or other man-made structures during the summer season. In winter, they may hibernate in caves, mines, or man-made structures with appropriate temperature regimes.	Yes-Within the Project Survey Corridors, several wooded areas were identified which appears to be potentially suitable habitat. Additionally, during the field survey, no caves or mines were identified in the Project area.	No comments regarding this species were received from the ODNR	No comments regarding this species were received from the ODNR. Based on recent comments from ODNR for another project, ODNR may recommend seasonal tree clearing to be completed between October 1 and March 31 to avoid adverse impacts to this species. ODNR may also recommend that a desktop habitat assessment, followed by a field assessment (if needed), be conducted to determine if there are potential hibernaculum(a) present within the project area. According the ODNR Division of Mineral Resources data, no mines or caves are mapped in the Project area.
Tricolored bat (*Perimyotis subflavus*)	Endangered	NA	The tricolored bat primarily roosts in trees during the summer months. During winter, this species hibernates in humid mines, caves, and occasionally man-made structures.	Yes-Within the Project Survey Corridors, several wooded areas were identified which appears to be potentially suitable habitat. During the field survey, no caves or mines were identified in the Project area	No comments regarding this species were received from the ODNR.	No comments regarding this species were received from the ODNR. Based on recent comments from ODNR for another project, ODNR may recommend seasonal tree clearing to be completed between October 1 and March 31 to avoid adverse impacts to this species. ODNR may also recommend that a desktop habitat assessment, followed by a field assessment (if needed), be conducted to determine if there are potential hibernaculum(a) present within the project area. According the ODNR Division of Mineral Resources data, no mines or caves are mapped in the Project area.

TABLE 5
ADDITIONAL ODNR LISTED SPECIES WITHIN THE WEST MOULTON-GEMINI 138 KV TRANSMISSION LINE PROJECT SURVEY CORRIDOR AND MARCH 2021 – ADDENDUM PROJECT SURVEY CORRIDOR

Common Name (Scientific Name)	State Listed Status	Federal Listed Status	Typical Habitat Description	Habitat Observed	Agency Comments	Potential Impacts and Avoidance Dates
Lark Sparrow (*Chondestes grammacus*)	Endangered	None	This species 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.	No	AECOM completed field assessment within the Project area on May 26, 2020 for potential habitat for the Lark Sparrow. No habitat was identified within or adjacent to the Project area for the Lark Sparrow. The Project area consists of primarily agricultural fields with a mix of forested and urban areas	ODNR-DOW stated that the project is within the range of the lark sparrow and 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.

4.0 SUMMARY

The March 2021 – Addendum Project Survey Corridor includes the wetland delineation and stream assessment results of a re-route of a 2.1-mile portion of the Project between US Route 33 and Canning Factory Road, as well as the addition of two access roads (totaling approximately 0.28 miles) in Auglaize County, Ohio (Figure 1). Identified wetlands and streams within the original wetland delineation and stream assessment report, *West Moulton-Gemini 138 kV Transmission Line Project – Wetland Delineation and Stream Assessment Report - March 2021*, are included within this addendum Tables 1-3. All other previous identified features, data forms, photographs, and supporting information from this previous survey is provided within the March 2021 – Report. As a result of the additional delineation, one previously delineated wetland (Wetland 06) and one previously identified stream (Stream 01) were extended, and one new wetland (Wetland 15) was delineated within the March 2021 – Addendum Project Survey Corridor. . No new ponds were identified within the March 2021 – Addendum Project Survey Corridor.

AECOM has preliminarily determined that the assessed perennial stream within the March 2021 – Addendum Project Survey Corridor appears to be jurisdictional (i.e., WOTUS.), based on the 2020 Navigable Waters Rule. Wetland 15 has been provisionally as “isolated” and not a WOTUS. Final jurisdictional status of the identified waterbodies can only be determined by the USACE.

The March 2021 – Addendum Project Survey Corridor presents potentially suitable habitat for the Indiana bat and the northern long-eared bat, as well as the Lark Sparrow. As the northern long-eared bat and Indiana bat were previously listed by ODNR/USFWS and included as an avoidance measure within the March 2021 - Report, no additional recommendations and/or avoidance measures would likely be required. AECOM completed an additional review to identify if new species were added to the federal and/or state list by completing an IPaC report and reviewing state-listed species on the ODNR website. Potentially suitable habitat for two species, the little brown bat and the tri-colored bat, were identified within the March 2021 – Addendum Project Survey Corridor. Although no comments regarding these two bat species were received from the ODNR, recent comments from ODNR for another project suggest that ODNR may recommend seasonal tree clearing to be completed between October 1 and March 31 to avoid adverse impacts to these species. ODNR may also recommend that a desktop habitat assessment, followed by a field assessment (if needed), be conducted to determine if there are potential hibernaculum(a) present within the project area. According the ODNR Division of Mineral Resources data, no mines or caves are mapped in the Project area. No mines or caves were identified in the Project area during the field survey.

Habitat assessment data was collected on May 26, 2020 by AECOM senior ecologist Jeff Brown. No potential Lark Sparrow nesting habitat was identified within the Project area. As such, based on the habitat assessment completed, disturbances to nesting Lark Sparrows or their potential habitat are not anticipated to occur. Therefore, due to the absence of potentially suitable nesting habitat for the Lark Sparrow, it is our

opinion that seasonal construction restrictions are not necessary for construction to occur within the proposed right of way. Furthermore, presence/absence surveys for the Lark Sparrow in the Project area are not warranted. The results of this habitat assessment is documented under separate cover in The Habitat Assessment for Lark Sparrow report, which AEP Ohio Transco will provide to ODNR for confirmation of absence of habitat in the Project area.

The reported results of the ecological survey conducted by AECOM on this Project are limited to the areas within the Project survey boundary provided in Figure 3: Wetland Delineation and Stream Assessment Map. Areas that fall outside of the Project survey 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.

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.

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.

OEPA, 2012. *Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams*. Version 3.0. Ohio EPA Division of Surface Water, Columbus, Ohio. 117 pp.

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

U.S. Army Corps of Engineers. 2018. *National Wetland Plant List*, version 3.3. Engineer Research and Development Center. Cold Regions Research and Engineering Laboratory, Hanover, NH. http://wetland_plants.usace.army.mil/

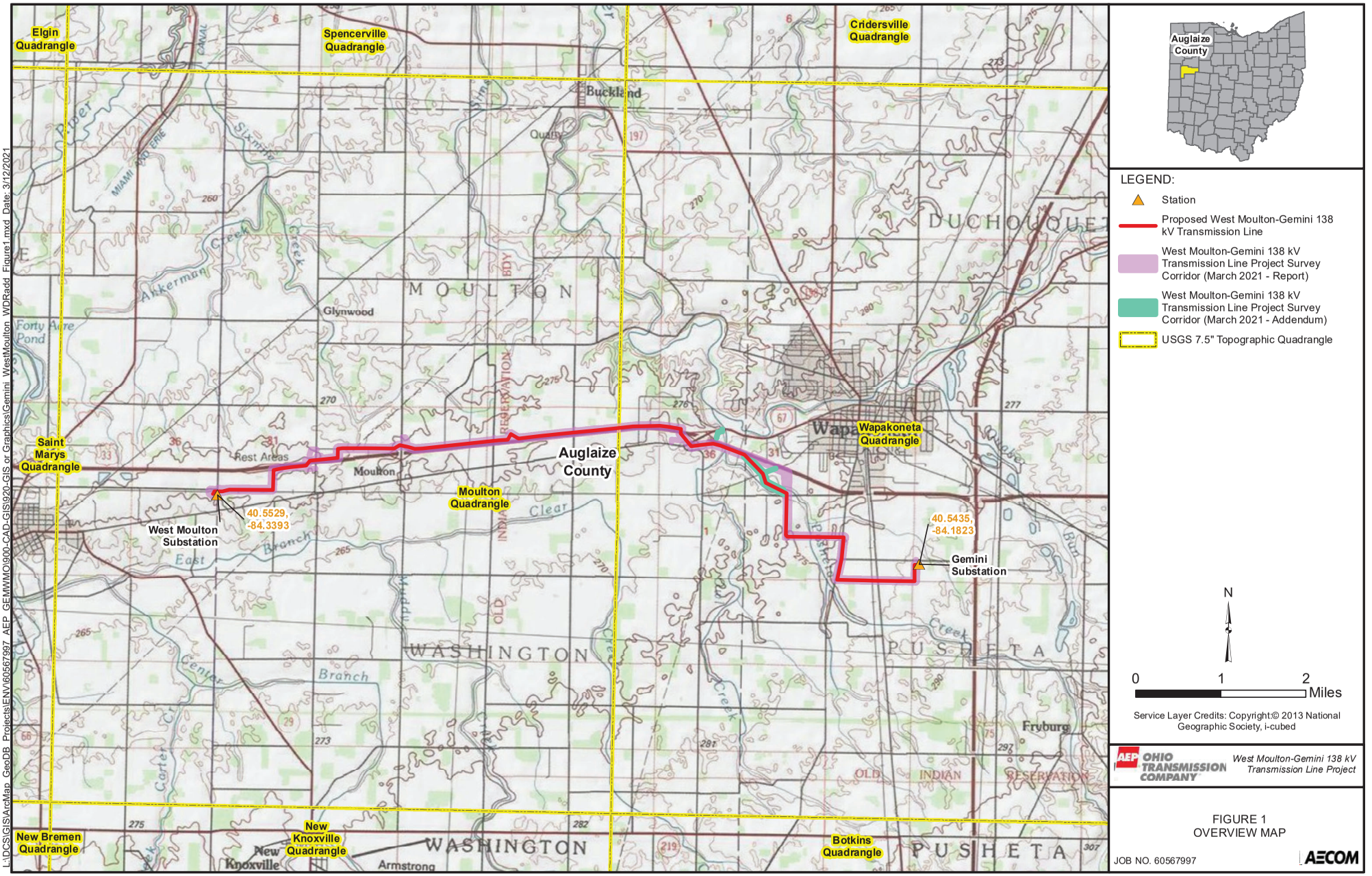
U.S. Department of Agriculture, Natural Resources Conservation Service. 2020. National Hydric Soils List. http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/. Accessed April 13, 2020.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2020. National Weather Service-Wetland Climate Evaluation Database (WETS Table). http://agacis.rcc-acis.org/. Accessed April 13, 2020.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2020. Web Soil Survey (GIS Shapefile). http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed April 13, 2020.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2020. Soil Survey Geographic (SSURGO) Database. Available online at: https://catalog.data.gov/dataset/soil-survey-geographic-ssurgo-database-for-various-soil-survey-areas-in-the-united-. Accessed April 13, 2020.

U.S. Fish and Wildlife Service. 2018. National Wetlands Inventory Classification De-coder. Available online at https://fwsmapservices.wim.usgs.gov/decoders/SWI.aspx. Accessed April 13, 2020.



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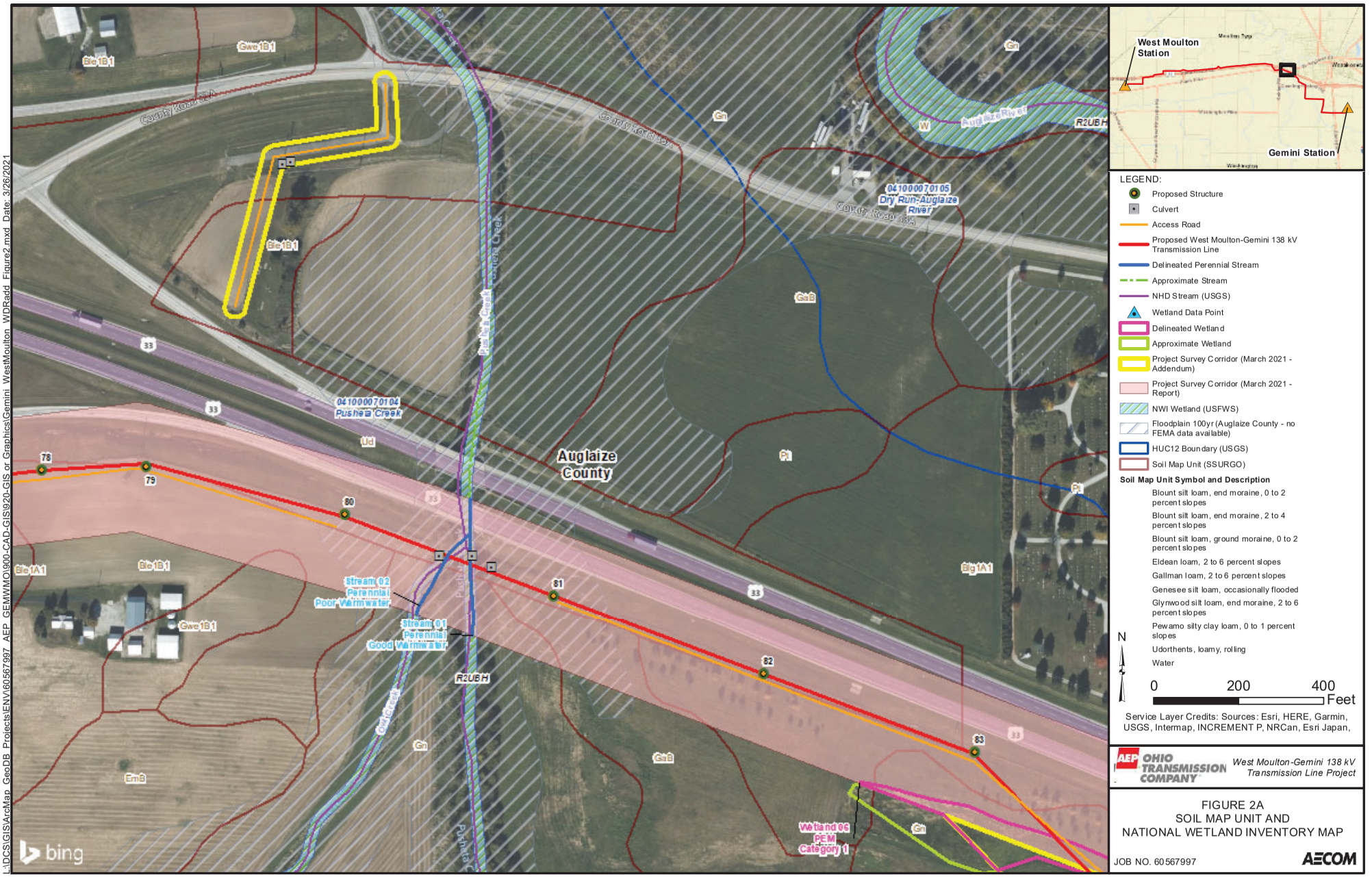
AEP OHIO TRANSMISSION COMPANY

West Moulton-Gemini 138 kV Transmission Line Project

FIGURE 1
OVERVIEW MAP

JOB NO. 60567997

AECOM



OHIO TRANSMISSION COMPANY

West Moulton-Gemini 138 kV Transmission Line Project

FIGURE 2A
SOIL MAP UNIT AND
NATIONAL WETLAND INVENTORY MAP

JOB NO. 60567997

AECOM

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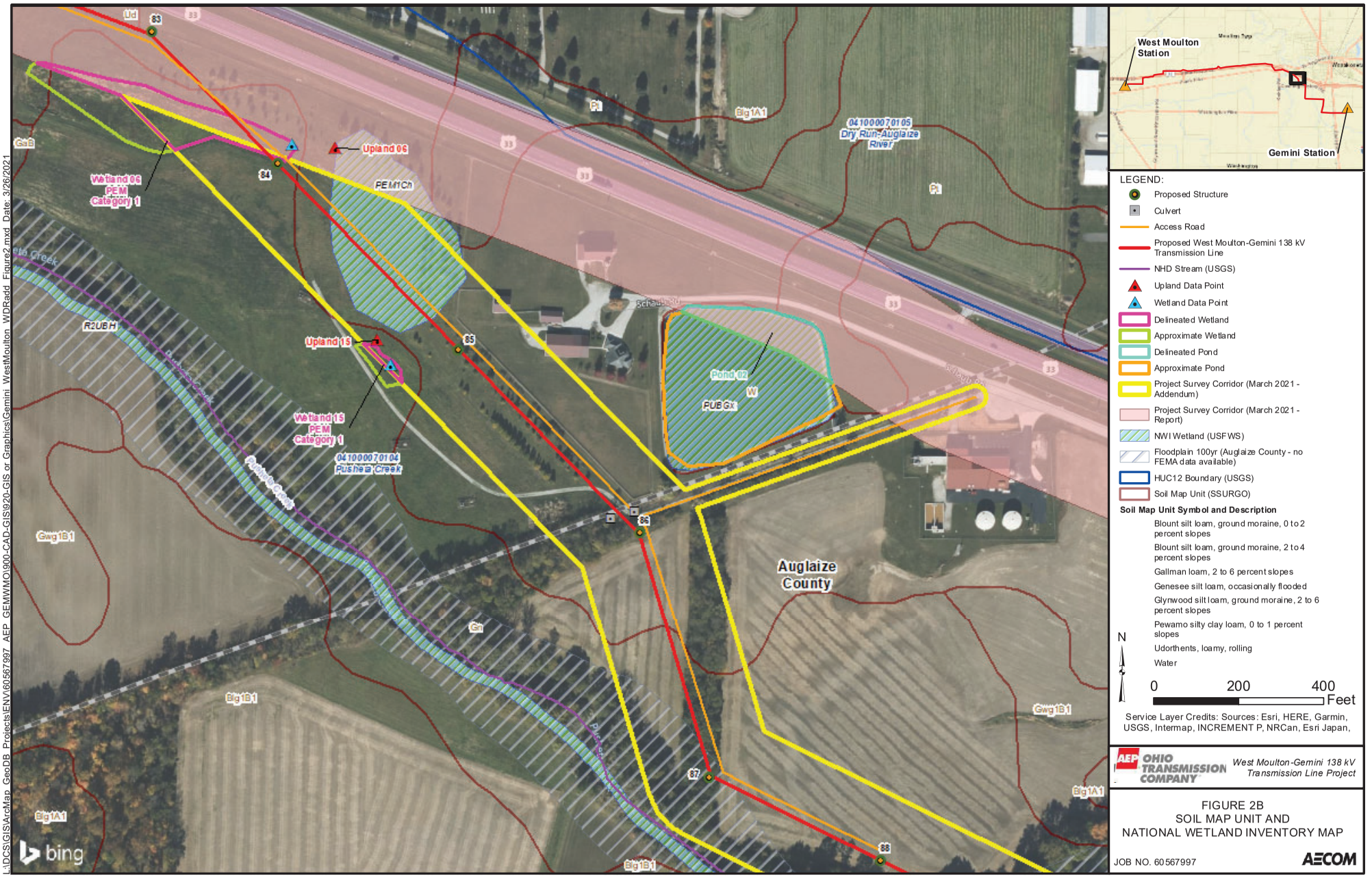

OHIO TRANSMISSION COMPANY

West Moulton-Gemini 138 kV Transmission Line Project

FIGURE 2B
SOIL MAP UNIT AND
NATIONAL WETLAND INVENTORY MAP

JOB NO. 60567997

AECOM

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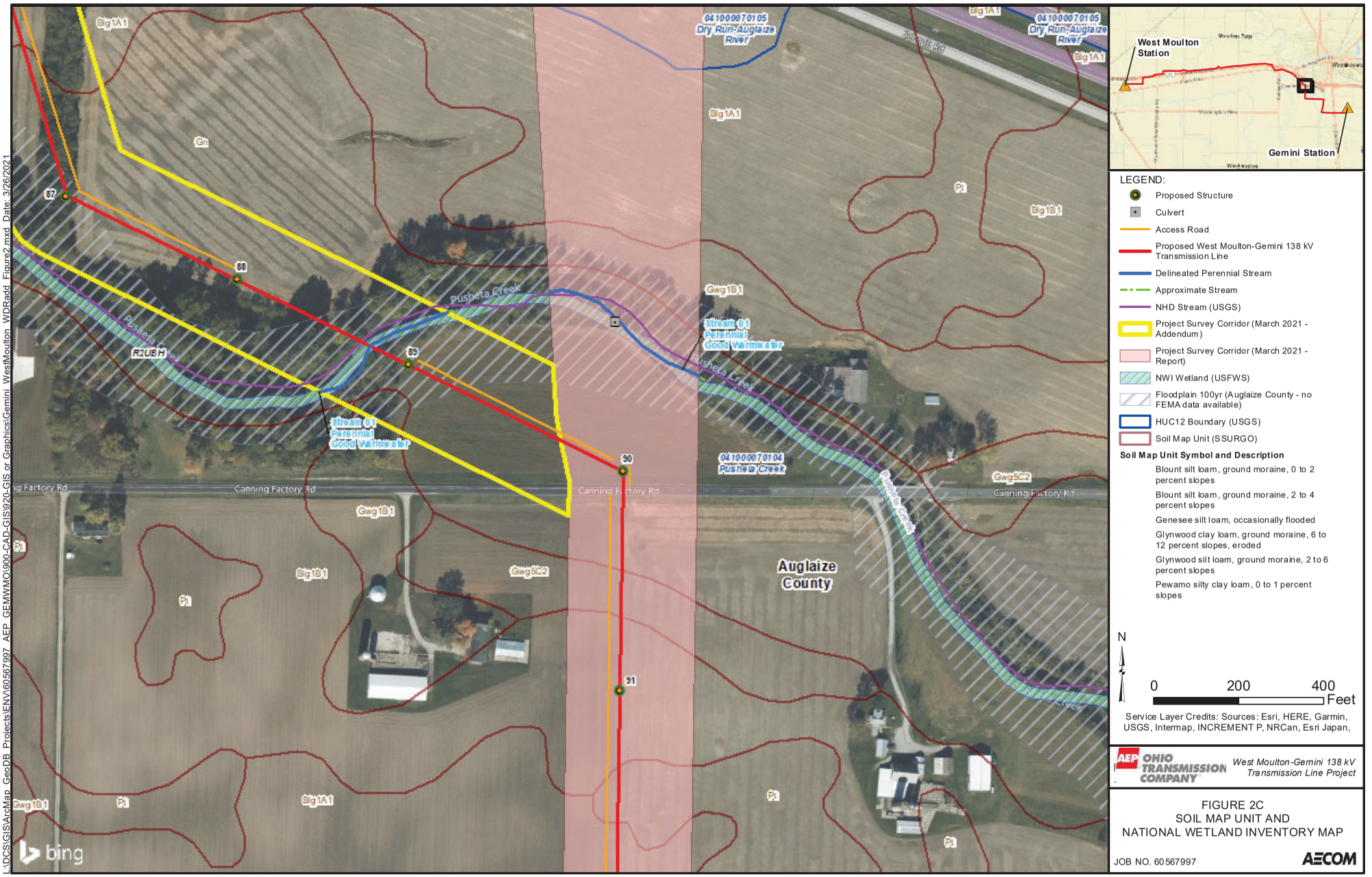

LEGEND:

- Proposed Structure
- Culvert
- Access Road
- Proposed West Moulton-Gemini 138 kV Transmission Line
- Delineated Perennial Stream
- Approximate Stream
- NHD Stream (USGS)
- Project Survey Corridor (March 2021 - Addendum)
- Project Survey Corridor (March 2021 - Report)
- NWI Wetland (USFWS)
- Floodplain 100yr (Auglaize County - no FEMA data available)
- HUC12 Boundary (USGS)
- Soil Map Unit (SSURGO)

Soil Map Unit Symbol and Description

- Blount silt loam, ground moraine, 0 to 2 percent slopes
- Blount silt loam, ground moraine, 2 to 4 percent slopes
- Genesee silt loam, occasionally flooded
- Glynwood clay loam, ground moraine, 6 to 12 percent slopes, eroded
- Glynwood silt loam, ground moraine, 2 to 6 percent slopes
- Pewamo silty clay loam, 0 to 1 percent slopes

N

0 200 400 Feet

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan,

AEP OHIO TRANSMISSION COMPANY

West Moulton-Gemini 138 kV Transmission Line Project

FIGURE 2C
SOIL MAP UNIT AND
NATIONAL WETLAND INVENTORY MAP

JOB NO. 60567997

AECOM

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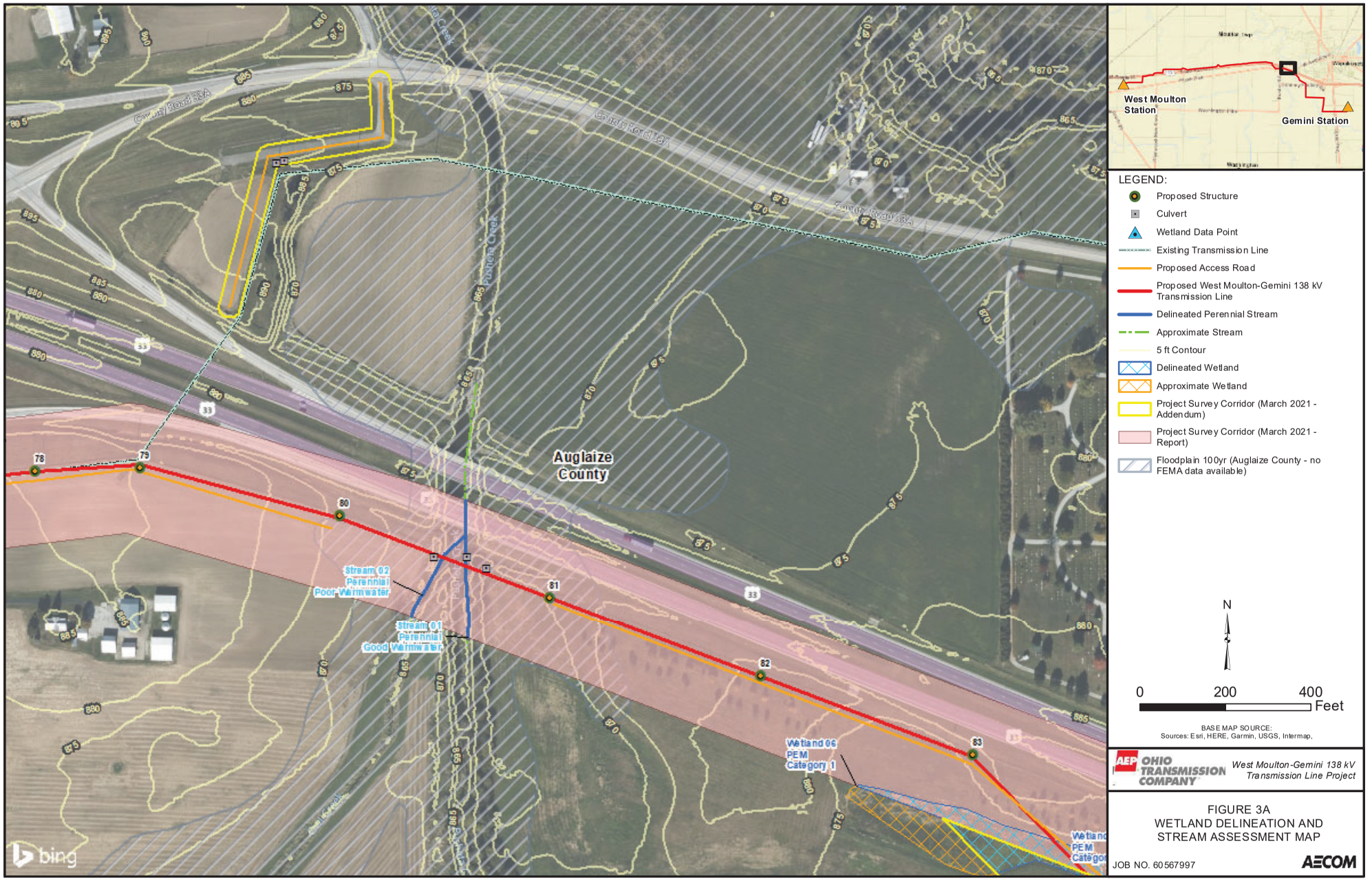

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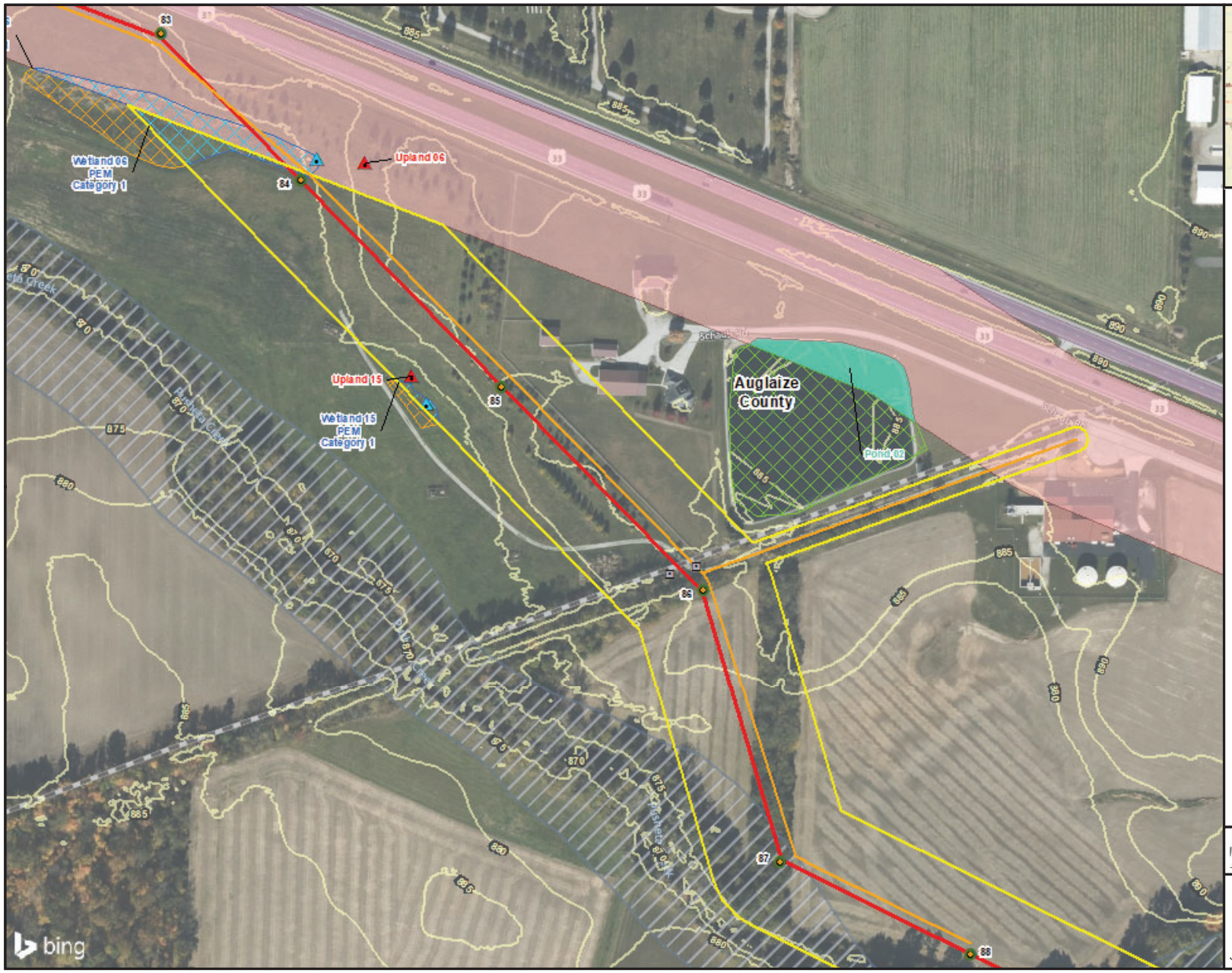

LEGEND:

- Proposed Structure
- Culvert
- Upland Data Point
- Wetland Data Point
- Proposed Access Road
- Proposed West Moulton-Gemini 138 kV Transmission Line
- 5 ft Contour
- Delineated Wetland
- Approximate Wetland
- Delineated Pond
- Approximate Pond
- Project Survey Corridor (March 2021 - Addendum)
- Project Survey Corridor (March 2021 - Report)
- Floodplain 100yr (Auglaize County - no FEMA data available)

N

0 200 400 Feet

BASE MAP SOURCE:
Sources: Esri, HERE, Garmin, USGS, Intermap,

AEP OHIO TRANSMISSION COMPANY

West Moulton-Gemini 138 kV Transmission Line Project

FIGURE 3B
WETLAND DELINEATION AND
STREAM ASSESSMENT MAP

JOB NO. 60567997

AECOM

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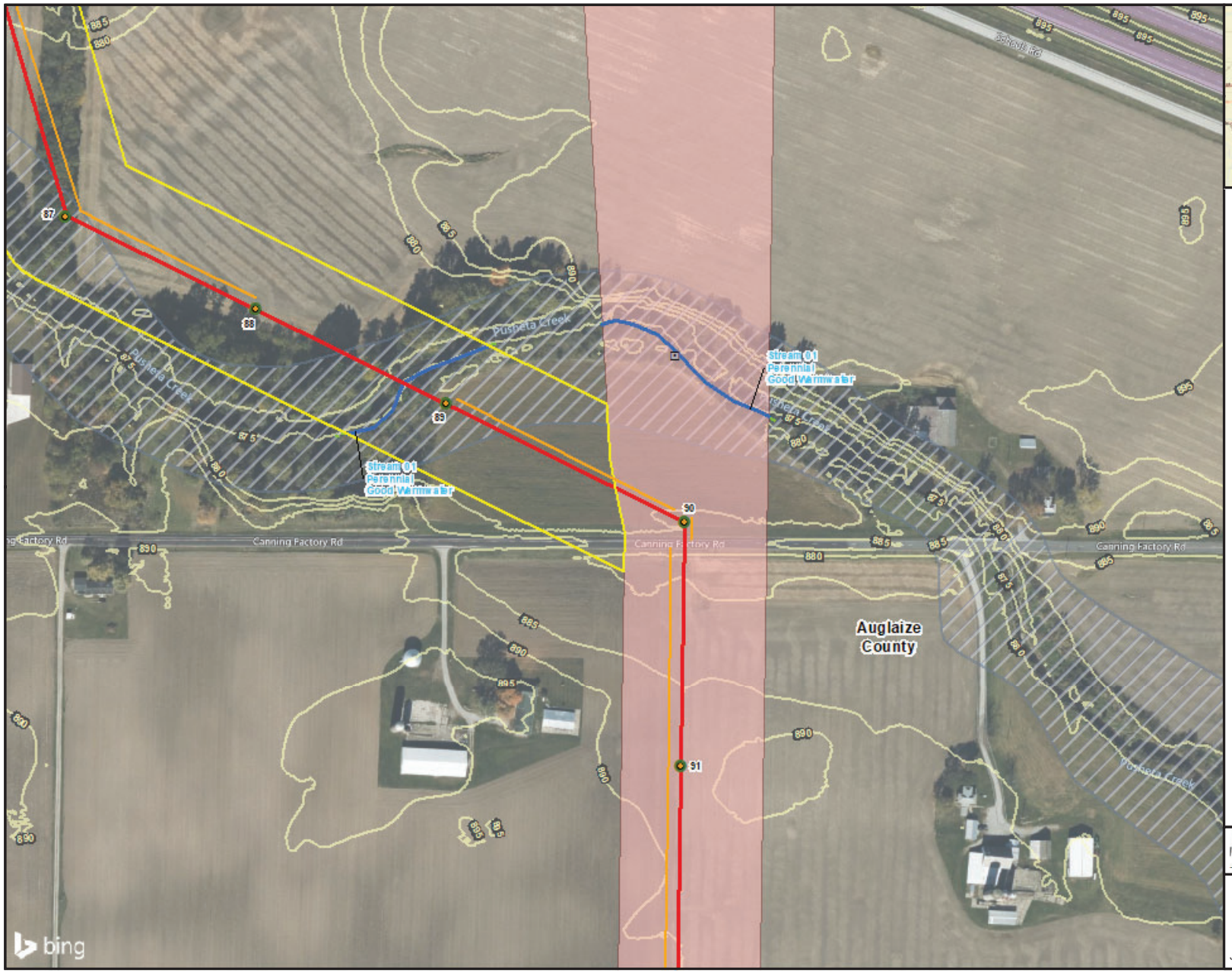

LEGEND:

- Proposed Structure
- Culvert
- Proposed Access Road
- Proposed West Moulton-Gemini 138 kV Transmission Line
- Delineated Perennial Stream
- Approximate Stream
- 5 ft Contour
- Project Survey Corridor (March 2021 - Addendum)
- Project Survey Corridor (March 2021 - Report)
- Floodplain 100yr (Auglaize County - no FEMA data available)

N

0 200 400 Feet

BASE MAP SOURCE:
Sources: Esri, HERE, Garmin, USGS, Intermap,

AEP OHIO TRANSMISSION COMPANY

West Moulton-Gemini 138 kV Transmission Line Project

FIGURE 3C
WETLAND DELINEATION AND STREAM ASSESSMENT MAP

JOB NO. 60567997

AECOM

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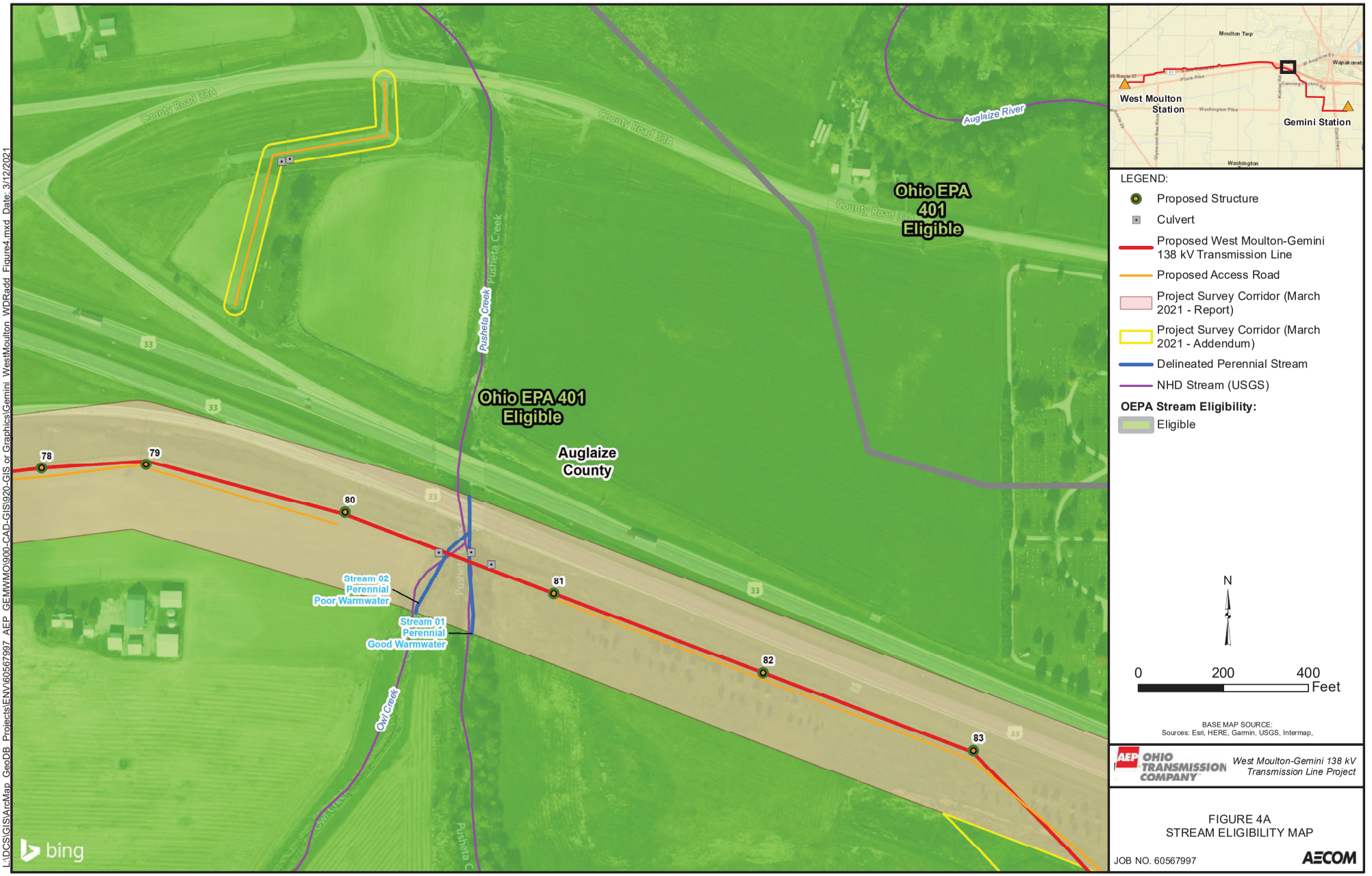

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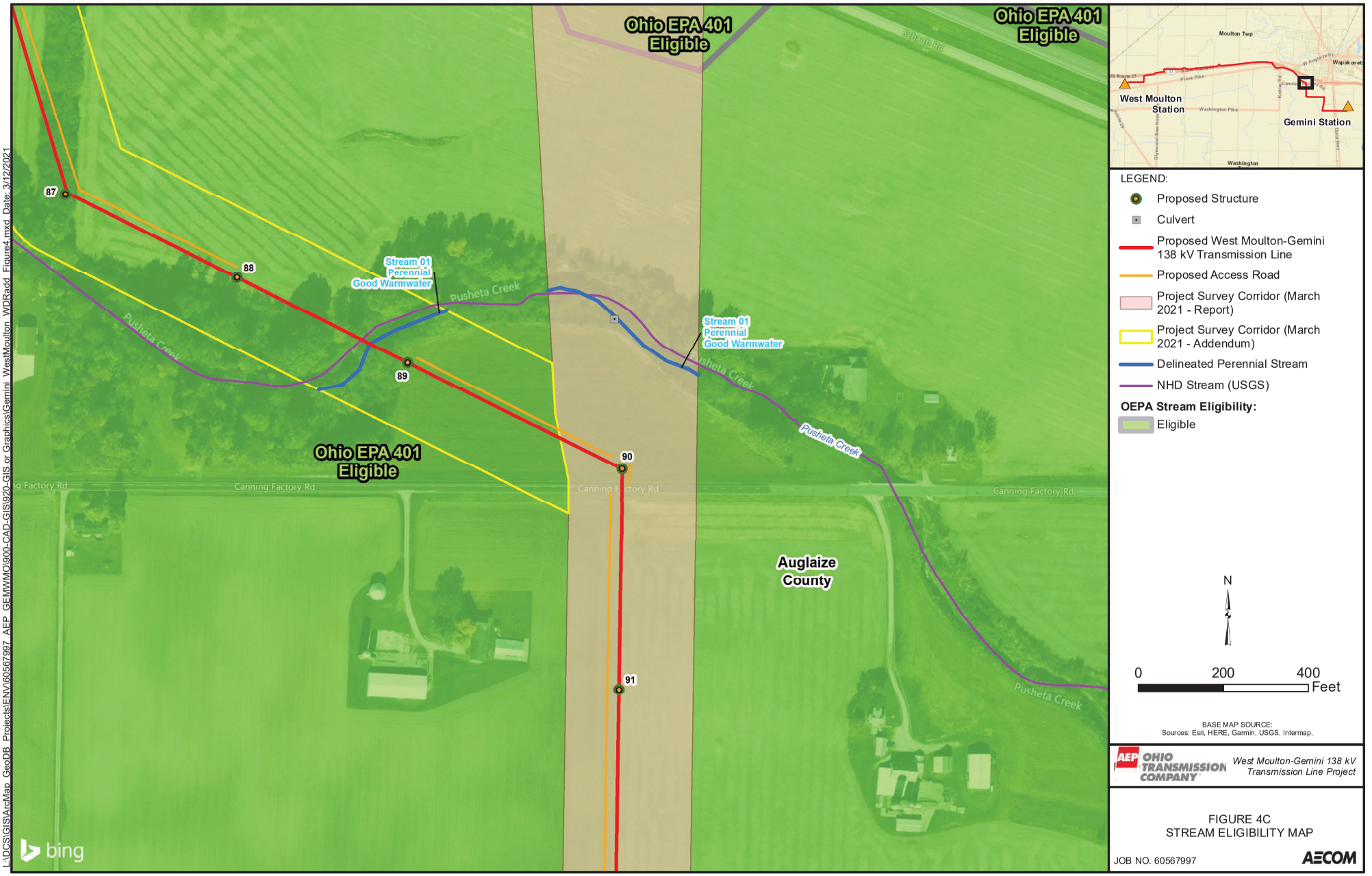

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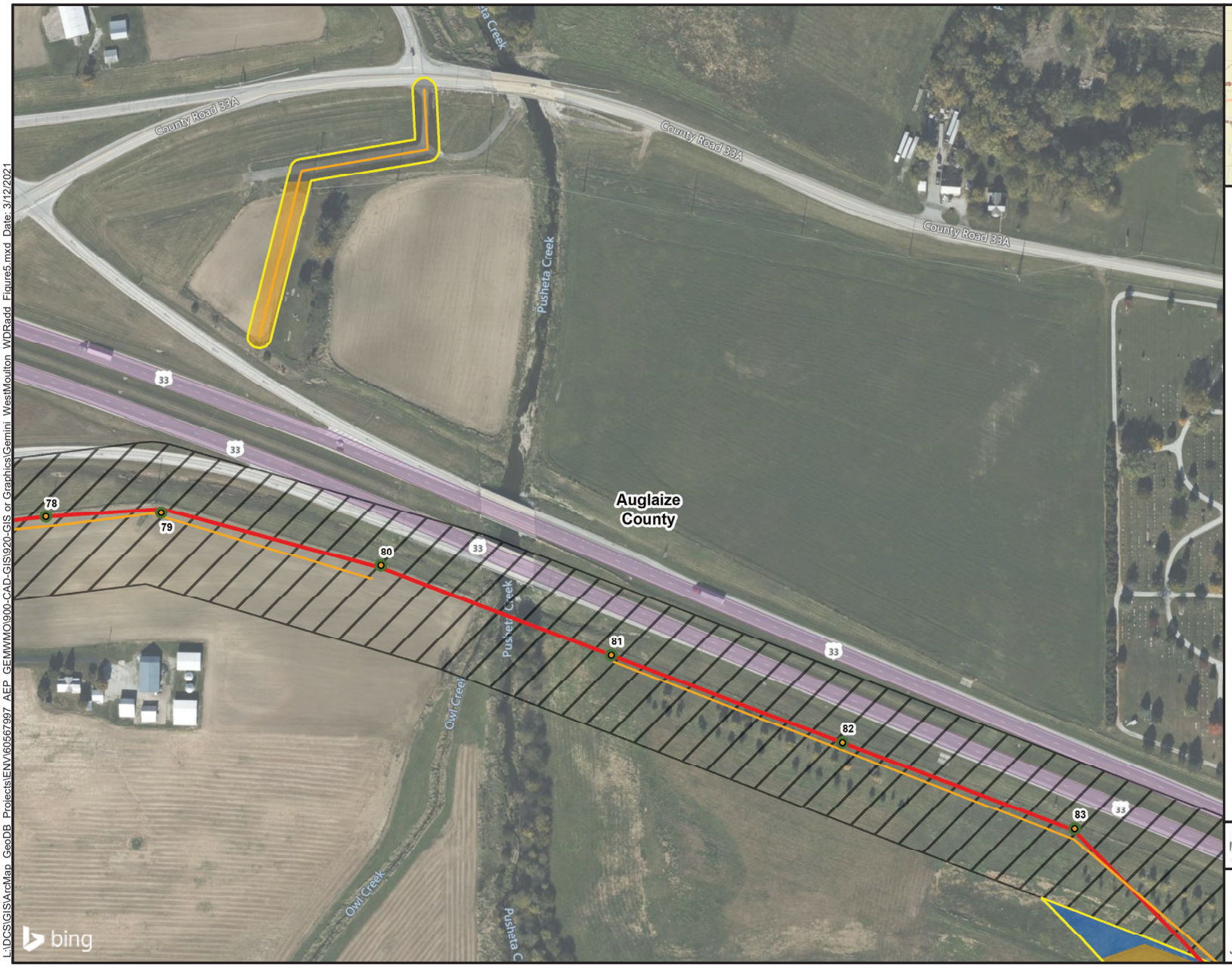

LEGEND:

- Proposed Structure
- Proposed Access Road
- Proposed West Moulton-Gemini 138 kV Transmission Line
- Proposed Access Road
- Project Survey Corridor (March 2021 - Addendum)
- Project Survey Corridor (March 2021 - Report)

Vegetation Communities

- Agricultural Land
- Stream/Wetland
- Urban

N

0 200 400 Feet

BASE MAP SOURCE:
Sources: Esri, HERE, Garmin, USGS, Intermap,

AEP OHIO TRANSMISSION COMPANY

West Moulton-Gemini 138 kV Transmission Line Project

FIGURE 5A
VEGETATIVE COMMUNITIES MAP

JOB NO. 60567997

AECOM

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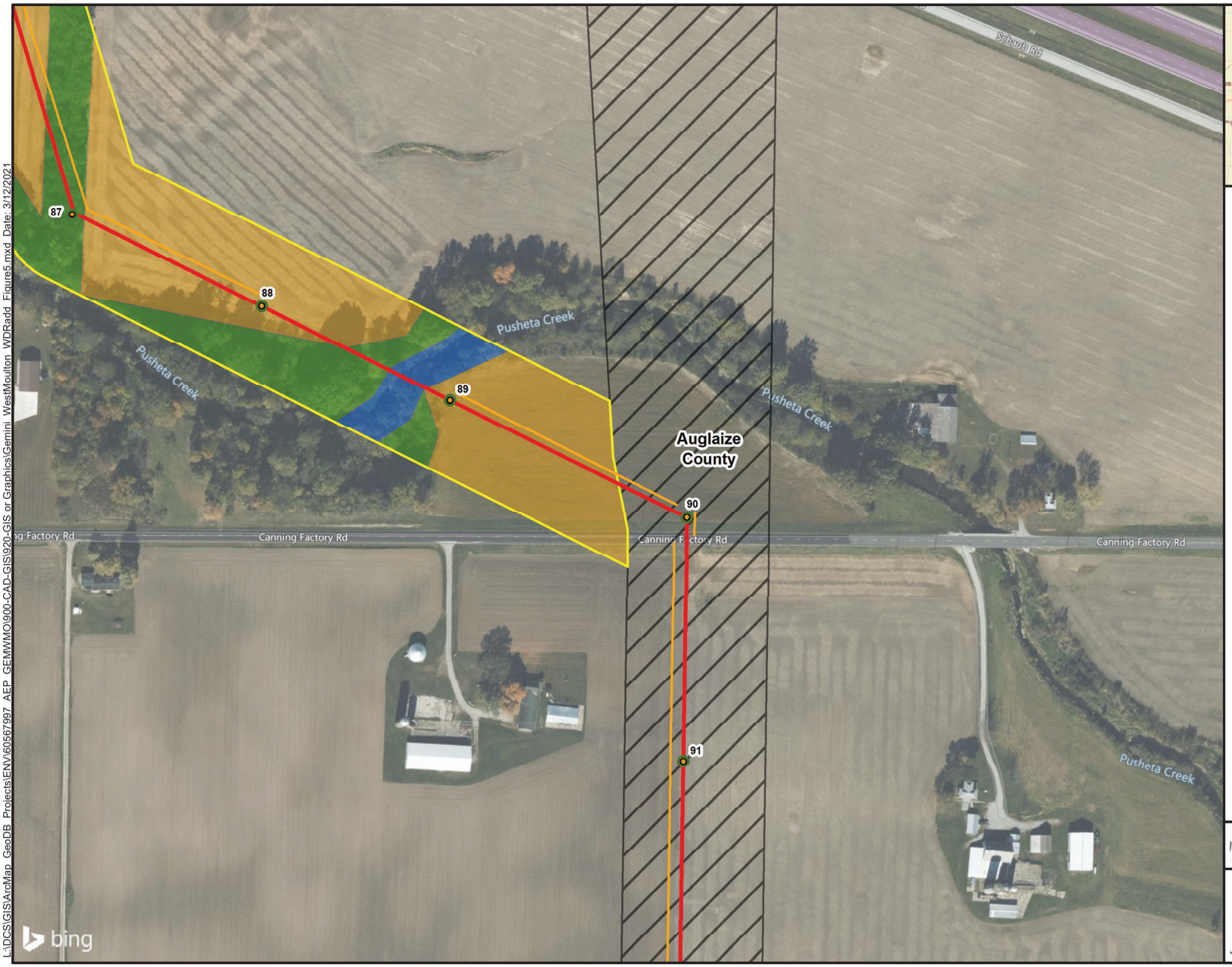

LEGEND:

- Proposed Structure
- Proposed Access Road
- Proposed West Moulton-Gemini 138 kV Transmission Line
- Proposed Access Road
- Project Survey Corridor (March 2021 - Addendum)
- Project Survey Corridor (March 2021 - Report)

Vegetation Communities

- Agricultural Land
- Stream/Wetland
- Mixed Mesophytic Forest

N

0 200 400 Feet

BASE MAP SOURCE:
Sources: Esri, HERE, Garmin, USGS, Intermap,

AEP OHIO TRANSMISSION COMPANY

West Moulton-Gemini 138 kV Transmission Line Project

FIGURE 5C
VEGETATIVE COMMUNITIES MAP

JOB NO. 60567997

AECOM

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APPENDIX A

USACE WETLAND DELINEATION FORMS

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Gemini-West Moulton 138 kV T-Line Project | City/County: Auglaize County | Sampling Date: 03/24/2020

Applicant/Owner: AEP | State: OH | Sampling Point: w-jbl-20200324-01

Investigator(s): JBL, AEH | Section, Township, Range: S31, T5S, R6E

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

Slope (%): 0 | Lat: 40.560896388 | Long: -84.220606124 | Datum: NAD 83

Soil Map Unit Name: Genesee silt loam, occasionally flooded (Ge) | NWI classification: N/A

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

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

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

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

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

Remarks:
Sample point w-jbl-20200324-01. Wetland located along a lowland field southwest of US-33. Wetland boundary is defined by the geomorphic position of the landscape and dominance of Phalaris arundinacea.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	60	Yes	FACW
2. *Setaria pumila*	15	No	FAC
3. *Typha angustifolia*	5	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	80 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	____ =Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	60	x 2 =	120
FAC species	15	x 3 =	45
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	80 (A)		170 (B)

Prevalence Index = B/A = 2.13

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Vegetation is frequently disturbed by mowing. Photographs of wetland habitat are located in Appendix D.

SOIL

Sampling Point: bl-20200324-

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 4/1	85	10YR 5/6	15	C	PL	Loamy/Clayey	Prominent redox concentrations
7-18	10YR 3/1	90	10YR 5/4	10	C	PL	Loamy/Clayey	Distinct redox concentrations
								10% gravel throughout

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

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ? Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

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

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes	X	No		Depth (inches): 0.24
Water Table Present?	Yes		No	X	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes	X	No		Depth (inches): 10

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

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

Remarks:

Wetland receives water from precipitation.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Gemini-West Moulton 138 kV T-Line Project City/County: Auglaize County Sampling Date: 03/24/2020

Applicant/Owner: AEP State: OH Sampling Point: upl-jbl-20200324-01

Investigator(s): JBL, AEH Section, Township, Range: S31, T5S, R6E

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

Slope (%): 5 Lat: 40.56086778 Long: -84.22023791 Datum: NAD 83

Soil Map Unit Name: Blount silt loam, ground moraine, 0 to 2 percent slopes (Blg1B1) NWI classification:

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

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

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

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

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

Remarks:
Sample point upl-jbl-20200324-01. Upland point for w-jbl-20200324-01 located in a field east of the wetland and southwest of US-33.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Pinus strobus*	35	Yes	FACU
2.			
3.			
4.			
5.			
	35	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Setaria pumila*	45	Yes	FAC
2. *Schedonorus arundinaceus*	40	Yes	FACU
3. *Daucus carota*	3	No	UPL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	88	=Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
		=Total Cover	

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	45	x 3 =	135
FACU species	75	x 4 =	300
UPL species	3	x 5 =	15
Column Totals:	123 (A)		450 (B)

Prevalence Index = B/A = 3.66

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Upland species are dominant.

SOIL

Sampling Point: -jbl-20200324

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					Loamy/Clayey	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ___ Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

No hydric soils.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

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

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

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

Remarks:

No wetland hydrology.

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Gemini West Moulton 138 kV T-Line Project | City/County: Auglaize County | Sampling Date: 03/03/2021

Applicant/Owner: AEP | State: OH | Sampling Point: w-jbl-20210303-01

Investigator(s): JBL | Section, Township, Range: S31, T5S, R6E

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

Slope (%): 1 | Lat: 40.55948 | Long: -84.21974 | Datum: NAD 83

Soil Map Unit Name: Genesee silt loam, occasionally flooded (Gn) | NWI classification: N/A

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

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:
Sample point w-jbl-20210303-01. PEM wetland located at base of hill. Wetland domniated by phalaris. Boundary of the wetland is defined by geomorphic position and dominance of hydrophytic veg. wetland extends offsite to the south, potentially isolated.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *N/A*			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	100	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
	100 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *N/A*			
2.			
	=Total Cover		

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
Hydrophytic vegetation indicator present as Dominance Test > 50% and Prevalence Index < 3.0.

SOIL

Sampling Point: bl-20210303-

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR 3/2	100					Loamy/Clayey	
2-17	10YR 4/2	95	10YR 3/4	5	C	PL/M	Loamy/Clayey	Distinct redox concentrations

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

- ? Coast Prairie Redox (A16)
- ___ Iron-Manganese Masses (F12)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

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

Remarks:

This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)

Hydric soil indicators present as high chroma/low value depleted matrix and depleted matrix below surface layer of low chroma/low value.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present?	Yes ___	No x	Depth (inches): ___
Water Table Present?	Yes X	No ___	Depth (inches): 6
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 3

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

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

Remarks:

Multiple primary and secondary hydrology indictors present; wetland receives water from precipitation and surrounding runoff. Wetland appears to be separated from downslope Pusheta Creek by upland old field and gravel drive, potentially isolated.

UPLAND 15

WETLAND DETERMINATION DATA FORM – Midwest Region

Project/Site: Gemini West Moulton 138 kV T-Line Project City/County: Auglaize County Sampling Date: 03/03/2021

Applicant/Owner: AEP State: OH Sampling Point: upl-jbl-20210303-01

Investigator(s): JBL Section, Township, Range: S31, T5S, R6E

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

Slope (%): 5 Lat: 40.55964 Long: -84.21986 Datum: NAD 83

Soil Map Unit Name: Genesee silt loam, occasionally flooded (Gn) NWI classification: N/A

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

Are Vegetation____, Soil____, or Hydrology____ significantly disturbed? Are "Normal Circumstances" present? Yes x No ____

Are Vegetation____, Soil____, or Hydrology____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:
Sample point out upl-jbl-20210303-01 for adjacent wetland w-jbl-20210303-01. Taken on hillside north of the PEM wetland area. Not a wetland as no wetland criteria met.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *N/A*			
2.			
3.			
4.			
5.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. *N/A*			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	55	Yes	FACW
2. *Sorghastrum nutans*	20	Yes	FACU
3. *Dipsacus fullonum*	15	No	FACU
4. *Daucus carota*	15	No	UPL
5. *Symphyotrichum ericoides*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
	110 =Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. *N/A*			
2.			
	=Total Cover		

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	55	x 2 =	110
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	15	x 5 =	75
Column Totals:	110 (A)		345 (B)

Prevalence Index = B/A = 3.14

Hydrophytic Vegetation Indicators:

____ 1 - Rapid Test for Hydrophytic Vegetation

____ 2 - Dominance Test is >50%

____ 3 - Prevalence Index is ≤3.0[1]

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

____ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks: (Include photo numbers here or on a separate sheet.)
No hydrophytic vegetation indicators present, dominant species are FACW and FACU.

SOIL

Sampling Point: jbl-20210303

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

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100					Loamy/Clayey	
10-16	10YR 3/3	100					Loamy/Clayey	

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

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils[3]:

___ Coast Prairie Redox (A16)
___ Iron-Manganese Masses (F12)
___ Red Parent Material (F21)
___ Very Shallow Dark Surface (F22)
___ Other (Explain in Remarks)

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

Restrictive Layer (if observed):

Type: _____
Depth (inches): _____

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

Remarks:
This data form is revised from Midwest Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils in the United States, Version 8.2, 2018. (https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_053171.pdf)
No hydric soil indicators present, low chroma/low value matrix without required redox features.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (minimum of two required)

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

Field Observations:

Surface Water Present? Yes ____ No x Depth (inches): ____
Water Table Present? Yes ____ No x Depth (inches): ____
Saturation Present? Yes x No ____ Depth (inches): 16
(includes capillary fringe)

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

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

Remarks:
No hydrology indicators present.

APPENDIX B

ORAM FORMS

Wetland 06

Site: Gemini West Moulton 138 kV T-Line Projec	Rater(s): Audrey Hanner and Jake Lubbers	Date: 3/24/2020

Field Id: **w-jbl-200324-01**

Metric 1. Wetland Area (size).

2 (subtotal) / 2 (max 6 pts)

Select one size class and assign score.

0.77 acres

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

Metric 2. Upland buffers and surrounding land use.

7 (subtotal) / 9 (max 14 pts.)

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

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

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

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

Metric 3. Hydrology.

9.0 (subtotal) / 18.0 (max 30 pts.)

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select one.

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

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

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

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

10 (subtotal) / 28 (max 20 pts.)

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

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

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

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

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

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

Check all disturbances observed

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

28 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland 06

Site: Gemini West Moulton 138 kV T-Lin	Rater(s): Audrey Hanner and Jake Lubbers	Date: 3/24/2020

Field Id:
w-jbl-200324-01

28
subtotal this page

0 | 28 | **Metric 5. Special Wetlands.**

max 10 pts. | subtotal

Check all that apply and score as indicated.

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

1 | 29 | **Metric 6. Plant communities, interspersion, microtopography.**

max 20pts. | subtotal

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

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

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

Category 1

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

Wetland ID:	Wetland 15

Site:	Gemini West Moulton 138 kV T-Line P	Rater(s):	Jake Lubbers	Date:	3/3/2021

Field ID:

W-jbl-20210303-01

Delineated acres:	0.04
Total acres:	0.12

Metric 1. Wetland Area (size).

2.0 | 2.0 (max 6 pts | subtotal)

Select one size class and assign score.

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

Metric 2. Upland buffers and surrounding land use.

8.0 | 10.0 (max 14 pts. | subtotal)

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

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

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

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

Metric 3. Hydrology.

7.0 | 17.0 (max 30 pts. | subtotal)

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

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

3b. Connectivity. Score all that apply.

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

3c. Maximum water depth. Select one.

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

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

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

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

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

Check all disturbances observed

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

Metric 4. Habitat Alteration and Development.

7.0 | 24.0 (max 20 pts. | subtotal)

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

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

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

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

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

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

Check all disturbances observed

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

24.0 (subtotal this page)

ORAM v. 5.0 Field Form Quantitative Rating

Wetland ID:	Wetland 15

Site:	Gemini West Moulton 138 kV T-Line Proje	Rater(s):	Jake Lubbers	Date:	3/3/2021

Field ID:

W-jbl-20210303-01

24.0 subtotal this page

-10.0 max 10 pts. | **14.0** subtotal

Metric 5. Special Wetlands.

Check all that apply and score as indicated.

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

-4.0 max 20pts. | **10.0** subtotal

Metric 6. Plant communities, interspersion, microtopography.

6a. Wetland Vegetation Communities.

Score all present using 0 to 3 scale.

	Aquatic bed
1	Emergent
	Shrub
	Forest
	Mudflats
	Open water
	Other_____

6b. horizontal (plan view) Interspersion.

Select only one.

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

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

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

6d. Microtopography.

Score all present using 0 to 3 scale.

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

Vegetation Community Cover Scale

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

Narrative Description of Vegetation Quality

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

Mudflat and Open Water Class Quality

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

Microtopography Cover Scale

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

10.0 **TOTAL (Max 100 pts)**

1 **Category**

APPENDIX C

OEPA QHEI STREAM FORM

Stream 01 | Good Warmwater

Ohio EPA Qualitative Habitat Evaluation Index and Use Assessment Field Sheet

QHEI Score: 61

Stream & Location: AEP Gemini-West Moulton 138 kV Transmission Line **RM:** _ _ _._ **Date:** 03/23/2020

qh-jbl-20200323-01 / Pusheta Creek **Scorers Full Name & Affiliation:** AEH, JBL / AECOM

River Code: _ _ _ - _ _ _ - _ _ _ **STORET #:** _ _ _ _ _ _ **Lat./Long.:** (NAD 83 - decimal °) 40.556293, -84.212667 **Office verified location** ☐

1] SUBSTRATE

Check **ONLY Two** substrate *TYPE BOXES*; estimate % or note every type present

BEST TYPES	POOL	RIFFLE	OTHER TYPES	POOL	RIFFLE
☐ ☐ BLDR /SLABS [10]			☐ ☐ HARDPAN [4]		
☐ ☐ BOULDER [9]	5		☐ ☐ DETRITUS [3]		
☐ ☑ COBBLE [8]	25		☐ ☐ MUCK [2]		
☐ ☐ GRAVEL [7]	10		☑ ☐ SILT [2]	40	
☐ ☐ SAND [6]	10		☐ ☐ ARTIFICIAL [0]	10	
☐ ☐ BEDROCK [5]					

(Score natural substrates; ignore sludge from point-sources)

NUMBER OF BEST TYPES: ☑ 4 or more [2] ☐ 3 or less [0]

Check ONE (*Or 2 & average*)

ORIGIN
- ☐ LIMESTONE [1]
- ☑ TILLS [1]
- ☐ WETLANDS [0]
- ☐ HARDPAN [0]
- ☐ SANDSTONE [0]
- ☐ RIP/RAP [0]
- ☐ LACUSTURINE [0]
- ☐ SHALE [-1]
- ☐ COAL FINES [-2]

QUALITY

SILT
- ☐ HEAVY [-2]
- ☐ MODERATE [-1]
- ☑ NORMAL [0]
- ☐ FREE [1]

EMBEDDEDNESS
- ☐ EXTENSIVE [-2]
- ☑ MODERATE [-1]
- ☐ NORMAL [0]
- ☐ NONE [1]

Comments

Substrate 12 *Maximum 20*

2] INSTREAM COVER

Indicate presence 0 to 3: **0**-Absent; **1**-Very small amounts or if more common of marginal quality; **2**-Moderate amounts, but not of highest quality or in small amounts of highest quality; **3**-Highest quality in moderate or greater amounts (e.g., very large boulders in deep or fast water, large diameter log that is stable, well developed rootwad in deep / fast water, or deep, well-defined, functional pools.

1 UNDERCUT BANKS [1]	1 POOLS > 70cm [2]	2 OXBOWS, BACKWATERS [1]
1 OVERHANGING VEGETATION [1]	ROOTWADS [1]	AQUATIC MACROPHYTES [1]
SHALLOWS (IN SLOW WATER) [1]	BOULDERS [1]	1 LOGS OR WOODY DEBRIS [1]
1 ROOTMATS [1]		

AMOUNT

Check ONE (*Or 2 & average*)
- ☐ EXTENSIVE >75% [11]
- ☑ MODERATE 25-75% [7]
- ☐ SPARSE 5-<25% [3]
- ☐ NEARLY ABSENT <5% [1]

Comments

Cover *Maximum 20* 14

3] CHANNEL MORPHOLOGY

Check ONE in each category (*Or 2 & average*)

SINUOSITY
- ☐ HIGH [4]
- ☑ MODERATE [3]
- ☐ LOW [2]
- ☐ NONE [1]

DEVELOPMENT
- ☐ EXCELLENT [7]
- ☐ GOOD [5]
- ☑ FAIR [3]
- ☐ POOR [1]

CHANNELIZATION
- ☐ NONE [6]
- ☑ RECOVERED [4]
- ☐ RECOVERING [3]
- ☐ RECENT OR NO RECOVERY [1]

STABILITY
- ☐ HIGH [3]
- ☐ MODERATE [2]
- ☑ LOW [1]

Comments

Channel *Maximum 20* 11

4] BANK EROSION AND RIPARIAN ZONE

Check **ONE** in each category for *EACH BANK* (*Or 2 per bank & average*)

River right looking downstream

EROSION L	EROSION R	RIPARIAN WIDTH L	RIPARIAN WIDTH R
☐	☐	☐ WIDE > 50m [4]	☐ WIDE > 50m [4]
☐	☐	☑ MODERATE 10-50m [3]	☑ MODERATE 10-50m [3]
☑	☑	☐ NARROW 5-10m [2]	☐ NARROW 5-10m [2]
		☐ VERY NARROW < 5m [1]	☐ VERY NARROW < 5m [1]
		☐ NONE [0]	☐ NONE [0]

FLOOD PLAIN QUALITY L	FLOOD PLAIN QUALITY R	L	R
☐	☐ FOREST, SWAMP [3]	☐	☐ CONSERVATION TILLAGE [1]
☑	☑ SHRUB OR OLD FIELD [2]	☐	☐ URBAN OR INDUSTRIAL [0]
☐	☐ RESIDENTIAL, PARK, NEW FIELD [1]	☐	☐ MINING / CONSTRUCTION [0]
☐	☐ FENCED PASTURE [1]		
☑	☑ OPEN PASTURE, ROWCROP [0]		

Indicate predominant land use(s) past 100m riparian.

Comments

Riparian *Maximum 10* 5

5] POOL / GLIDE AND RIFFLE / RUN QUALITY

MAXIMUM DEPTH Check **ONE** (*ONLY!*)
- ☐ > 1m [6]
- ☐ 0.7-<1m [4]
- ☑ 0.4-<0.7m [2]
- ☐ 0.2-<0.4m [1]
- ☐ < 0.2m [0]

CHANNEL WIDTH Check ONE (*Or 2 & average*)
- ☑ POOL WIDTH > RIFFLE WIDTH [2]
- ☐ POOL WIDTH = RIFFLE WIDTH [1]
- ☐ POOL WIDTH < RIFFLE WIDTH [0]

CURRENT VELOCITY Check ALL that apply
- ☐ TORRENTIAL [-1]
- ☐ VERY FAST [1]
- ☐ FAST [1]
- ☑ MODERATE [1]
- ☑ SLOW [1]
- ☐ INTERSTITIAL [-1]
- ☐ INTERMITTENT [-2]
- ☐ EDDIES [1]

Indicate for reach - pools and riffles.

Recreation Potential
Primary Contact
Secondary Contact
(circle one and comment on back)

Comments

Pool / Current *Maximum 12* 6

Indicate for functional riffles; Best areas must be large enough to support a population of riffle-obligate species: Check ONE (*Or 2 & average*). ☐ NO RIFFLE [metric=0]

RIFFLE DEPTH
- ☑ BEST AREAS > 10cm [2]
- ☐ BEST AREAS 5-10cm [1]
- ☐ BEST AREAS < 5cm [metric=0]

RUN DEPTH
- ☑ MAXIMUM > 50cm [2]
- ☐ MAXIMUM < 50cm [1]

RIFFLE / RUN SUBSTRATE
- ☐ STABLE (e.g., Cobble, Boulder) [2]
- ☑ MOD. STABLE (e.g., Large Gravel) [1]
- ☐ UNSTABLE (e.g., Fine Gravel, Sand) [0]

RIFFLE / RUN EMBEDDEDNESS
- ☐ NONE [2]
- ☐ LOW [1]
- ☑ MODERATE [0]
- ☐ EXTENSIVE [-1]

Comments

Riffle / Run *Maximum 8* 5

6] GRADIENT (10.5 ft/mi) DRAINAGE AREA (34.7 mi²)

- ☐ VERY LOW - LOW [2-4]
- ☐ MODERATE [6-10]
- ☑ HIGH - VERY HIGH [10-6]

%POOL: 20 **%GLIDE:** 50 **%RUN:** 10 **%RIFFLE:** 20

Gradient *Maximum 10* 8

A] SAMPLED REACH

Check ALL that apply

METHOD

- ☐ BOAT
- ☐ WADE
- ☐ L. LINE
- ☑ OTHER

STAGE

1st -sample pass-	2nd
☐ HIGH	☐
☑ UP	☐
☐ NORMAL	☐
☐ LOW	☐
☐ DRY	☐

DISTANCE

- ☐ 0.5 Km
- ☐ 0.2 Km
- ☐ 0.15 Km
- ☐ 0.12 Km
- ☑ OTHER

200 feet

CLARITY

1st --sample pass--	2nd
☑ < 20 cm	☐
☐ 20-<40 cm	☐
☐ 40-70 cm	☐
☐ > 70 cm/ CTB	☐
☐ SECCHI DEPTH	☐

CANOPY

- ☑ > 85%- OPEN
- ☐ 55%-<85%
- ☐ 30%-<55%
- ☐ 10%-<30%
- ☐ <10%- CLOSED

1st pass _____ cm

2nd _____ cm

C] REC

Comment RE: Reach consistency/ Is reach typical of steam?, *Recreation/* Observed - Inferred, *Other/* Sampling observations, Concerns, Access directions, etc.

Pusheta Creek has an aquatic life use designation of Warmwater Habitat under Chapter 3745-1 of the Ohio Administrative Code (OAC) for the Maumee River basin.

Stream was at a slightly higher stage due to recent rains. The stream has been channelized in the past and is surrounded by a predominantly agricultural landscape.

B] AESTHETIC

- ☐ NUISANCE ALGAE
- ☐ INVASIVE MACROPHYTES
- ☐ EXCESS TURBIDITY
- ☐ DISCOLORATION
- ☐ FOAM / SCUM
- ☐ OIL SHEEN
- ☐ TRASH / LITTER
- ☐ NUISANCE ODOR
- ☐ SLUDGE DEPOSITS
- ☐ CSOs/SSOs/OUTFALLS

ION AREA DEPTH

POOL: ☐ >100ft² ☐ >3ft

D] MAINTENANCE

Circle some & *COMMENT*

PUBLIC / PRIVATE / BOTH / NA
ACTIVE / HISTORIC / BOTH / NA
YOUNG-SUCCESSION-OLD
SPRAY / SNAG / REMOVED
MODIFIED / DIPPED OUT / NA
LEVEED / ONE SIDED
RELOCATED / CUTOFFS
MOVING-BEDLOAD-STABLE
ARMOURED / SLUMPS
ISLANDS / SCOURED
IMPOUNDED / DESICCATED
FLOOD CONTROL / DRAINAGE

E] ISSUES

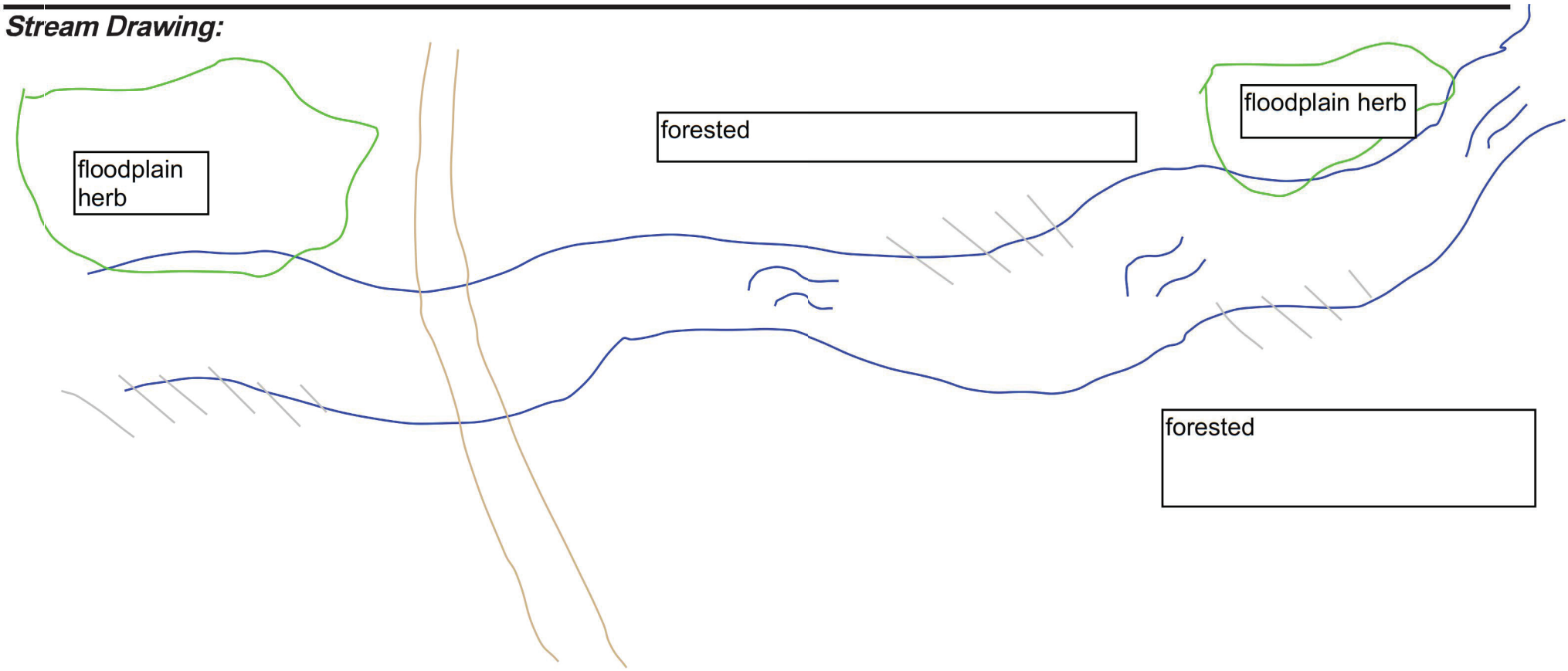
WWTP / CSO / NPDES / INDUSTRY
HARDENED / URBAN / DIRT&GRIME
CONTAMINATED / LANDFILL
BMPs-CONSTRUCTION-SEDIMENT
LOGGING / IRRIGATION / COOLING
BANK / EROSION / SURFACE
FALSE BANK / MANURE / LAGOON
WASH H_20 / TILE / H_20 TABLE
ACID / MINE / QUARRY / FLOW
NATURAL / WETLAND / STAGNANT
PARK / GOLF / LAWN / HOME
ATMOSPHERE / DATA PAUCITY

F] MEASUREMENTS

- $\bar{x}$ width
- $\bar{x}$ depth
- max. depth 20inche
- $\bar{x}$ bankfull width 25 feet
- bankfull $\bar{x}$ depth
- W/D ratio
- bankfull max. depth
- floodprone x^2 width
- entrench. ratio

Le *Tree:*

Stream Drawing:



APPENDIX D

DELINEATED WETLANDS AND STREAMS PHOTOGRAPHS

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	West Moulton-Gemini 138 kV Transmission Line Project	60567997

Wetland 06

Date:

March 24, 2020

Description:

PEM wetland

Category 1

Facing North

Wetland 06

Date:

March 24, 2020

Description:

PEM wetland

Category 1

Facing East

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	West Moulton-Gemini 138 kV Transmission Line Project	60567997

Wetland 06

Date:

March 24, 2020

Description:

PEM wetland

Category 1

Facing South

Wetland 06

Date:

March 24, 2020

Description:

PEM wetland

Category 1

Facing West

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	West Moulton-Gemini 138 kV Transmission Line Project	60567997

Wetland 06

Date:

March 24, 2020

Description:

PEM wetland

Category 1

Facing Soil Pit

Wetland 15

Date:

March 3, 2021

Description:

PEM wetland

Category 1

Facing North

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	West Moulton-Gemini 138 kV Transmission Line Project	60567997

Wetland 15

Date:

March 3, 2021

Description:

PEM wetland

Category 1

Facing East

Wetland 15

Date:

March 3, 2021

Description:

PEM wetland

Category 1

Facing South

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
WETLANDS

Client Name:	Site Location:	Project No.
AEP	West Moulton-Gemini 138 kV Transmission Line Project	60567997

Wetland 15

Date:

March 3, 2021

Description:

PEM wetland

Category 1

Facing West

Wetland 15

Date:

March 3, 2021

Description:

PEM wetland

Category 1

Soil pit

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
STREAMS

Client Name:	Site Location:	Project No.
AEP	West Moulton-Gemini 138 kV Transmission Line Project	60567997

Stream 01

Date:

March 04, 2021

Description:

Perennial

Good Warmwater

Facing Upstream

Stream 01

Date:

March 04, 2021

Description:

Perennial

Good Warmwater

Facing Downstream

AECOM Imagine it. Delivered.

PHOTOGRAPHIC RECORD
STREAMS

Client Name:	Site Location:	Project No.
AEP	West Moulton-Gemini 138 kV Transmission Line Project	60567997

Stream 01

Date:

March 04, 2021

Description:

Perennial

Good Warmwater

Facing Substrate

APPENDIX E

IPAC AND ODNR GUIDANCE REGARDING BATS

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
Phone: (614) 416-8993 Fax: (614) 416-8994

In Reply Refer To:
Consultation Code: 03E15000-2021-SLI-1055
Event Code: 03E15000-2021-E-01523
Project Name: West Moulton-Gemini

March 29, 2021

Subject: Updated list of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see http://www.fws.gov/migratorybirds/RegulationsandPolicies.html.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/BirdHazards.html.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit http://www.fws.gov/migratorybirds/AboutUS.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Ohio Ecological Services Field Office
4625 Morse Road, Suite 104
Columbus, OH 43230-8355
(614) 416-8993

Project Summary

Consultation Code: 03E15000-2021-SLI-1055
Event Code: 03E15000-2021-E-01523
Project Name: West Moulton-Gemini
Project Type: TRANSMISSION LINE
Project Description: Transmission line project
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.5580228,-84.21745636807478,14z

Counties: Auglaize County, Ohio

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: ▪ Incidental take of the northern long-eared bat is not prohibited at this location. Federal action agencies may conclude consultation using the streamlined process described at https://www.fws.gov/midwest/endangered/mammals/nleb/s7.html Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

OHIO DIVISION OF WILDLIFE GUIDANCE FOR BAT SURVEYS AND TREE CLEARING
JUNE 2020

Agency Contacts:

ODNR-DOW Permit Coordinator: Wildlife.Permits@dnr.state.oh.us, (614) 265-6315
ODNR-DOW Bat Survey Coordinator: Sarah Stankavich, sarah.stankavich@dnr.state.oh.us, (614) 265-6764

Due to the evolving situation with COVID-19, we are temporarily suspending bat-handling activities until more is known about the risk to North American bats. This document has been updated with new state guidance for the 2020 field season only, or until bat-handling activities are reinstated. These guidelines replace previous guidelines released in March 2020.

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

Ohio Mist Net Surveys:
Mist-netting for presence/absence surveys, education events, or research activities will not be authorized for the 2020 season.

Ohio Acoustic Surveys:
Acoustic bat surveys for presence/absence will be accepted by ODNR for the 2020 season. Surveys should follow guidelines laid out in the USFWS Range-wide Indiana Bat Survey Guidelines (March 2020) with the following exceptions:

- Ohio survey dates are June 1 – August 15, 2020
- After conducting automated analyses using one or more of the currently available 'approved' acoustic bat ID programs[1], qualitative analysis (i.e., manual vetting) of any calls recorded from state-endangered species (*Myotis sodalis, M. septentrionalis*[2]*, M. lucifugus*[2]*,* and *Perimyotis subflavus*[2]) must be completed.
    - At a minimum, for each detector site/night a program considered presence of state-listed bats likely, review all files (including no IDs) from that site/night. If more than one acoustic bat ID program is used, qualitative analysis must also include a comparison of the results of each program by site and night.

During Field Season:

- **Prior to initiation of field work (a minimum of two weeks in advance)**, permittees must provide proposed survey plans to ODNR-DOW via e-mail. **Plans must be reviewed and approved by ODNR-DOW before ANY surveys take place**. Study plans must specify objectives, location details, dates of proposed work, and all other relevant details.

[1] https://www.fws.gov/midwest/Endangered/mammals/inba/surveys/inbaAcousticSoftware.html
[2] State listing as endangered effective July 1, 2020

After Field Season:

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

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

Step 1: Coordinate with Ohio Division of Wildlife (DOW) regarding existing records for state-listed endangered bat summer and/or winter occurrence information.

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

- For state-listed endangered species other than the Indiana bat, a recommendation of 0.25-mile tree cutting buffer around all known entrances to protect existing conditions at the hibernaculum(a). If the project involves subsurface disturbance, consultation with DOW is required.
- Limited summer and winter tree cutting may be permitted within the buffer following guidelines detailed below. Coordinate with DOW before cutting.

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

- Conduct a habitat assessment (desktop or field-based, using methods detailed in current USFWS Range-wide Indiana Bat Guidelines) to determine if a potential hibernaculum(a) is present within the action area.

Step 2: When conducted, a presence/absence survey must follow current DOW guidelines.

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

- Recommendation of no summer tree cutting, or limited cutting following guidelines detailed below, within 5 miles of the capture site if a roost is not located.
- Recommendation of no summer tree cutting, or limited cutting following guidelines detailed below, within 2.5 miles of a roost tree if located.

If no state-listed endangered bat is captured or recorded during the survey:

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

Limited summer tree cutting guidance for bats that are only state-listed endangered: Limited tree cutting in summer may be permitted after consultation with DOW, but clearing trees with the following characteristics should be avoided unless they pose a hazard: dead or live trees of any size with loose, shaggy bark; crevices, holes, or cavities; live trees of any species with DBH $\geq$ 20.

FREQUENTLY ASKED QUESTIONS

When does the Bat Survey protocol have to be used?

This protocol should be used anytime Indiana bat, northern long-eared bat, little brown bat, or tricolored bat summer presence/probable absence surveys are conducted in the state of Ohio. For 2020 only, acoustic surveys will meet the ODNR-DOW requirements unless new guidance allowing for the handling of bats during presence/absence surveys is released from USFWS.

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

As described in the current USFWS Range-wide Indiana Bat Guidelines: Linear projects: a minimum of 2 detector nights per km (0.6 miles) of suitable summer habitat
Non-linear projects: a minimum of 8 detector nights per 123 acres (0.5 km^2) of suitable summer habitat. At least 2 detector locations per 123 acre "site" shall be sampled until at least 8 detector nights has been completed over the course of at least 2 calendar nights (may be consecutive). For example:

- 4 detectors for 2 nights each (can sample the same location or move within the site)
- 2 detectors for 4 nights each (can sample the same location or move within the site)
- 1 detector for 8 nights (must sample at least 2 locations and move within the site)

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

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

When can acoustic surveys occur in Ohio?

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

Can a presence/probable absence survey be conducted within a known Indiana bat and/or northern long-eared bat capture/detection buffer?

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

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

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

How does take of northern long-eared bats differ from Indiana bats?

Under Ohio law, there is no exemption for take of any listed bat species.

Summary: Notice Notice of supplemental information and associated exhibit for the West Moulton-Gemini 138 kV Transmission Line Project electronically filed by Tanner Wolffram on behalf of AEP Ohio Transmission Company, Inc.